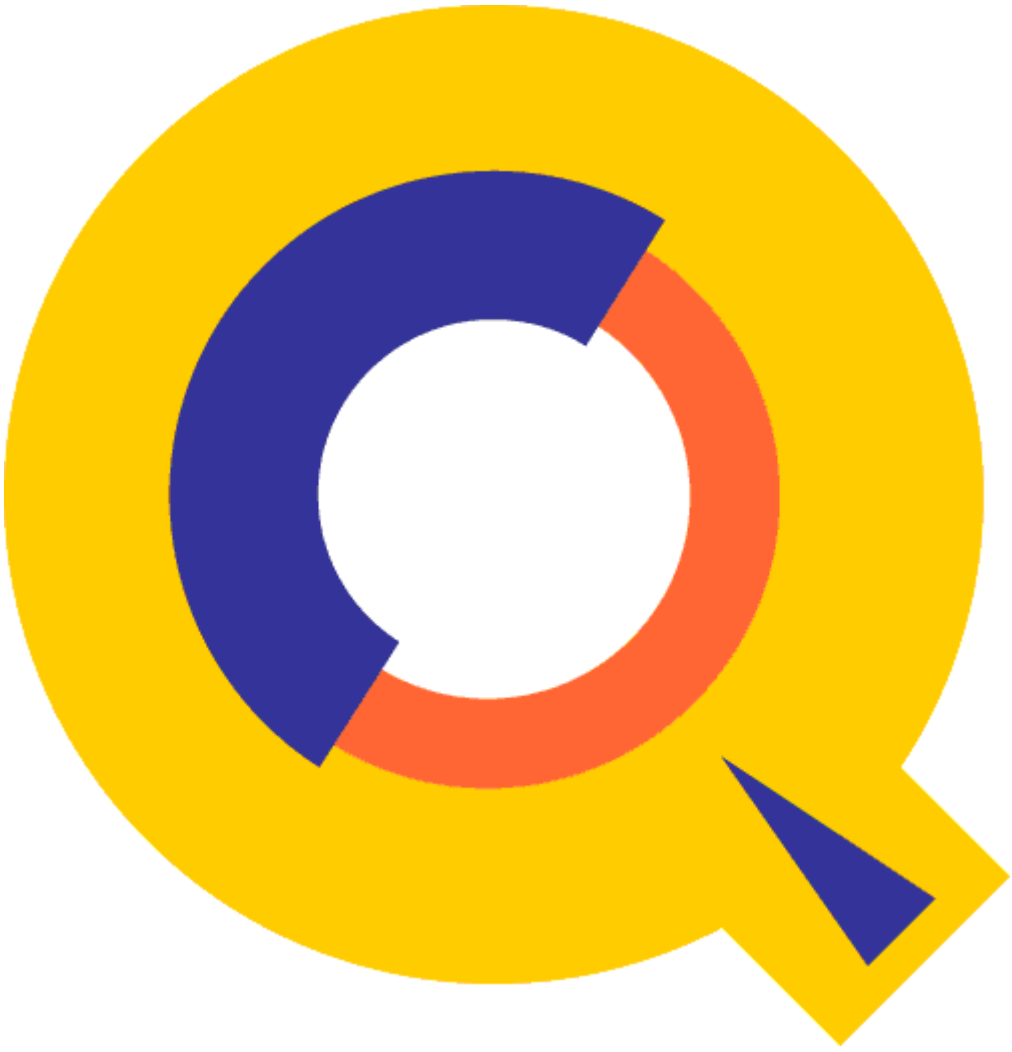
Qedit 6.4 for HP e3000

User Manual

by Robelle Solutions Technology Inc.



Updated on November 15, 2018

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Contents

Welcome to Qedit

Introduction

Welcome to Qedit, the fast, full-screen text editor for MPE and HP-UX. To get into Qedit, enter this MPE command:

```
:run qedit.pub.robelle
```

Qedit version 6.1 has screen-editing, function keys and commands:

Commands:

Add	FINDUp	Open	ZZ
Add(=copy)	FORM	Proc	%ext
Add(<move)	FORward	Q	shell
Add(=file)	GARbage	REDO	
Append	Glue	RENum	
BAckward	Help	Replace	
Before	HOld	Set	
Change	Justify	SHut	
COLcopy	Keep	SPell	
COLMove	List	Text	
Delete	LISTREDO	UNDo	COmp
DEStroy	LISTUndo	Use	RUN
Divide	LSort	Verify	Mpe
DO	MErge	VIsual	Udc
Exit	Modify	Words	Cmdfile
Find	New	Zave	=calc

Function Keys:

F1 Upd Next/Visual	**F2** Roll Up	**F3** Findup	**F4** Find

F5 Backward **F6** Forward **F7** Do ===> /LISTREDO **F8** Exit

Documentation

Qedit comes with a User Manual and a Change Notice. You may have received printed copies of these. If you wish to have printed copies, you can order them by filling out the form on our web site.

They are also available as PDF or HTML files. You can download the files from the Robelle web site at: http://www.robelle.com/library/manuals/.

User Manual

The user manual contains the full description of all the Qedit commands, as well as usage tips. The manual is up-to-date with all the latest changes incorporated in Qedit.

Printed Documentation

The latest user manual and change notice are available in Adobe PDF format. If you do not already have the Adobe Acrobat reader, you can get a copy from http://www.adobe.com/prodindex/acrobat/readstep.html. If you wish to have printed copies, you can order them by filling out the form on our web site.

Other Documentation

In addition to the Qedit User Manual and Qedit Change notice, there are other manuals that come with Qedit. Manuals for bonus programs and the contributed library are available in Robelle's Prose format, not in PDF format. They are found in the Robelle account on the HP e3000, and are printed using the Printdoc program. Printdoc prints the manual on your printer, whether LaserJet or line printer.

Printdoc Program

To print them on your printer, whether LaserJet or line printer, run the Printdoc program.

```
:run printdoc.pub.robelle
```

Printdoc is menu-driven, and very easy to use. Printdoc asks you for information, and if you are not sure of your answer, you can ask for

help by typing a question mark (?) and pressing the Return key. There are two steps for printing a manual: first, choose one of the manuals on the menu; second, select a printer. Printdoc supports most types of LaserJet printers and regular line printers.

Other Manuals of Interest

You may want to print at least one copy of these manuals:

```
prose.qlibdoc.robelle     {text formatter}
spell.doc.robelle         {Bonus spelling checker}
contents.qlibdoc.robelle  {contributed library}
howmessy.doc.robelle      {Bonus database analyzer}
```

You can print any Robelle document if you know the file name. If you wish, you can include the file name in the :Run command. For example, to print the Spell User Manual, type

```
:run printdoc.pub.robelle;info="spell.doc.robelle"
```

Customer Support

When you purchase Qedit, customer support is included for the first year. After the first year, there is a yearly Maintenance fee. If you are a Right-to-Copy user at a branch of a larger company, you have two options. If you pay only the one-time Extra CPU surcharge, then you must obtain your support from your own corporate resources. If you wish to have support at your own location, you may obtain this by also paying the regular Maintenance fee. With this yearly support for Qedit, you are entitled to call with questions. Service also supplies you with a yearly update to Qedit.

Robelle Newsletter

Do you receive a copy of *What's Up, DOCumentation?*, our regular news memo about Robelle, MPE, and HP-UX? We distribute our news memos only to sites with current service. Your copy may be going to your corporate headquarters.

The lastest newsletter is also available from our Web site at www.robelle.com/newsletter/.

QLIB and Bonus Contributed Software

Qedit comes with an array of contributed software in the QLIB library (in the QLIB groups of the Robelle account). The tools in QLIB, such as Prose to print manuals, can be extremely handy. As well, your Robelle license may entitle you to receive our Bonus programs: Compare/iX, a file comparison tool, HowMessy, an analyzer for

database efficiency, Select, a menu processor, Spell, an English spelling checker, and Xpedit, a VPLUS text editor.

If you have the Bonus programs, you may only use them on appropriately licensed CPUs; you may not give a Bonus program away. However, QLIB programs may be used on any CPU and given away freely.

To browse through the Robelle account, including QLIB, use our Select "menu" program. Select allows you to run programs, get help, and print manuals, all without knowing any MPE commands.

```
:run select.pub.robelle,qlib
```

Compare/iX compares two text files (Keep or Qedit format) and prints out the differences. The basic comparison unit is a line. Compare/iX identifies three types of differences: lines that are in the first file but not in the second; lines that are in the second file but not in the first; and lines that are in both files, but don't match. There is no Classic version of Compare/iX for MPE V.

HowMessy analyzes a database and prints a report on its internal efficiency, 10 to 20 times faster than similar programs. To access HowMessy, log on as the database creator in the same group as the database and enter:

```
:file loadrept;dev=lp;cctl
:run howmessy.pub.robelle
Enter database:CUSTMR
```

Spell is a spelling checker that reads a file and produces a list of misspelled words. Spell comes with an 80,000 word English dictionary, and you can add your own words into global or local auxiliary dictionaries. Spell reads Qedit files, and has an option to generate an error file that is compatible with the :Editerror command.

Notation

This manual uses a standard notation to describe commands. Here is a sample definition:

VERIFY [@ | ALL]

[*keyword* ...]

UPPERCASE - If the commands and keywords are shown in uppercase characters in a syntax statement, they must be entered in the ***order*** *shown (example: ALL). However, you can enter the characters in either uppercase or lowercase.*

1. *Lowercase, highlighted* - These are "variables" to be filled in by the user (example: *keyword*). The variables may be highlighted by underlining or italics. Each such "variable" is defined elsewhere (see the "Qedit Glossary" on page 403 when you have trouble). In the Help command,

highlighting is not available, so these variables appear simply in lowercase.

2. Brackets - enclose optional fields (example: [ALL]).
3. Braces - enclose comments which are not part of the command. However, braces and comments are accepted in actual Qedit commands.
   /listq filename {Q means without line numbers}
4. Up lines - separate alternatives from which you select (example: SET CHECK [ON|OFF]). The choices are sometimes listed on several lines without "up lines".
5. Dot-dot-dot (...) - indicates that the variable may be repeated many times in the command.
6. Other special characters - literal symbols that must appear in the command as they appear in the manual (for example, "=" in Add *linenum* = *rangelist*).

In examples, there is an implied Return key at the end of each line.

Control characters, generated by holding down Control while striking another key, are either spelled out (e.g., Control-H) or abbreviated with a circumflex prefix (e.g., ^H).

When Qedit asks you a question, the default answer is shown in [brackets]. The default is the answer that Qedit will assume if you press only the Return key.

Highlights

Highlights In Version 6.4

This is an overview of all the changes implemented in this version.

- Work on 2027 mitigation has been completed.
- Qedit has been ported to Qedit.

Highlights In Version 6.3

This is an overview of all the changes implemented in this version.

- More work has been done on reducing the dependence on the Calendar Intrinsic.

Highlights In Version 6.2

This is an overview of all the changes implemented in this version.

- The Qedit Server Login on HP-UX would not honour administrative lock and other security measures. The MPE release has had no changes.

Highlights In Version 6.1

This is an overview of all the changes implemented in this version.

- The Verify command incorrectly parsed certain entries near the end of the verb table such as ZZ, String etc.
- The Calendar intrinsic is being phased out of Qedit and all Robelle products, which will help all products run past 2028.

Highlights In Version 6.0

- UDC's would stop working properly if a Calc command longer than 138 characters was entered.

Installing Qedit

General Installation Notes

Here we describe how to install and configure Qedit, and how to integrate it with your compiler tools. The following are general notes about installing Qedit.

Who Should Use These Instructions?

Use the following installation instructions if you have just purchased Qedit and are installing it for the first time. If you already have Qedit on your system, and are installing an update or pre-release of Qedit, you will find specific installation instructions in the change notice included with your tape.

TRIAL USERS: Refer to the *Robelle Trial Handbook* **that accompanied your trial tape.**

Summary of Installation Steps

To install Qedit, follow these steps:

1. Install Qedit
2. Install the QLIB and/or Bonus programs
3. Fix the NM compilers (XL only)
4. Fix the MPE V compilers (both systems)
5. Save disc space (optional)

Qedit Compiler Interfaces

Qedit edits compact files of a special format called *workfiles*. In order to be able to compile these files without doing a Keep command, you must "fix" the MPE compilers. This applies to the Classic 3000 compilers (CM), which might exist on either an MPE V or MPE/iX system, and the NM compilers on MPE/iX only. The methods and installation steps are quite different between the CM and NM Qedit compiler interfaces.

Many third-party tools either read Qedit files already (e.g., PowerHouse, MPEX) or can be altered to read Qedit files (techniques for doing this are discussed here).

Important Note About Passwords

None of the jobs that we supply have passwords in them. Before streaming a job, you may have to add your system's passwords to the first line. Users of MPE XL version 3.0 and higher do not have to do this because the operating system prompts for missing passwords. The same is true for some MPE V users who have security software that inserts passwords. Most MPE V users have to edit the jobs. For example, if the system manager logon password is Qwerty, you would do the following:

```
:editor
HP32201A.07.22 EDIT/3000
/text robelle.job.robelle
FILE UNNUMBERED
/modify 1
MODIFY     1
!job robelle,manager.sys,pub;hipri
                        i/qwerty
!job robelle,manager.sys/qwerty,pub;hipri

/keep robtemp
/exit
END OF SUBSYSTEM
:stream robtemp
:purge robtemp
```

STREAMX Users

Users of STREAMX, a part of SECURITY/3000 from VESOFT Inc., must set a Job Control Word before streaming jobs. This step prevents STREAMX from generating an error if the Robelle account does not yet exist. For example,

```
:setjcw streamxtempnonest 1
:stream robelle.job.robelle
```

Step 1: Install Qedit

This step requires three separate procedures: restoring all Robelle files from tape to disc, building (or upgrading) the Robelle account using the job stream that we provide, and streaming the installation job stream. All these procedures can easily be accomplished if you log on as Manager.Sys.

Restore Files

First, you have to restore all the Robelle files from tape.

```
:hello manager.sys                {log on as system manager}
:file rtape;dev=tape              {mount Robelle tape}
:restore *rtape; @.@.@; create    {=reply on the console}
```

Check the :Restore listing for files that could not be restored because they were busy for any of the following reasons: someone was using them, they are held as suspended son processes (menu system), they are allocated, or someone was backing them up! Chase away any users and deallocate any busy programs. Then try the :Restore again.

Create/Update Robelle Account

You must build (or upgrade) the Robelle account with the job stream we provide. Stream the job that builds and updates the Robelle account.

```
:stream robelle.job.robelle
```

If the Robelle account already exists on your system, the installation job preserves the current passwords.

If the account does not exist, it is created with the password XXXX. The Mgr.Robelle user does not have a password. You should change the passwords to something that will be hard for outsiders to guess.

```
:altacct robelle;pass={robelle account password}
:altuser mgr.robelle;pass={mgr.robelle user password}
```

Please note that during installation, we add OP capability to the Robelle account. When the Qedit installation is complete, you can, if you wish, remove the OP capability.

File Names

The Qedit program files are located in the Pub group of the Robelle account. These are the names of the various files:

Qeditnm		NM Qedit program
Qeditcm	Qeditpm	CM Qedit programs
Qcompxl		NM compiler interface
Qedify	Qcompusl	CM compiler interface
Qloadxl		NM Qedit options
Ederrnm	Ederrcm	:Editerror support
Qmap		reformat MPE V PMAP

Install Program Files

Our installation job installs Qedit. No one can be using these programs when you do the installation. Warn people not to use Qedit for a while, and then stream our installation job:

```
:hello mgr.robelle
:warn @;please exit from Qedit NOW!

:stream install.qeditjob   {supply passwords}
```

Check the installation job $stdlist. If anyone was using Qedit or attempting to back it up, the job will fail. Chase away any users, ensure that backup is not in progress, then stream the installation job again.

The installation job renames your current versions of Qedit to the PubOld group of the Robelle account. If you need to move these versions back into production, use the Previous.QeditJob job stream.

You can now access Qedit by entering

```
:run Qedit.pub.robelle
```

If you wish to print manuals, move Qedit to another account, read on in this chapter for instructions.

Step 2: Install QLIB and Bonus Programs

Qedit comes with an array of contributed software in the QLIB library (in the QLIB groups of the Robelle account). QLIB programs may be used on any CPUs and given away freely. Your Robelle license may also entitle you to receive our Bonus programs: Compare/iX, HowMessy, Select, Spell, and Xpedit. These programs reside in the Pub group of the Robelle account. Bonus programs can only be used on authorized machines, and you may not distribute them to your friends.

If you received Bonus programs with this version of Qedit, use the job stream called Bonus.Job.Robelle to install both the QLIB and Bonus programs. If you did not receive Bonus programs, use the job stream Qlib.Job.Robelle to install the QLIB programs. If you skip this step, you may end up running old versions of these programs.

```
:hello mgr.robelle
:stream bonus.job.robelle       {or Qlib.Job.Robelle}
```

Building the Spell Dictionary

The Spell Bonus program requires an additional install job to build its main dictionary. This job is required if you want to use Spell, and the Spell and Words commands in Qedit. By default, the American spellings are used. To use British spellings, modify the line that sets the SpellAmerican JCW so that the JCW is set to False. This job

stream could take 30 to 60 minutes to complete; there is no reason to wait for it to finish before going on to the next step.

```
:run qedit.pub.robelle          {or use :Editor}
/text dictmain.spjob
/modify "setjcw SpellAmerican"  {for British spelling,     }
/keep robtemp                   {      change True to False}
/exit
:stream robtemp
:purge robtemp
```

See the Spell user manual for more information on using Spell.

Step 3: Install NM Compiler Interface

On MPE/iX, if you use any NM compilers, you will want to install the new NM compiler interface. If you still use the CM compilers as well, you will want to install that compiler interface too, as described under step 4.

Installing the Interface

Assuming that you have Restored the Robelle files onto your system and that you have not done this step before, stream Savecmdf.Qeditjob to make backup copies of the existing HP command files in the Stdcmd.Sys group. You need to know the Manager.Sys password:

```
:stream savecmdf.qeditjob.robelle {wait for it to finish}
:listf @.stdcmd.sys
```

Then stream Qcompxl.Qeditjob to make changes to the Pub.Sys compiler command files.

```
:stream qcompxl.qeditjob.robelle
```

This stream makes the following changes to the files:

1. Change the run of the compiler program to

```
;xl ="qcompxl.pubnew.robelle, qcompxl.pub.robelle",
```

2. Add ";shr" to the File commands for the text and master files.

Compiling Instructions

At any point, either within Qedit or at the MPE/iX prompt, you now should be able to compile a Qedit file or a Keep file, just by invoking the normal command file:

```
:pasxl source               {from MPE}
:run qedit.pub.robelle
/pasxl source               {from Qedit}
```

Within Qedit, you can specify "*" for the current workfile:

```
:run qedit.pub.robelle
/text source
/pasxl *
/exit
:pasxl qeditscr
```

Step 4: Install CM Compiler Interface

When installing Qedit on MPE/iX, you may have to install the NM compiler interface (described earlier) and the CM compiler interface (described here). MPE V, on the other hand, has only the original "CM" compilers to worry about. After Restoring the files from tape, you have to choose an installation method: integral or isolated.

Choosing a CM Installation Method

There are two methods of fixing the compilers on your system: integral into Pub.Sys or isolated in the Robelle account. The isolated method is best for new or trial-period users, because it is faster to install and easier to remove later. You can start with the isolated method and convert easily to the integral method later.

Integral Method. The compilers in Pub.Sys are "fixed" directly and a segment is added to the System SL. The standard :Cobol and :Pascal commands of MPE will then compile Qedit workfiles. :Sysdump is used to make a new cold load tape for the next time you must boot the system.

Isolated Method. The MPE compilers are copied into the Q.Robelle group and the original compilers are left in the Pub.Sys group. No code is added to the System SL. Because the "Qedit" compilers are not in Pub.Sys, you cannot compile Qedit workfiles except from within Qedit.

Integrating CM Compiler Changes

The job stream Qeditj1.Qeditjob.Robelle makes integral compiler fixes. Use it either to update the fixes to a new version or to re-install the fixes after a MPE update from HP. Because this job modifies the compiler program files in Pub.Sys, you should :Store @.Pub.Sys before starting and save the tape. You need another small tape for a new cold load tape.

Ensure that no one compiles until the installation is complete. Stop all jobs and send an operator warning. Log on as Manager.Sys, modify the first line of the Qeditj1 job to include the passwords, then :Stream the job.

```
:stream qeditj1.qeditjob.robelle
```

The job runs Qedify.Pub.Robelle to update the compilers in Pub.Sys and install nonprivileged hooks into them, so that they can access Qedit workfiles. The job adds a code segment from Qcompusl.Pub.Robelle into Sl.Pub.Sys and then requests a tape mount for a new cold load tape.

Mount a tape with a write ring and :Reply. Save this tape and use it for any future cold loads. The CM compiler interface is now installed. Compiles done inside or outside Qedit work on either Qedit workfiles or on regular Keep files.

Isolating CM Compiler Changes

The job stream Qeditj1a.Qeditjob.Robelle fixes the compilers, but isolates the changes in the Q.Robelle group. Ensure that no one compiles until the installation is complete. Stop all jobs and send an operator warning. Modify the first line of Qeditj1a to include the Robelle password, then stream the job:

```
:stream qeditj1a.qeditjob.robelle
```

The job uses Qedify.Pub.Robelle to copy the compilers from Pub.Sys to the Q.Robelle group, then "fix" them to read Qedit files. The original compilers in the Pub.Sys group are not modified. Once this step is completed you can use the CM compilers on Qedit files from within Qedit, but not at the MPE prompt.

Step 5: Saving Disc Space

There may be obsolete or unnecessary files in the Robelle account that you can remove to save disc space.

Purging Obsolete Files

If you have been a Qedit user for several years, you may have obsolete files in the Robelle account. For example, the file Qapply.Doc.Robelle is an older version of part of the Qedit User Manual. It should be purged.

To remove all obsolete files that were part of the Qedit product, stream the job Obsolete.Qeditjob.Robelle.

Minimal Set of Files

If you are extremely short of disc space, you can purge many files in the Robelle account after you complete all installation steps. The only files you must have to run Qedit are those listed below. Of course, if

you have other Robelle products such as Suprtool, you do not want to purge the files needed for them, which are listed in their User Manuals.

Filename	Purpose
qedit.pub.robelle	
qloadxl.pub.robelle	optional NM run-time
qeditpm.pub.robelle	allows BS priority
qcompxl.pub.robelle	MPE/iX only
qedify.pub.robelle	CM compiler interface
qcompusl.pub.robelle	CM compiler routines
@.q.robelle	copies of CM compilers
qedit.help.robelle	
qedhint.help.robelle	
qzmodhlp.help.robelle	
qmap.pub.robelle	for QMAP in :Prep command
prose.qlib.robelle	to print manuals, you need this
f92286f.qlibdata.robelle	and at least one font files

There are a number of jobs in the Purgejob.Robelle group which can help clean up the Robelle account of unwanted files. One in particular that you may want to use is Cleanup.Purgejob.Robelle. After you have completed the Qedit installation, Cleanup gets rid of all the pre-installation files.

```
:stream cleanup.purgejob.robelle
```

Moving Qedit to Another Account

Although the Qedit program file is normally installed on the system Qedit.Pub.Robelle, you can move the program to any account and group that has PH and DS capability. There are some file names that are built into Qedit:

Filename	Purpose
qedit.help.robelle	the Qedit help text
qedhint.help.robelle	the hint-of-the-day file
qzmodhlp.help.robelle	help text for Qzmodify
qmap.pub.robelle	for QMAP option of :Prep
cobol.q.robelle	etc., the CM compilers
qeditmgr.pub.robelle	a configuration file

qloadxl.pub.robelle	NM run-time routines

Moving All the Files

Qedit follows the location of the program file in deciding what file names to open. If you move the Qedit program to the PUB group of the UTIL account, Qedit looks for the files listed above in that account rather than Robelle. If Qedit resides in a group named Pubnew (or Pubxxx), the three "help" files will be searched for in HELPNEW (or HELPxxx). The Qeditmgr file is always assumed to be in the same group as the Qedit program, while Qmap must be in the Pub group and the CM compilers in the Q group.

```
:hello mgr.util,pub
:fcopy from=qedit.pub.robelle;to=qedit.pub.util;new
:fcopy from=qloadxl.pub.robelle;to=qloadxl.pub.util;new
:fcopy from=qedit.help.robelle;to=qedit.help.util;new
:fcopy from=qedhint.help.robelle; &
       to=qedhint.help.util;new
:fcopy from=qzmodhlp.help.robelle; &
       to=qzmodhlp.help.util;new
:fcopy from=qmap.pub.robelle; &
       to=qmap.pub.util;new
```

Redirecting the File Names

The Verify Account command shows what account Qedit searches for the Qeditmgr file, Qmap.Pub, and the CM compilers. Use Set Account to override the default. The Verify Filename command shows the names assumed for the "help" files and Set Filename allows you to override them.

Suppose you run Qedit in the Util account, but you don't want to move the rest of the files to that account. You would use Set Account Robelle and Set Filename commands to force Qedit to look back into Robelle for the files instead of in Util.

Moving a "Hooked" Qedit

When you install MPEX and the Vesoft account, they make a copy of Qedit in Pub.Vesoft and "hook" it for closer cooperation with MPEX.

```
:run qedit.pub.vesoft;lib=p
```

Since Qedit looks for compilers, help files, and other supporting files in the same account where the program resides, the hooked Qedit looks for those files in the Vesoft account. If you are on MPE/iX and you want I/O redirection of command files, copy the file Qloadxl from Robelle to Vesoft. Put the following Set commands in a configuration file named Qeditmgr.Pub.Vesoft:

```
/set account robelle   {e.g., Cobol.Q.Robelle}
/set filename help qedit.help.robelle
/set filename hint qedhint.help.robelle
/set filename qzmodhlp qzmodhlp.help.robelle
/set extprog mpex.pub.vesoft com on
```

The Set Extprog command assumes that you want Qedit to explicitly pass % commands to MPEX, rather than have the "hook" intercept all % lines at every prompt in Qedit. It is desirable to handle % commands within Qedit this way, rather than through the hook, because it ensures that your current workfile is properly posted to the disc and it allows you to Add % commands into a file as data without executing them. To achieve this result, you must rehook Qedit with the Nopercent option:

```
:run mpex.pub.vesoft
%hook qedit.pub.robelle;nopercent     {SM or Vesoft logon}
```

You may not find that you need a hooked Qedit, now that Qedit has a :Listredo stack and accepts the VESOFT-style shorthand ("," for Redo). Some remaining benefits of hooking Qedit are that the System Manager can Keep across account boundaries (but watch out for Creator name), and ACD information is retained from Text to Keep.

Running the MPEXHOOKed Qedit

The MPEXHOOK procedure, which intercepts file system calls made by Qedit, is activated differently based on whether the program to be executed is a native-mode or a compatibility-mode program. On Classic systems, or on Spectrum systems running compatibility-mode or OCT-mode Qedit, you run the hooked program with lib=p.

```
:run qedit.pub.vesoft;lib=p
```

Lib=P works equally well with the native mode version of Qedit. However, with Qedit/iX, you can specify an XL file instead of the Lib parameter:

```
:run qedit.pub.vesoft;xl="mpexhknl.pub.vesoft"
```

The hooked version will work version either way. The Lib parameter is there for MPE compatibility reasons (Classic vs PA-RISC). The XL file parameter is the "correct" way of doing it on MPE/iX.

The following sample User Command, which can be used to run the hooked version of Qedit, determines if Qedit is native-mode or compatibility- mode, and invokes it accordingly.

```
parm runparm=0
if finfo("qedit.pub.vesoft",9)="NMPRG" then
   run qedit.pub.vesoft;xl="mpexhknl.pub.vesoft";parm=!runparm
else
   run qedit.pub.vesoft;lib=p;parm=!runparm
endif
```

VESOFT advises that you be running MPEX version 23.11115 or later, so that the Keep-across-accounts feature will work properly with Qedit/iX.

If Qedit/iX aborts with quit parm -50 or -1041, this indicates that the MPEXHOOK support routines are not correctly installed on your system. You will have to stream the VESOFT-supplied job Veproc.Job.Vesoft. If the hooked Qedit/iX still aborts after running this job, you will need to contact VESOFT for a software update.

Removing the Compiler Interface

If you remove Qedit from your system, you will want to revert to the original MPE compilers. Once you remove the compiler interface you can no longer compile Qedit workfiles. you may either Keep them with Qedit, or use the contributed program Qcopy.Qlib.Robelle to convert them to Keep files.

If you did an integral installation of the CM compiler interface, you now do an integral removal. If you did an isolated installation, you now do an isolated removal.

Removing the NM Interface

Reverting to the original NM compilers is a simple matter of going back to the original command files. You should have saved those in @.Stdcmd.Sys. Purge the command files in Pub.Sys, such as Pasxl, and Rename or Copy the originals from Stdcmd.Sys.

Removing the Integral CM Interface

Qeditj3.Qeditjob.Robelle removes the Qedit CM compiler interface that had been integrated into MPE. The original compilers are Restored and the CM Interface is removed from the system SL. If you are on MPE V, a new cold load tape is created.

Ensure that no one compiles for the next half hour. Stop all jobs and send an operator warning. Log on as Manager.Sys, modify the first line of the Qeditj3 job to include the passwords, then :Stream the job.

Qeditj3 first attempts to :Restore the original compilers from a backup tape (you can use the last Hewlett-Packard update tape). Mount the tape and :Reply on the console. It then removes the Qedit interface segment from Sl.Pub.Sys and requests a tape to make a new cold load

tape. Please mount a blank tape with a write ring and :Reply. Save this tape and use it on your next cold load.

Removing the Isolated CM Interface

Qeditj3a.Qeditjob.Robelle removes the isolated CM compiler interface from the Robelle account, leaving you only the original ones in Pub.Sys. Ensure that no one compiles or uses Qedit until this job finishes. Stop all jobs and send a warning to all users. Modify the first line of Qeditj3a to include the Robelle account password and stream the job.

Qeditj3a purges fixed compilers from the Robelle account, removing the interface.

Getting a Quick Start with HP Full-Screen Editing

Introduction

Qedit aims to provide everything an MPE or HP-UX programmer could need to write COBOL, PowerHouse, or other programs, and to prepare documentation. Therefore, Qedit has Line mode for batch editing and full-screen mode for interactive editing. On HP terminals, Qedit's full-screen mode is called Visual mode.

Qedit's Visual mode is a powerful but friendly full-screen editor designed specifically for programmers. It gives you full access to the editing capabilities of your terminal in block-mode, with low system overhead. You can move, copy, mark and delete blocks of text with Visual's cut-and-paste functions, and page backward and forward through your file with function keys. To use Visual mode, you must have an HP terminal or an HP terminal emulator (e.g., Reflection from WRQ).

NOTE: As of HP-UX 11.0, HP has dropped support for block-mode terminals. For this reason, full-screen editing is only available in Screen mode on HP-UX 11.0 and later.

In Visual mode, you have access to all Line mode commands (including UDCs, command files, compiling, linking and running programs, shell scripts, and string searching and changing). Qedit's search and replace functions aim to be simple, fast and powerful (e.g., ignore embedded words, etc.). The Undo command allows you to cancel any previous edits to your file, working back to the state at which you started. Using the optional Open and Shut feature, you can switch between files instantly. With the Justify command, the Prose text formatter and the Spell checker, you can format documents such as memos and manuals.

Visual mode is a good introduction to the HP operating systems for users who don't work on HP computers all day. Those who may

particularly benefit are novice users, or users who run Qedit only to update a report skeleton once a week. These occasional users no longer have to memorize editing commands. Visual mode provides a familiar environment where novices can make changes to the entire screen, just as they do on PC editors. You can even configure some electronic mail packages (HPDesk, elm), to put your users directly into Visual mode when they edit a message.

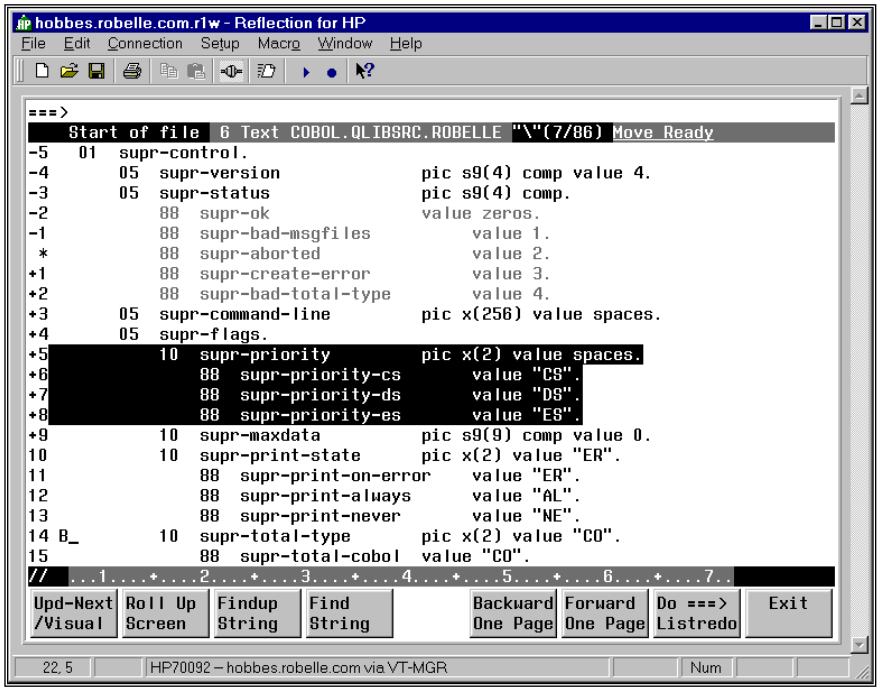
Starting Visual Mode

After you have invoked Qedit, and Texted or Opened a file, you switch from Line mode to Visual mode by typing VI or pressing F1. If you don't have a file open, Qedit opens a scratch file and, if empty, fills it with a screenful of blank lines.

VI [*linenum* | "*string*"] or press F1

(Default: *linenum* = *)

Whereas in Line mode you type in command and text lines ending each with a Return, in Visual you edit a full screen of text in block-mode using the terminal keyboard. Since your terminal is off-line from the computer, you can use its cursor and editing keys. You edit by moving the cursor around the screen, inserting and deleting lines and characters. Press Enter to save your changes. To move through the file, you have the convenience of eight function keys, such as F6 *Forward One Page*.



Visual mode in Reflection for Windows, showing cut-and-paste indicators

You copy, move, hold, and delete blocks of text easily by placing "cut-and-paste" indicators at the start of the line. You may type Line mode commands at the home line ===> and execute them via the Enter or the F7 key. Combining the cut-and-paste functions with the Open and Shut commands, you can also copy and move text quickly between different Qedit files. Use the ZZ cut-and-paste indicator with any command to mark text easily.

The Set Visual command controls how Visual mode operates and allows great latitude in configuring Visual to your own liking. For example, you can choose to have automatic update; decide where the current line or cursor appears; and select how many lines will carry over when you page up or down.

When you are done, exit Visual mode using F8, then Keep or Shut your file. Press F8 again to leave Qedit.

Screen Layout

```
===>
Okay  1691.75  WFILE.DOC.TACCT  "verify"(u)  Move Ready
 *  procedure abc;
+1  begin
+2      integer def;
//  ....+....10...+....20...+...
```

The screen starts with the **home Line**, followed by the **status Line**, several **text Lines**, and ends with the **template Line**. Columns 3 and 4 of text lines sometimes contain special characters and are called the **indicator columns**.

Home Line

You type commands, search for strings and for line numbers after the ===> on the home line.

```
===>
```

These are executed when the F7 or Enter key is pressed.

The home line is also used by Qedit to print error messages. You must clear the error message by pressing the F7 or Enter key before you can type another command in the home line.

Status Line

The second line shows the status, the current line number (i.e., that of the * line), the name of the file you are editing, the current string with its window, and any pending cut-and-paste task.

```
Okay  1691.75  WFILE.DOC.TACCT  "verify"(u)  Move Ready
```

If you have Texted a file into Qeditscr, the status line shows the name of the Text file, which is also your default Keep file.

Text Lines

By default you see the * (current) line and 19 lines after it. Each line is prefixed by the relative line number, and two columns for special indicators.

```
 *  procedure abc;
+1  begin
+2      integer def;
```

Use Set Vis Above and Set Vis Below to adjust the number of lines shown above and below the current line.

Template Line

The last line has // and a column template. The // signals end-of-screen to Qedit and must not be erased.

```
//  ....+....10...+....20...+...
```

Visual uses more than 76 columns for text on Reflection, Qcterm, a 2393/97, 2626, or 700/9x terminals.

Special Indicator Columns

Qedit leaves columns 3 and 4 of the text lines for you to enter cut-and-paste operators (i.e., MM, CC, HH, etc.). Also, Qedit may print one of two special indicators in these columns:

!	line extends beyond the visible right margin
?	line contains control characters, shown as dots

An ! means the line extends beyond the right terminal margin. To shift the screen image left, type Set Left 55 at the Visual home line and press F7.

A ? means the line contains nonprinting characters such as Nulls, Escapes, Bells, Tabs or possibly Roman-8 extended characters. Qedit replaces these characters with dots (.) in Visual mode, and does not allow you to make changes. These ? lines are not updated when you press Enter.

To edit Bells, Escape sequences, Tabs, ShiftOuts and ShiftIns in Visual, use Set Vis Bell, Set Vis Esc, Set Vis Tab, Set Vis SO and Set Vis SI. All these specify substitute characters to be shown instead of dots. To edit other control codes, use Modify or Change from the ===> line. If you turn Set Editinput Extend Off, Qedit regards Roman-8 characters as nonprinting noise and show them as dots.

Using Your Keyboard

In Visual mode, the keyboard gives you the power to move around the screen, edit text, and control the flow of Qedit.

Moving the Cursor

You move around the screen using the cursor keys and others:

Cursor Left	Move one space to left
Backspace	Move one space to left
Cursor Right	Move one space to right
Cursor Up	Move one space up
Cursor Down	Move one space down
Return	Down to next line, back to column 5
Home Up	Move to ===> line
Shift-Home	Move to bottom of screen
Tab	Move to next right Set TAB column
Shift-Tab	Move to next left Set TAB column
Prev Page	Only moves around terminal memory
Next Page	Only moves around terminal memory

Editing the Text Lines

You revise the screen image using these keys:

Space bar	Move cursor right and erase character
any char	Overwrite cursor and move it right
Del Char	Remove character at current cursor
Ins Char	Enable "insert"; use again to disable
Ins Line	Insert blank line above current line
Del Line	Delete line at current cursor
Clear Line	Erase to the end of the line
Clear Display	**Avoid!** Recovery: Home Up,*,F7

To save the changes you have made on the screen,

Enter	Send screen image to Qedit, update file

Control Functions

To return from Visual mode to Line mode:

F8	exit from Visual

Some other keys:

Select	Useless in Qedit
Stop	Do not use in Visual
Break	Disabled in Visual
Reset	Use if screen locks up, press Enter
Esc	First key of Escape sequences
Del	Does not delete anything!

Reflection for DOS Keyboards

If you are using a PC with Reflection for DOS, you need to map the PC keys into the HP keys.

Note that the PC keyboard has two keys labeled Enter, which are used differently in Qedit. The Enter key above the Right Shift key is called the Return key in this manual, and is used to execute commands in Line mode. In Visual mode, this key moves the cursor down by one line. The other Enter key (on the numeric keypad) is called the Enter key, and is used to update the screen in Visual mode.

Here are the default Reflection keystrokes for common functions:

Terminal Keyboard	Reflection Key Sequence
Enter	Enter on the numeric keypad. If that doesn't work, try the "+" on the numeric keypad, or try Shift-F10
Home Up	Control-Home
Shift-Home	Control-End
Ins Line	Alt-I
Del Line	Alt-D

Clear Line	Alt-K
Clear Display	Alt-J (avoid in Visual!)
User keys	F9
System keys	F10 (then F7 for help)

Additional Functions	Reflection Key Sequence
Begin Line (Column 1)	Home
End Line	End
Help about Reflection	Alt-H
Exit	Alt-X

Other PC Keyboards

AdvanceLink is similar (Alt-H is help, Alt-I is Insert Line, Alt-D is Delete Line), but Clear Line is Alt-L, and Enter is Alt-F3. Other terminal emulators have their own keystrokes for common functions. See your emulator's manual for details.

Function Keys

Much of the convenience of Visual mode is due to the power built into the eight user function keys: F1 through F8.

F1	Update and go to next page
F2	Roll Up Screen *n* lines, as per Set Vis Roll
F3	Findup (search back for current string)
F4	Find (search ahead for current string)
F5	Backward One Page
F6	Forward One Page
F7	Execute command typed in ===> line
F8	Exit from Visual back to Line mode

F1: Update and Go to Next Page

Qedit reads the current page and updates the file, then displays the next page. The **F1 key** combines the Enter key and F6 (Forward) in a single key. However, F1 does not execute any command typed in the home line as the Enter key would.

F2: Roll Up Screen

Qedit clears the screen and displays a new one that is rolled up *n* lines (default: 6), where *n* is controlled by Set Vis Roll.

F3: Findup - Previous String

Qedit searches backward in the file, starting from the * line, until it finds a line that contains the current string. Qedit clears the screen and displays a new page, with * positioned at the line that contains the found string. Visual also displays the target string on the Status line.

Before you can use F3, you must establish the string for which to search. Type the string in quotes prefixed by a circumflex (`^"string"`) at the `===>` on the home line and press F7, to do the first Findup.

F4: Find - Next String

Qedit searches forward in the file, starting from the * line, until it finds a line that contains the current string. Qedit clears the screen and displays a new page, with * positioned at the line that contains the found string. Visual also shows the target string on the Status line.

Before you can use F4, you must enter the target string. Type the string in quotes (`"string"`) at the `===>` on the home line and press F7, to do the first Find.

F5: Backward One Page

Qedit clears the screen and displays the previous page. By default, the top line of the original screen becomes the bottom line of the new screen. Use Set Vis Carry to change the number of lines carried over to the new screen.

F6: Forward One Page

Qedit clears the screen and displays the next page. By default, the bottom line of the original screen becomes the top line of the new screen. Use Set Vis Carry to change the number of lines carried over to the new screen.

F7: Execute a Command

Use the F7 key to execute commands. The current screen is not updated, unless you have Set Vis Update On. Type whatever command you want to execute after the ===>. This includes "strings" to find, Qedit Line mode commands such as Open or Justify, MPE commands, calculator commands (=5/6), and special Visual commands (e.g., * for Refresh, ? for Help). Then press F7. Qedit reads only the home line and executes the function. To first save your screen changes and then execute, use Enter instead of F7.

See the section "Home Line Commands" for complete details.

F8: Exit from Visual

To return from Visual mode to Line mode, use the F8 key. Press F8 again once you are in Line mode to exit Qedit and return to MPE (: prompt). If for some reason F8 fails to exit from Visual, type / at the ===> and press F7 or the Enter key. This should get you back to Line mode.

Browsing Through Your File

Line Number. Move to a specific line (e.g., to line 45).

```
===>45 F7
```

> and <. Move ahead or back a page. Use with a number to move several pages (e.g., ahead 3 pages).

```
===>>3 F7
```

+ and -. Move forward or backward any number of lines (e.g., back 200 lines). If you do not specify a number, the default is the number of lines configured by Set Vis Roll.

```
===>-200 F7
```

~ The Tilde Key. Return to the "most recent" screen. If you jump from line 1500 to line 451, ~ sends you back to 1500. This is handy if you jump briefly to another part of your file to check something then want to get back to your original location.

The tilde is also available from line-mode but it has to be enabled by removing it from the list of string delimiters. In order to do this, you could do the following:

```
/V stringd
Set STRINGDelimiters "|\~{}[]_@?!#>%&:'"
/S stringd "|\{}[]_@?!#>%&:'"
```

Notice that tilde has been removed from the delimiter list entered on the Set command.

```
===>~ F7
```

FIRST and LAST. Move to start or end of file.

```
===>first F7
```

Scrollup Character. This character can be entered in the cut-and-paste columns to scroll up in the file. A single character scrolls the number of lines defined by Set Visual Roll. If the character is entered more than once, Qedit scrolls up that many times the number of **Roll** lines. For example, enter 4 minus signs anywhere to scroll 4 X Roll

lines. The default scrollup character is a minus sign. It can be changed to something else with Set Visual Scrollup.

Cut-and-Paste

It is never necessary to remember line numbers in full-screen mode. Visual allows you to mark, hold, move, copy, replicate, or delete a block of text, all visually. This is called "cut-and-paste" and is done by putting special indicators in the two blank columns at the left of each text line before you press the Enter key. For example, DD indicates a block of text to be deleted.

Cutting Operations

Order Is Not Important (But One at a Time). You can enter the indicators in any order and on different screens, but 10,000 is the maximum number of lines you can cut. When you have defined a complete cut-and-paste task, Qedit completes the task and removes the indicators. You can only perform one cut-and-paste task at a time.

Single Line	Block of Text	Function
M	MM	Move line or block of text
C	CC	Copy line or block of text
D	DD	Delete line or block of text
H	HH	Hold a line or block of text
	HJ	Append block of text to Hold file
	JJ	Justify a block of text
Z	ZZ	Mark a line or block of text
	XX	Exclude a block of text from the display

Pasting Operations

A	Insert text "after" this line (or use F for "following")
B	Insert text "before" this line (or P for "preceding")
AH	Insert Hold file after this line (or use FH)
BH	Insert Hold file before this line (or use PH)
A0	Insert Hold0 file after this line (or F0)
B0	Insert Hold0 file before this line (or P0)

R	A line to be replicated after itself
R*n*	A line or block to be replicated *n* times (max. 9). (See "Copying a Block of Text" below.)

Display Enhanced. When the cut-and-paste task is partly defined, Qedit highlights the indicated lines and adds a warning to the status line.

Resetting Cut-and-Paste

You can cancel a pending cut-and-paste task (if you have not pressed the final Enter) by entering a period (.) in the ===> line and pressing F7.

```
===>. F7
```

Copying a Block of Text

Paste One Copy at a Time. Suppose you want to copy a section of text from one place in your file to another. Here is one way to do it. First, locate the screen containing the start of the block that you want to copy, using a string search via the home line. Move the cursor down to the first line you want to copy, then press Cursor Left twice and type "CC" in the blank columns provided. Press Enter and you should see that line highlighted in inverse video.

Second, find the end of the text section and mark the last line with another "CC". After you press Enter, you should see the entire block highlighted.

Third, go to the screen where you want to insert a copy of the text. Move the cursor down to the line *before* the desired insertion point, Cursor Left once and type "A" (for after). Press Enter and the block should appear.

Paste Multiple Copies at Once.

When working with a block of text, you can use the same cut-and-paste codes to mark the beginning and the end of the block (i.e., HH on the first line of the block and HH again on the last line). The only exception to this is the block replication code.

In this case, you would use RR to mark the beginning of the block and R*n* to mark the end of the block, where *n* represents the number of times you want that block replicated. For example, to have the same block replicated five times, you would enter R5. The new blocks are inserted immediately after the last line of the copied block.

The original lines marked for replication are written to the Hold0 file.

Cut-and-Paste Between Files

Using Visual mode's cut-and-paste functions, you can copy and move blocks of text **between** files.

You can only edit one file at a time in Qedit, but you can switch quickly between different Qedit files by Opening and Shutting them.

```
/o file1
Open file1  List * = 20
/o file2                {implicitly shuts file1}
Shut file1
Open file2  List * = 48
/o *                    {open the last file that was shut}
Shut file2
Open file1  List * = 20
/o *                    {open the second file again}
Shut file1
Open file2  List * = 48
```

Note: The * shortcut refers to the last Qedit file that was shut.

Now, to copy a block of text from *file1* to *file2*, use HH twice (just as you would use CC) to hold the block in *file1*. Then, open *file2*, and use AH or BH to paste in the text from the Hold file. To move a block from *file1* to *file2*, use the DD function to delete the block of text from the first file. The deleted block is stored in a temporary Hold file called Hold0 (Hold-zero). Now immediately open *file2* and use A0 or B0 to paste in the text from Hold0.

Dividing and Gluing Operations

Single line

V	a single line to be diVided
G	a single line to be glued
GJ	a single line to be glued with a space inserted

Block of text

VV	begin or end of the block to be diVided
GG	begin or end of the block to be glued

Dividing Lines in Visual Mode

To divide a line, use the V (diVide) cut-and-paste function in column 3 or 4, then insert the special field separator ("~") at each division point in the line. The default field separator is tilde ("~"), but you can

override this with Set Vis Field. If no "~" is found in the line, a blank line is added after the line.

What about dividing all the lines in a range? Use VV to mark the start and the end of the line range, then place the field separators in the first line of the range. Every line of the range is divided at the specified field columns. If no "~" is found, a blank line is added after each line.

When marking several division points, insert them into the first line of the block from **right to left**. As you insert them, they shift the following text to the right one space each. Otherwise, if you insert them from left to right, it is difficult to select the proper division point for subsequent fields.

Gluing Lines in Visual Mode

To Glue the next line to the current line, use a G in column 3 or 4. To Glue two lines with a space inserted at the joint, use GJ in columns 3 and 4.

To glue "pairs" of lines within a block, use GG to mark the start and end of the block.

By default, G and GG append text after the last nonblank character in a line, but it is also possible to glue text to specific columnar fields. You do this by inserting a field separator at the start of each field (mark the first line only). The default field separator is the tilde ("~"), but you may override this with Set Vis Field. If you specify three fields, G glues the next three lines to the first line. GG glues the next three lines to the first line, and then go on to the next group of four lines. If the precise column number where each field starts is important to you, insert the field separators from right to left, since each one that is inserted shifts the column numbers that follow off by one more.

Excluding Lines From Visual Mode Display

The XX indicators are used to mark lines that you do not want displayed in full-screen mode. Once marked, the block of text is replaced with a single line.

```
--- Excluded Area --- 10/34.5
```

This line shows the line numbers which are currently excluded. An excluded area setting is saved in the workfile so it's preserved across **Open**/**Shut** commands. To reset the excluded area and see the original lines again, type `.xx` on the Homeline and press Enter or F7.

The excluded area can also be defined using **Set Visual XX**. The current excluded area is displayed on the **Verify Visual** output.

Restrictions

The `Excluded Area` line must not be removed, altered or used in any way. This also means that you can not enter any indicators in the cut-and-paste area. If you wish to paste lines before or after the excluded area, you should use the appropriate cut-and-paste indicators on the line that immediate precedes or follows the `Excluded Area` line.

An excluded area can not be included in any other block operation such as ZZ, CC, MM or other XX.

If any of these rules are broken, Qedit displays an appropriate error message.

Justifying Lines in Visual Mode

Justification in text alignment is available in full-screen mode. To justify a block of text, simply mark the first and last lines in the block with the JJ indicator. If Qedit uses any justify default settings, they are defined by the Set Justify command. If there are no default settings, Qedit assumes the text should be justified within the current display width.

The justified lines are written to the Hold0 file. A single J indicator is not valid.

Renumbering Lines

When the insertion point is on the current screen, Qedit renumbers the screen if needed (and if Set Vis Renum is ON).

Inserting Blank Lines

When entering a lot of new text, it is tiresome to keep pressing Ins Line for each new line. To insert a block of 10 blank lines quickly, press Ins Line to create one blank line, Cursor Left twice, type R9, and press Enter. This reproduces nine copies of the blank line immediately after it (as well as updating the paragraph you just finished typing). Repeat as needed.

Hold Files

Visual has both an implicit and an explicit Hold file.

The Implicit Hold0 File. Any block processed by the CC, MM, JJ, RR, or DD indicators is also written to a disc file called Hold0 (Hold-zero). This allows you to copy the lines back into your workfile using A0 or B0 (add from Hold0, **A**fter or **B**efore the line on which you place the indicator).

The Explicit Hold File. The HH indicator writes a block to the Hold file without moving or modifying it. Use H for a single line. To copy the line(s) back into your workfile, use AH or BH. You may need a Hold file when creating a file that you want to compile, or when using the Use command. You must use HH (instead of CC) for copying text from one file to another.

When HH is used to mark the beginning and end of a block, it copies the block of text to the explicit Hold file. With the HH indicator, the current contents of the Hold file are erased and replaced with the marked lines.

If you want to append a block of text to the Hold file, you can use the HJ indicator. HH or HJ can be used to mark the first line. However, HJ must be used to mark the last line. You cannot hold-append a single line of text, which means you can append only two or more lines. With the HJ indicator, the current contents of the Hold file are preserved and the block of text is appended to it.

Marking Changes Without Using Line Numbers

The ZZ indicators mark a group of lines that you want Qedit to remember. Use Z to mark a single line. Note: "Z" for a single line is valid only in Visual mode; in Line mode, use "ZZ" to mark a single line. See the ZZ command in the "Qedit Commands" chapter for further information. Once marked, the lines are displayed at half-bright intensity and you can refer to them in any home line command by using ZZ where the line numbers are expected. This is especially useful when listing lines to the printer, changing or appending strings, and formatting text:

```
===> list $lp zz  F7
===> change "bob"Robert" zz  F7

===> verify zz  F7        {check current ZZ range}

===> zz off  F7           {cancel ZZ range}
```

Paste from a Non-Qedit File

If you want to copy text into your current workfile from another file that is not a Qedit file, you cannot use the methods described above. You cannot Open the second file if it is not in Qedit format. Instead, use the List command to find the portion of text that you want to add from it (without Shutting the first file). Then, use the Add command to paste in the text.

```
===>list xxx
===>add * = xxx 10.7/22.9
```

Home Line Commands

All Qedit commands are supported in Visual mode. To do a command, such as Listf or ls, press the Home Up key to reach the home line, then type your command after the ===> and press F7 or Enter. To execute a command, such as Change, on a subset of the file, first use the ZZ cut-and-paste indicators to mark the subset and then use ZZ in the command. After most ===> commands, Qedit prompts you for more commands ("Next command [Visual]"). Type in more commands, or return to your Visual screen above, by pressing the Enter or Return key.

Qedit accepts each command, executes it and goes back to the "Next command" prompt. There are a few exceptions to this process. By default, when you enter an Open command, Qedit assumes you want to edit the file immediately and switches into full-screen mode automatically. If you wish to disable this feature, enter Set Visual Editonopen Off.

If the tilde has been removed from the list of string delimiters (see **Set Stringdelimiters**) and you enter a tilde "~" at the "Next command" prompt, Qedit uses the current line number associated with the tilde, makes it the current line and goes back into Visual immediately.

Finding Strings

To search for a string, simply type it in quotes at the ===> line and press F7 or Enter.

```
===>"string"   F7
```

Qedit will find the **next** line containing that string, display the page around it, and show the target string in the Status line. To find the next occurrence of the same string, press F4.

To find the **previous** occurrence of a string, prefix the string with a circumflex.

```
===>^"string"   F7
```

To find the next previous occurrence, press F3.

You may delimit strings with any of the following characters:

~	Tilde
!	Exclamation mark
#	Number sign

&	Ampersand
_	Underscore
|	Vertical line, Up-line
"	Quotation mark
'	Apostrophe, Single quote
\	Reverse slant, Backslash

You may use single quotes (') if you do not have Set Decimal On. Note that, with this syntax, Qedit permits a few less characters in Visual mode than it does in Line mode because Visual mode uses these characters for other purposes. For example, the question mark is used to get quick help about Visual mode, instead of as a string delimiter. If you insist on using other delimiters, you should use the Find command on the ===> line.

```
===>F :string:      F7
```

Changing Strings

You can change strings on the screen by entering a Change command on the ===> line.

```
===>c "niether"neither" */*+19  F7
```

Help on Visual Mode

To get help, press Home Up, type ? and press F7 or Enter.

```
===>?  F7
```

The ? command gives a one-screen summary of Visual mode. For complete on-line help on Qedit, including Visual, type HELP in the ===> line and press F7 or Enter.

```
===>help  F7
```

For help on a specific command, type HELP [*command name*]. See the Help command in the "Qedit Commands" chapter. To get out of help, press F8.

Compile, Link, and Run

You compile your file using the home line. Just type the proper compile command in the ===> line and press F7 or Enter. For example, to compile a current COBOL file:

```
===>cob85xl *  F7
```

In fact, you can execute any MPE or shell command in the ===> line. You can :Link and :Run, :Listf, :Showjob, ls, and even execute UDC commands or shell scripts, just as you do Qedit commands.

Formatting Paragraphs

To format a screen paragraph, mark the paragraph with ZZ cut-and-paste indicators, then use a Justify command that includes a ZZ. For example:

```
===>justify both margin 68 zz  F7
```

If every paragraph ends with a blank line, you can Justify a paragraph by using the relative line number on the screen. Justify will start at that point and continue until it finds a blank line:

```
===>justify both margin 68 *+2  F7
```

For more information on Justify, see the Justify command in the "Qedit Commands" chapter.

Undoing Changes in Visual Mode

After you have made some changes to your screen in Visual mode and updated the file by pressing Enter, you may decide you don't want those changes after all. You can use the Undo command to cancel these changes.

All of the changes you make on the screen before pressing Enter, are treated by Qedit as one "undo-able" command, except for cut-and-paste operations. Qedit always executes a cut-and-paste last after updating the file with any other changes, no matter what order the changes were made in. This means that you can choose to undo just the cut-and-paste operation, or undo it and all of the other changes. You can continue undoing your previous changes until the file is back to its original state.

Refreshing the Screen

If you make changes to the screen, then decide not to keep them **before** you press Enter to update your screen, how do you get your original text back? You *refresh* the screen by typing a * on the home line, then pressing F7, F1 or Enter (or any function key with Set Vis Update On). Use the Undo command if you press Enter and then decide that you don't want to keep your changes.

If you insert so many new lines that you push the column template line right off the bottom of your screen, don't worry -- it's not really gone. Qedit won't update your screen without the template line, however. Press Next Page (Pg Dn) to pull up the next screen of display memory.

You have a problem only if you inserted so many lines that you pushed the template line right out of display memory, and even then you can still recover your changes. See the *Errors in Visual* section of Appendix E, regarding qscreen.

Screen Refresh is particularly useful if you've pressed Clear Display by accident.

```
===>*    F7
```

When using Set Vis Update On to automatically update the screen, use *> F7 or *< F7 to move ahead or back one page, without updating the current page.

Other Line Mode Commands

You may enter any Line mode Qedit command in the ===> line, including Opening another file, MPE % commands for an external program such as MPEX, and calculator commands (=). The ZZ cut-and-paste indicator can be used to mark a group of lines for use in any Qedit Line mode command.

```
===>list $lp $include zz   F7
```

Truncated Home Line

When editing a file with short records (e.g., Set Lang Text, Set Len 20), the right margin of terminal display memory is set to match the record length. This means that when typing home line commands you wrap the status line at the same width as the records (very inconvenient if the record length is 3 bytes!). You can, however, cursor past the right margin to type a longer command. Therefore, Qedit expands the right margin when you use F7 to execute the home line command, making it possible to execute a long command even when the data length is short. Qedit cannot expand the right margin if you press Enter (and may cut short your command).

Exit from Visual

If your function keys do not work for some reason, you may not be able to use F8 to exit from Visual. Instead, press Home Up, type / and press Enter. This updates your current screen and returns you to Line mode.

```
===>/    F7
```

Getting a Quick Start with Line Mode Editing

Introduction

You don't have to learn every command in order to use Qedit. With just a few of the basic functions, you can take care of editing job streams, programs, memos, or big text files. First, find out how to run Qedit on your system. Your system manager may have set up an easy way to access Qedit (try typing `qedit`). Look for a slash prompt (/ on MPE or qux/ on HP-UX), which tells you Qedit is ready to go.

This introduction will make the following activities familiar to you: adding lines to a file, looking at the contents of files, searching files for specific characters, changing one line or many lines, deleting, moving, and copying lines, and saving files. In the examples to follow, watch for comments on the right-hand side, enclosed in curly braces. Whatever you see in { } is an explanation, not part of the command, although Qedit will accept it. Press Return after each command line. When you finish your session, getting back out of Qedit is easy. Type Exit, and press the Return key:

```
/exit
```

Adding Lines to a File

You add text with the Add command. Qedit numbers each line you add. Pressing Return at any spot in the line moves you to a new line. This means that you can put a blank line into your text if you press Return twice in a row. Qedit continues to add your lines of text until you type // (two slashes) at the beginning of a new line and press Return. Try typing Add right now, and Qedit moves the cursor and prints some identifying information:

```
/add                          {remember to press Return}
 QEDITSCR                     {Qedit displays this line}
 Temporary File List * = 1    {and this line too}
  1  _                        {go on, Qedit is waiting for you}
```

Continue to "add" by typing in this example:

```
  1    MEMO TO: Drama Staff, News Simulation Dept.
  2
  3    FROM:    Marie Reimer, Publicity Dept.
  4
  5    Please check your in-baskets daily and
  6    respond to your fan mail within a week.
  7    //                       {stop adding for now}
/                              {Qedit is waiting again}
```

You can add lines anywhere in the file by typing Add followed by the line number where you want to start your insertion. For example, if you decide to date this memo, type at the slash prompt:

```
/add 2
  2.1  DATE:  November 18, 2000
  2.2
  2.3  //
/
```

You have added line 2.1 for the date, and line 2.2, which is blank. Line 2.3 is not put into your file, since typing the double slash stopped the adding. Notice that Qedit used line numbers that would fit between line 2 and line 3. Now, if you want to see what the whole thing looks like, type List ALL at the slash prompt.

```
/list all
  1    MEMO TO: Drama Staff, News Simulation Dept.
  2
  2.1  DATE:  November 18, 2000
  2.2
  3    FROM:    Marie Reimer, Publicity Dept.
  4
  5    Please check your in-baskets daily and
  6    respond to your fan mail within a week.
/
```

Looking at the File

The command for looking at the file is List. But you can do much more than List ALL. For example, you can list a file you're not even working on. Our sample memo is a temporary file, in your group, named Qeditscr, but you could look at a file in another group now without harming the memo by typing, for example:

```
/list qedhint.help.robelle
```

The file *qedhint.help* may be scrolling by on your screen, but don't panic. If you change your mind about looking at it, you can stop the listing by holding down the Control key and pressing "Y".

You may choose to look at just a small part of the file. To prove that the memo, although temporarily gone from your screen, is not lost forever, look at two lines of it:

```
/list 3/4
  3    FROM:    Marie Reimer, Publicity Dept.
  4
```

Instead of listing all, you limited the range of lines to be listed. A range of lines, called a *rangelist*, can have specific line numbers (such as 3 in the above example), words like "first" and "last", relative line numbers such as -3 (means the third line back) or +10 (tenth line ahead), or a combination.

```
/list first/2,+1,last-2
  1    MEMO TO: Drama Staff, News Simulation Dept.
  2
  2.2
  4
```

The slash / separating the numbers (or words) symbolizes the word "to". Rangelists can also contain strings. See the section on strings (called *Searching the File*), or the "Glossary" for definitions of *rangelist* and *string*.

Browsing the File

If you want to browse through the file, the command you need is **LJ**. LJ stands for List-Jump. Qedit shows you a screen of text, prints

```
More?[yes]
```

at the bottom of the screen, and waits for you. If you press Return, Qedit displays the next screen. You can stop browsing by pressing Control-Y, typing NO or just N, or by typing //. Also, you can type any command, and Qedit stops browsing to execute it. To request a List-Jump:

```
/lj 6                      {begin browsing at line 6}
/lj qedhint.help.robelle   {browse entire hints file}
```

Searching the File

So far, you typed line numbers to specify which lines you wanted to see. There is another way to list lines, and that is to specify an identifying *string*. Put anything in quotes and it's a string. Qedit lists all the lines that contain that exact same "anything".

```
/list "your"
  5    Please check your in-baskets daily and
  6    respond to your fan mail within a week.
2 lines found
```

There are two occurrences of "your" in the file, one on line 5 and one on line 6.

Strings can help you find a particular place in the file quickly.

With the commands Find and Findup, you can go to the next consecutive location of a string. Find searches the file from your current location to the end. Findup searches backwards from where you are to the beginning. So in order to search a file for a date scattered throughout it, type:

```
/find "January 18"       {search forward from current line}
```

Or, search back through the file with

```
/findup "January 18"
```

Qedit displays the next line containing "January 18". To search again for the same string, just type Find (or Findup). You can abbreviate "Find" to "F" and "Findup" to "^".

```
/f
```

To search for a different string, just type F "*new string*".

Editing Lines

Suppose you want to change the date of your memo. You could do it the slow way, first deleting the line, then adding a replacement line with the new date. But instead of all that retyping, try the Modify command. Modify has a lot of power. Here's how to use it:

1. Type *M* and the line number.
2. Qedit displays the line, and you move along on the line below it by pressing the space bar.
3. Stop at the point where you want to make your correction.
4. Type in the change to be inserted and press Return.
5. Qedit displays the entire corrected line for your approval. Make another correction if you want, and when satisfied, press Return again to accept the corrected line and get back to the slash prompt.

An example:

```
/m2.1
  2.1  DATE:  November 18, 2000
                          9        {move with the space bar}
                                   {press Return}
  2.1  DATE:  November 19, 2000  {press Return again}
```

Here is a partial list of special things you can do with Modify:

^B	insert text Before this column
^D	DELETE text from this column onward
^L	add text after the LAST column in the line

^O	OVERWRITE (or replace) columns
^T	TRAVEL over the line without changing it
^G	GOOFED. Put the line back the way it was, please

Note: The little symbol ^ is a shorthand way of saying that you hold down the Control key (on some keyboards abbreviated Ctrl) while at the same time pressing the letter. For example, ^B (or Control-B): keep the Control key down with one finger while with another, type a B. These symbols won't show up on your screen.

This command is easy to use but awkward to describe; you'll understand how to use it much faster if you give it a try. Let's take a typical example, and modify line 5 of our memo. Begin by typing "m5" and, of course, pressing Return. Then, to replace "daily" with "every day", our first step is to delete the word. Use the space bar to move to the column under the "d" in "daily". Press ^D (you won't see anything, remember), then space across all the columns you want to delete. **Don't press Return yet**.

The second step is to insert the two new words. Press ^B and type "every day". Now press Return to see the line with the revisions.

Qedit lets you see your revisions and continue modifying with as many different changes as you can fit into one pass, before you press Return. In order to make changes at different locations in a line, press ^T to space over the intervening characters without disturbing them. If you goofed, press ^G instead: you'll get your original line back.

The final step is to accept the revisions by pressing Return one last time.

If your fingers are so trained to MPE's style of Modify (e.g., D for delete) that you cannot remember to use the Control key, do not despair. As with most things in Qedit, there is a configuration option to solve this problem. The command Set Mod HP instructs Qedit to accept HP-style modifies (i.e., MPE modifies such as D and I), instead of Qedit-style. See the *Modify* section of the Set command.

Global Changes

There is another way to modify lines in your workfile. The Change command allows you to make changes throughout the entire file, without the bother of working on each line one by one. For example, with one Change command to your memo, you can replace all the colons with dashes.

```
/change ":"-" all
  1    MEMO TO- Drama Staff, News Simulation Dept.
  2.1  DATE-  November 19, 2000
  3    FROM-    Marie Reimer, Publicity Dept.
3 lines changed
```

Using the Change All command is a one-way street. If we now decide we don't like the dashes and want to get the colons back, observe what happens to Line 5.

```
/change"-":" all
  1    MEMO TO: Drama Staff, News Simulation Dept.
  2.1  DATE:  November 19, 2000
  3    FROM:    Marie Reimer, Publicity Dept.
  5    Please check your in:baskets daily and
4 lines changed
```

This second Change command has gotten us into hot water. Luckily, Qedit has an Undo command that takes your file step-by-step backwards to put it back to the way it was. See the Undo command in the "Qedit Commands" chapter.

CJ Command

If you're not sure what the consequences of a global change will be, use the CJ command. CJ stands for Change-Jump. Qedit shows you each line it means to change, and waits for you to approve, to change your mind, or to modify that line. Then Qedit jumps to the next occurrence of your string, and repeats its question until you have dealt with all occurrences of the string in the file. To accept the default answer of NO (i.e., *don't* replace the string), shown in square brackets, just press Return.

```
/cj":"-" all
  1    MEMO TO: Drama Staff, News Simulation Dept.
Change okay (Y,N or Modify) [No]:  {press Return}
  2.1  DATE:  November 19, 2000
Change okay (Y,N or Modify) [No]:  {press Return}
  3    FROM:    Marie Reimer, Publicity Dept.
Change okay (Y,N or Modify) [No]:  {press Return}
  5    Please check your in:baskets daily and
Change okay (Y,N or Modify) [No]:Yes
1 line changed
```

You can use the handy ^Y to stop in the midst of change-jumping just as you used it to stop listing.

Rangelist

You can also specify individual lines or a rangelist to Change. For example,

```
/change "Dept."Department" 1/3
  1    MEMO TO: Drama Staff, News Simulation Department
  3    FROM:    Marie Reimer, Publicity Department
2 lines changed

/change "Drama Staff, "" 1  {changes string to nothing}
                            {i.e., deletes it}
  1    MEMO TO: News Simulation Department
1 line changed
```

Copying Lines

Copying lines is a variation of the Add command. One reason we might want to copy lines is to make a general-purpose form out of our memo. We can keep a sample memo form at the beginning of the file, then copy it to the end of the file and fill it in whenever we need to communicate. This is how to do it:

```
/add last = first/4
  7    MEMO TO: News Simulation Department
  8
  9    DATE:  November 18, 2000
 10
 11    FROM:    Marie Reimer, Publicity Department
 12
6 lines COPIED
```

Qedit copies the *rangelist* (*first/4* = first line to line 4) *after* the indicated line (here, *last* line in file). To accomplish our goal of placing the sample memo template at the *beginning* of the file, we'll have to move the first six lines so they follow our new sample. Before we try *moving* lines, a last tip on copying: you can copy lines from an external file by including the file name in the command, placed after the equals sign and right before the rangelist.

Moving Lines

Moving is very similar to copying; it's another form of the Add command. But, instead of using the *equals* sign, use the *less-than* sign. You can specify:

```
/add 12 < 1/6
 13    MEMO TO: News Simulation Department
 14
 15    DATE:  November 18, 2000
 16
 17    FROM:    Marie Reimer, Publicity Department
 18
 19    Please check your in-baskets daily and
 20    respond to your fan mail within a week.
8 lines MOVED
```

Qedit moves the *rangelist* (in this case, lines 1 to 6) *after* the indicated line (in this case, 12). In case you were wondering, we could have used "last" instead of the number "12". You can add, move, or copy lines to any spot. In fact, we could have copied the first six lines to the

beginning of the file in the first place, but then we wouldn't have had this fascinating "move" example. The result of this particular move is

```
/list all
  7    MEMO TO: News Simulation Department
  8
  9    DATE:  November 18, 2000
 10
 11    FROM:    Marie Reimer, Publicity Department
 12
 13    MEMO TO: News Simulation Department
 14
 15    DATE:  November 18, 2000
 16
 17    FROM:    Marie Reimer, Publicity Department
 18
 19    Please check your in-baskets daily and
 20    respond to your fan mail within a week.
```

Deleting Lines

To demonstrate the Delete command, we'll get rid of our memo template. On some systems, Qedit asks for confirmation before deleting a large number of lines. If so, you can cancel the deletion just by pressing Return; to confirm the deletion, type "yes" and press Return. The abbreviation for Delete is simply D :

```
/d first/12
  7   _MEMO TO: News Simulation Department
  8   _
  9   _DATE:  November 18, 2000
 10   _
 11   _FROM:    Marie Reimer, Publicity Department
 12   _
DELETE 6 lines [no]? yes
```

If you typed "yes" without due consideration, you now have a chance to take it back. Press Control-Y, and Qedit saves your bacon with the message "Undeleted!" But you must press Control-Y immediately: if you do anything else between the deletion and the rescue, Qedit will commit to the deletion. However, in this situation the Undo command can bring your lines back, even if you have made more changes. You must undo each change to the file in reverse order. See the "Qedit Commands" chapter of the manual for details.

Help Command

On-line help is available on every topic in Qedit. After you've become an expert with the commands introduced here, you can use Help to teach yourself all sorts of amazing new commands. To get Help, type a question mark or the word HELP.

```
/help
```

or

```
/?
```

Qedit responds with a list of its commands, and at the bottom of the screen, a list of keywords. Type the keyword of the topic in which you're interested. For example, one of the keywords is "Full-Screen". Get an introduction to full-screen mode by typing:

```
>full-screen
```

Did you notice that the Help prompt is different from Qedit's regular prompt?

When you asked for Help, Qedit filled your screen with lists. To learn about some of the commands in the list, (e.g., the Add command), type the keyword:

```
>commands
```

and Qedit gives you some general information on the topic of commands. At the bottom of the screen is a list of keywords. Type the one in which you're interested:

```
>add
```

Qedit responds with further information. You can backtrack your route and look at all the other possibilities too. Pressing Return takes you back one step at a time.

To exit from Help, press the Return key until you see the regular Qedit slash prompt again.

Saving the File

There are two commands that preserve your work: Keep and Shut. First, invent a name for your file. Naturally, two files cannot have the same name. The name must be a valid MPE file name. We've been working on a temporary file. To save it, name it:

```
/keep myfile1
```

When you want to work on Myfile1 again, type:

```
/text myfile1
```

and Qedit will copy Myfile1 for you to use. If you make changes to the file, remember to Keep it again before you leave Qedit to make the changes a permanent part of the file.

Open and Shut for Instant Access

Only Qedit files can be opened and shut. It is much faster to use the Open command than it is to use the Text command, because you make changes directly to the Open file. With a Text file, you must wait for Qedit to make a copy to which you make your changes.

Using the Shut command converts your file to a Qedit workfile. You can Shut a new file, or a file that you made a copy of (with the Text command). Name the file as described above.

```
/text myfile1
QEDITSCR               {copy of Myfile1}
16 lines in file
/shut myfile1
MYFILE1,OLD  Qedit File, # of lines=16
Purge existing file [no]?  Yes
File renamed from QEDITSCR to MYFILE1
```

Running Qedit under MPE

Introduction

To run Qedit on MPE, type this command:

```
:run qedit.pub.robelle
Qedit. Copyright Robelle Solutions Technology Inc. 1977-2001.
(Version 5.0) Type ? for help.
Today's Hint.  For full-screen edit, use Visual.
/
```

Qedit prints its version number and the hint of the day and prompts with "/". You type commands, ending each with Return. For example, to edit a file enter a Text command:

```
/text filename
```

To save your edits, use the Keep command.

Edit in Line Mode or in Full-Screen Mode

Initially you are in Line mode (you type command and text lines, ending each with Return). You can backspace over errors with Control-H (holding down Control while you press "H"), or use the Backspace key. Control-X cancels a line. The function keys give you eight quick functions: F1 = Visual, F2 = Roll up, F3 = Findup, F4 = Find, F5 = Browse backward one page, F6 = Browse forward, F7 = Listredo, and F8 = Exit.

Use the /VIsual command or the F1 key to switch to full-screen mode, where you edit a full screen of text using the terminal keys. The Enter key passes the revised screen back to Qedit, and the F7 key executes any Line command that you type on the home line.

To return from full-screen mode to Line mode, press the F8 key. To save changes to your Text file, use the Keep command. To get out of Qedit, type Exit or press F8 again.

```
/keep
/exit
End of program
```

If you forget to Keep your changes, Qedit warns that your changes weren't saved, you can rerun Qedit, reopen the temporary workfile (Open with no parameters), and save your changes.

Edit Several Files at Once

The temporary file called "Qeditscr" is Qedit's primary scratch file. Whenever you use the default options for Opening or Texting a file, your work will be in the Qeditscr scratch file.

How to Edit Several Files?

What if you want to edit two or more files, and copy lines between them? You could Text the first file, Hold the selected lines, Keep your changes, then Text the second file and insert the lines. However, if you are doing a large number of edits, the constant Text and Keep operations are inconvenient.

A faster method is to Text each file into an *extra scratch file* of its own. Then use the "Open ?" or the "Open *-*n*" command to switch quickly between them. By default, Text always copies the file into the Qeditscr scratch file. However, Qedit can supply up to eight extra scratch files. To Text a file called abcd into an extra scratch file, type:

```
/text abcd,new
```

When you Exit, Qedit checks whether you have any unsaved edits in any of your extra scratch files. If there are some unsaved edits, Qedit prompts you to "Discard?" them or to stay in Qedit to save them with the Keep command.

Starting a New Scratch File

Sometimes you start editing a new document and have nothing to Text to create the extra scratch file. In this case, use the New command *without parameters*.

```
/new
```

A new extra scratch file is created and assigned a sequential number (1,2,3...). If you use the Open ? command, you would see "Extra Scratch file #2" in the list of files. If you do a Keep or Set Keep Name, you would then see the Keep file as the Text name in Open ?.

Qeditmgr Configuration Files

When you run Qedit, it automatically "uses" two configuration files if they exist: Qeditmgr.Pub.Sys and Qeditmgr in the same group and account as the program file (usually Pub.Robelle). The system

manager creates either or both of these files and puts Qedit commands in them to set Qedit options, print messages, and execute standard :File commands. To check the options for your site, List these files.

If you want a Qeditmgr file for your logon account or your logon group, run Qedit with Parm=1 or Parm=2. Parm=1 executes Qeditmgr.Pub.*logon*, while Parm=2 executes Qeditmgr.*logon*.*logon*. To execute both, run with Parm=3 (3 is 2 plus 1; you can combine PARM options). These files are in addition to the global Qeditmgr files, which are always executed first.

```
:run qedit.pub.robelle;parm=1  {uses Qeditmgr.Pub}
```

When you run Qedit, it attempts to execute commands in global configuration files: Qeditmgr.Pub.Sys and/or Qeditmgr.Pub.Robelle. The Qeditmgr file, which can be a Qedit workfile or a Keep file, may limit Qedit users or do default Set commands. If you move Qedit out of the Robelle account, Qedit looks for the Qeditmgr file in its new location.

Limiting Compile Priority

If you want to restrict compiles to the DS or ES subqueue, put a COMPPRI command in your Qeditmgr file. The syntax is a little nonstandard, in that it acts like a Set command, but does not use the word Set.

```
COMPPRI=DS       {or COMPPRI=ES}
```

COMPPRI specifies the highest priority at which you can Compile within Qedit. Any Qedit compile commands automatically "create" the compiler in the lower priority. Qedit itself, and the user, remain in the original higher priority. In no case will the compile occur at a higher priority than that of Qedit. COMPPRI may only be executed via Qeditmgr; it cannot be entered from the keyboard.

Default Set Commands

Qedit treats the Qeditmgr file exactly like a usefile, so Qeditmgr can include any Qedit commands. The Set commands let you configure Qedit so it has the ideal defaults for your shop (e.g., Set Lang Cobol ...). Here is a typical Qeditmgr file:

```
{These are default qedit values for all users:}
comppri=ds                {force compiles into ds}
set lang cobolx all on
set whichcomp cobol 85    {CM compiles}
set whichcomp fortran 77  {CM compiles}
set x date list off       {mark changed lines with date}
set check on              {verify delete/format of >5 lines}
set list page on          {LP listings interpret $page}
set udc udc.catalog.robelle
z=list */last             {define Z command}
```

For details on Set commands, refer to the "Qedit Commands" chapter.

If one set of defaults is not appropriate for everyone on your system, it is possible to set up account and/or group Qeditmgr files. See the chapter "Running MPE under Qedit" for details. For security reasons, users cannot override the global Qeditmgr files with :File commands. This prevents them from getting around the limits imposed by the system manager.

Using Qedit in Batch

Qedit in batch is almost identical to Qedit in a session, except for answering questions. When Qedit asks a question in batch, no one is there to answer it. Therefore, Qedit does not expect an answer from $stdinx. Qedit assumes that you want your batch task to complete, so it always selects the option that will complete the command successfully. This is normally a "YES" answer, as in "yes, clear the file" or "yes, upshift the line". Qedit prints the question on $stdlist, and the answer that it has selected for you.

If you run Qedit from a batch job, but redirect $stdinx and $stdlist to the same terminal, Qedit acts as if it were in Session.

If you run Qedit in a REMOTE SESSION that was created from a batch job on the other machine, Qedit is unable to detect that it is really controlled by a job. So, Qedit operates in Session mode and waits for answers to all questions. You can use Set Interactive Off as your first command to override this.

When Qedit encounters an error in batch, it has no one there to correct it. Therefore, Qedit normally aborts. However, you can use Set Autocont On to override this abort, instructing Qedit to keep processing after errors in batch (i.e., automatically insert a :Continue before each command).

Summary of Parm= Values

1	Execute QEDITMGR.PUB.*logon*
2	Execute QEDITMGR.*logongroup.logonacct*
4	Execute INFO string once

8	Execute INFO string on each reactivation
16	Unused
32	Don't suspend on exit, terminate
64	Check with user before Exiting
128	Execute Info= string only
256	Suspend on info=file name and single file edit
512	Single file edit only (info= contains name)

Values may be combined by adding them together. For example, Parm=67 means "execute Qeditmgr files in the Pub group of my logon account and in my logon group (in addition to to the global qeditmgr files) and don't let me Exit without first double-checking".

If you run Qedit from within another tool that does not support Parm= on the :Run command, you can either use Info="-p *n*" or put the Parm value into the QEDPARMBITS JCW:

```
:run qedit.pub.robelle;info="-p 64"
:setjcw qedparmbits=64
:run qedit.pub.robelle
```

From the Posix Shell

The Posix shell does not have the concept of a Parm value. Previous versions of Qedit still try to retrieve the value and are ending up with unpredictable values causing unpredictable behavior. To get around this problem, Qedit tries to determine where it is running from. If it is run from the standard Posix shell, SH.HPBIN.SYS, Qedit assumes the parm value is entered via the -P argument. For example, to run Qedit with a value of 67 from the Posix shell prompt, one would enter:

```
/ROBELLE/PUB/QEDIT -p 67
```

All arguments are retrieved as if they had been entered in the MPE Info= string. So, any feature supported by the Info= mechanism also works from the Posix shell.

Exit and Entry Options

Following are explanations and examples of running Qedit with the different parameter and Info strings.

Exit with Verify

Some users find that they Exit from Qedit inadvertently by pressing F8 too many times. This can be irritating if you have many suspended son

processes, which are lost on Exit. To require user approval on Exit, run Qedit with Parm=64.

```
:run qedit.pub.robelle;parm=64
/e
Okay to exit [no]:
/
```

Info= First File to Edit

Info= can be used to pass Qedit the name of the first file to edit, unless you use Parm 4, 8 or 128 to define Info= as a command string.

```
:run qedit.pub.robelle;info="myfile"
/visual
```

If the file named is an existing file, Qedit either Texts a copy of it, or Opens it if the file code is 111. If the file does not exist, Qedit configures the Set Keep Name to create that file when you do a default Keep command (e.g., K with no parameters). To create a new Qedit workfile, use a :File command with Code=111:

```
:file newwork;code=111
:run qedit.pub.robelle;info="newwork"
```

Even though you passed in the first file name to Qedit, you can edit other files too.

Random Name for Primary Scratch File

If you use the Info= file name option or Set Work Random On, Qedit generates a random name for the Qedit scratch file, instead of using Qeditscr. This allows you to have multiple copies of Qedit in the same session without worrying about conflicts over use of Qeditscr. The scratch file is permanent and the name is QEDnnnnn in your current logon group. Even though random scratch files are created in MPE's permanent domain, they are temporary in the sense that Qedit purges them when you exit. For this reason, you must have Set Work Temp ON to be able to use random scratch files.

"Discard Changes?" on Exit

When you are using random, permanent scratch files, Qedit needs to purge them when it terminates. But you may not have saved your editing work yet. In that case, Qedit asks you "Discard changes?" and will not Exit/Purge unless you answer Yes:

```
:qedit.pub.robelle myfile
/visual
/exit
Discard your changes [no]:
/
```

Qedit can supply Extra Scratch Files as well as the Primary Scratch file. These too are checked on Exit to see if you left any edits unsaved.

Info= "-p 99" Specifies Parm Value

The Info value can specify the Parm bits as well as the first file name. You precede the file name by -p and a numeric value (e.g., -p 64 or -p %100 or -p $40). For example, to edit "myfile" and confirm "Ok to exit" on the Exit command, you could do the following:

```
:run qedit.pub.robelle;info="-p 64 myfile"
/visual
/exit
Okay to exit [no]:
```

Info= "-c cmdstring"

In addition to passing the Parm value and the edit file name, Info can specify commands to be executed, with the -c option. The -c is followed by the commands to be executed. If those commands contain a space, they must be enclosed in one of the Qedit quote characters; otherwise, the quotes are optional. Note that the -c must be lowercase, as in UNIX.

The Parm value, if any, is specified before the -c option, and the file name to edit, if specified, must be placed after the -c option. When both -c and a file name occur, the -c commands are executed after the file is accessed for editing. Here are some examples:

```
qedit "-c visual myfile"
qedit "-c :visual: myfile"
qedit '-c "set vis ab 3 bel 12;visual" myfile'
qedit "-c 'text abc;use fixit;k,y;e'"
qedit "-p 64 -c visual myfile"
```

The underscore character can be used as a string delimiter and as as valid character in a Posix filename. If you enter a filename containing an underscore in the INFO= string parameter, Qedit interprets the underscore as a string delimiter. This is a known problem and we are working on a permanent fix for it. For example, if you enter:

```
run qedit.pub.robelle;info='-c "t my_history;vi"'
```

This command should start up Qedit, have it open the Posix file called `my_history` and go into full-screen mode automatically. However, since the underscore is seen as a string delimiter, whatever follows is basically ignored during command processing. Thus, the file is opened but Qedit stays at the line-mode prompt.

We hope to have a permanent fix in a future release. In the meantime, the workaround is to explicitly identify the underscore as being part of the filename. You can do this in different ways. Here are two examples.

```
run qedit.pub.robelle;info='-c t $file \my_history\;vi"'
```

The $file keyword and the backslash characters are used to clearly identify the filename. The other approach is remove the underscore

from the list of valid delimiters using the **Set StringDelimiters** command.

```
run qedit.pub.robelle;info='set stringd posix;-c "t my_history;vi"'
```

The $file approach is simpler as it only affects that particular command. The Set StringDelimiters approach should be used with caution as it might affect other commands during the edit session.

Parm 512 to Edit a Single File

Sometimes you want to invoke Qedit for a specific purpose, such as to edit order notes in a purchase order system. You are using Qedit as a dedicated tool for a specific purpose. In these cases, specify Parm 512 and pass in the file name through Info=. You are able to edit only that file, and it will be saved on exit. You will not be allowed to edit any other file.

```
:run qedit.pub.robelle;info="-p 512 -c visual myfile"
/exit
Save your changes (yes/no)?
```

Parm 512 is the same as the Basicentry entry point, except that the file name is specified through Info= rather than through :File Edttext. The functioning is the same, but the primary scratch file will be random instead of Qeditscr. Many tools do not allow you to specify an entry point when running a program, so Parm 512 gives you an alternative.

Info= An Empty File to Fill

You can easily start with an empty file, add text to it, and Keep it on Exit. Create the file before entering Qedit and use the single file Parm value:

```
:build abc.source;rec=-76,10,f,ascii
:run qedit.pub.robelle;info="-p 512 abc.source"
```

Info= Temporary File

You can edit an existing Temporary file, whether empty or not, and Keep it back into the same file name on Exit. Warning: Never use the ;Temp option on :File commands, only on the :Build command. And don't use ,Oldtemp either. Oldtemp has no effect on the creation of files. Using ;Temp on the :File command overrides the Close disposition of the file and causes Qedit to create unwanted, empty temporary files.

```
:build message;rec=-80,16,f,ascii;temp
:run qedit.pub.robelle;info="message"
```

Info= Can Create New Files

Info= file creates a new Keep file on Exit if one did not exist. To create a new Qedit workfile, use a :File command with Code=111. For example, these commands work whether **newfile** exists yet or not:

```
:run qedit.pub.robelle;info="newfile"
/add last=template
/visual
/exit

:file newfile;code=111
:run qedit.pub.robelle;info="newfile"
/add last=template
/visual
/exit
```

This method cannot be used to create a new temporary file. Build the temporary file before invoking Qedit instead.

Parm Values to Suspend or Not

When you exit Qedit, it either terminates or suspends, depending upon how you invoked it and what Parm values you specified.

What are the pluses and minuses of suspending? Unfortunately, many tools allow you to run Qedit, but do not notice if Qedit suspends when done rather than terminating. HPDesk has this problem, as well as any program that calls the Hpcicommand intrinsic to execute Run commands (e.g., native-mode PowerHouse). The next time you run Qedit from within the tool, you get a new copy of Qedit. Eventually you will have many suspended copies of Qedit, all consuming system resources. However, if you have a tool, such as Select or MPEX, that can reactivate suspended processes, activating an existing process is much more efficient on MPE than creating a new one.

If you run Qedit without any special options, it suspends on Exit by default; you can suppress this with Parm 32. You can also suppress suspend with Set Suspend Off. If you specified an Info= string (or use the Basicentry entry point), Qedit does not suspend on Exit; it terminates. To force Qedit to suspend, use Parm 256. When Qedit is reactivated, it repeats the steps that it does upon initial entry, except for execution of the configuration files.

```
:run qedit;info="-p 256 myfile" {suspend}
:run qedit;parm=32              {do not suspend}
```

Info= Commands Only

If you :Run Qedit with Parm 4, the entire Info= parameter is treated as a string of Qedit commands to be executed (up to 256 characters).

```
:run qedit.pub.robelle;parm=4;info="use jobfile;exit"
```

If you use Parm 4 and Info= when you run Qedit from a menu program, Qedit executes the Info= commands only once. If you want Qedit to re-execute those commands **every time** it is activated, use Parm 8.

If you want Qedit to execute **only** the Info= commands and not to prompt the user for input, use Parm 128. This is handy when you want to invoke Qedit to perform a specific task without user intervention:

```
:run qedit.pub.robelle;parm=128;info="reflect dir"
```

Also, if you want Qedit to suspend and repeat the Info= string (only) each time you activate it, combine Parm 8 and Parm 128 (makes Parm 136).

Remember, if you don't specify Parm 4, 8 or 128, Info= will be interpreted as a file to edit unless you precede the commands with the -c option.

Basicentry Option

Basicentry is on older option that provides the same capabilities as Info=file name. When you run Qedit with the Basicentry entry point, Qedit edits the file "Edttext" that you have defined via a :File command. Basicentry can be combined with Parm 4 and Info="command". For example,

```
:file edttext=abc.source
:run qedit.pub.robelle,basicentry; &
     parm=4;info="visual;exit"
```

If you are using Qedit from within another program, it is more efficient to have Qedit suspend on Exit so that you don't have to create a new process for each editing task. You can do this by combining Basicentry with Parm 256, which means suspend on Exit, or Basicentry and Parm 8, which means repeat the Info= string each time Qedit is activated.

Basicentry uses the same logic as Info=file name, vis-a-vis empty files, new files, Opening workfiles, temporary files, etc. Remember, never use ;TEMP or =OLDTEMP on you :File commands. You can use Basicentry to create a new temporary file:

```
:file edttext=message
:run qedit.pub.robelle,basicentry;parm=4; &
     info="set keep name *edttext,temp"
```

JCWs That Drive Qedit

Qedit has a number of JCWs (Job Control Words, a feature of MPE) that allow you to configure and direct the execution of Qedit. Most of

these have to do with the type of terminal you are using, but QEDITMGRTRACE allows you to see your configuration commands and QEDPARMBITS allows you to specify the Parm= values without a Parm= option on the Run command.

When you run Qedit, it must identify the type of terminal that you are using and determine what function-key labels to display. Qedit does status requests to detect the model number and the current width of display memory. This information is used to enhance the functioning of Qzmodify, Visual, Help and List. Qedit locks the keyboard during terminal identification and discards any user input that manages to get through. However, if you have Reflection typeahead enabled, this is not possible; be careful not to type during terminal identification in this case.

Qedit sets three JCWs to remember your terminal state: RCRTMODEL, RPCVERSION and RCRTWIDTH. If you run Qedit and these JCWs are already set, Qedit does not need to do the status requests of your terminal. To reset these JCWs and force Qedit to re-identify the terminal, use the Set Visual Stop command. You can set a fourth JCW, RCRTSTRAPSGH, to request nondefault handshaking in Line mode. The fifth JCW, RLABELDEFAULT, is described under "Function Key Labels".

RCRTMODEL JCW

This JCW can have any of these values:

0	Don't know terminal model yet, will check it
1	This is not an HP terminal, won't bother checking it
1234	This terminal or emulator is not fully-compatible with an HP terminal
2645	This is an old HP terminal without function key labels
2392,etc.	This is a newer HP terminal with labels
2393/2397	This terminal can have up to 160 columns of display
7009	A 700/9x terminal with 132-column ability

If you are using a 2645, you can save one status-request timeout by doing `setjcw rcrtmodel = 2645` before you :Run Qedit. If you are not using an HP-compatible terminal, you can avoid all timeouts by doing `setjcw rcrtmodel = 1` before entering Qedit.

Type 1234 Terminal or Emulator

Set the RCRTMODEL to 1234 if the terminal or emulator you are using does not support all the standard HP terminal features. For example, you should use this setting with hpterm. hpterm is a UNIX terminal emulator running under the X window system. It's a basic 2392 emulator. hpterm can not identify itself to Qedit, nor let Qedit change the display width by escape sequence (although you can configure the display width manually).

When RCRTMODEL is set to 1234 before you run Qedit, Qedit functions in the following manner:

1. It accepts the terminal as a terminal that is capable of more than 80 columns of display memory and of doing full-screen mode.
2. If you set RCRTWIDTH to some value between 81 and 256, Qedit accepts it as the manually set display width.
3. If you do not set RCRTWIDTH, Qedit attempts to sense the current display width and sets the jcw accordingly. The maximum width is 256 columns. Qedit can support up to 999 columns but, in these instances, the width has to be entered using the RCRTWIDTH variable or the **Set Term Columns** command.
4. Qedit sets the option that eliminates changes to display width: `Set MarginFixed On`.

   This option also ensures that the right margin is always set at the right edge of the display width. Normally the right margin is set at the last valid column of the file, which might be less than the display width. You can use this option with other emulators if you wish to stop Qedit from changing the display width.

   Please read the section on **Set Visual Marginfixed** to learn about its advantages and disadvantages.
5. If you use the **Set Term Columns** command to specify a new width, Qedit does not attempt to change the terminal with an escape sequence. Instead, it displays the following message and waits for you to change the width manually:

   ```
   Please change display width and press Enter:
   ```

   Qedit does not verify that you have done this correctly, so if you make a mistake, do another Set Term Columns command to fix the width.

6. **Set Visual Stop** normally resets all the jcws to their default state, forcing Qedit to re-identify the terminal. However, for hpterm, the RCRTMODEL and RCRTWIDTH jcws are not reset, since the terminal cannot be identified automatically. If you wish to stop using **1234** mode, you must reset RCRTMODEL to 0 manually.
7. **Set Visual Widen** should normally be set to 76 or 80 (default) with hpterm. Otherwise you will not be able to use the extra columns beyond 80.

RPCVERSION JCW

RPCVERSION can have any of these values:

0		don't know if this is Reflection, will check it
1		this is not Reflection, or it is too old
`wXyyy`, where		
	`w=0`	for display width can be expanded
	`1`	for display width cannot be expanded
	`2`	for 132-column VGA in Reflection
	`X=0`	for DOS Reflection
	`1`	for Macintosh Reflection
	`2`	for Windows Reflection
	`5`	for Qcterm emulator
	`yyy`=version number	(420 = 4.20)

You cannot do the :Reflect command if Xyyy equals 150 or 200. This same value is shown in Verify Visual as {Reflect=420}; if it says "Col=80 max", this PC emulator was unable to make display memory wider.

RCRTWIDTH JCW

This JCW is usually 80 for 80 columns of display memory. But if your terminal or PC is configured with more than 80 columns, Qedit sets this JCW to that width. Qedit must determine the width of display

memory in order to properly fold listings of lines that will overflow that width.

To change your Line mode display width while in Qedit, use **Set Term Columns**.

RCRTSTRAPSGH for Handshaking

The G and H straps of the HP terminal control datacomm handshaking. If you pull up your Terminal Config screen, it should look something like this:

```
InhHndShk(G) NO        Inh DC2(H) NO
```

Since these are "inhibit" straps, NO actually means "yes, do the handshake". G and H control whether the terminal waits for a DC1 and/or DC2 prompt character from the computer before sending input, such as on terminal status requests or upon pressing Enter in block-mode. If the straps are configured incorrectly, the symptom is a hung terminal (i.e., the terminal is waiting for a prompt character that is never going to come, or the terminal has sent the data before the computer was ready because it didn't wait for the prompt).

By default, Qedit sets these straps the way it appears will work best, based on your CPU and Term Type. The settings differ between Line mode and Visual mode.

Line Mode. Qedit starts execution in Line mode and immediately attempts a status check of your terminal. With a DTC or ATP, this usually requires a handshake, so Qedit should set G and H to NO. If you are using an X.25 network or a LAN, the network provides buffering of data sent by the terminal, so Qedit usually inhibits handshaking. These Line mode rules apply to both MPE V and MPE/iX.

Line Mode:	Serial	X.25/LAN
	G=NO, H=NO	G=YES, H=YES

Block-Mode. The situation in Visual mode is more complicated. You are in block-mode and when you press Enter, your terminal wants to send a screen of memory. To summarize the recommended G and H values:

Block-Mode:	Serial	X.25/LAN
MPE V	G=YES, H=NO	G=YES, H=YES
MPE/iX	G=YES, H=YES	G=YES, H=YES

MPE V has a complex system to stop your terminal from sending the data until the ATP is ready and there are enough memory buffers available in the CPU. The terminal sends a DC2 when you press Enter and MPE replies with an Escape code to Home Up and a DC1 to trigger the transfer. This arrangement only works if G=YES and H=NO.

MPE/iX improves the speed of block transfers by eliminating the Home Up and the DC1 trigger. Instead of sending a Home Up Escape code, MPE/iX enables a terminal option to do an automatic Home Up when you press Enter. That is why block-mode does not work on some older terminals. Instead of the DC1, the DTC provides a typeahead buffer for the entire screen contents when you press Enter in block-mode. Qedit sets G=YES, H=YES to inhibit handshaking on a DTC while in block-mode. However, the DTC does not have unlimited buffer space, so it uses XON/XOFF pacing to control the flow from the terminal. **You must enable your terminal's XON/XOFF Transmit Pacing,** which is not enabled by default.

Using block-mode over an X.25 network or LAN can be tricky. Theoretically, the network provides full buffering and no handshaking is needed, so set G=YES and H=YES on both MPE V and MPE/iX. However, the buffers may not be large enough for the transfer that Qedit makes in Visual. MPE/iX must work with the network to ensure that the terminal is configured to do an automatic Home Up on Enter, otherwise the terminal starts transferring from the position of the cursor at the time you press Enter.

Overriding Qedit. If you are using an unusual X.25 network to connect your terminal to the HP e3000, you may find that Qedit sets G and H incorrectly. Perhaps the network simulates a direct connection so well that Qedit cannot figure out that you are using X.25.

For these situations, Qedit has a JCW that allows you to specify exactly how you want G and H set in Line mode.

```
:setjcw rcrtstrapsgh = n
```

n	G	H	
0	no	no	(handshaking active)
1	no	yes	
2	yes	no	
3	yes	yes	(no handshaking, X.25)

Qedit only reads and never changes the value in this JCW.

To override the setting of G and H in Visual mode, use the Set Vis DTC option, setting it ON or OFF. You may have to experiment to find the right setting.

G & H Summary. In block-mode, Qedit decides how to set G and H. You can override that decision by doing Set Vis Classic On or Set Vis DTC On. When Qedit returns to Line mode, it needs to reset the G and H straps to some value. Again, Qedit makes a choice of its own, but it may not work on all networks. Therefore, the JCW allows you to override the reset values for G and H when exiting from full-screen mode to Line mode.

Trivia. These settings are called "straps" because in the earliest HP terminals, configuration settings were enabled or disabled by inserting a short piece of wire (no bigger than a staple) between two holes in the circuit board. Configuring by way of these short metal "straps" became known as "strapping your terminal". Today, of course, all configuration is done in terminal software by way of on-screen menus.

RLABELDEFAULT JCW

If you set the RLABELDEFAULT JCW before starting Qedit, you can specify what function-key labels appear upon entry into Qedit.

```
:setjcw rlabeldefault=0   {don't care}
:setjcw rlabeldefault=1   {terminal lacks labels}
:setjcw rlabeldefault=2   {show user keys}
:setjcw rlabeldefault=3   {show modes keys}
:setjcw rlabeldefault=4   {no keys -- blank}
:setjcw rlabeldefault=5   {F1 to F8 labels}
:setjcw rlabeldefault=6   {Qedit's labels}
```

If you wish to use Qedit's function keys in Line mode, set the RLABELDEFAULT JCW to 6 before running Qedit. To change the function key defaults while in Qedit, set the JCW and then use Set Vis Stop to force Qedit to re-initialize.

The memory lock function is useful because it keeps certain lines on the screen while scrolling the text. This function is controlled by the F6 key on the modes keys. When you start Qedit with something other than modes keys, switching between enabling and disabling memory lock can be annoying. Qedit provides a command to easily toggle memory lock.

If you want to enable memory lock, move the cursor to the last line you want to freeze and enter a dollar sign ($). When you are done, enter a dollar sign and a hyphen ($-) to disable memory lock.

QEDITMGRTRACE JCW

If the QEDITMGRTRACE JCW is set to a nonzero value, Qedit prints tracing messages for the Qeditmgr configuration files.

```
:setjcw qeditmgrtrace=1
```

The trace includes the name of each Qeditmgr file that Qedit attempts to open, the :File command that redefined the file (if used), and each command executed from the file.

QEDPARMBITS JCW

Qedit has options which are specified via the Parm= value of the MPE :Run command, such as Parm=64 to ask permission on Exit. If you don't have access to the Parm= option, you can put those values into the QEDPARMBITS JCW instead:

```
:setjcw qedparmbits=64
:run qedit.pub.robelle
```

The QEDPARMBITS JCW is only effective if the Parm= value received by Qedit is 0 (i.e., no Parm= option on :Run or Create).

QEDCURWFILE Variable

Qedit updates a variable, QEDCURWFILE, with the name of your current or last workfile. This gives you the ability to reference the current workfile easily from within a command file without having to pass it in as a parameter.

QEDSTOREDPWD and QEDPROMPTEDPWD Variables

When the Qedit for Windows client establishes a new connection, it transmits information about the passwords included in the request. Qedit updates two variables with the information: `QEDSTOREDPWD` and `QEDPROMPTEDPWD`. The first variable indicates which passwords are stored with the connection. The second variable indicates which passwords are prompted for.

Values for these variables can have up to 4 characters. Each character represents a password supported by MPE. The user password is identified by the letter `U`, the account password by the letter `A` and the group password by a `G`. If you're using VESOFT's Security/3000 and enabled session passwords, the variables might also contain the letter `S`.

Both variables are always created. If a variable does not have any of the passwords, it's value is set to asterisk `*`. For example, if the session and user passwords are stored with a connection, the variables will have the following values:

```
QEDSTOREPWD = SU
QEDPROMPTEDPWD = *
```

This gives you the ability to reference these variables from within a command file, a Use file or a Qeditmgr file.

Since these variables are accessible from the Qeditmgr files, they can be used to validate proper security procedures and settings. Combined with the `Exit` command, they can be used to implement tighter system access control. For example, a qeditmgr file might contain the following statements:

```
/if pos('S', qedstoredpwd) = 0
/   exit Session passwords must be prompted for. Contact system admin.
/endif
```

Qedit for Microsoft Windows

Introduction

Here we describe Qedit for Windows. Qedit for Windows client lets you edit local MPE/iX and HP-UX files from a single MS Windows program. It consists of a Windows editing client and an MPE/iX or HP-UX editing server that work together to edit your host files for you. To take advantage of Qedit for Windows, you need both the Qedit client and the Qedit server.

Qedit for Windows uses the popular TCP/IP protocol for communicating between the client and the server (this is the same protocol that you use to access the Web). Configuring the Qedit server software requires creating the correct TCP/IP environment for Qedit for Windows.

Server Process

By default, the Qedit server uses the MPE/iX Remote Process Management (RPM) service to start each server session. With RPM, the client sends a program name and an Info= string along with logon information to the RPM listening process. The RPM listening process then validates the user logon and starts the specified program with the Info= string. The server process is seen as an MPE/iX session, but the process is not included in your user limit. The Qedit server software is not available for MPE V.

Logon Sequence

When you use an MPE/iX connection to open a file in Qedit for Windows, this is what happens:

1. A new host session is started, and the user name and passwords are validated (this includes additional logon processing by products such as SECURITY/3000).

2. The Qedit client asks for the program Ci.Pub.Sys to be run with an Info string. For example,
   `qedit.pub.robelle "-d<ip-address>"`
   The "<ip-address>" is the IP address of the Qedit client.
3. The Qedit process starts, and it verifies that you are authorized to use Qedit in server mode.
4. Any system-wide Qeditmgr files are always processed. Processing account and group Qeditmgr files is optional and must be enabled in the client.
5. The requested file is opened.
6. A response is sent to the client.

It is important to note that logon UDCs are not executed as part of this process. Any environment variables or file equations that are set up as part of a logon UDC will not be in effect for the Qedit server process.

The default protocol is usually sufficient at most sites. However, some customers use firewall devices that further restrict access to their HP e3000, in which case the default protocol might not work.

For this reason, the server offers the Firewall protocol. Because the Firewall protocol needs to have a Qedit listener running at all times, you should add it to your system startup procedure. If the job is not running, all new connection requests are rejected.

```
:stream qserver.qeditjob.robelle
```

Currently, the only way to stop the job is to abort it.

With this setup, the server is run as a listener similar to a UNIX daemon. It waits for incoming connection requests on a specific port number. Like the HP-UX server, the default port number is 7395. If you want to use a different port, you have to modify the Qserver job stream. Upon receiving a request, the listener passes the information down to RPM, which then takes over.

QEDSERVMODE JCW

The Qedit server process always executes the commands in the system-wide Qeditmgr files (e.g., Qeditmgr.Pub.Sys). Processing of the account and group Qeditmgr files can be enabled in the client. To indicate that you are using the Qedit server in either the server or the non-server mode, which are not exactly the same, we provide a JCW called QEDSERVMODE. QEDSERVMODE is set to zero (0) if you are in non-server mode, and non-zero if you are in server mode. If you are using the Qedit server, you should modify your Qeditmgr file so that few, if any, commands are executed in server mode. For example,

```
if Qedservmode = 0 then
   set extprog mpex.pub.vesoft
endif
```

Log Files

The Qedit server can *only* communicate with Qedit clients. To help system managers see what is happening with the Qedit process, Qedit for Windows writes to three log files: the access log, the error log, and the trace log.

Console Messages

If Qedit cannot access any of its log files, it writes the log message to the system console. You can also enable console logging with the Debug command in the Option menu of the Qedit client. If someone is having trouble establishing a Qedit for Windows connection and the Qedit log files on the host do not include a message for this connection, check the system console. If Qedit was unable to open the log files, it probably reported the message on the system console.

Access Log

Every time a Qedit client makes a connection to the server process, an entry is written to the access log file in which the IP address of the client is logged. The numeric for the IP address is logged, along with the port number used to communicate with the client.

Error Log

Any error conditions encountered by the Qedit server process are written to the error log file. If you suspect a problem between the client and the server, start your diagnosis by looking at the end of this log file.

Trace Log

By default, Qedit does not log messages to the trace log file. However, you can enable trace file logging by using the Debug command in the Option menu of the Qedit client. The trace log file can grow to become very large because Qedit messages are constantly being added to it. These messages assist in understanding the communication between the Qedit server process and the Qedit client. In many cases, their detailed information is the only way to diagnose a problem.

Log File Names

If you run Qedit as Qedit.Pub.Robelle, the three log files are located in the Qlog group of the Robelle account. If you renamed Qedit or run it from a different group or account, the group and account names for these log files will automatically be adjusted. See the chapter "Installing Qedit" for more details.

Qedit Issues and Solutions

Running Qedit with Reflection

Walker Richer & Quinn produces Reflection, the well-known terminal emulator for IBM PCs, which can be combined with Qedit in a number of useful ways.

RPCVERSION JCW

When you run Qedit, it attempts to detect what type and version of Reflection you are using. The RPCVERSION JCW will be to one of these values:

0	don't know if this is Reflection
1	this is not Reflection
xxxx	type and version of Reflection installed

For more details on RPCVERSION, see JCWs under the main ACCESS help keyword.

Using a Command File to Start Up

At startup, Qedit usually attempts to identify the terminal model number. This involves some invisible interaction with the terminal (status requests, etc.). Suppose you have a Reflection command file that runs Qedit and then executes a Qedit command:

```
transmit "run qedit.pub.robelle^M"
wait 0:1:0 for "^Q"
transmit ":mail^M"
```

This sequence of commands now fails, because the `:mail` command is transmitted as the terminal status response. To fix this command file, wait for the Qedit prompt ("/") and then a DC1 (Control-Q):

```
transmit "run qedit.pub.robelle^M"
wait 0:1:0 for "/^Q"
transmit ":mail^M"
```

Alt-Y vs. :Reflect

Q: Why do some Reflection command files work fine when I execute them from the Alt-Y command line, but go screwy when I execute them using Qedit's :Reflect command?

A: Qedit's :Reflect command sends an escape code to Reflection to invoke the command, then Qedit waits for Reflection to send back a status code to indicate when the command is finished. While Qedit is waiting for the result code from Reflection, it isn't capable of executing other Qedit commands - it's already executing a Qedit command! The only thing that Qedit is capable of doing while it's waiting is to execute any MPE commands that Reflection might send to the HP e3000. The reason why MPE commands must be accepted is that Reflection sends a :Run command for PCLINK whenever a file transfer is requested.

As long as the command or command file doesn't attempt to *transmit* any data to the HP e3000, :Reflect will probably work the same way as Alt-Y.

For example, here is a Reflection command file that works from Alt-Y, but not from :Reflect.

```
; BYE
; This command file gets me out of Qedit, logs me off
; the HP e3000 and exits from Reflection.
;
transmit "exit^M"
wait 0:01:00 for "^Q"
transmit "yes^M"
wait 0:01:00 for "^Q"
transmit "bye^M"
wait 0:01:00 for "CONNECT"
wait 0:00:05
hardexit
```

Qedit and Reflection File Transfers

Reflection file transfers work at the MPE level or within Qedit, without any change to Reflection's Host Startup Sequence. Reflection, versions 2.2 and later, has the ability to read Qedit's special files and download them to your PC as ordinary flat files. You don't need to do a Keep before a file transfer.

If you transfer a PC file to your 3000 and try to Open it in Qedit, you get an error message.

```
Error: you can only Open Qedit workfiles (code=111)
```

Open is Qedit's command for getting into a file quickly. You can only Open files that are in Qedit format. To edit any other file type, you

must Text it instead (Text is slower then Open). Qedit users are accustomed to instant access to the files they need. Reflection 2.2 and later can upload to Qedit files as well as download them. You simply append ";Q" to the host file name on the file-transfer screen or in your Send command line. Reflection does the rest.

When you work in Qedit, you are working on files that have a language (Set Lang FORTRAN, Pascal, COBOL, SPL, Job, or Text) and a record length (Set Length). If you copy a Qedit file to your PC and then back again to the HP e3000, Reflection 2.2 returns a file with the same Qedit attributes by writing a label to the PC file that describes the Qedit file:

```
RECSIZE=80; LANGUAGE=3
```

When Reflection transfers a file to the HP e3000 with the ;Q option, it uses the label in the PC file to create a proper Qedit file. Thus, you can send a COBOL file from Qedit to your PC and return it to Qedit later and still have it recognized as COBOL. Here is the complete list of Language codes for Qedit files:

1	SPL (72-byte records)
2	FORTRAN (72-byte records)
3	COBOL without comments (66-byte records)
4	RPG (80-byte records)
5	Job (80-byte records, Keep UNN)
6	Text (Set Length sets record size up to 256 bytes)
7	Pascal (72-byte records)
8	COBOLX with comments (74-byte records)
9	Data (Set Length sets record size up to 8,172 bytes)

Qedit files are downloaded without sequence numbers, since PC tools seldom use sequence numbers. When a PC file is uploaded into Qedit, new sequence numbers are assigned to the lines. If you download a Qedit file containing PC data, such as a Reflection command file or an Assembler program, you don't want a label at the start. Use Set Lang JOB for such files, since a JOB file has 80-byte records without sequence numbers. When you download a Qedit "job" file, Reflection does NOT add a label to it, since "job" is the default format when uploading to Qedit format.

Form Feed Causing Return/Line Feed

In Modify, the Lengthen control code (Control-L) means edit the end of the current line. However, in recent versions of Reflection, ^L is

executed by the PC as you type it and causes a Return/line feed. If this is happening to you, you can change the default in Reflection. Press Alt-Y for the Reflection command line, type Set Do-Form-Feeds No, press Return, then type Save and press Return again to save the new default to your current configuration file.

Typeahead and Visual Mode

On MPE/iX, Reflection's typeahead must usually be disabled while in Visual mode, since MPE/iX no longer sends the DC1 trigger needed to make typeahead work. Qedit takes care of disabling and re-enabling typeahead for you, except for recent versions of Reflection, where typeahead has been rewritten to work even on MPE/iX.

Please Note. The Reflection typeahead has nothing to do with the MPE/iX typeahead feature. When you use the MPE/iX typeahead feature, Visual mode disables it and re-enables it when you go back to Line mode.

Completion Codes

If you are using version 2.00 or later, Qedit automatically enables completion codes on Reflection commands. If these have been disabled with Set Disable-Comp-Codes YES, you will find that your terminal hangs when Qedit attempts to execute a Reflection command; just press Return to get out of this situation. To avoid this situation, you press Alt-Y, type Set Disable-Comp-Codes NO, press Return, then type Save and press Return again to save the new default to your configuration file.

Controlling the PC

The Reflect command allows you to execute any Reflection PC command from within a Qedit usefile, UDC, or command file. This allows you to do things like automatically download and upload files and run programs.

The Reflect command can also be used in batch jobs to control PCs that are directly connected to the system, even back them up. For more details, see the :Reflect command.

Accidental Exit from Reflection

If you use Reflection for DOS, and you press Alt-X while in Visual mode, some versions of Reflection allow you to recover.

Get back into Reflection. Your usual method is okay, unless you use a command file that performs other deeds, such as logging you on. A command file would send the logon commands to a puzzled Qedit

session, so use "r1" at the DOS prompt instead. Back in Reflection again, press Alt-M for the Modes function keys. Ensure that none of the labels on the display show an asterisk (i.e., are activated) except for the Remote Mode key.

Press Return or Enter -- Qedit accepts either one. If you're back in your Visual mode session, Qedit prints the status line with an error. It might be **No // at the end, so no UPDATE (see qscreen)** or maybe **Read error on CRT. Try again or reduce speed**. Type an asterisk after the home line arrow (===>), and press F7. If the function keys are properly defined for Qedit, your file appears. Any changes you made to the screen between your last update and the time you pressed Alt-X are lost. The qscreen file is of no use in this case. Sometimes Qedit is slow to display the status line and error message. If you see some flashing on the screen that hints at activity, be patient. But if nothing happens when you press F7, or if random characters appear right after the asterisk, it probably means that F7 is not defined properly. But we can fix that.

Display the menu to define the function keys by pressing Ctrl-F9. To set these back to the default values, press F3. The labels become F1, F2, F3... Press F9 to activate the changes and go back to your regular screen. Pressing F7 should now work; then press Return. Qedit may display an error message, such as "UNKNOWN COMMAND NAME", but you will still get your file back. Again, changes to the screen after the last update will have vanished.

In the worst case, you will not be able to recover. Log on from scratch. When you open your file, Qedit will display the message: **Warning: Recovery.** Your file will be current up to your last update.

Changing the Exit Keystroke

The Alt-X keystroke for exiting from Reflection back to DOS is too close to the Alt-D (delete line) and Ctrl-X ("re-think") keys. Accidentally pressing Alt-X and shutting down Reflection in the middle of a Visual screen is pretty disastrous. WRQ has added a "remappable keyboard" in Reflection that allows the user to specify which keys perform what functions. The exit-to-dos function can be activated by a different, harder-to-type key sequence.

To remap your keyboard in Reflection for DOS, first create a DOS file called REMAP.KBM with the following lines:

```
KEYBOARD-ID = ENHANCED
TERM = HP
alt x       = null
alt ctrl x  = exit-to-dos
```

Then activate the changes by typing C:> KEYMAP REMAP.KBM R1.CFG at the DOS prompt. See your Reflection user manual for full

details. Reflection for Windows also has a remappable keyboard, but uses a different method of configuring it. See your Reflection for Windows on-line help or user manual for details.

Running Qedit in MPE/iX

Running Qedit on MPE/iX is the same as running it on MPE V, with a few minor differences. We have made a number of changes to Qedit (regarding EOF and disc space) due to differences between the MPE V file system and the new MPE/iX file system.

Unresolved Externals on MPE/iX 4.0

If you try to run Qedit on MPE/iX 4.0, you might get the following errors:

```
UNRESOLVED EXTERNALS: _thd_errno  (LDRERR 512)
UNRESOLVED EXTERNALS: _thread_set_error  (LDRERR 512)
UNRESOLVED EXTERNALS: thd_lock_lang_mutex  (LDRERR 512)
UNRESOLVED EXTERNALS: thd_unlock_lang_mutex  (LDRERR 512)
```

These messages indicate some missing routines from the C library. If you are not planning to upgrade to a more recent version of MPE/iX, you should contact Robelle technical support. We can provide you with an additional file that will fix these problems. Someone on our technical support team will be happy to ship this file to you and instruct you in its installation.

Compiling on MPE/iX

MPE/iX comes with both CM compilers from MPE V and NM compilers. The CM compilers work the same way that they did with MPE V. With Qedit, we provide an XL library that allows the NM compilers to read Qedit files as if they were standard files (the file name is Qcompxl.Pub.Robelle). You only need to change the compiler command files in Pub.Sys so that they have an "XL=" clause on the :Run command. We provide a job stream to make the needed changes to the command files for you; see the "Installing Qedit" chapter. Once the changes are made, the NM compilers can read both Qedit files and Keep files, whether activated within Qedit or at the MPE/iX prompt.

```
:pasxl source
:run qedit.pub.robelle
/text source
/pasxl *
```

XDB: the Symbolic Debugger

If you :Run Xdb.Pub.Sys with XL= "qcompxl.pub.robelle", XDB can display source files that are in Qedit format. For COBOL/iX, the

debugger uses the compiler listing instead of the source file, so an interface isn't necessary (the compiler, not XDB, reads the Qedit file).

Command Files and Variables

MPE/iX has command files, variables and the :While command. All of these work in Qedit as well, including Hppath when looking for command and program files. Qedit supports command files, :While commands and Hppath on MPE V (using Set Hppath), but doesn't provide variables (although you can insert JCW values into both command files and UDCs by using the **!cierror** notation).

Visual Mode

On MPE/iX, it is very important that you configure your terminal with XON/XOFF Pacing (both Receive and Transmit). If you have Transmit Pacing set to None, Visual may fail with "Insufficient System Resources". If you use Qedit Visual on the console, you should configure the terminal for ENQ-ACK protocol as well (prior to MPE XL 2.0).

If you have problems with DC1 hangs, first ensure that you are logged on as TERM=10 (or another Term Type that prompts for input with a DC1); you can determine this by enabling Display Functions, then press Return and see if the computer prints a DC1 Control Character after the regular prompt character). Second, check that you have enabled XON/XOFF Pacing on your terminal. Third, see if your modems are configured to pass XON/XOFF through. Fourth, try disabling typeahead.

EOF vs. LIMIT

Under MPE/iX it is very common to have a LIMIT of 4 million and an EOF of 400. This is because the large LIMIT does not impose a large extent size on the MPE/iX file, due to the unlimited number of extents. When Qedit Texts a file, it remembers the number of records beyond the EOF and adds that count to the size of the file on a later Keep. Qedit now restricts that extension beyond the EOF to 100,000 records.

Disc Space for Files and XItrim

MPE/iX cannot operate on a file unless it has about 256 sectors of disc space allocated to it. As a result, Qedit files which used to occupy 30 sectors often occupy 256 sectors or more. In effect, the minimum extent size increases dramatically. MPE/iX has enhanced the FCLOSE intrinsic to deal with this problem. If you specify bit 11 of the close options parameter, MPE/iX releases the disc space beyond the EOF

while the file is not in use. Qedit uses this option, which is operational in version 1.1 of MPE XL.

See also the Xltrim command, which allows you to trim back unneeded disc space for a group of files in a single command.

Extents

Qedit still creates files on MPE/iX with the number of extents (1-32) that would be desired on MPE V. The reason is that this information, while ignored by MPE/iX in allocating disc space, is remembered with the file, and is used if the file is transported to MPE V via STORE/RESTORE.

Qedit as the HPDesk Editor

HPDesk users can configure an external editor. However, HPDesk allows only one option for this editor: it must be invoked by passing the file name to edit via the Info= string.

Configuring HPDesk

To change the default editor in HPDesk, you need to modify your individual Profile. To do this, enter HPDesk as you usually would. From the main menu (choice 0), select option 10 (Admin.). From the administration menu, select F2 (Profile). From the profile menu, select F2 again (Next Options). You should see a screen similar to:

```
Edit and Create Options
Entry method for creating messages/comments ...   [ ]

Entry method for creating text items ...          [ ]

Editor for editing text items                     [ ]

    Values can be:

    1. Line by line text entry
    2. Screen text entry
    3. Slate editor
    4. HPWORD or screen for non-HP terminals
    5. External editor
```

You must make two sets of changes to this menu. First, enter "Qedit.Pub.Robelle" as the external editor (value 5). Second, change each of the three editor options to 5, then press Enter. After your changes, the screen should look like the following:

```
Edit and Create Options
Entry method for creating messages/comments ...   [5]

Entry method for creating text items ...          [5]

Editor for editing text items                     [5]

    Values can be:

    1. Line by line text entry
    2. Screen text entry
    3. Slate editor
    4. HPWORD or screen for non-HP terminals
    5. External editor Qedit.Pub.Robelle
```

Configuring Qedit in HPDesk

Because HPDesk does not provide any Parm= options, you can pass in a Parm value by placing it in the QEDPARMBITS JCW. Configuration commands can be placed in Qeditmgr files.

DeskQed

Older versions of Qedit did not support passing in the file name via Info=. Instead, a program called DeskQed acted as an interface between HPDesk and Qedit. You no longer need to use DeskQed, but we document DeskQed here as a reference for those who are still using it.

Because old version of HPDesk does not provide any Parm= or Info= options, the DeskQed interface uses two JCWs, DESKQEDPARM JCW and DESKQEDVISUAL JCW, and a default command file, to configure Qedit for editing from HPDesk.

DESKQEDPARM JCW

When Qedit starts up, it always executes configuration commands in Qeditmgr.Pub.Sys. Optionally, you can get Qedit to execute commands in Qeditmgr.Pub.*logonaccount* and/or Qeditmgr.*logongroup*. In the HPDesk/DeskQed environment you use these optional Qeditmgr files by setting a JCW before executing HPDesk.

```
:setjcw deskqedparm=1 {use Qeditmgr.Pub.logonaccount}
:setjcw deskqedparm=1 {use Qeditmgr.logongroup}
:setjcw deskqedparm=3 {use both of the above}
```

DESKQEDVISUAL JCW

DeskQed assumes that you do not have an HP terminal and that you would like to edit messages in Line mode. Setting the DESKQEDVISUAL JCW to any nonzero value places Qedit directly into Visual mode when editing an HPDesk message:

```
:setjcw deskqedvisual=1
```

Default Usefile

When DeskQed creates Qedit, it executes an optional usefile called DeskQed.Qlibdata.Robelle. You can add default configuration values to this file (e.g., Set Limits Sys Off); you should only use Set commands in DeskQed.Qlibdata.Robelle.

Version Entry Point

DeskQed does not print any banner or version number when it is run. To find the DeskQed version number and the status of the two configuration JCWs, use the version entry point:

```
:run deskqed.qlib.robelle,version
DESKQED/QLIB/Copyright Robelle Solutions Technology Inc. 1988
(Version 0.4)

DESKQEDPARM    =  0
DESKQEDVISUAL  =  1
```

Notes on DeskQed

DeskQed requires the temporary file DeskQscr. If you open this file in Qedit, invoke HPDesk, and then try to edit a message, DeskQed fails. A special message is printed in this case, warning you to return to Qedit and close DeskQscr before invoking HPDesk. Your original message remains unchanged in HPDesk.

DeskQed always runs the program file Qedit.Pub.Robelle. There is no way to change this.

Getting Programs to Read Qedit Files

When you install Qedit, we provide interfaces to most of the MPE compilers, but you may want some other programs to be able to read Qedit files. Some programs, such as PowerHouse and Splash, already read Qedit files. For a list of such tools, type `help tools`.

There are four ways to get a program to understand Qedit workfiles: Qinput, Qcompxl, Qeditaccess, and Qedify.

Qinput

If you don't have the source code, your can try running the program inside Qedit with the Qinput option. See the :Run command for details. This option will pass a Qedit workfile into a program through a message file.

Qcompxl

An NM program that reads a source file may be able to read Qedit files if you run it with XL="Qcompxl.Pub.Robelle". This is the same interface we use for the NM compilers from HP. It simulates most of

the file system intrinsics and makes Qedit workfiles look like ordinary disc files.

Qcompxl cannot be combined into a single XL file along with other XL files, not even other Robelle XL files. In particular, do not put Qcompxl into the System XL: you may get a system abort.

Qeditaccess Subroutine

If you have the source code, insert calls to the Qeditaccess routine and recompile. Qeditaccess is a part of the Qlib Contributed Library and is described in Qcopy.Qlibdoc.Robelle. It can read either Qedit files or regular Keep files and has been easily merged into many software tools.

Software vendors and Qedit users are authorized (even encouraged) to include Qeditaccess in programs they distribute. A native-mode version is available as well.

Qedify

Some CM programs can be converted to read Qedit workfiles by running them through the same Qedify program used to make the MPE compilers smarter. This does not work for all programs; they must be sequential processors and must only call the intrinsics that the Qedit Interface Library "traps" (i.e., no calls to Freaddir on Qedit files and no calls to the Pascal run-time library). A number of programs have been successfully "qedified": DBSCHEMA, Basic Interpreter, RJE, and MRJE (be certain to disable Control-Y), and Fastran.

The first step is to build a new group in your account called Q. To convert a program, copy the program file into the Pub group of your account, then

```
run qedify.pub.robelle,q;parm=1.
```

You are prompted for the file name, an option that determines how to interpret Qedit files, whether to process $include, whether to disable the Control-Y "Abort" message, and whether to always run the program in DS priority. Then Qedify modifies the program file to contain calls to the CM compiler interface.

Here is an example of Qedify:

```
run qedify.pub.robelle,q;parm=1 {,Q and Parm=1}
What is the name of the program file?
DBSCHEMA

You have five options for how to interpret Qedit files
for your program.  Remember that there are many types
of Qedit files (COB,COBX,SPL,FTN,RPG,JOB,TEXT,PASC)
Which input-format option do you select?
1.  Like COBOL, sequence numbers in columns 1 through 6.
2.  Pascal-Fortran source, numbers in columns 73-80.
3.  RPG, no sequence numbers, $control in column 6.
4.  No sequence numbers at all, 80 data columns.
5.  Take format from type of input file (max 80).
Input-format option =
4

The Qedit library can look for and process $include and
$qdebug commands.  By default, it leaves this to your
program.

Enable $include processing? [no]:
N

Would you like to disable the Control-Y abort
question of the Qedit interface? [no]:
Y

Always run this program in DS priority? [no]:
N

DBSCHEMA
CONVERTED FROM PUB TO Q
```

The improved program file now resides in the Q group of your account, and has the same file name as the Pub file. To run the converted program, you must link it to the Qedit interface routines. For example:

```
:segmenter
-sl sl.q,400,2
-buildusl tempusl,400,4
-auxusl qcompusl.pub.robelle
-copy segment,qeditlib
-addsl qeditlib
-exit

:run yourprog.q;lib=g
```

Qedify and $Include

The CM compiler interface normally leaves Include commands to the user program, since the CM Interface allows up to 17 concurrent Qedit file opens, which should accommodate any reasonable level of nesting for Include files. If your CM program does not provide an Include facility, you can have the Qedit interface provide that facility for you.

If you answer Yes to Qedify's Include question, Qedify asks you two more questions about processing Include files:

```
Would you like $included lines to show their sequence
numbers (the default is to show spaces instead)? [no]:

There is an option to turn $INCLUDE lines into comments.
What kind of comments do you want?
(0=none,1=SPL,2=Pascal,3=COBOL,4=Fortran?) [none]:
```

When you use Qeditj1 or Qeditj1a to convert your CM MPE compilers, FORTRAN, COBOLI and RPG are converted with $include processing enabled. All other compilers, including Trancomp, Ftn (77), COBOL, COBOLII and Pascal let the compiler process Include files. You could re-Qedify a particular compiler by hand if you wished to override these choices.

Editing Wide Files

Versions Qedit 4.7 and later support files with lines up to 8,172 characters. If you are trying to edit a file wider than that, Qedit truncates the lines to the maximum. To support these wide files, a new workfile format has been created and is generally referred to as Wide-Jumbo.

Using the New Command

You can create a new, empty Wide-Jumbo workfile by using the New command or an option on the Text command.

When creating a new file, you can force it to have a Wide-Jumbo format by setting the Language to Data and the Length to a value larger than 1,000 before issuing the New command.

```
/Set Language Data
/Set Length 2500
/New newwork
```

These commands create a new permanent workfile called Newwork. If you want to create a scratch file with these attributes, enter the New command by itself.

Using the Text Command

If you use the Text command on a file with lines wider than 1,000 characters, Qedit automatically builds a Wide-Jumbo scratch file with the appropriate characteristics.

If you use the Text command on a file with lines less than 1,000 bytes, you can override the Qedit workfile format by appending a workfile format *keyword* to the workfile name:

Text *workfile*,WIDE {forces Wide-Jumbo workfile}

The *keyword* may be shortened to any leading substring, but the *comma is required*.

You can use the Wide keyword to override Qedit's decision and force it to use the wider format.

Let's assume that we have a file called Funny with 80-character lines. To read this file into a Wide-Jumbo workfile, you would enter:

```
/text wrkwide,WIDE=funny  {this creates a Wide-Jumbo workfile}
Language is now JOB
678 lines in file
/v open
Open: WRKWIDE.SRC.DEVACCT JOB W-jumbo Length:80 Margins:1/80
```

The syntax requires that you name the workfile and make it permanent. Notice that Qedit still assigns a Language based on the original file characteristics. If you want to go beyond 1,000 characters, you have to change the Language and Length settings after using the Text command on the file.

If you want a scratch file that is a Wide-Jumbo workfile, you should use

```
/Set Lang Data
/Set Length 2500
/AQ 1=funny
```

Lines, Strings and Ranges

Character strings can be used of line numbers to qualify lines on most commands. In its simplest form, a command can have a single string using all the search window defaults.

```
/List "enhancement"
```

The search string can be further qualified using temporary window settings as in:

```
/List "enhancement" (Upshift 20/50)
```

This example searches for the word `enhancement` regardless of the case used in columns 20 to 50.

Qedit allows up to 10 search strings on a single command. Individual strings are separated from each other with the **OR** keyword. Each string can have its own temporary window.

```
/List "enhancement" (U 20/50) or "bug" or "customer" (1/30)
```

The search range can be different depending on the command it is used on. For example, a **List** command searches all the lines in the file by default while a **Find** command starts from the current line. The search range can be specified on individual commands using a rangelist. A rangelist is often specified using line numbers (absolute or relative), special keywords (**First**, **Last**, **All**) or characters (@, *****, **[**, **]**). To define a block of lines, the user can enter 2 line numbers separated a slash "/" e.g. 1/6.

It is also possible to define a block of lines using a string range. This syntax allows the use of strings to define the start and end of the range. A string range can also be combined with a numeric line range to further define the block. Here are some examples:

```
/List "start-proc" / "end-proc"
/Change "a" "b" "start-proc" / "end-proc"
/Delete "start-proc" / "end-proc" 20/100
```

The **List** command above finds the first occurrence of `start-proc` in the file and uses it as the range start location. It then finds the first occurrence of `end-proc` starting from the start location. It uses that line as the range end location. Finally, it lists all the lines between the 2 locations. By default, **List** starts at the beginning of the file.

The **Change** command above replaces all occurrences of the letter `a` with a `b` in the lines between (and including) `start-proc` and `end-proc`. By default, **Change** starts at the current line.

The **Delete** command above removes all the lines between (and including) `start-proc` and `end-proc` found in lines 20 to 100. By default, **Delete** starts at the beginning of the file.

A string range does not behave like a rangelist e.g. 1/20 in all cases. For example, the first statement is not a valid construct with the second statement is.

```
/Delete "bug" "start-proc"/"end-proc"
Error: Linenum
/Delete "bug" 10/30
```

You can use the **Find** command and the **ZZ** marker to work around the problem. If you enter a simple strings on a **Find** command, Qedit stops at the first string occurrence and sets the current line. You can then perform any operation on that line or use it as a starting point. If you specify a line range, the **Find** command sets the **ZZ** marker to the block of lines. You then use the **ZZ** marker on subsequent commands.

```
/F "start-proc" first
   5     Start-Procedure.
      (1)^
/F "start-proc"/"end-proc" first
Lines 5/11 saved in ZZ
/Delete "bug" zz
    8    _bug-display-section.
1 line Deleted!
```

Using Qedit with MPE Programming Languages

Introduction

Here we describe how to combine Qedit with popular MPE programming tools.

When you install Qedit, we "fix" the MPE compilers to read Qedit workfiles so that you won't need to Keep before compiling. Many of the most popular third-party tools, such as PowerHouse and MPEX, already read Qedit workfiles. We also provide Editerr, a method for trapping and fixing compile errors with COBOL, Pascal, SPL, and C/iX.

```
/set lang cobol      {what type of source file is this?}
/compile *           {compile current file and language}
/prep                {prep $oldpass into $newpass}
/list "cust"(smart)  {Smart means ignore "cust-rec"}
/set udc udc.catalog.robelle  {:COBERR and :EDERR}
/coberr cob74xl,*    {compile and display each error}
/ederr pascal,*      {same for Pascal}
```

Editerr: Trapping Compiler Errors

Qedit's :Editerror command traps compiler syntax errors and pulls up the offending lines of source code for you to correct. Of course, you need a custom link to each compiler for this to work (:Editerror links are included in the SPLash! compiler from Software Research Northwest). We provide a utility, Editerr, which formats compiler errors for HP's COBOLII (ANSI 74 and 85), SPL, Pascal and C/iX compilers.

Editerr is invoked through User Commands in UDC.Catalog.Robelle. There are two commands: Coberr, which traps compiler errors in COBOL source, and :Ederr, which traps compiler errors in SPL, Pascal and C/iX source. The User Command compiles the source file (you specify which compiler to be used). If there are any errors, the

Editerr utility generates a list of errors for the :Editerror command. The User Command then puts you into Visual mode on the line in the source file where the first syntax error was found, and shows the first line of the compiler error message at the top of your screen. To see the next error you press F4. To see the previous error you press F3. Qedit takes care of Opening and Shutting your source files, or Texting and Keeping them if they are not Qedit files.

Editerr can be configured to ignore compiler warning messages, as well as nonstandard COBOL statement warnings. This is done by setting JCWs before running the Editerr program:

```
:setjcw EditerrIgnoreWarn = 1
:setjcw EditerrIgnoreNonStd = 1 {COBOL only}
```

The Editerr utility identifies errors in COBOL Copylib members and Include files, and allow you to correct them, as long as you have Write access to the copylib file. For SPL, Pascal, and C/iX, Editerr attempts to identify errors in Include files and allow you to correct them.

```
/set udc udc.catalog.robelle
/open srcfile                    {or Text it}
/visual                          {make changes, then try one}
                                 {of the following commands}
/coberr ,*                       {default is COBOL 85/iX}
/coberr cob74xl custrept.source {compile/fix}
/coberr co * uslfile             {use MPE V compiler}
/ederr pasxl *                   {Pascal/iX}
/ederr ccxl *,objfile            {C/iX}
/ederr spl *                     {SPL}

/shut                            {or Keep}
```

HINT: In general, you use the same syntax as you are accustomed to using for compiling, but you insert the word Coberr or Ederr in front of the command. For example, instead of typing `/cob85xl *`, you type `/coberr cob85xl *`.

For MPE/iX systems, a native-mode version of the Editerr program is provided which works with both the compatibility-mode and native-mode compilers. The Qedit installation job, Install.Qeditjob.Robelle, renames the appropriate version of Editerr into production, depending on whether your machine has MPE/iX or MPE V.

Limitations and Restrictions

1. Editerr attempts to identify syntax errors in Include files for COBOL, SPL, Pascal and C/iX. For COBOL, SPL and Pascal you must compile your source with $control List, and include a comment at the end of each Include file in the form

```
! end $include                {SPL}
<< END $INCLUDE >>            {uppercase or lowercase}

{ end $include }              {Pascal}
(* END $INCLUDE *)

* END $INCLUDE                {COBOL}
```

These comments are required for Editerr to determine where each Include file starts and ends in the compiler listing. For C/iX, no special options or comments are required.

2. In order to correctly identify syntax errors in COBOL copylib members, Editerr must determine where each copylib member starts and ends in the source listing. This requires that the source file be compiled with $control List. COBOL allows copylib members to in turn copy other copylib members. This is referred to as "nesting" copy statements. If you want Editerr to recognize nested copy statements, do not use the NOLIST option of the COPY statement.
3. C/iX and Pascal source lines are restricted to 80 characters.
4. The Editerr utility only processes compiler listings that have 132-byte records, with or without CCTL. We recommend that you use the COBERR and EDERR UDCs, which build the compiler listing file with the right characteristics.

Keep in mind that the compiler sometimes trips over its own feet: the line number indicated by the compiler may not be the actual line in error. For example, forgetting to terminate a statement with a period will flag a succeeding statement in COBOL.

Linking PowerHouse with Qedit

PowerHouse 4GL, by Cognos Incorporated, is comprised of several development tools: QUIZ, QUICK, QDESIGN, QTP, QDD and PDL. Qedit/MPE works well with PowerHouse for several reasons:

1. PowerHouse can read Qedit files. This means that you can Open and Shut files, and can compile without having to first Keep. PowerHouse can read source files up to 256 characters wide, and thus supports all of Qedit's language settings except Data.
2. QUIZ, QDESIGN, QTP, QDD and PDL can be suspended, to make subsequent invocations faster, and less demanding of system resources.
3. Qedit can be configured as the default PowerHouse editor, and can thus be invoked from within the PowerHouse tools.

4. Qedit can edit PowerHouse subfiles.

Qedit takes advantage of these features to give you an integrated development environment for PowerHouse, where you can switch instantly between editing source files in Qedit, and compiling and testing in PowerHouse.

Invoking PowerHouse from Qedit

Qedit has always been an excellent workbench for PowerHouse programmers. The PowerHouse components read original-format Qedit files directly, and all of them (except for QUICK) can be suspended from Qedit for faster invocation. It is also possible to use Qedit "shorthand" when invoking PowerHouse from within Qedit ("*" for current file, "$" for previous), provided the PowerHouse UDCs have been slightly modified.

In the past we supplied modified UDCs for the various PowerHouse versions, but as the UDCs were large, very complex, and changed frequently, supporting every new version became a problem for us. We therefore developed a set of command files to call the UDCs that Cognos supplies with your PowerHouse updates. They allow Qedit shorthand and suspend the PowerHouse tools on exit:

```
parm auto=$null
anyparm otherparms=ZZZ
file qsource=!auto
if "!otherparms" = "ZZZ" then
  quiz "auto=qsource suspend"
else
  quiz "auto=qsource suspend" !otherparms
endif
file qsource = $null
```

Note that we have added one parameter to your invocation of the UDCs. This parameter, the file name to execute, must be passed before the other run parameters. You must first set the Cognos UDCs, as they're invoked from within the command files. Note also that UDCs have precedence over command files, so the command files must have different names. We supply the following three command files:

QZ.QEDCMD.ROBELLE	{for calling QUIZ}
QD.QEDCMD.ROBELLE	{for calling QDESIGN}
QP.QEDCMD.ROBELLE	{for calling QTP}

QUICK doesn't allow suspension on exit, so we haven't supplied a command file for it. You may wish to duplicate the above for QUICK (removing the "suspend" parameter), to allow easy execution of specified compiled QUICK files:

```
/qk qkscrn
```

Using these command files, "qz *" will run QUIZ, and execute your current file. On completion, Qedit will ask you whether it should keep QUIZ suspended:

```
Quiz is still alive.  Okay to HOLD onto it [no]?
```

Replying "yes" means that subsequent calls to QUIZ will be much faster. Of course, suspending QUIZ keeps the dictionary open (one of the reasons why it is faster), so you cannot change your current dictionary without first killing the suspended process:

```
/kill quiz  {kill only QUIZ}
/kill       {kill all child processes}
```

Similarly, you would need to kill and rerun QUIZ to change any other run parameters, such as CC= for conditional compile flags.

Configuring Qedit as Your Editor

Later versions of PowerHouse have a Revise command. This command invokes your configured editor, tells it which file to edit, and optionally, tells PowerHouse how to process that file upon return.

By default, PowerHouse invokes the Editor.Pub.Sys. file. Setting the :File equation

```
:file cogeditr=qedit.pub.robelle
```

configures Qedit to be your PowerHouse editor. We recommend that you add this :File equation to your system UDCs. PowerHouse invokes Qedit with a ,Basicentry entry point, and pass a file to be edited via a :File equation for Edttext.

In QUIZ,

```
> revise
```

invokes Qedit with the Quizsave file texted. Quizsave contains all the QUIZ statements you have entered since the last Cancel Clear, Save Clear, or Set Save Clear. After making your revisions, you will be asked whether you wish to save your changes when you exit Qedit. Quizsave will then be re-executed by QUIZ. Use the command

```
> revise filename
```

to edit a specific *filename*. On return to QUIZ, that file will be executed. To suppress execution of the edited file on return to QUIZ, use the NOUSE option:

```
> revise filename NOUSE
```

See the PowerHouse manuals for a full description of the options available.

Editing PowerHouse Subfiles

There may be occasions when you wish to use Qedit's powerful capability to edit data stored in a PowerHouse subfile. A subfile has file labels containing a PowerHouse "mini-dictionary" of the file's record structure. It is important that your file editor preserve these labels, if you will subsequently use PowerHouse to read the file: Set Work Label On will ensure that Qedit retains the file labels.

COBOL

As a COBOL user of Qedit, there are a number of topics you should be familiar with.

Selecting a Compiler

There are five possible COBOL compilers you could wish to use: COBOL 68, 74 or 85 for MPE V (CM), or COBOL 74 or 85 for MPE/iX (NM). Use the Set Whichcomp command to select your CM compiler (the one invoked by the :Cobol and :Compile commands).

```
/set whichcomp cobol 85 | 74 | 68  {Select CM compiler}
/cobol *          {uses compiler program named COBOL}
/cobolII *        {Compiles using the COBOLII compiler}
/cobolI *         {uses CobolI compiler, COBOL 68}
```

The Qcompxl.Pub.Robelle file contains the XL library, routines that intercept calls to the MPE/iX file system. Use the COB74XL or COB85XL command files once they have been modified to reference this XL.

Sequence Numbers and Comments

The following rules apply to standard COBOL source files. They do not apply to COBFREE files, which are free-format files that do not have line numbers. COBOL statements can start in any column and go beyond column 72. They cannot have comments (tags).

In COBOL source files,the first six columns are reserved for the sequence number. This means that the first column of your text area is actually column 7. When a Qedit file has Set Lang Cobol, the first six columns are not displayed. Instead the sequence number is displayed, in the form `105.1`. To check what columns some text is in, use the LT command (list template). You must remember the column numbers when using the Change command to insert or delete columns. For example, you might want to shift the first column three spaces to the right by inserting blanks.

```
/change 1 "   "   {wrong!}
Error: Target

/change 7 "   "   {right}
```

COBOL statements occupy columns 7 through 72 of each line. Columns 73 through 80 are reserved for comments. If you extend a COBOL statement into this area by accident, you get a compiler error. To keep this from happening, Qedit has two Set Lang values for COBOL. Set Lang Cobol limits your line length to column 72, while Set Lang Cobolx allows you to use the comment area. In normal practice you would do initial development with Set Lang Cobol, then switch to Set Lang Cobolx during maintenance.

```
/set lang cobolx
/c 73/80 "BobGreen"
```

Tagging Source Changes

When you have a file Set to Lang Cobolx, you can have Qedit automatically tag source changes with a comment in columns 73 through 80. You might choose to tag the changes with the date of the changes and perhaps the initials of the changer:

```
/set lang cobolx          {lines contain 80 columns}
/set x "rmg"              {tag changes with a string (COBOLX)}
/set x date               {tag changes with the date (COBOLX)}
/set x yymmdd "bg"        {see Set X for more options}
/set x list off           {suppress listing of the tags}
/set lang cobolx all on   {force all COBOL to COBOLX}
```

These configuring options can be made the default by putting them in one of your Qeditmgr configuration files. Other options that are useful with COBOL:

```
/set window(7/72)         {change without shifting comments}
/set wrap on              {wrap overflow lines to column 12}
/list "cust-rec" (smart)  {look for "symbols" only}
/set maxdata 31000        {default Maxdata= for PREP}
```

Copylib Members

To edit Copylib members in Qedit, put the member name in parentheses and do a :File command for "copylib".

```
/file copylib=copylib.pub.develop
/text (custrec)            {looks in "copylib"}
/keep                      {saves changes}
/keep (custrec2)           {new member name}
/keep (custrec) copylib2   {different Copylib}
```

Notice that we can refer to other Copylib files by putting the file name after the member name, rather than having to change our :File command. To create a new Copylib file, use HP's Cobedit program.

To list the member names in a Copylib file, specify a pattern instead of an actual member name.

```
/list (b@)                  {names starting with b}
/list (@)                   {all names}
```

Trapping Syntax Errors

The :Editerror command allows Qedit to pull up a compiler syntax error and the offending line of source code and present them to you for correction. Of course, you need a custom link to each compiler for this to work. The COBERR UDC is an error processor for HP's COBOL 74 and 85 that uses the Editerr program to find and fix syntax errors. See above for a complete description.

FORTRAN

There are several FORTRAN compilers available to you.

```
/fortran *              {compile CM FORTRAN 66}
/ftn *                  {compile CM FORTRAN 77}
/ftn 350/700            {compile a line range!}
/set whichcomp ftn 77   {make 77 the default}
/ftnxl *                {native-mode FORTRAN compiler}
```

If you always compile through Qedit, you can use $include commands to centralize the definitions of COMMON blocks in separate source files. If most of your work is with FORTRAN, you should configure Qedit with FORTRAN as the default language for new files. You do this by putting the Set Lang Fortran command in a file named Qeditmgr.Pub.Robelle. Other options that are useful with FORTRAN:

```
/set rl graphrl.lib.dev {default RL= on PREP}
/set fortran on         {default for external files}
/set tabs hp on 7 17 27 {customize tab stops}
/set wrap on            {generate continuation lines}
/list "custbase"(smart) {ignores embedded spaces!}
```

Pascal

To tell Qedit that you are working on a Pascal program do Set Lang Pascal. If Pascal is your primary language, putting this Set option in Qeditmgr. Pub.Robelle (your Qedit configuration file) makes Pascal the default choice. You compile your Qedit workfile directly with either a Classic compiler or a native-mode compiler. For NM compilers, you must first stream Qcompxl.Qeditjob to adjust the command files (see Step 5 in the installation chapter). For CM compilers, you must first stream Qeditj1 or Qeditj1a to adjust the compiler program files (see Step 6 in the installation chapter).

```
/text pas.source
/set lang pascal
/pascal *               {standard MPE compiler}
/pasxl *                {native-mode compiler}
```

The :EDERR UDC compiles your Pascal source file, finds the errors, and displays the source and error messages on the screen for correction. See Editerr above for details:

```
/ederr pasxl,*
/ederr pascal,src
```

Other Qedit options of interest:

```
/list "cust"(smart)      {ignore "cust_rec"}
/text file,pascal        {make external file pascal}
/aj 55                   {justified = indented}
```

The MPE V HP Pascal compiler can abort with a stack overflow when compiling large programs. To avoid this abort, insert the $bigcompile$ option at the start of your Pascal source file.

C Language

C is a standardized programming language that is available on MPE V and MPE/iX. If you are using Jumbo or Wide-Jumbo files, you can use Set Lang CC or Set Lang CPP. If you are not using Jumbo or Wide-Jumbo files, we suggest Set Lang Job for C files in Qedit because Job files are kept without line numbers.

For C/iX, the :EDERR UDC can compile your program, find the errors and display each on the screen with the cursor on the offending line, ready for correction. See Editerr above.

```
/ederr ccxl *
```

For MPE V, there is one compiler available: CCS C. The CCS compiler can be converted to read Qedit files; see the chapter on installation at the end of this manual.

SPL

SPL is the Systems Programming Language for the Classic 3000. SPL is Qedit's default language, so you don't need a configuration command in Qeditmgr to set it.

```
/spl *                   {compile SPL workfile}
/set lang spl            {identify code as SPL}
/list "cust"(smart)      {ignore cust'rec}
/aj 55                   {justified = indented}
```

There is also a native-mode SPL compiler for MPE/iX, Splash from Allegro. The Splash compiler reads Qedit workfiles without a Keep and can generate an "error file" that is compatible with the :Editerror command. You can edit a Splash program within Qedit, use the Splash

UDC to compile it, and automatically have Qedit position you to the proper spots in each source file where you have compile errors.

The UDC file is named Splashu.Pub.Splash and contains two UDCs of interest, :SPLASH, and :SPLLK. In each of them, you will want to add a :File equation such as FILE SPLERRS = SPLERRS to generate the error file. This causes the Splash compiler to emit a permanent disc file named SPLERRS.

Then add the following command after the :Run of the compiler:

```
editerror splerrs visual
```

This command will find the first error, if any, and print the error message and the line. If you then return to Visual, Qedit will be at the proper spot, with the compiler error message at the top of the screen. You use the F4 key to find the next error, F3 to go back to the previous error, or F8 when you are done fixing errors.

If you have many programmers that use the same logon group, you will be stepping on each other's Splerrs files. Modify the :File equation and the :Editerror command to specify a unique file name for each programmer. This is not difficult on MPE/iX. For example, use HP variables that store the User Name or the Session Name as part of the unique file name.

TRANSACT

TRANSACT is a 4GL from Hewlett-Packard that runs on MPE V and MPE/iX. When you install Qedit, the CM Trancomp program is converted to read Qedit files. You will find it either as Trancomp.Q.Robelle, where it should be Run with Lib=G, or as Trancomp.Pub.Sys. The TRANSACT/iX Compiler reads a Qedit file as the main source file, but should be run with XL="qcompxl.pub.robelle" for Include files.

RPG

RPG files are like JOB files, in that they have 80-byte records and are "kept" unnumbered. If you create an RPG program in a JOB file by mistake, you can convert the file to RPG with Set Lang RPG. Because RPG is column-oriented, SMART string matching is ignored. The RPG compilers print the RPG source listing with sequence numbers (1, 2, 3...); therefore, if you do a Renumber before a compile, you can edit directly from the compiler listing. Full-screen editing in Visual mode is especially handy for the columnar format of RPG code.

Users of RPG/iX can use the Qcompxl.Qeditjob job stream to convert command files for RPG. This should allow you to compile a Qedit or

Keep file at any point, either within Qedit or at the MPE/iX prompt, just by invoking the normal command file, `rpgxllk` or `rpgxlgo`.

BASIC

Even though the Basic Interpreter has an "editor" built into it, we regularly get requests for the ability to edit Basic programs in Qedit. You can do such editing and XEQ the Qedit file within the Basic Interpreter, but your system manager must change the Basic interpreter for this to work. See the sections on installing the compiler interface in the chapter on installation for details.

A side benefit of changing the Basic interpreter to read Qedit files is that Xeq files can then have $include statements in them, allowing you to define subroutines and common blocks in separate X-5 files. However, you must remember that the Qedit line numbers are not the statement numbers of the Basic program. Each Basic statement in your Qedit file must still have a valid sequence number at the start of it.

Segmenter

You can invoke the Segmenter from within Qedit using the :Segmenter command, but then you must type your segmenter commands directly and wait for them to complete. You can :Stream a job that invokes the Segmenter, but that does not execute on your terminal where you can see it. Or, you can Run Segdvr.Pub.Sys with a Stdin file that contains your Segmenter commands.

```
/list segprg23
    1    usl $oldpass
    2    auxusl splusl.source
    3    copy segment,qhelp
    3    copy segment,dateformat
    4    exit
/:run segdvr.pub.sys;stdin=segprg23
```

You can use Prep and you can specify default values for RL and Maxdata (Set RL and Set Maxdata) or use QMAP to make the PMAP readable.

Common Uses of Qedit

Introduction

Qedit is much more than just a programmer's editor. For your day-to-day tasks, you can use Qedit as a word processor, a file utility, and an operations tool.

Qedit as Word Processor

There are several ways to use Qedit for word processing.

QNote UDC for Occasional Memos

Some users would like to use Qedit's full-screen editing to write an occasional memo, but feel intimidated by the range of features and options in Qedit. You can make Qedit more accessible by providing a special UDC and usefile. You can use our QNote UDC (from the file UDC.Catalog.Robelle).

```
:QNOTE [filename]
```

To invoke Qedit to create a new memo, use :QNOTE without any parameters. Qedit puts the user straight into Visual mode, with configuration options suitable for processing a memo. For example, the option Set Vis Update is ON, meaning that pressing any function key updates the screen. The user is not faced with an "Okay to clear?" message, because Qedit purges any existing Qeditscr file. When the user presses **F8** to exit Visual, Qedit updates the screen, Keep the new document as the file *Memo* in the logon group, and ask the user to verify Exit. You should teach users the MPE :RENAME command so that they can rename the file *Memo*, if they want.

To invoke Qedit to modify an existing memo, use :QNOTE **filename** (where **filename** is a Keep file or Qedit file). When the user presses **F8**, Qedit asks permission to Keep the file back into **filename**. The users should answer Yes to save their work or No to discard it.

Justify Capability

Suppose you want to write a letter to your mother. You know how to build a new file for it, or open an old one. You can create the rough letter using Visual or Add, Modify, and Delete. But what if you want the letter to be extremely tidy? Mothers like that sort of thing. Qedit has commands to help you produce a neat and tidy letter or memo:

```
/justify both 5       {even margins for paragraph}
/justify center 10    {center line 10}
/set just margin 65   {right margin at column 65}
/justify right 200    {right-justify line 200}

/set wrap on          {wraparound for long lines in Add}
/change 1/3 ""        {shift left 3 columns}
/change 1 "   "       {shift right 3 columns}

/set mod qzmod        {visual line edit; try Control-Q}
/visual *             {full-screen edit}

/l $lp all            {list on file LP, with line numbers}
/lq $lp all           {LP listing without line numbers}
/set list page on     {LP lists have page heads}
/add 50.1
    50.1   $page      {causes page eject in LP list}
    50.2   //
/add .1               {replace default date/time}
     0.1   $title "Letter to Mom"
     0.2   //
/set list name off    {remove file name from LP list}
/list $double $lp @   {double space LP list}
```

By combining these commands in various ways and using $page commands in your text to define page breaks and running titles, you can produce a very nice LP listing.

Check Spelling

Qedit has built-in commands to use Spell's dictionaries to perform integrated spell-checking. The Spell command spell-checks a line range, while the Words command spell-checks or searches for words.

```
/spell                {check current line}
/spell @              {check current file}
/spell 10/20          {check lines 10 through 20}
/spell "xyz"          {check lines containing "xyz"}

/spellj 10/20         {check lines 10 through 20 and}
                      {modify lines with misspellings}

/words "rigth"         {check the word "rigth"}
not found : rigth

/words "quicks@"       {find words prefixed with "quicks"}
word          : quicks
prefix        : quicksand
              : quicksands
              : quicksilver
              : quickstep
4 matches

/words "vegetable!"   {find sound-alikes for "vegetable"}
word          : vegetable
soundex       : vegetable
              : vestibule
              : visitable
3 matches
```

If your UDC or command file for running the spell checker program is also called "Spell", you must change its name. You must use :Spell to access the UDC.

```
/:spell file         {we suggest "spellf" instead}
```

Prose: A Text Processor

When you license Qedit we give you a text formatter named Prose. Prose is in our Qlib; it works well for user manuals and program documentation.

We use Prose for everything and find it flexible and reliable. It reads a Qedit or Editor file of text and commands, and produces a final document on a screen, line printer, LaserJet, or a disc file.

Prose can justify, underline, hyphenate, number pages and paragraphs, format the page the way you want, produce an index, and produce a table of contents. If you have a LaserJet, you can use the font cartridges and proportional spacing, as well as draw boxes and lines. Prose can not do footnotes, or generate two-column output.

Prose User Manual

To print the *Prose User Manual*, using Prose, enter these commands:

```
/set udc udc.catalog.robelle
/file print;dev=lp,,copies
/prose prose.qlibdoc.robelle,*print
```

The UDC file contains two User Defined Commands for Prose. :PROSE formats a specified "input" document to a specified "output" file (usually a printer, but defaults to $stdlist), while :PDISC takes only an input file and formats it into a temporary disc file named PLIST.

You can also use the Printdoc program to print the Prose user manual or any other Robelle user manual. Run Printdoc.Pub.Robelle, and Printdoc displays a menu of user manuals for you to choose from. You then answer a few questions about your printer.

Templates for Prose

There are two template files, MANUALS and LETTERS, in the Qlibdata.Robelle group. These files are designed to get you past the hurdle of deciding what Prose options to use; they decide for you! Both template files are explained in the *Prose User Manual*.

Fixing Hyphenation Errors

When you finish a Prose document, you usually need to make a couple of formatting passes over it to resolve hyphenation problems. Use the :PDISC UDC to writes all errors (including hyphenation errors) into a separate file named PERRFILE. Then use Qedit to find and fix words that need hyphens:

```
/set udc udc.catalog.robelle
/open howmessy.doc
/:pdisc *    {format HowMessy Manual into PLIST}
```

Justify Command and Prose Documents

While editing Prose files, you will want to use the Justify Format command to make the raw text more tidy and easy to read. This command adjusts text so that the words fill the margins as much as possible, adjusting lines that are too short or too long. You can configure Justify with Set Justify to start and stop justification when it encounters certain characters in column one. This avoids having your format commands and text all run into one long paragraph.

```
/set justify stop ".+" start "` "
```

Using TDP from within Qedit

Many users have TDP/3000 and Qedit, because TDP is one of the few programs on the HP e3000 to use the full capabilities of the 2680 Laser printers. Using the :Tdpdraft and :Tdpfinal commands that are built into Qedit, you can use Qedit for complete editing of your document, then print it via TDP.

Qedit as a File Utility

Qedit has numerous applications in handling of ASCII data, not just straight text.

Sorting a Range of Lines

Qedit has a command, Lsort, for sorting a range of lines.

```
/lsort all
/lsort 1/10
/lsortq 1/10
/lsort all key 1 10 desc
/lsort 40/last key 1 10 20 5
```

By default, the command uses the entire line as the sort key, sorts in ascending order, and prints the sorted lines. Use the KEY option to specify up to four explicit sort keys, use the DESC keyword to sort in descending order, and use LsortQ to sort without printing.

Searching Groups of Files for Strings

You can use Qedit to search a group of files for a string; we show two very different methods below. Note that either method can be replaced by a single MPEX command, %QEDIT @,List "string".

FINDIT Job

The first technique is to do a :Listf into a disc file and then have Qedit convert that disc file into a usefile of commands to be finally executed by Qedit. There are three lines to be modified in this job. On each of these lines the key fields have been underlined and a comment has been placed in curly braces.

```
!job FINDIT,username.account,group {Insert USERID}
!comment ************************************************
!comment *                                              *
!comment * FINDIT will produce a list of occurrences of  *
!comment * a given string in a given set of files in a   *
!comment * single file group (logon group).              *
!comment *                                              *
!comment ************************************************
!comment
!comment To use FINDIT, follow these instructions:
!comment   1.  Text a copy of this sample (/Text FINDIT).
!comment   2.  Change the JOB command to log on to the
!comment       group that you wish to search.
!comment   3.  Change the fileset in the LISTF command if
!comment       you don't want to search the entire group.
!comment   4.  Enter the string to search for between the
!comment       quote characters in the first Change command.
!comment       Change these quotes to colons if your string
!comment       contains any quotes.
!comment   5.  Stream your workfile (:Stream *).
!comment
!file f=findit;temp;rec=-12,170,f,ascii;nocctl
!listf @;*f                          {Insert FILESET}
!run qedit.pub.robelle
set autocont on
text findit
set length 80
dq "         " (1/8)
dq "FILENAME" (1/8)
cq 10 #"_______"# all                {Insert SEARCH STRING}
cq 1 "L " all
shut
use *
exit
!eoj
```

FINDIT Command File

The second technique is not so different from the first. A :Listf command is used to generate the list of files, but instead of being a job stream, it is a command file which can be executed from your terminal. It takes two parameters: the fileset to be be searched, and the string for which to look. This command file uses MPE/iX syntax, the listf mode (6), and uses I/O Redirection (> ftemp).

```
parm      fileset=@
anyparm   string
purge ftemp,temp
listf !fileset,6 > ftemp
/set autocont on
/text ftemp
/set length 80
/changeq 1 "$include " all
/list $include "!string"
```

Editing Data Files

Any external file that Qedit cannot classify as a programming language such as COBOL is tagged either as a JOB file (80-byte records, unnumbered), or a Text file (any record up to 8,172 bytes, numbered or not, ASCII or Binary, CCTL or not, etc.). See the Set Keep and Set Length commands. When working with record lengths of greater than 80 columns, you may find it easier if you set margins with Set Left and Set Right.

Warning: If you Text and Keep a file with a record length greater than 8,172 bytes, Qedit truncates the file to 8,172 bytes per record.

Copying and Shifting Columns

To copy columns of data, use Hold plus Set Left and Set Right to save the column in the Hold file. Then change the margins and use Replace $hold to copy the lines from the Hold file into another column. See the Replace command for an example.

To shift columns right, use Change col " " to insert spaces in front of a column. To shift columns left, use Change col/col "" to remove columns. To erase a column, use Set Left x, Set Right y, and Change x/y "".

Weird Line Numbers or Losing Eight Characters

Sometimes you try to List or Text a data file, and Qedit appears to lose the last eight characters of your record, or show you line numbers that seem crazy. The reason may be that the data file contains digits in the last eight columns of the record, so Qedit assumes that these digits are the record line numbers. The solution is to remember to List or Text these files using the UNN option. For example, the file is a list of the following ten-digit part numbers:

```
0004001007
0004001010
0004002059

/list thefile
 4001.007 00  {The file is interpreted as a}
 4001.01  00  {two-character file with}
 4002.059 00  {eight-digit line numbers.}

/list thefile,unn
    1     0004001007
    2     0004001010
    3     0004002059
```

CCTL Files

When you are working with CCTL disc files, remember that List prints the first column, the one with the carriage control, as data, while ListQ sends it to MPE to control spacing of the listing.

If you change your terminal width and want that new width to be used in the List command (especially LISTQ of CCTL files), you must do a Set Vis Stop command to force Qedit to re-query the terminal for its width.

When you do a List-Quiet of a CCTL file, the goal of Qedit is to reproduce as closely as possible the result of originally directing the output to a printer instead of a disk file. The first character in each line directs whether that line is single-space printed, overprinted, or page-ejected.

The listing is written to a file, either QEDLIST or LP ($LP). The record width of that file is very important. For LP, the record width comes from the device specification of a :FILE command with a REC= parameter.

QEDLIST is a file that is opened in Qedit for the $STDLIST device. The default record width is 80 characters. However, if you are logged on interactively, Qedit knows that your "CRT" or Reflection may have more than 80 columns of display. Therefore, it checks your terminal at startup and uses the CRT width at that time as the record size for QEDLIST.

When you List a file with lines longer than the QEDLIST record size, Qedit normally folds those lines for you. However, on a ListQ of a CCTL file, Qedit does not do any folding. It leaves the treatment of the lines completely to the MPE file system. MPE itself breaks up the lines in its own way if necessary, which seldom looks the way you want for CCTL files. Therefore, if you have widened the CRT width, you must let Qedit know about that change. You can do this with Set Vis Stop, which forces Qedit to re-iniitalize all knowledge of the CRT on the next command. This also closes and re-opens a new QEDLIST file with the new terminal width.

You can confirm the current CRT width by doing Verify Visual - if the CRT is open, it will appear in a comment like this:

```
{Reflection=500W Col=80}
```

Or you can do a SHOWJCW RCRTWIDTH. Set Vis Stop will reset both values to 0 or null.

If you do List-Template, then you obviously do not want an exact reproduction of the original report, since it did not have a template. Therefore, Template disables the special Quiet treatment of CCTL files. Similarly, a non-quiet list also cannot look like the original report, so the special processing is not done in that case either.

File Size

When you Text a data file into a Qedit workfile, Qedit remembers whether the original file had space available beyond the end-of-file. If it did, when you Keep the data file again, Qedit adjusts the limit of the new file to ensure that the same free space still exists.

Texting a File with User Labels

When you edit a file with **user labels** (e.g., a PowerHouse subfile), use Text file,Labels to retain the contents of those labels in the workfile. When you do a Keep, Qedit writes the labels to the new file. There is no way to edit the labels, but you can remove them by doing Keep file,Nolabels. To retain the user labels by default, use Set Work Labels On. Many PowerHouse sites put this command in their Qeditmgr file, since they edit PowerHouse subfiles in Qedit.

Editing Program Files

For years people have been editing binary program files with Qedit, but we have never said whether this should work. Now Qedit recognizes that you are editing a program file. The Text command prints a warning that you should only use the Change, List, and Keep commands on program files. Change does not let you replace a string with one of a different length, as this would invalidate the program file. Keep forces the new program file to have exactly one extent.

Qedit as an Operations Tool

Qedit is handy for managing :Stream files and spool files and coping with operational problems in general. For example, you can leave Qedit running on the console with SPOOK and Suprtool as "suspended" son processes for dealing with spool files and data files. While editing and launching job streams, the operator can use List *filename* to examine other files and dump them to the printer.

Editing Stream Files

The Qeditscr file is just what you need for editing and launching batch jobs. You Text a copy of the template stream into Qeditscr, fix it, then :Stream it - all within Qedit.

```
/text compjob.streams
QEDITSCR
33 lines in file
/modify "XXXX"        {modify parameter lines}
/stream *             {stream modified job}
```

When creating job streams, use Set Lang JOB and consider saving job streams as Keep files. Qedit files can only be streamed from within Qedit, or by STREAMX from VESOFT.

Native-Mode Output Spool Files

Since native-mode output spool files are ordinary files, they can be Listed, Texted, and Destroyed with Qedit. To make this easier, Qedit recognizes the format #O1234 and #1234 as spool files and translates them into the proper MPE/iX file name. You cannot Keep as a spool file, but you can do List LP to create a new spool file.

```
/showout sp;ready
/list #o12
/text #321
/destroy #O5678
```

Editing Bells, Tabs and Escapes

When using Visual mode to edit files containing Bell, Tab, Esc, many lines are shown with a ?. This indicates that the line contains unprintable characters and cannot be edited in Visual. Lines containing ShiftOut and Shiftin characters might be modified because of the interaction with the terminal or terminal emulator. However, you may specify substitute characters for use in Visual. The trick is to choose a character that is not used for anything else (say ¤, which is typed as Extend-char-G, or Alt-Z G using Reflection for DOS).

```
/set vis bell "ß"        {Alt-Z S in Reflection}
/set decimal on; set vis bell '222 {for Qeditmgr file}
/set vis tab "¤"         {Alt-Z G in Reflection}
/set vis esc "¥"         {Alt-Z H in Reflection}
/set vis so "é"
/set vis si "ç"
/set decimal on; set vis esc '186  {for Qeditmgr file}
```

Aborting All Users to Back Up

One of the features of MPE is the ability to do automatic backups to a DAT tape in the middle of the night without an operator. For this to work, you need to configure your tape drive for "automatic reply", insert a tape before you leave, and :Stream *backup*; AT=23:00 (i.e., 11

p.m.). This works fine, unless someone forgets to log off. The files they have open will not be on the backup tape. Qedit can abort these users when it is time for backup, by doing a :Showjob into a disc file and reformatting it into a list of :Abortjob commands.

```
!file abort,new;dev=disc;rec=-80,16,f,ascii;nocctl;temp
!setjcw cierror := 0
!continue
!showjob job=@s;*abort
!if cierror=0 then
!   file abort,oldtemp
!   run qedit.pub.robelle
text abort
dq "#S" (1/2 nomatch)
:comment To allow Operator.Sys to remain logged on:
dq "OPERATOR.SYS"
cq 9/80 "" all
cq 1 ":abortjob " all
shut
use Qeditscr
exit
!endif
!purge abort,temp
!reset abort
```

For this job to work, the job stream must be "allowed" to do :Abortjob. You can either ALLOW the command to everyone (@.@), or use VESOFT's GOD program to ALLOW this job the :Abortjob command.

Qedit Commands

Introduction

Qedit operates in Line mode or Visual mode, depending upon the type of terminal. The same commands are used in both modes. In Line mode, you do everything with commands. In Visual mode, you do most editing with built-in functions of your terminal, but use commands for some things. Line mode commands work in Visual mode, and Visual mode function keys work in Line mode.

Here we describe the Qedit commands in alphabetic order. For each command, we show both the longest and the shortest name that Qedit can recognize, as in Add [A]. Highlighted terms (e.g., *linenum*) and jargon words (e.g., "workfile") are defined in the "Glossary". The **Visual** command is described only briefly in this section: see the chapter "Getting A Quick Start with Full-Screen Editing" for full details.

General Notes

Here are general guidelines that apply to using the Qedit commands.

Abbreviations

Each Qedit command has a name such as List that you can abbreviate to any leading subset. Thus, L means List. Some commands require more than one letter: GARbage, DEStroy, RENumber, SHut, VIsual. You may append option letters to the command: Q, T, or J. Q means "quiet", T means "template", and J means various things, depending on the command.

```
list all      {fully spelled out}
l @           {maximal abbreviation}
lq            {list quietly}
listqt        {list quietly, with template}
lqjt          {list quiet, jumping, with template}
list $        {most recent external file name}

s dec on      {Set Decimal command}
sh            {Shut command}
```

Uppercase or Lowercase

You can enter the commands in uppercase or lowercase. These commands are identical:

```
LIST ALL    {uppercase}
list all    {lowercase}
```

Multiple Commands per Line

You can enter several commands on a single line, if you separate them with semicolons. The maximum command line is 256 characters, and & is not supported for continuation. If you want to have an MPE command or a calculator command in the stack, you should enclose it in parentheses. This prevents Qedit from passing the rest of the line as parameters. For example,

```
List 5;Listspf o ;seleq=[owner=mgr.acct];List 4       {fails}
List 5;(Listspf o ;seleq=[owner=mgr.acct]);List 4     {works}
```

If the syntax requires semicolons and parentheses, you have to put the problematic command in a command file, a UDC, or set it in a MPE variable and use it in the command list instead.

Any error causes Qedit to flush the remaining commands in the line.

```
list 505;add *-1   {list line 505; add just before it}
shut;stream job23
```

When combining Qedit commands, be certain to use the same quote character in all the commands.

Wrong:

```
/c7/7"DISPLAY";c\.\\
```

Right:

```
/c7/7"DISPLAY";c"."
```

Comments on Command Lines

You may annotate Qedit commands by putting comment text in curly braces at the end of the line:

```
keep sample,yes    {update disc file}
```

Such comments are recognized at the "/" prompt, in usefiles, command files, and UDCs (of course, MPE won't like them!), as well as Visual's home line and Next? prompt and List's More? prompt. In command files and UDCs the {comment} may appear on continuation lines, before or after the "&".

STREAMX Warning

STREAMX is a product from VESOFT that permits you to build flexible job streams. STREAMX contains a complete programming language with loops, prompts, and parameter substitution. A problem arises when trying to enter comments into a Qedit batch job that will be submitted with STREAMX. Qedit uses the {...} pair to delimit comments. STREAMX uses these same characters for expressions.

You cannot change Qedit's comment character, but you can change the {...} characters in STREAMX. The following example changes the STREAMX expression characters from {...} to ~...~:

```
!job helpfile,user.acct
::setbraces ~~
!comment  Purpose: This job stream uses the QLIB tools
!comment            Prose and Qhelp to create
!comment            a helpfile from a user manual.
!comment
!purge ~product~.help.acct
!setjcw outhelpcomp=1
!run helpcomp.qlib.robelle;parm=3
~product~.doc.acct
yes
~product~.help.acct
!release ~product~.help.acct
!run qedit.pub.robelle
open ~product~.help.acct
list .beginkey (U)    {optimizing pointers for speed}
exit
!tell ~hpjobname~,~hpuser~.~hpaccount~;Help created!
!set stdlist=delete
!eoj
```

Stopping Commands with Control-Y

You can stop most Line mode functions by pressing the Control-Y key. For example, to stop an inadvertent List ALL, use Control-Y. To stop the Add, Modify, or Replace commands, use either Control-Y or two slashes (//).

Implicit Commands

Some commands have no alphabetic name. In Line mode, pressing only Return means display the next line and a backslash (\) means display the previous line, $ means enable Memory Lock and $- means disable Memory Lock. In either mode, ? means Help, any line number

means go to that line, a string means display the next line with that string, and "^" means search backwards for a string:

55	find and display line 55 or higher
FIRST	find and display first line
;;;;	display the next 5 lines
\	display the previous line
-5	move current line back 5 lines
"*string*"	display next line with *string*
^"*string*"	display previous line with *string*
$	turn on memory lock at this line
$-	turn off memory lock

Function Keys

Qedit accepts the eight user function keys of HP terminals as one-keystroke abbreviations for useful functions:

F1	Go into Visual; Update/Getnext if in Visual
F2	Roll the screen up 6 lines; browse
F3	Findup (find previous line with current string)
F4	Find (find next line with current string)
F5	Browse Backward One Page
F6	Browse Forward One Page
F7	Listredo (line) or execute ===> line (Visual)
F8	Exit from Qedit or Exit from Visual to Line mode

^1 through ^8 are another way of invoking the user function keys in Line mode.

Command Files and UDCs

Qedit executes MPE commands, UDCs (see Set UDC), and command files, whether they start with a colon (":") or not. Your UDCs must first be activated in Qedit using the Set UDC command.

MPE Commands

Qedit accepts most MPE commands, including Run commands, User Defined Commands, command files, and Implied Runs, with or without the colon. You only need the ":" if the MPE command is also a valid Qedit command (e.g., `:help` requests MPE help). Beware of some unobvious Qedit commands composed of abbreviations and options. For example, PRT is interpreted as a Qedit command (Proc with the template option) so you must put a colon in front of it to have Qedit execute it as a User Command. Any MPE command causes Qedit to post to the disc all changes to your current workfile.

Examples

```
/listf abc.source,2
/list abc.source 5/10;listf abc.source,1
/fcopy from=abc.source;to=
/:showtime
/showjob
/file bobtape;dev=tape
/stream abc12.compile    {stream Qedit files, *}
/showcatalog             {see Set UDC command}
/:help listf             {colon is recommended}
/:help udcname            {see set UDC}
/compile *               {Set Lang decides compiler}
/cobol abc.source,,lp
/prep $oldpass,abc12.prog;pmap
/run abc12.prog;lib=g
/dbutil                  {implied Run dbutil.pub.sys}
/segmenter
/display Print this message on the screen.
/pause Press Return when ready to continue:
/tdpdraft *              {invoke Scribe on Qedit file}
/reflect dir             {Reflection PC command}
/qhelp qlib.help.robelle {get Robelle Help}
```

Differences from MPE

The Break key will not stop Qedit in the middle of a long :Listf or other command. You may want to use :Break and :Resume to do a long :Listf. Control-Y sometimes stops a :Listf on certain versions of MPE/iX, but generally Control-Y doesn't stop most commands. Control-Y does stop a compile if the compiler has been "fixed" to use our interface routines to read Qedit source files. The Qedit syntax for Prep and Run is more forgiving than in MPE; you can abbreviate the keywords, leave out the commas, and use default parameter values. Qedit adds a number of new commands that MPE forgot -- Reflect, Display, Pause, Activate, Kill.

Unlike Qedit commands, MPE commands cannot normally be shortened, and only one may be entered per command line. You will find MPE commands handy to check files (`listf`), to check users (`showjob`), to redirect files (`file lp = $stdlist`), to compile without leaving Qedit, to :Prep (or :Link on MPE/iX), and to :Run programs:

```
/listf
/file lp;dev=serialp
/cobol *,,lp
/prep                       {$oldpass to $newpass by default}
/run                        {defaults to $oldpass}
```

Calculator Commands

Any command that begins with an equal sign (=) is treated as a calculator expression. This feature can be used to compute temporary values and do conversions from one number base to another.

```
=64,O
Result= %000100
```

QEDITCOUNT JCW

Qedit has a JCW (like a variable) that keeps track of how many lines were processed by the last command: QEDITCOUNT. This JCW is updated after those commands that can print a total: List, Delete, Add-file, Add-move, Add-copy, Append, Change, Divide, Glue, Justify, Keep, Merge, Proc, and Text. The line count is truncated at 32,000.

```
/deleteq "$page"
29 lines DELETED!
/showjcw qeditcount
QEDITCOUNT = 29
```

QEDCURWFILE Variable

Qedit updates a variable, QEDCURWFILE, with the name of your current or last workfile. The name in this variable is the same as the name substituted when you use "*" as a parameter in a User Command. This gives you the ability to reference the current workfile easily from within a User Command without having to pass it in as a parameter.

External Program Commands

If you define an external program such as MPEX with the Set Extprog command, you can then send it commands by prefixing them with a percent sign (%). When the external command completes, you return to Qedit.

```
/set extprog main.pub.vesoft
/%!altfile @.@;squeeze;extents=1
```

:Activate Command [AC/:A]

Awakens one of the programs that you have held in Qedit. See also Kill.

:ACTIVATE [*progname* [,*entrypoint*]]

(Defaults: most recently used)

The *progname* must be the name of a program file that you ran within Qedit, that suspended on exit, and that you held. The default is the program most-recently used. You need not spell out the entire program file; you may shorten the name to any substring. Use Verify Run to see what programs are ready to be activated.

Examples

```
/run suprtool.pub.robelle
>base xx;get yy;list;xeq  {do Suprtool task}
>exit                     {return to Qedit}
End Run
SUPRTOOL is still alive.  Okay to HOLD onto it [no]?yes
/list all...              {continue editing}
/ac supr                  {activate Suprtool}
SUPRTOOL.PUB.ROBELLE
>get zz;list;xeq
>exit
Program Held.  Use :Activate/:Run to rerun.
```

Add Command [A]

Adds lines into the workfile. There are five varieties of Add that cover all the ways you can add lines into a Qedit workfile:

NEW	Add new lines to your workfile from Stdin.
STRING	Add a new line from the command prompt.
COPY	Copy lines from one place to another.
MOVE	Move lines from one place to another.
FILE	Bring lines in from an external file.

Add (Adding New Lines)

Add some new lines from the terminal keyboard. Insert them at a given line number or after it.

ADD [*linenum*]

(Q=no linenums, J=justified, T=template)

(Default: *linenum* = *)

The *linenum* parameter specifies where to add new lines and also determines the increment between new lines. If *linenum* is 9.1, lines will be incremented by 0.1; if 9.01, then 0.01. If *linenum* already exists, Qedit increments it and begins adding after the existing line. If *linenum* is 0, Qedit adds new lines before the first existing line in the file. If you don't say which *linenum*, Add inserts the lines after the current position (*). (See Miscellaneous Points below.)

Examples

```
/add 5              {add new lines after line 5}
    5.1   line a    {Qedit prompts with line number}
    5.2   line b    {you enter line of text and Return}
    5.3   //       {you enter // or Control-Y to stop}

/aq                 {add after * line; no prompt}
This is new text
//                  {end the Add command}
```

Temporary Workfile: Qeditscr

If you do not have a named workfile Open when you Add, Qedit automatically builds a temporary workfile for you. This file is named Qeditscr (or Qed*nnnnn* if you have Set Work Random On), and it is job temporary, meaning it goes away when you log off the computer. Therefore, you should convert it into a permanent Qedit workfile by doing Shut *filename* or into a permanent Editor-style file by doing Keep *filename*.

Making Qeditscr Permanent

Do you access Qedit over a telephone line? Have you ever been disconnected by noise on the line? If so, you probably know that Qeditscr is a job temporary file. When your session is lost, so is your editing work. Of course, if you were editing a named Qedit file that you Opened, you would not lose anything.

Qeditscr can easily be converted into a permanent file so that it will not be lost on :BYE. However, if two people share the same logon group, the Qeditscr file cannot be permanent for both of them! Here are the commands to create a permanent scratch file for yourself:

```
/:purge qeditscr,temp  {purge existing file}
/set work size 3200    {ensure file is big enough}
/open                  {creates new Qeditscr}
/shut
/:save qeditscr        {make permanent}
```

Another way of using permanent scratch files is to pass a file name for Qedit to edit, or to use Set Work Random On. See the "Running Qedit Under MPE" chapter for more information.

Using the Tab Key

By default, Qedit defines tabs every 10 columns across the line (every 8 for Qedit/UX). You can override these default tab stops using Set Tabs Stop **n** (every 2 to 15 characters) or Set Tabs 5 10 22 28 ... for completely custom tab stops. When you press the tab key as you Add lines, Qedit correctly inserts spaces in your lines and skip to the correct column on your screen (assuming you are using an HP terminal).

Overflowing Lines or Line Numbers

The Add command continues prompting until you press Control-Y, or you type "//" at the end of a line, or you run out of line numbers. When you exhaust the line numbers possible between two lines, Qedit prints "Error: Already". You can continue by doing a range Renumber on the area where you wish to add more lines. Thus, if your last line added was 4.999, use Renum 4/5 to spread out the lines between 4 and 5.

You can configure Qedit to automatically renumber part of the file so that you do not have to renumber it manually. See the Set Visual Renum option.

Line Wraparound

If you enter a line that is too long, Qedit divides it into several lines. Set Wraparound ON divides lines on "word" boundaries only. Any words that will not fit on the current line are moved to the next line. If only a small number of words are moved to the next line, Qedit prompts you to complete the line. To end the Add when this happens,

press Return before typing "//". If you are editing FORTRAN source code, Qedit generates a valid continuation line for you.

Automatically Indenting Lines

AJ for justified is a special option to indent new lines. The *linenum* you specify must be an existing line. You enter new lines beneath it. Qedit will then indent the new lines by exactly the same number of spaces as the existing line. You can shift the indentation left by typing {'s at the start of a line, or shift it right with }'s. To redefine the { and } characters, use Set Zip.

Modifying a Line During Add

When you know you made a typo, and prefer to fix it now instead of going on, the auto-modify character will help you. Enter the command Set Zip []@{}#, or better yet, put it in your Qeditmgr configuration file. The # character (or other special character of your choice) is called the auto-modify character. It allows you to modify the line you are currently entering. Type "#" at the end of the line, and Qedit redisplays the line for you to modify. When you are done with the Modify, you press Return to continue adding new lines.

Miscellaneous Points to Note

If you have Set Left/Right margins, the new lines added will have spaces to the left and right of the margins. That is, the line you enter will be left-justified within the current margins of the workfile.

The maximum default increment between new lines is 1.0 (or 0.1 for standard COBOL files). You can change this default with Set Increment.

You can ask Qedit to remove nonprinting characters from your input lines using Set Editinput Data ON. If you do not wish to allow the extended Roman-8 characters, use Set Editinput Data ON Extend OFF.

Add (Adding a String as a Line)

Add one new line, with the text coming from a string in the command itself. This is handy when you need some literal text within a User Command or Use file, but don't want to create a temporary file to hold it.

ADD *linenum string*

(Q=no linenums, J=justified, T=template)

(Default: *linenum* = *)

The *linenum* parameter specifies where to insert the new line containing the string.

Examples

```
/add 5 "new line"
   5.1    new line
/add 10.01 "change datasetdata setall"
  10.01   change datasetdata setall
```

Add (Copying Lines within a File)

Add lines by copying duplicates of existing lines.

ADD *linenum* = *rangelist*

(Q=no display)

(Defaults: none)

The *linenum* parameter tells Qedit where to insert the copied lines. The number of decimal places in *linenum* tells Qedit how finely to number the new lines:

```
/add 50 = 1/9           {new lines will be 50.1, 50.2, 50.3...}
/add 50.10=1/9          {new lines will be 50.10, 50.11, 50.12...}
```

The *rangelist* parameter tells Qedit which lines to copy:

```
/add 50.1 = 1/9 10/15 {'1/9 10/15' is the rangelist}
```

Examples

```
/list 4/8               {how lines look before the copy command}
    4     aaaaaaaa
    5     bbbbbbbb
    6     cccccccc
    7     dddddddd
    8     eeeeeeee
/add 5 = 7/8            {copy lines 7 and 8 after line 5}
    5.1   dddddddd
    5.2   eeeeeeee
2 lines COPIED
/list 4/8               {how lines look after the copy command}
    4     aaaaaaaa
    5     bbbbbbbb
    5.1   dddddddd
    5.2   eeeeeeee
    6     cccccccc
    7     dddddddd
    8     eeeeeeee

/aq 5 = 5               {duplicate line 5 after itself}
```

Notes

Add prints each new line, unless you use AQ. When you copy lines, the *rangelist* must not include the *linenum* (e.g., /Add 5 = 4/6 is rejected because it would be an infinite loop). Qedit prints "Error: Already". The lines copied are not deleted from the original location. You now have two copies of the lines (and a copy in the Hold0 file, see Add-Move). Add-Copy is like the Copy command of EDIT/3000.

If you have Set Left/Right margins, Qedit prints only the portion of each line within the margins. However, it will actually copy the entire line, including the portion outside of the current margins.

Add (Moving Lines within a File)

Move some lines from one place in the file to another, deleting them from the original position.

ADD *linenum* < *rangelist*

(Q=no display)

(Defaults: none)

The *linenum* tells Qedit where to move the lines. The number of decimal places in *linenum* determines the line number increment. For example, "/add 5.10<100/200" creates lines 5.10, 5.11, 5.12, etc.

The *rangelist* tells Qedit which lines to move. Add deletes the original lines after moving them. You still only have one copy of each line.

Examples

```
/list 4/7         {how lines look before the move}
    4     aaaaaaaa
    5     bbbbbbbb
    6     dddddddd
    7     cccccccc

/add 5 < 7        {move line 7 after line 5}
    5.1   cccccccc
1 line MOVED

/list 4/7         {how lines look after the move}
    4     aaaaaaaa
    5     bbbbbbbb
    5.1   cccccccc
    6     dddddddd
```

Notes

Control-Y during a move stops the move, but it also changes the move into a copy. The lines being moved in the current range are not deleted.

Add-Move ignores Set LEFT/RIGHT margins; it moves entire lines. However, it only prints the portion of the line within the current margins.

Add-Move is like the Gather command in EDIT/3000.

When you copy or move lines using Add= or Add<, Qedit first puts the lines into a "Hold" file called Hold0. It then counts the lines. If you do not have sufficient line numbers to insert the new lines, Qedit stops and prints "Error: Already". Use Renum to renumber the range of line numbers and then copy the lines from the Hold0 file. See also the Hold command.

```
/list hold0
/add 55=hold0     {add from Hold file}
```

Add (Copying Lines Between Files)

Add lines to the workfile from an external file.

ADD *linenum* = *filename* [,UNN] [*rangelist*]

(Q=no display)

(Default: entire file)

The *linenum* tells Qedit where to begin adding the lines from the external file.

The *filename* tells Qedit which file to copy from. It can be any type of disc file. If any of the lines are too long, they will be truncated with a warning. Use *filename*,UNN when you are adding from a data file with numeric characters in the last eight columns which are not really sequence numbers.

The *rangelist* tells Qedit how much of the file to copy. The default is to copy the entire file. If the external file does not have sequence numbers, Qedit assumes that the file is numbered from 1 by the current Set Increment. When you specify a rangelist, Add leaves a copy of the lines from the external file in the Hold0 file, as well as in your workfile.

Examples

```
/add 500.01 = abc       {copy in the file ABC after 500.01}
  500.001 abc line-1    {prints each line copied from file}
  500.002 abc line-2    {prints new line numbers too}

/aq 5 = xyz 5/10        {copy in lines 5/10 of the file XYZ}

/l template "$page"(up) {list page breaks in a file}
    1    $PAGE "xx"     {select the template you want}
   24    $PAGE "yy"
   37    $PAGE "zz"
/add 5=template 24/36   {copy the lines between $pages}

/shut longname.to.type  {establishing "previous" file}
/new cust               {open another file}
/a 1 = $ 50/60          {$ stands for longname.to.type}
```

Notes

Add prints each line as it copies it, unless you use AQ. If Qedit finds invalid sequence numbers in a file, it begins assigning "logical" sequence numbers using the last valid sequence number and the current Set Increment.

If you have Set Left/Right margins, Qedit inserts blanks before the left margin in each line. That is, the lines from the external file are left-justified within the current margins of the workfile.

Add from a file is like the Join command in EDIT/3000.

Append Command [AP]

Appends a string to the end of each line in the rangelist.

APPEND "*string*" [*rangelist*]

(Q=no display)

(Default: *rangelist* = *)

Append allows you to add a semi-colon (or any other string of characters) to the end of a line (/AP ";" 5/10). Append prints each line that it changes. If the resulting line would be too long, Append goes into Modify on that line.

Examples

```
/list 25
   25    to the end of the line
/append "!"
   25    to the end of the line!
/ap ")" 1/4
    1       (redo function)
    2       (modify function)
    3       (append function)
    4       (list function)
```

Backward Command [BA/F5]

Starts "browsing" the current file by displaying one page "backward". You stay in "browse" mode until you enter any command (see List, jumping option).

BACKWARD

(F5 key does the same)

In Line mode, Backward and Forward (or F5/F6) throw you into List-Jumping's browse-mode. Qedit displays a screen of text, where the screen size is either 23 lines or what you specify with Set List LJ, then waits for you by asking "More?". Press Return to see the next screen. Typing a line number moves you to the screen starting at that line, pressing F2-F6 does the appropriate action, and F8 or "//" or Control-Y or typing any command gets you out of browse-mode. At the "More" prompt, the * "current" line is the last line displayed.

Before Command [B]

Repeat any combination of the previous 1,000 command lines, with or without editing.

BEFORE [*start* [/ *stop*]]
[*string*]
[ALL | @]

(Default: redo previous line)

(BQ=redo without change)

(BJ=listredo)

The Before command allows you to modify the commands before it executes them. If you don't need to change them, use BQ or :Do. Commands are numbered sequentially, starting with 1 for the first command entered and, by default, the last 1,000 commands are accessible. This numbering sequence applies only to the temporary redo stack, because this stack is discarded when you exit Qedit. The numbering sequence in a persistent redo stack, which is accessible across Qedit invocations, continues between invocations. Use the :Listredo or BJ command to display the previous commands. You can redo a single command, a range of commands, or the most recent command whose name matches a string.

The Before command uses Qedit-style Control characters for modifying the commands. The default mode is to replace characters. To delete use Control-D, and to insert use Control-B. If you prefer HP-style modify (D, R, I, and U), use the :Redo command instead of Before, or do Set Modify HP.

Examples

```
/listf @.soruce               {"source" is not spelled right}
NON-EXISTENT GROUP.  (CIERR 908)
/Before                       {redo most recent command}
listf @.soruce                {last command is printed}
         our                  {you enter changes to it}
listf @.source                {the edited command is shown}
you press Return}

/listredo -10/                {show last 10 commands}
/before 5                     {redo 5th command in stack}
/bef 8/10                     {redo 8th through 10th}
/b listf                      {redo last Listf command}
/b listftemp                  {redo "listftemp" command}
/b @temp                      {redo last containing "temp"}
/before -2                    {redo command before previous}
/before -5/-2                 {redo by relative lines}
```

Notes

If you wish to change any characters within the line, the modify operators are the regular Control Codes used in Qedit:

Any printing characters replace the ones above.

Control-D plus spaces deletes columns above.

Control-B puts you into "insert before" mode.

Control-A starts appending characters at the end of line.

Control-A, Control-D, plus spaces, deletes from the end.

Control-T ends Insert Mode, allowing movement to a new column.

Control-G recovers the original line.

Control-O specifies "overwrite" mode (needed for spaces).

To save more commands, use a :File command on the file Qedredo before running Qedit:

```
:file qedredo;disc=5000
:run qedit.pub.robelle
```

:Beginfile and :Endfile Commands

Qedit allows you to build and fill MPE files in UDCs and usefiles:

:BEGINFILE *filename*

: *data records*

:ENDFILE

The :Beginfile command opens a new temporary file with 256-byte records. :File equations are allowed to override the format of the file. Qedit writes all of the *data records* between the :Beginfile and the :Endfile into this new file. Each *data record* must have a colon at the start, but the colon is not written to the temporary file. Also note that Qedit removes all leading spaces between the colon and the first character on the line. The :Endfile command closes the file as a temporary file. If the session already has a file with the same name, Endfile asks the user if he wishes to purge the existing file or rename the new one. If you don't want the end-user to go through this dialogue, you should :Purge the existing file before the :Beginfile.

Examples

You can use this file as input to programs, using a :File command and/or the Stdin parameter of Run:

```
:purge basename,temp
:beginfile basename
:menu
:endfile
:file inname=basename,oldtemp
:run dbutil.pub.sys,create;stdin=*inname
:reset inname
:purge basename,temp
```

Notes

A useful application of :Beginfile is to create command files in job streams. However, when creating a file with :Beginfile in a job stream, be certain that each data line **starts with a colon (:)**. Otherwise, Qedit thinks that those are Qedit commands and it attempts to execute them.

Change Command [C]

Changes one string or column range to another string in some or all of your lines. There are two basic varieties of Change:

STRINGS	replace one string with another
COLUMNS	replace a column range with a string

Change (Changing Strings)

Replaces one string of characters by another string, the two strings being separated by a single quote character.

CHANGE "*string1*"*string2*" [*rangelist*]

(Q=no display, J=verify, T=CobX Tag)

(Default: *rangelist* = *)

The *string1* tells Change what string of characters to find. The default for *string1* is the last string used, and you specify this default via the null string (e.g., `change ""xxx"`). The null string recalls the last string and the window used with it. If the target *string1* occurs more than once in a line, Qedit changes every occurrence.

The *string2* tells Change what characters to substitute. In this format of the Change command, only three quote characters are used to define the two strings, not four as you would normally expect. Another oddity is that *string2* does not become the current string. This is so that you can do another Change or Find command using "" as the target (i.e., the last string), finding and fixing multiple occurrences of the same string (e.g., `find "nad"; CH ""and"; F; CH ""and"; ...`). The third difference of *string2* is that a null string for this parameter actually means "null". `change "very"" 100` means remove "very" from line 100.

The *rangelist* tells Change what lines to search for *string1*. The default *rangelist* is the current line only.

If *string2* is shorter than *string1* (e.g., `change "Robert"Bob"`), Qedit shortens the line by shifting the rest of the line left. If *string2* is longer (e.g., `change "Bob"Robert"`), Qedit lengthens the line by shifting characters right. If *string2* is so much longer that the line would be too long, Qedit sends you into the Modify command to fix the line by hand.

Change prints each line that it updates, unless you use CQ.

Examples

```
/list 55                {display line with mistake}
   55     select lines contaning both of two
/change "contan"contain" {change string in current line}
   55     select lines containing both of two

/change "sub"subindex" all    {make a global change}
   10     subindex = subindex + 1
   11     table(subindex) = 0
  213     if subindexway = 0  {oops-bad change!}

/cj "cust"Customer" 200/300   {change with user approval}
  225    Display Customer     {shown for approval}
Change okay (Y,N,or Modify) [No]: yes

/list 9           {display line to review}
    9     The test results were very exciting.
/c "very""        {remove word, change to null string}
    9     The test results were exciting.

/find "wiith"     {search forward for line with error}
   99    the string is combined wiith the second string
/c ""with"        {change "wiith" to "with"}
   99    the string is combined with the second string
```

Using Alternates to Quote

You may select your own quote character if you find " too much work because it is a shifted key. Among the alternatives are \ : and ' (apostrophe). See the "Glossary" for more on strings and other alternates to quotes.

```
/c :wiith:with:
/c \wiith\with\
```

Approving Each Changed Line

Use CJ to give yourself approval over each change before it is updated. With CJ, Qedit displays the line as it would be and asks you for a Yes, No, or Modify answer. Use CJ when you have trouble working out the precise strings to change.

Searching for Two Strings at Once

Because the *rangelist* can contain a search string, you can actually select lines containing both of two strings:

```
/c "xxx"filename" all          {"xxx" becomes "filename" in ALL}
/c "xxx"filename" "rename"     {line must contain "rename" too}
```

Including a Window

The form of Change command just described requires only three quotes per command, but does not allow all options. You cannot specify a special *window* - you will always use the default Set Window value. To do a Change with a special window, you must specify four quote characters, two for each string:

CHANGE "*string1*" (*window*) "*string2*" [*rangelist*]

Each string is delimited by two quote characters and the two strings must be separated by a space or a comma. Between the two strings you may insert a *window* such as (SMART) or (20/30) or (UPSHIFT).

Changing Within a Column Range

If you insert a column window, Qedit changes only the columns within the *window*. Columns outside the *window* are untouched:

```
/change "CUSTREC" (10/39) "CUSTOMER-RECORD"
```

In this example, "CUSTREC" is expanded to "CUSTOMER-RECORD", but the data at column 40 and beyond is not moved. In addition, the Change must not cause the rest of the window to overflow.

Changing Uppercase and Lowercase

If you specify an upshift window, Qedit ignores the case of letters when matching the target string. It will match words that are spelled with caps or without:

```
/change "JONES" (upshift) "Fitz-Jones" all
```

In this example, Change selects lines containing "JONES", "Jones", or even "joneS".

Avoiding Changes to Embedded Words

If you specify a Smart window, Qedit rejects those matches in which the target string is actually in the middle of another word:

```
/change "FRANK" (smart) "Frank" all
```

This example selects "FRANK", but reject "FRANKLYN." You can combine Smart and Upshift.

Patterns and Windows

In other commands the *window* can specify a *pattern* to match. In the Change command patterns are not allowed, because Change cannot perform pattern changes. However, a string specified in the rangelist portion of the Change command may be a pattern. For example:

```
/change "CUSTREC" "CUST-REC" "@01@PIC@" (pattern)
                 {change custrec to cust-rec in all lines that}
                 {   also contain "01" and "PIC" in that order}
```

CobX Tags

Cobol tags are short strings stored in columns 73 to 80 of CobX source files. The Cobol tag value is defined using the Set X command. Once enabled, updated lines and added lines are automatically updated with the tag. They can also be modified manually with custom tag values.

In its regular form, the Change command affects only the text area in columns 7 to 72. If you wish to make changes to Cobol tags, use the `T` suffix. You can think of it as the `Tag` option. This option operates only on the tag area itself, columns 73 to 80.

```
/change "CUST" "SUPP" all
                {change cust to supp in all lines.   }
                { cust must be between columns 7 and 72.  }
/changeT "CUST" "SUPP" all
                {change cust to supp in all lines.        }
                { cust must be between columns 73 and 80.  }
```

To to this, the `Tag` option temporarily changes the margins to `(73/80)`. Qedit displays a warning every time this option is used. Because the margin values have changed, explicit column range in a Window can only be between 73 and 80.

```
/changeT "CUST" (50/60) "SUPP" all
Warning:  ChangeT: editing the Cobol tag area only (73-80).
Error: Window
/changeT "CUST" (73/80) "SUPP" all
Warning:  ChangeT: editing the Cobol tag area only (73-80).
   10      SUPP0102
1  line changed
```

Because the margins have been changed, Qedit displays text in the tag area only except when the Justify option is used. In this case, Qedit prompts for confirmation before making the change. It would be hard to determine if a line needs to be changed based only on the tag value. So, when the Justify option is used, Qedit displays the complete line. The user has the option to accept the changes, reject the changes or manually modify the line. If the user chooses to modify the line, only the tag is displayed.

Change (Changing Columns)

Replace some columns in some lines with a new string of characters. Use Change to insert columns, shift text left, or shift text right.

CHANGE *column* [/*column*] [(*window*)] "*string*" [*rangelist*]

(Q=no display, J=verify)

(Default: *rangelist* = *)

Change replaces the target *column* range with the *string* in the lines of the *rangelist*. You can use this to insert a string at a specified column. You can also use it to replace, expand, or contract specified columns.

If you specify a single *column* instead of a range, Qedit inserts the *string* before that column and shifts the rest of the line to the right. You can create new columns by inserting blanks in front of a position (e.g., `change 5 " "`).

If you specify a range of columns, Qedit replaces that column range with the *string*. The *string* may be the same length as the column range, longer, or shorter. If the string is shorter than the column range deleted, the rest of the line shifts left. If longer, the rest of the line shifts right. You can remove columns entirely by changing them to a null string (e.g., `change 5/7 ""`).

Examples

```
/change 5"|"all       {draw vertical line of "|"s in file}
/cq 1/2 "" 10/15      {shift lines 10/15 left 2 spaces}

/cq 1 "   " 10/15     {shift lines 10/15 right 3 spaces}

/cq 1(1/8)" " all     {shift columns 1/8 right 1 space}
                      {don't change text beyond column 8}

/change 12/12 ::      {delete column 12 in the current line}
```

Notes

See the discussion of *windows* under "Changing Strings". Those notes also apply to column changes.

The first column number is usually 1,except for standard COBOL source files, where it is 7 (seven). The last column number depends on the current values for Set Language, Set Length, and Set Right. See the COBOL section in the chapter "Using Qedit with MPE Programming Tools."

Change prints each line modified, unless you use CQ. CJ asks you to verify each change.

Close Command [CL]

Shut the current work file and remove it from the recently accessed file list.

CLose

(Default: none)

The Shut command is the normal way to close a workfile. When you Shut a file (or Open another one), Qedit remembers the name of the current workfile in a list of recently accessed files. This allows you to reopen the file using `open ?`. However, the list is of limited size. If you are not coming back to edit the current file again, use the Close command instead of Shut. This keeps other file names from falling off the bottom of the list.

Examples

```
/open abc
/open def
/close       {close "def" and forget it}
/open *      {current file is now "abc"}
```

Colcopy Command [COL]

Copies one or more columns to a different location on the same line.

COLCOPY *source* [*/source2*] *destination1* [*/destination2*] [*rangelist*]

(Q=no display, J=verify, T=CobX Tag)

(Default: *rangelist* = *)

Colcopy copies text in columns specified by *source1* and *source2* to the destination columns specified by *destination1* and *destination2* in the lines of *rangelist*. Even though Colcopy can modify multiple lines using a *rangelist*, it really operates on one line at a time. You can not copy columns from one line to another.

Source and destination columns always represent the original location. All changes are based on that assumption.

If *source1* only is specified, Qedit copies just that column (length of 1). If *destination1* only is specified, the source columns are inserted at that location. If you wish to replace a single column, enter a destination range where *destination1* and *Destination2* are the same e.g. `Colcopy 1 10/10`.

```
/list 1
   1     abcdefghijklmnopqrstuvwxyz
/colcopy 1 10          { insert column 1 at column 10 }
   1     abcdefghiajklmnopqrstuvwxyz
1 line changed
/colcopy 1/5 10        { insert columns 1/5 at column 10 }
   1     abcdefghiabcdejklmnopqrstuvwxyz
1 line changed
```

If *destination1* and *destination2* are specified, text in these columns is replaced by the source text. If the source text is narrower or wider, the line is shortened or expanded as needed.

```
/colcopy 1 10/15     { copy column 1 to columns 10/15 }
   1     abcdefghiapqrstuvwxyz
1 line changed
/colcopy 1/5 10/11   { copy columns 1/5 to 10/11. Line expands. }
   1     abcdefghiabcdelmnopqrstuvwxyz
1 line changed
/colcopy 1/5 10/20   { copy columns 1/5 to 10/20. Line shortens. }
   1     abcdefghiabcdeuvwxyz
1 line changed
```

Trailing Spaces

Trailing spaces on the line are not significant. This means that a line can expand until a non-space character reaches the current right margin (**Set Right**). However, trailing spaces from the source text are significant and are copied in the operation. If the line can not be expanded further, Qedit displays a warning message and allows the user to modify it.

```
/list 2
   2     abcd     efghiabcdeuvwxyz
/colcopy 1/8 20        { insert columns 1/8 at 20 }
   1     abcd     efghiabcdeabcd    uvwxyz
1 line changed
/Set right 30
/colcopy 1/5 30        { insert columns 1/5 at 30 }

Warning: Source columns could not be inserted. Please modify. (Warning
2)
   1     abcd     efghiabcdeabcd    uvwxyz
1 line modified
```

Overlapping Columns

When source and destination columns do not overlap, the results are straightforward. If source and destination columns overlap partially or completely, the results might not be as expected. Keep in mind that:

- source and destination columns are always based on the original line
- the destination columns are removed
- the source columns are put in their place

Approving Each Changed Line

Use COLJ to give yourself approval over each change before it is updated. With COLJ, Qedit displays the line as it would be and asks you for a Yes, No, or Modify answer.

CobX Tags

Cobol tags are short strings stored in columns 73 to 80 of CobX source files. The Cobol tag value is defined using the Set X command. Once enabled, updated lines and added lines are automatically updated with the tag. They can also be modified manually with custom tag values.

In its regular form, the Colcopy command affects only the text area in columns 7 to 72. If you wish to make changes to Cobol tags, use the `T` suffix. You can think of it as the `Tag` option. This option operates only on the tag area itself, columns 73 to 80.

```
/ColT 73/74 79/80 all      { copies content of columns 73 and 74 }
                           { into columns 79/80                  }
/ColT 73/74 75 all         { inserts content of columns 73 and 74     }
                           { in column 75. Columns 76-80 are shifted. }
```

To to this, the `Tag` option temporarily changes the margins to `(73/80)`. Qedit displays a warning every time this option is used. Because the margin values have changed, explicit column range in the source and destination columns can only be between 73 and 80.

```
/ColT 23/24 79/80 all
Warning:  ColcopyT: editing the Cobol tag area only (73-80).
Error:  The Sourcestart column (23) is not between 73 and 80

/ColT 73/74 79/80 10
Warning:  ColcopyT: editing the Cobol tag area only (73-80).
   10      ME0307ME
1  line changed
```

Because the margins have been changed, Qedit displays text in the tag area only except when the Justify option is used. In this case, Qedit prompts for confirmation before making the change. It would be hard to determine if a line needs to be changed based only on the tag value. So, when the Justify option is used, Qedit displays the complete line. The user has the option to accept the changes, reject the changes or manually modify the line. If the user chooses to modify the line, only the tag is displayed.

Colmove Command [COLM]

Moves one or more columns to a different location on the same line.

COLMOVE *source* [*/source2*] *destination1* [*/destination2*] [*rangelist*]

(Q=no display, J=verify, T=CobX Tag)

(Default: *rangelist* = *)

Colmove moves text in columns specified by *source1* and *source2* to the destination columns specified by *destination1* and *destination2* in the lines of *rangelist*. The source columns are removed from their original location. Even though Colmove can modify multiple lines using a *rangelist*, it really operates on one line at a time.

You can not move columns from one line to another. Source and destination columns always represent the original location. All changes are based on that assumption.

If *source1* only is specified, Qedit moves just that column (length of 1). If *destination1* only is specified, the source columns are inserted at that location. If you wish to replace a single column, enter a destination range where *destination1* and *Destination2* are the same e.g. `Colcopy 1 10/10`. A move means the original columns are removed and the line is shifted left. Then the source text is inserted at the destination.

```
/list 1
   1     abcdefghijklmnopqrstuvwxyz
/colmove 1 10          { move column 1 to column 10 }
   1     bcdefghiajklmnopqrstuvwxyz
1 line changed
/colmove 1/5 10        { move columns 1/5 to column 10 }
   1     fghiabcdejklmnopqrstuvwxyz
1 line changed
```

If *destination1* and *destination2* are specified, text in these columns is replaced by the source text. If the source text is narrower or wider, the line is shortened or expanded as needed.

```
/colmove 1 10/15     { move column 1 to columns 10/15 }
   1     bcdefghiapqrstuvwxyz
1 line changed
/colmove 1/5 10/11   { move columns 1/5 to 10/11 }
   1     fghiabcdelmnopqrstuvwxyz
1 line changed
/colmove 1/5 10/20   { move columns 1/5 to 10/20 }
   1     fghiabcdeuvwxyz
1 line changed
```

Trailing Spaces

Trailing spaces on the line are not significant. This means that a line can expand until a non-space character reaches the current right margin (**Set Right**). However, trailing spaces from the source text are significant and are moved in the operation.

```
/list 2
   2     abcd     efghiabcdeuvwxyz
/colmove 1/8 20        { move columns 1/8 to 20 }
   1      efghiabcdeabcd    uvwxyz
1 line changed
```

Overlapping Columns

When source and destination columns do not overlap, the results are straightforward. If source and destination columns overlap partially or completely, the results might not be as expected. Keep in mind that:

- source and destination columns are always based on the original line
- the source columns are removed
- the destination columns are removed
- the source columns are put in their place

Here is an example:

```
/list 1
   1     abcdefghijklmnopqrstuvwxyz
/colm 6/20 15
   1     abcdefghijklmnopqrstuvwxyz
1 line changed
```

Apparently, nothing has changed but, in fact, something did happen to the line. Qedit removed the source columns "fghijklmnopqrst" and tried to insert the original text where column 15 used to be. Column 15 was part of the area that has been removed so Qedit inserts the text where it should have been i.e. between "e" and "u". So, it's putting the original text back where it was.

Moving Passed the Right Margin

Destination columns can exceed the current right margin. In this case, Qedit assumes the columns should be moved to the end of the line. Effectively, the source columns are inserted in the rightmost columns of the line. The destination columns do not have to be a precise value. They just need to be larger than the current right margin. If the right margin is currently set at 80, the following commands yield the same results.

```
/v right
Set Right 50
/lt2
         ....+....10...+....20...+....30...+....40...+....5
   2     abcdefghijklmnopqrstuvwxyz
/colm 1/5 51
   2     fghijklmnopqrstuvwxyz                          abcde
1 line changed
/colm 1/5 88/90
   2     fghijklmnopqrstuvwxyz                          abcde
1 line changed
```

Approving Each Changed Line

Use COLMJ to give yourself approval over each change before it is updated. With COLMJ, Qedit displays the line as it would be and asks you for a Yes, No, or Modify answer.

CobX Tags

Cobol tags are short strings stored in columns 73 to 80 of CobX source files. The Cobol tag value is defined using the Set X command. Once enabled, updated lines and added lines are automatically updated with the tag. They can also be modified manually with custom tag values.

In its regular form, the Colmove command affects only the text area in columns 7 to 72.If you wish to make changes to Cobol tags, use the `T` suffix. You can think of it as the `Tag` option. This option operates only on the tag area itself, columns 73 to 80.

```
/ColmT 73/74 79/80 all     { copies content of columns 73 and 74 }
                           { into columns 79/80                  }
/ColmT 73/74 75 all        { inserts content of columns 73 and 74     }
                           { in column 75. Columns 76-80 are shifted. }
```

To to this, the `Tag` option temporarily changes the margins to `(73/80)`. Qedit displays a warning every time this option is used. Because the margin values have changed, explicit column range in the source and destination columns can only be between 73 and 80.

```
/ColmoveT 23/24 79/80 all
Warning:  ColcopyT: editing the Cobol tag area only (73-80).
Error:  The Sourcestart column (23) is not between 73 and 80

/ColmoveT 73/74 79/80 10
Warning:  ColcopyT: editing the Cobol tag area only (73-80).
   10      ME0307ME
1  line changed
```

Because the margins have been changed, Qedit displays text in the tag area only except when the Justify option is used. In this case, Qedit prompts for confirmation before making the change. It would be hard to determine if a line needs to be changed based only on the tag value. So, when the Justify option is used, Qedit displays the complete line. The user has the option to accept the changes, reject the changes or manually modify the line. If the user chooses to modify the line, only the tag is displayed.

:Compile Command [CO/:C]

Qedit supports many commands for compiling using MPE V or CM compilers: three for COBOL, two for FORTRAN, SPL, Pascal, and RPG. To select a default CM COBOL compiler, use Set Whichcomp. Qedit provides a generic :Compile command that uses Set Language to determine which compiler to use. Once you have compiled a program, you can also :Prep and :Run it from within Qedit.

The generic :Compile command does not currently apply to NM compilers. Instead, use the regular command files in Pub.Sys, which we adjust to use our special Qcompxl routines (e.g., COB85XL).

Commands for MPE V and CM Compiles

COMPILE *files* [;INFO [=] "string"]

CO *files*

COBOL *files* {see Set Whichcomp}

COBOLI *files*

COBOLII *files*

SPL *files*

RPG *files*

FORTRAN *files* {see Set Whichcomp}

FTN *files* {FORTRAN 77}

Pascal *files*

The *files* Parameters

All of the compile commands use the same file parameters:

:COMPILE *text, usl, list, master, new*

The *text* file is the file that contains the source code. It may be a Keep file or a Qedit workfile (if the compilers have been properly "fixed"). Compiler fixing is part of the standard Qedit install jobs. But, the "copylib" file for COBOL cannot be a Qedit file; it should be KSAM. If the *text* file is "*", the currently open workfile is compiled. If none is open, the one just closed is compiled.

The *usl* file is the file where the compiler deposits the machine code that it generates. This file must be "prepped" into a program file before you can actually :Run. The *usl* file defaults to $newpass (or $oldpass). You can specify a USL file created via the Segmenter (-buildusl) or by a previous compile (e.g., :save $oldpass after compile).

The *list* file is where the compiler sends its listing. The default is to print on $stdlist (i.e., your screen). If the *list* file is "LP", it always

refers to Dev=LP. To direct the listing to a device name other than "LP", use a regular File command:

```
/file sp;dev=serialp
/cobol x,,*sp  {compile file x, list to device Serialp}
```

The *master* file is a master source file that is merged with the *text* file by line number at compile time. This parameter is not supported for FORTRAN 77, Pascal, or C.

The *new* file is an optional output disc file that can be created by merging the *master* file and the *text* file.

Examples

```
/cobol abc.source,,lp       {output goes to dev=lp}
/open def.source            {open another source file}
/co *                       {Lang of file selects compiler}

/shut                       {close current workfile}
/spl *                      {compile errors to terminal}
/open *                     {resume editing}
```

Compiling a Range

You can specify a line range instead of a *filename* if you like:

```
/fortran 300/414.5
```

This option works only with the current workfile, accepts only explicit line numbers (e.g., 1.0, not FIRST), and allows only a single range (e.g., not 5/10,20/30).

Set Whichcomp Command

Qedit has the :COBOLII command to run the COBOLII program and :COBOLI to run the COBOLI program. To use COBOL-85, you need to use Set Whichcomp.

```
/set whichcomp cobol 85    {run COBOLII,COBOLIIX}
/set whichcomp cobol 74    {run COBOLII for :COBOL}
/set whichcomp cobol 68    {run COBOLI for :COBOL}
```

Qedit has the :FORTRAN command to compile FORTRAN 66 and :FTN to compile FORTRAN 77. Use Set Whichcomp to make FORTRAN 77 the default for :Compile:

```
/set whichcomp fortran 77
```

Interrupting with Control-Y

You can use Control-Y during a long compile to interrupt the compiler. It should print the question "Terminate program [no]?". Answer "YES" to abort the compile, or answer "NO" to continue compiling.

Compile Priority

Normally, the compiler is run in the same priority subqueue as Qedit, but the System Manager can specify a maximum subqueue for

compiles that is lower than the programmer's logon priority. In these cases, the compiler is run in the lower subqueue (see the installation chapter). The System Manager can also specify that no on-line compiles at all are to be done in Qedit.

Include Files

The Qedit compiler interface interprets $include commands within Qedit workfiles at compile time. This is the syntax:

`$INCLUDE` *filename* or `!INCLUDE (`*filename*`)`

The HP Pascal syntax for $include is okay: $include '*filename*' $. For Transact systems, use !Include with the *filename* in parentheses. For C, use #Include <*file*>. The Include statement must start at the beginning of the line.

When the Include command is encountered during the compile, the Include file is opened, and the lines are returned to the compiler with their actual sequence numbers. If the file cannot be opened, Qedit returns the include line to the compiler for interpretation. If the file can be opened, the include line is returned as a comment. Include is recognized only in Qedit workfiles, not in Keep files. However, "included" files themselves can be either Qedit files or Keep files. Nesting of includes is supported to ten levels deep.

Note that the SPL compiler interprets lines that start with an exclamation mark as a comment, even !include. The Qedit compiler interface treats this as a valid !include statement, not a comment. To prevent this, use the SPL << >> comment syntax instead.

Compiling to a Disc File

If you direct your compiler error listing to a disc file, you can use Qedit to examine the errors and fix them.

First, add a line to the beginning of your workfile specifying "$control nolist", which means "list only lines with errors":

```
/add 1.1
   1.10  $control nolist
   1.11  //
```

Later, when you want a full listing, change this line to "`$control list`", or "`$control source`" for COBOL.

Build a disc file, compile the listing into it, and display it:

```
/:build list;rec=-132,64,f,ascii;disc=4000,32
/:spl *,,list   {compiler listing goes to List}
/lq list        {displays compiler listing on your terminal}
```

On subsequent compiles, you can use the same file and the compiler should erase the previous contents. With this technique, you can do your compile in a job stream and continue editing another file while you are waiting. When the stream job finishes, you can check the

results from within Qedit, even if you are remotely located from the batch line printer. Using :Tell, you could have the Job send a message to your Session when it completes.

Trapping Compiler Syntax Errors

Qedit can trap compiler syntax errors and show you each line in your source code for you to correct. See the chapter "Using Qedit with MPE Programming Tools" for full details.

Delete Command [D]

Deletes lines from the workfile.

`DELETE` [*rangelist*]

(Q=no display, J=verify)

(Default: *rangelist* = *)

Delete prints each line in *rangelist*, with an underline character after the line number, as it deletes them, unless you use DQ.

Notes

If you do Delete All, you must answer "Y" to a verifying question before the lines will be deleted. This also applies if you Set Check Delete is ON and you delete more than 5 lines.

If you delete the wrong lines, you can cancel the Delete by striking Control-Y. However, you must use Control-Y before you press Return on the next command line. Qedit responds by printing "Undeleted" or "Canceled". Once you have typed in the next command line and press Return, your chance to recover using Control-Y is gone and the previous Delete command is final. You can still undo the deletion using Undo.

Delete All resets the Set Keep Name (default for **Keep** command) so that a later Keep command will not wipe out the wrong file by mistake.

Confirm Each Deletion

Use DJ to give yourself approval over each delete before it is carried out. With DJ, Qedit displays the line (even if the Quiet option is used) and asks you for a Yes, No, or Stop answer.

Answer `No` or Return to keep the line.

Answer `Yes` to delete the current line. Unlike the basic Delete operation where lines are removed with the next command, lines confirmed in DJ are deleted immediately. They can be recovered with an **Undo** command.

Answer `Stop` if you wish to stop the delete process. When you use Stop, lines that have been deleted are not recovered automatically. Use Undo to recover them.

Examples

```
/delete 5/6           {remove lines 5 and 6 from file}
    5    _this is line 5
    6    _and this is line 6!

/dq 2 10/49           {delete lines 2 and 10/49}

/delete "."(1/1)      {delete lines with "." in column 1}
                      {Implied rangelist is ALL}

/del "."(1/1 nomatch) {delete lines without "."}

/d "~"(pattern)       {delete all blank lines}

/dj 3/66
    3    this is line 3
Delete it (Y,N or Stop) [No]:
    4    this is line 4
Delete it (Y,N or Stop) [No]:Y
    5    this is line 5
Delete it (Y,N or Stop) [No]:n
    6    this is line 6
Delete it (Y,N or Stop) [No]:S
1 line Deleted!
```

Destroy Command [DES/:D]

Purges the current workfile, a named MPE file, a Copylib member, or a spool file, after first verifying with the user.

DESTROY [*filename*]

(Default: current workfile)

The *filename* parameter can be the name of any file that you have write access to, "$" to refer to the "last" file name mentioned in another command, or "*" to refer to either the current workfile or, if none is currently open, the one just Shut. To purge a Copylib member, put the name in parentheses and do a :File command for "copylib". To purge a native-mode spool file, just refer to the number preceded by a #.

Examples

```
/destroy crept23.dead
CREPT23.DEAD.GREEN,OLD Qedit File, # of lines=162
Purge file [no]? Oui    {that's French for Yes}
/open ctemp
/des *
CTEMP.BOB.GREEN,OLD Qedit file, # of lines=15
Purge file [no]?        {Return key means "no"}
File NOT purged
/list datapg2           {check contents of file}
/destroy $              {...then purge it}

/destroy #o1234         {purge an NM spool file}

/file copylib=copylib.pub.develop
/destroy (custrec)
```

Notes

The MPE :Purge command also purges files, but it does not ask for your approval first. If you abbreviate the Purge command (as in PU), you are sent to the Destroy command instead.

If you are purging an opened file that is "clean" (that is, a file that has not been changed since the last save), Qedit does not ask for approval before purging the file.

:Display Command [DISPLAY]

Prints a message on the terminal - handy for instructions in UDCs. The *message* is not in quotes and is separated from the command name by a single space. See also Pause.

:DISPLAY [*message*]

(Defaults: blank line)

Examples

```
/display To get out of Suprtool, type Exit
/display
/run suprtool.pub.robelle
```

Divide Command [DI]

Divides a line into two or more lines at specified columns. Divide can turn a field-oriented record into a series of lines with one field per line. It can also append a blank line after every line in a file. See also VV in Visual. For the opposite of Divide, see the Glue command.

DIVIDE [(*columnlist*)] [*rangelist*]

(Default: *columnlist* =], *rangelist* = *)

The *columnlist* parameter is one or more valid column numbers in ascending order such as (10 20 30), or it may be a (]) for "after end-of-line" (i.e., append a blank line). All characters from the specified column to end-of-line are moved to a new line after the original line.

The *rangelist* parameter specifies one or more lines in the file. Each line is split into two or more lines according to the column parameter. The default *rangelist* is the current line.

The default *columnlist* is "]", except when the Divide command has no parameters or only a "string" *rangelist*. Then the current line is split at the "current column". When Divide has no parameters, the current column is "]". Following a successful string match, the current column is the first column of the string position in the line(s).

Examples

```
/find "abc";divide     {move "abc..." to a new line}
/list *+2;divide       {move ahead 2 lines, add a blank line}
/divide (20) all       {split every line at column 20}
/divide (20 40) @      {split every line at columns 20 and 40}
/divide (10 20 30)     {split current line at 3 places}
/divide (]) */*+10     {add blank line after lines */*+10}
/divide (20)"Qedit"    {split all "Qedit" lines at column 20}
/divide "Qedit"        {split all "Qedit" lines at "Qedit"}
/divide (])"Qedit"     {add blank line to all "Qedit" lines}
```

Notes

After a Divide command, the current line is the last line divided. To not print the lines, use DivideQ.

Divide works within the current Left and Right margins. That is, characters to the right or left of the current margins are not moved.

When working with COBOLX files, the Divide command does not consider the tag (columns 73 to 80) as part of the data. This means that the current tag data is not moved to the new split line. It also means that you cannot divide a line passed column 73.

The QEDITCOUNT JCW is updated with the number of lines divided, rather than the number of lines resulting.

:Do Command [DO]

The :Do command repeats (without changes) any of the previous 1,000 commands.

DO [*start* [/ *stop*]]
[*string*]
[ALL | @]

(Default: repeat the previous command)

Commands are numbered sequentially from 1 as entered and the last 1,000 of them are retained. Use the :Listredo command to display the previous commands. You can repeat a single command (`do 5`), a range of commands (`do 5/10`) or the most recent command whose name matches a string (`do list`). If you want to modify the commands before executing them, use :Redo or Before.

Examples

```
/listredo          {or /bj or ,, }
/do                {do previous command again}
/do 39             {do command line 39 again}
/do 5/8            {do command lines 5 to 8 again}
/do list           {do most recent List command}
/do show           {do last starting with "show"}
/do showjob job    {do last "showjob job" command}
/do @job           {do last containing "job"}
/do -2             {do command before previous}
/do -7/-5          {do by relative line number}
/do 5/             {do command lines 5 to "last"}
```

Notes

The :Do command can be abbreviated to ",." as in MPEX, but you cannot use ";" to combine commands on the same line. To stop a :Do All, use Control-Y.

:Editerror Command [EDITERROR]

Pulls up "errors" in source files for the user to correct. :Editerror depends upon a special **error-file** that is usually generated by the program that detects the errors. See Appendix B for the file format. Some compilers, such as SRN's SPLash! compiler, can generate Qedit error-files. For COBOL, SPL, Pascal, and HP C, Qedit converts compile errors into :Editerror format using the Editerr utility program.

:EDITERROR **error-file** [VISUAL | NEXT | PREV]

(Default: Line mode)

There are two basic types of :Editerror command: the first command after a compile, and a subsequent command.

```
/:editerror error-file [VISUAL] {first command}
/:editerror error-file NEXT      {subsequent}
```

Finding the First Error

The first command after a compile would not specify NEXT or PREV and would find the first error in the error-file. Qedit prints the error message, then Opens or Texts the source file containing the error, and positions itself to the line with the error. If the current open file is a Qedit workfile, :Editerror does an automatic Shut command on it. If the current open file is Qeditscr and you did a previous Text and made some changes, :Editerror does an automatic Keep command on it (you will see the question "Purge existing file?"). :Editerror can handle Copylib members if the member name is enclosed in parentheses and followed by the name of the Copylib file (without a space).

If you specify VISUAL on the first command, Qedit assumes that you wish to correct the errors in Visual mode. Qedit does not throw you into Visual mode, but if you enter (or re-enter) Visual at this point, Qedit will display the error message at the top of the screen where the error occurred. If you do not specify Visual, Qedit assumes that you want to correct the errors in Line mode. Normally, the first command would be included in the UDC that does your compile.

Subsequent Errors

Subsequent commands retrieve the "next" (or "previous") error in the same error-file.

If you used the Visual option on your first command, Qedit allows you to use the F4 and F3 keys in Visual to find the Next or Previous error. Visual mode does the necessary :Editerror commands for you automatically.

If you do any string searches in fixing your errors, you will lose the ability to use F4 and F3 for Next and Previous Error. This often happens when you must search backward in your file for the definition

of a data item. If the current string value does not equal "$error", the F4 and F3 keys do not pull up the next and previous errors to be fixed. You can now reactivate error-fixing by searching for "$error" explicitly.

You do not need to go through all the errors before recompiling. If you go past the last error to be fixed, Qedit prints a warning that says so. The same occurs if you try to go backwards beyond the first error to be fixed. Qedit does not turn off error-fixing just because you reach the end -- you can still go back to the previous error by pressing F3.

Resetting :Editerror Mode

Once you do the :Editerror command you are in a special mode where the F4 and F3 keys pull up errors. This mode stays enabled until one of the following resets it:

- another :Editerror operation
- :Editerror without any parameters
- any explicit Text, Open, Keep, Shut or New command
- using the F8 key to exit from Visual back to Line mode

Line Mode Tip

If you use Line mode to correct your errors, you will need a UDC to retrieve the next and previous error. For example, if the error file is called cerrors:

```
nexterror
option nolist
editerror cerrors next
*****
```

Screen Format

In most programming languages, it makes more sense to see the lines above the point of error, rather than after. The error line becomes the current line in :Editerror and the default Visual display is zero lines above the current line and 19 lines after. You can of course override this with Set Vis Above and Set Vis Below. If your Above value is 0, :Editerror changes the screen format so that there are 9 lines above and 9 fewer lines below (with a minimum of 9). Naturally, :Editerror saves the original values and resets them when you end error-fixing mode.

UDCs

See the UDCs called COBERR and EDERR in the file Udc.Catalog.Robelle for examples of how to use the Editerror command effectively.

:Escape Command [ESCAPE]

The :Escape command causes control to leave all User Commands (regardless of nesting levels) and return to the Qedit prompt. The :Escape command is valid only in User Commands (UDCs and command files). It returns an error if executed from the Qedit prompt or in a Use file.

:ESCAPE

(Default: none)

Examples

```
if cierror = 999 then
   escape
endif
```

See also the :Return command.

Exit Command [E/F8]

Exit from Qedit and return to the operating system.

EXIT [*string*]

The current workfile is closed and Qedit terminates. The F8 user key is the same as Exit.

To close the current workfile without exiting, use Shut. Remember: you do not need to Exit in order to do :COBOL, :Prep or :Run, but you do need to Exit in order to do :BYE.

When you Exit, Qedit checks whether you have any unsaved edits in any of your Extra scratch files. If so, you are prompted to **Discard?** them, or stay in Qedit to save them. If your primary Qeditscr file is temporary and named "Qeditscr", Qedit warns you that you forgot to save your changes, but does not purge the file. You can re-enter Qedit, Open it and resume work or save your edits.

Examples

```
:hello bob.green      {log on to the computer}
:run qedit.pub.robelle
/open qedit.doc       {open file to work on}
/modify 2482.5/       {do some editing...}
    .
    .
    .
/:prose *             {use a UDC to format a document}
/exit                 {ready to quit for the day!}
:bye                  {disconnect from computer}
```

Notes

To avoid accidental Exit as a result of pressing F8 one time too many, you can run Qedit with Parm=64. This forces user approval of Exit.

The only situation where Qedit does not terminate on an Exit is when you invoke Qedit from another user program (e.g., from SPOOK, MPEX, or SELECT). In this case, Qedit "suspends" so that the father process can quickly "activate" Qedit again. When you reactivate Qedit you can resume editing with Open *. If the father does not want to hold onto Qedit, he should get rid of it with the KILL intrinsic. If the father process is like HPDesk and does not notice that Qedit remains suspended, you should :Run Qedit with Parm=32 or do Set Suspend Off to force Qedit to terminate on Exit instead of suspending.

The string parameter is only allowed when Qedit is running as a server. The string is a message sent to the Qedit for Windows client. The client receives the exit notification, displays the message and disconnects immediately. If no string is specified, a default message is displayed.

Find Command [F/F4]

Finds the next line in the workfile that contains a string. Use Findup if you want to search for the previous line. Find always finds a single line that matches a string. Use the List command if you want to find many lines that match a string.

FIND [*string*] [*linenum*]

FIND [*string range*] [*linenum*]

(Q=no display)

(Default: *string* = recent; *linenum* = *+1)

Find defaults *string* to be "same as last string" and *linenum* to be "starting from the next line". This saves having to repeatedly type the *string* and *linenum*. Once you have defined your *string* and starting position, just enter "F" to find the next line.

Find does not start searching at the beginning of your file. Find will start searching for the string at the *line after the current line*, unless you specify a *linenum* to start the search. If you want to search from the beginning of your file, use Find *string* FIRST.

The F4 user key does the same function as Find with no parameters.

Examples

```
/find "exit" first     {find first line with "exit"}
    45     this command will cause an exit from the
                                    (28)^
/f                     {find next line with "exit"}
    90     after you exit from a module, the program
                (11)^
/f                     {continue finding lines...}
   ...
/f                     {...until you reach end of file}
Warning: No Line         {prints error and rewinds}
Error: End of File
/f                     {next Find wraps around!}
Warning: Rewind to FIRST
    45     this command will cause an exit from the
                                    (28)^
/fq"$page"(1/5);m      {find next $page and modify it}

/fq;c""exit"           {find next string and change it}

/fq;c"""               {find next string and remove it}
/f "start"/"end" [     {find string range and set ZZ}
Lines 5/11 saved in ZZ
```

Notes

The Q option lets you find the line without printing it. Use FQ if you intend to Modify the line after you find it.

Find prints an error when the search reaches the LAST line without locating the string. Then, if you enter another Find without a line number, the search starts from the FIRST line in the file, after printing a warning.

See the /Qedit command for a command file that uses the Find command and checks the value of CIERROR to see if the string was found. The Find command only sets the CIERROR JCW when it is executed from a User Command. It does not set the JCW when executed from $stdin or from a usefile.

To find/see all occurrences of a string in a file, use the List command.

When a string range is used and a corresponding block is found, the start and end line numbers are stored in the **ZZ** marker.

Findup Command [FINDU/F3]

Finds the previous line in the workfile that contains a string. Findup can be shortened to ^. Use Find if you want to search for the next line.

FINDUP [*string*] [*linenum*]

(Q=no display)

(Default: *string* = recent; *linenum* = *-1)

Findup defaults *string* to be "same as last string" and *linenum* to be "starting from the previous line". This saves having to repeatedly type the *string* and *linenum*. Once you have defined your *string* and starting position, all you need to enter is "^" or "FINDU" to find the next string.

The F3 user key does the same function as Findup without parameters.

Examples

```
/findup "exit" last   {find last line with "exit"}
    90     after you exit from a module, the program
                (11)^
/findup               find previous line with "exit"
    45     this command will cause an exit from the
                                  (28)^
/^                    {continue finding lines...}
   ...
/^                    {...until you reach start of file}
Warning: No Line      {prints error and rewinds}
Error: Beginning of File
/findup               {next Findup wraps around!}
Warning: Rewind to LAST
    90     after you exit from a module, the program
                (11)^
/findupq;mod          {find string and modify it}

/findupq;c""exit"     {find string and change it}

/findupq;c"""         {find string and remove it}
```

Notes

Refer to the notes under the Find command.

Form Command [FORM]

Displays information about a self-describing file created by programs such as Suprtool. These programs store information about the record layout such as field names, data types, length.

FORM [*$lp* | *$lpa* | *$lpb*] [*filename*]

(Default: *filename* = current Text file)

If *filename* is omitted and a workfile is currently active, Qedit uses the name of the Text file (see **Verify Keep**). An external filename can be specified.

If the file is not self-describing, Qedit displays the following message:

```
Error:  File is not self-describing.
```

Self-describing files on MPE have a special filecode, SD. The data description information is stored in the file userlabels. For example, a self-describing file would look like this:

```
ACCOUNT=  GL       GROUP=  DATA

FILENAME  CODE  ------------LOGICAL RECORD-----------  ----SPACE----
                  SIZE  TYP        EOF      LIMIT R/B  SECTORS #X MX

X1DSBEDR  SD      302B  FA        3500       3500  13      320  1  1
```

The Form output looks like this:

```
Self-describing information for X1DSBEDR.DATA.GL
    File: X1DSBEDR.DATA.GL     (SD Version B.00.00)
       Entry:                     Offset
          CHAR-FIELD            X5      1  <<Sort# 1 >>
          INT-FIELD             I1      6
          DBL-FIELD             I2      8
          PACKED-FIELD          P12    12
          PACKED*-FIELD         P12    18
          QUAD-FIELD            I4     24
          ID-FIELD              I1     32
          LOGICAL-FIELD         K1     34
          DBLLOG-FIELD          K2     36
          ZONED-FIELD           Z5     40
    Limit: 3500  EOF: 3500  Entry Length: 44  Blocking: 64
```

LP listing

Overrides default output to $stdlist. $lp, $lpa and $lpb send output to a file with the same name as the option.

Forward Command [FO/F6]

Starts "browsing" the current file by displaying the next page "forward". You stay in "browse" mode until you enter any command (see List, jumping option).

FORWARD

(F6 key does the same)

In Line mode, Backward and Forward (or F5/F6) throw you into List-Jumping's Browse mode. Qedit displays a screen of text, where the screen size is either 23 lines or what you specify with Set List LJ, then waits for you by asking "More?". Press Return to see the next screen, typing a line number moves you to the screen starting at that line, pressing F2-F6 does the appropriate action, and F8 or "//" or Control-Y or typing any command gets you out of browse mode. At the "More" prompt, the * "current" line is the last line displayed.

Garbage Command [GAR]

Finds and recovers wasted space in the current workfile.

GARBAGE

(Q = no summary)

If you keep adding lines to a workfile and editing them, eventually you will get an "Error: Full" message in Line mode or "File nearly full!" in Visual mode, and be unable to add more lines. One method of continuing at this point is to use the Garbage command.

```
/garbage
/gar        {minimal command name}
```

Garbage combines partially full blocks to squeeze out free blocks, but it also searches the workfile for any blocks that have been "lost" (i.e., are no longer on the "free list" or the "text list"). Garbage does not release extents, nor does it reduce the EOF. It does not make your file any smaller, it just allows you to continue editing by finding usable space within the file.

Garbage prints a summary of how much space it recovered and how much is available in the file. The summary report can be suppressed using GarbageQ.

```
5 blocks squeezed out, 2 found, 55 used,
    10 on free list, 9 for expansion.
```

In this example, Garbage reports that 5 blocks were retrieved via squeezing, 2 lost blocks were found, 55 blocks are currently used to hold text, 10 empty blocks are held on a "deleted-block" list (the free list), and 9 blocks are available if the EOF is expanded toward the LIMIT.

Expanding Your File

If you need still more space, you should build a bigger file using the Text command. Text creates a workfile with room to add more lines.

```
/open crept23
/add
     5.11  this is a new line
 Error: Full
/shut        {close the file that is too small}
/text *      {text Crept23 into larger Qeditscr}
/shut *      {rename as new Crept23, purge old}
/open *      {open new big file and edit...}
/add
     5.11  this is a new line
```

Compressing Your File

If you want to compress your file into minimal disc space because you are through editing it, use Garbage to minimize the number of blocks, then use New to build a new smaller file, deriving the number of lines

from a Verify Open of the old file, and copy the old file into the new with Text:

```
/open crept99
/garbage              {minimize number of blocks}
/verify open          {find out number of lines in file}
/shut saveold         {rename file as Saveold}
/new crept99 (2900)   {build new, smaller file}
/text saveold         {copy old file into new}
```

Glue Command [G]

Joins a line with one or more following lines, either concatenated or at specified tab positions. Use Glue to turn a list of fields into a single record-oriented line. See also GG in Visual mode. For the opposite of Glue, see the Divide command.

GLUE [(*columnlist*)] [*rangelist*]

(Defaults: *columnlist* =], *rangelist* = */*+*n*)

The *columnlist* is a list of ascending column numbers in parentheses such as (10 20 30), or ( ]) for "after the end-of-line", which is the default.

The *rangelist* specifies which lines to combine. The default *rangelist* is the current line plus *n*. When you specify a range of lines, Glue joins the lines in "pairs".

Examples

```
/glue              {joins *+1 to *}
/gluej             {joins *+1 to * with space between}
/glue;glue         {join *+1 and *+2 to *}
/glue (10) all     {joins lines in "pairs" at column 10}
/glue (10 20 30)   {joins 4 lines into 1 record}
/glue "string"     {glue "string" lines to lines that follow}
```

Notes

If there are not enough lines at the end of a *rangelist* to fill in each column of the list, Glue **does not** go beyond the *rangelist*. If there is not enough room to move all of the characters into the line, as many characters as will fit are moved, the following line is not deleted, and Qedit prints an "overflow" warning.

After a Glue command, the current line is the line last spliced together. To suppress printing of the spliced lines, use GlueQ.

If you don't specify a list of column fields, Glue removes leading spaces from the following lines before moving them. To insert a single space between them, use GlueJ instead. If you do specify columnar fields, Glue treats spaces as valid data and moves them intact. If you specify more than one field, some nonblank data may be overwritten if the columns are too close together or the lines to be glued are too long. You can always use Undo to cancel a Glue command.

The QEDITCOUNT JCW is updated with the number of lines resulting, rather than the original number of lines that were affected.

If Left or Right margins have been Set, only the text within the margins is copied and the following lines are not deleted.

When editing COBOLX files, the tag area (columns 73 to 80) is not considered part of the data. This means that the tag string on the next

line is not moved to the new line. It also means you cannot glue to columns passed 73.

Help Command [H/?]

Gives instructions on the use of Qedit. Everything in the *Qedit User Manual* is also in the Help command. "?" means the same as Help.

HELP [*command* [,*keyword*]]

[TERMS [,*word*]]

[INTRO]

[NEWS]

(Default: browse through the entire help file)

(Q = Quick Reference Guide "Quick Help")

The parameters have the following meaning:

command explains *command*; lists subsidiary keywords to select.

command,*keyword* finds *keyword* under *command*.

command,@ prints everything about the *command*.

TERMS [,*word*] explains *word* (see "Glossary").

INTRO explains how to apply Qedit to typical problems.

NEWS shows any new features in Qedit.

Examples

```
/h text   {explain the Text command and show sub-keywords}
/h text,@ {tell all about Text.  Comma is required}
```

If Help cannot find your specified topic in the Qedit help file, it prints a warning and search the system help file. To get system help directly, put a colon in front of Help (i.e., `/:help`).

Quick Help - HQ

HQ looks for entries under the keyword Quick in the helpfile. Quick contains the text from the Qedit *Quick Reference Guide*, offering the experienced user a review of command syntax.

```
/hq visual            {full-screen options}
/hq shortcuts         {quick list of shortcuts}
```

Notes

The help file must be on the system for the Help command to work. If the file is missing, Qedit still works fine, but you cannot get any on-line help. The default file name is Qedit.Help.Robelle, but if you move Qedit to another account you should move the help file to that account as well. Within the Help command, use "+" to see what levels exist "beneath" you and "?" for "help on Help". The help file is organized into levels: to go back to the previous level, press Return instead of

entering a keyword. Press F8 to exit the QHELP subsystem completely and return to Qedit. Use the Prev Page (or Page Up) key on your terminal to review help already printed.

Hold Command [HO]

Lets you explicitly write lines to the Hold file.

HOLD [*filename*] [*rangelist*]

(Default: hold current line)

(Q=hold without display)

(J=append, without erasing)

You can refer to the current contents of the Hold file by the actual file name, "hold", in any of the commands that access external files (Add-File, List, Use).

Examples

```
/hold 50/60         {erase Hold, hold lines}
/holdj 100/198      {append more lines to Hold}
/ho "direct"        {hold lines with string}
/open abc.src
/add 33=hold        {adds held lines to abc.src}
/holdq qedhint.help.robelle
/list hold
```

Implicit Hold

When using the Add command to move or copy lines within a file, Qedit overwrites a file named Hold0 with a copy of the lines. It counts the lines and tries to select a line number increment that will accommodate the number of lines being added to your workfile. So, if the command fails or if you wish to copy the same lines again, you can refer to the Hold0 file. Adding from an external file also holds the lines if you specify a rangelist for the file, and if the file is not the Hold file itself.

```
/add 55=hold0
/list hold0          {the Hold file is temporary}
```

Notes

You can save the current Hold file using the MPE Save command:

```
/save hold
/rename hold,newname
```

On MPE/iX, the Hold files are created with variable-length records and a limit of 250,000 lines. On MPE V, the Hold files are created with variable-length records and space for 3 megabytes of data.

Every time you use "hold" or "hold0" by themselves as a file name in any command, Qedit replaces the word with the fully-qualified file name of the appropriate Hold file.

```
/Add 1=hold
```

translates to

```
/Add 1=hold.mygroup.myacct
```

:If, :Endif, :Else, :Elseif Commands

In command files, UDCs, usefiles, and even from the /-prompt, use If, Endif, Else and Elseif commands to create conditional logic. See also the While command, the /Qedit command and the INSIDEQEDIT JCW.

:IF *expression* [THEN]

:ELSEIF *expression* [THEN]

:ELSE

:ENDIF

Examples

Here is a sample command file to show a specific session or all sessions on the system. The parameter is the session number, which the If tests for zero default value in deciding whether to show one or all sessions:

```
PARM sessnum=0
setjcw jsnum=!sessnum
if jsnum=0 then
   showjob job=@s
else
   showjob #s!sessnum
endif
```

To invoke this command, put it in a file named "SS", then type the file name, optionally followed by a session number:

```
/ss
/ss 456
```

Although :If commands may be nested up to 30 levels deep, :Elseif provides an alternative, effectively giving you a "case" command. Any number of Elseifs may follow an If, but only one Else may follow an If or Elseif. The "Then" keyword is optional in Elseif, and in If as well.

Justify Command [J]

With Justify, you can do text formatting: center lines, right-justify lines, left-justify lines, and fill text into margins.

JUSTIFY [*option*] [*keyword* ...] [*rangelist*]

(Q=no display)

(Default *option*: Null or Set Justify)

When the Justify command is processing the range of lines you specified, if you decide not to continue, press Control-Y to stop the formatting.

Options Specify Which Function

Justify Right	right-justify each line
Justify Center	center each line
Justify Centre	Canadian spelling!
Justify Left	remove leading spaces
Justify Format	fill lines, ragged right margin
Justify Both	fill lines, straight right margin
Justify Null	default - no changes - safety

Keyword Parameters of Justify

MARGIN *column*	right edge, relative to left
TWO [ON|OFF]	maintain 2 spaces after **.** **?** and **!**
INDENT *spaces*	indentation for list of points
WITHINDENT	activate configured indentation
STOP *"chars"*	break justification when found
START *"chars"*	start new paragraph

You may shorten options and keywords to the leading letters.

Rangelist Specifies Which Lines

For the Format and Both options, the *rangelist* specifies some lines to format. Warning: if you type a single line number (e.g., `just both 5`), Qedit begins formatting lines from that line number to the end of the paragraph. Qedit sees blank lines as end-of-paragraph markers, so if you `justify format all` you end up with smooth and even

chunks of text, set off by blank lines. This is one of the few places in Qedit where a single line number implies a range of lines.

For the Left, Right and Center options, a single line *rangelist* means a single line. But, you can specify a "string" *rangelist* to center or justify only lines containing a string. Specifying a "string" *rangelist* with the Format or Both options is equivalent to specifying a single line number i.e. formatting starts with the line which has the string to the end of the paragraph.

Verification Before Formatting

If Set Check Justify is ON, Justify Format and Both require user verification before formatting more than 5 lines. This should eliminate inadvertent formatting of entire source programs!

You can also use the Undo command to undo the effects of the Justify command.

Left and Right Edges for Justify

Justify works within borders called the left and right edge. The left edge is usually column 1, or column seven 7 in standard COBOL. The right edge is usually the highest column number allowed in the file (e.g., 80 for JOB files). However, if you use Set Left and Set Right to create margins for your file, Justify operates within those limits. Set Left will be the left edge and Set Right will be the right edge. You can also use the Margin keyword to establish the right edge for Justify, but remember that this edge is relative to any Set Left value.

Examples

```
/justify center 5/6     {center lines 5 through 6}
/j right 5/6            {right-justify lines 5 through 6}

/j left 5/6             {left-justify lines 5 through 6}

/j format 5/50          {format lines 5/50 into margins}

/j f 5/6                {splice lines 5 and 6 into one line}

/j both 5               {format a paragraph, even right edge,}
                        {  from line 5 to the next blank line}
```

Right Justifying Lines

Justify Right shifts each line of *rangelist* to the right until the last nonblank character is at the right edge. For example:

```
/justify right margin 50 rangelist
```

Input lines:

```
Robelle Solutions Technology Inc.
Tools for HP3000
```

Output lines:

```
                Robelle Solutions Technology Inc.
                                Tools for HP3000
```

Centering Lines

Justify Center adjusts each *rangelist* line so that it is centered between the left edge and the right edge. For example:

```
/justify center margin 50 rangelist
```

Input lines:

```
Robelle Solutions Technology Inc.
Tools for HP3000
```

Output lines:

```
         Robelle Solutions Technology Inc.
                  Tools for HP3000
```

Left Justifying Lines

Justify Left removes leading spaces from each *rangelist* line, until the left-most nonblank character is at the left edge. This will left-justify the lines. Use for this option to recover from an inadvertent Center or Right option. For example:

```
/justify left rangelist
```

Input lines:

```
                  Robelle Solutions Technology Inc.
                     Tools for HP3000
```

Output lines:

```
Robelle Solutions Technology Inc.
Tools for HP3000
```

Filling Words into Tidy Paragraphs

Justify Format adjusts the processed lines so that the words fill the space between the left edge and the right edge, but allows the right edge to be ragged:

```
/justify format margin 50 rangelist
```

Input lines:

```
The Format keyword performs a
function which is equivalent to
Format mode in TDP/3000.  Uneven lines
are converted into lines of about
the same length.
```

Output lines:

```
The Format keyword performs a function which is
equivalent to Format mode in TDP/3000.  Uneven
lines are converted into lines of about the same
length.
```

Making Both Edges Even

Justify Both is similar to Justify Format, except that both the left and right edges of the text are even. This is accomplished by inserting blanks between words. For example:

```
/justify both margin 50 rangelist
```

Input lines:

```
The Both keyword performs a
function which is equivalent to
Format;Just ON in TDP/3000.  Uneven lines
are converted into lines of
exactly the same length.
```

Output lines:

```
The Both keyword  performs  a  function  which  is
equivalent  to Format;Just ON in TDP/3000.  Uneven
lines are converted into lines of exactly the same
length.
```

Null Option

Justify Null is included as an option to serve as a default. If Both were the default option, most of your file would be quickly formatted if you accidentally typed "J 5" instead of "LJ 5".

Configuring the Justify Command

The five *options* (Right, Center, Left, Format, and Both) and the four keywords (Margin, Two, Indent, and Withindent), configure the Justify command. The hierarchy of configuration values is as follows:

Startup default (the "default default")

overridden by

SET Justify (the configured default)

overridden by

Keywords in Justify command

You set your own defaults for the Justify *option* and *keyword* values using Set Justify. Once you find the setting you like, you may want to put them in your Qeditmgr configuration file so you won't have to do the Set Justify command every time you run Qedit. For example:

```
/set justify null margin 50 two on
```

causes

```
/justify both 5
```

to be interpreted as

```
/justify both margin 50 two on 5
```

but you can override your own defaults, as in

```
/justify both margin 60 10/20
```

which merges with your Set Justify values to produce

```
/justify both margin 60 two on 10/20
```

Configuring the Right Edge

The Margin keyword specifies the right-most column for processed lines. This column is needed for the Right, Center, Format and Both options. The value you specify is relative to any Set Left margin that is effective at the time of the Justify command.

Determining the Left Edge

For the Both and Format options, the left margin is determined by looking at the first and second lines of each "paragraph". If the first and second line are indented, the entire paragraph will be indented. Of course, this indentation is relative to any Set Left.

```
/justify both margin 50 linenum
```

Input lines:

```
     The Both keyword performs a
     function which is equivalent to
Format;Just ON in TDP/3000.  Uneven lines
are converted into lines of
exactly the same length.
```

Output lines:

```
     The Both keyword performs a function which is
     equivalent to  Format;Just  ON  in  TDP/3000.
     Uneven  lines  are  converted  into  lines of
     exactly the same length.
```

Two Spaces at End of Sentence

Normally, when Qedit adjusts text with Format and Both, it inserts one space between each symbol, regardless of the number of spaces between symbols in the input text. If the Two keyword is ON, Justify maintains two blanks after the end of a sentence (i.e., after a . ? or !, or one of those three followed by a quote mark or a right parenthesis and a space). The default for this keyword is OFF.

Justify does not insert two spaces if the input only contains one; it merely maintains two spaces if they are there already (this means you don't have to worry about getting two spaces in a name like Calvin C. Cook).

```
/justify format two on margin 70  99.5/
```

Formatting a List of Points

The Indent keyword is a special capability for handling lists of numbered points (1., 2., 3., ...). It assumes that your text is indented and that the numbers for each point appear to the left of that indentation. The Indent parameter specifies the number of spaces at the start of each line that will not contain text to format. Justify leaves anything to the left of this border "as is". In fact, the existence of text to the left of the border acts as an "end-of-point" indicator, eliminating

the need for a blank line between points to stop the justification. Indent is relative to any Set Left.

The end of each point in a list is effectively an end of paragraph. Here is a sample of what happens when you attempt to format a list of points without the Indent keyword:

```
/justify both margin 50 rangelist
```

Input lines:

```
1.  Text which occurs in
    a list of points should also
    be formatted into even lines.
2.  Any text to the left of column 5
    causes a
    "justification break".
```

Output lines:

```
1.  Text which occurs in a list of  points  should
    also  be  formatted  into even lines.  2.  Any
    text  to  the  left  of  column  5  causes   a
    "justification break".
```

All of the points have been run together into a single point. You can avoid this result by inserting a blank line at each point, or by doing Justify on each point individually, or by using the Indent keyword:

```
/justify both margin 50 indent 4 rangelist
```

Input lines:

```
1.  Text which occurs in
    a list of points should also
    be formatted into even lines.
2.  Any text to the left of column 5
    causes a
    "justification break".
```

Output lines:

```
1.  Text which occurs in a list of  points  should
    also be formatted into even lines.
2.  Any  text  to  the  left  of column 5 causes a
    "justification break".
```

Activating Indentation

Withindent activates an Indent value that you have previously configured with Set Justify Indent. Withindent allows you to settle on a single indentation for all "lists of points" without having to respecify that value on every Justify command. You merely specify Withindent when you format a list of points:

```
/set justify indent 4     {configure potential indentation}
/justify format 5         {this is not a list of points}

/just f with  9           {this is a list of points}
```

Justification Breaks and Formatting Commands

Justify has options to define characters that start and/or stop justification when found in column one. These options make it much

easier to justify text in files which contain embedded commands and special characters for a format program (e.g., Prose, TDP, etc.). The specific characters are defined using the Start and Stop options:

```
/set justify stop ".+" start "` "
```

This command says that any line with "." or "+" in column one stops text justification and that line is not changed. Any line with "`" or " " (space) in column one ends justification of the previous paragraph and signals a new paragraph (i.e., that line is formatted as part of the next paragraph).

It's important to note that a "string" *rangelist* has precedence over Start and Stop characters. In other words, the latter options are ignored.

Here is an example which justifies some text from a Robelle document that consists of both text and embedded Prose formatting directives. Note that lines beginning with "." and "+" are not altered, and the line beginning with "`" properly appears as a new paragraph.

```
/justify start "` " stop ".+" margin 50 format all
```

Input lines:

```
.for([ T   S:40 // l55 /   "-" pn:1 "-" /]
+    [ S   T:40 // l55 /   "-" pn:1 "-" /])
.par(f` p5 s1 u3).com  Define ` as Start of Paragraph
.ent `|1Welcome to Compare|
.beginkey compare
     Welcome to version 2.2 of Compare -- a
file comparison program for text files.
`Compare answers the question,
"How different are these two text files?"
Compare will tell you whether lines
have been added, or whether a block of
lines is now different.
```

Output lines:

```
.for([ T   S:40 // l55 /   "-" pn:1 "-" /]
+    [ S   T:40 // l55 /   "-" pn:1 "-" /])
.par(f` p5 s1 u3).com  Define ` as Start of Paragraph
.ent `|1Welcome to Compare|
.beginkey compare
     Welcome to version 2.2 of Compare -- a file
comparison program for text files.
`Compare answers the question, "How different are
these two text files?" Compare will tell you
whether lines have been added, or whether a block
of lines is now different.
```

Keep Command [K]

Creates a standard disc file and writes the workfile into it, including any user labels copied by the Text command. Can also update or create a "member" in a COBOL Copylib. Keep is the reverse of Text, which copies a standard disc file into a workfile that you can edit. Use Text when you need to duplicate a file. You should not need Keep very often - especially if you retain your files in Qedit format. In that case you would use New or Open to start editing the Qedit workfile, and Shut to stop editing.

KEEP [*filename*][,*options*] [*rangelist*]

(Q=no linenums)

(Defaults: *rangelist*=ALL, *filename*=last)

Keep Options

Qedit allows several options on the Keep command. Note that the comma preceding the option name is mandatory, and that spaces are not allowed before the comma or the option name.

Keep filename,**TEMP**	temporary instead of permanent file
Keep filename,**UNN**	unnumbered (same as KQ)
Keep filename,**YES**	go ahead and purge old file
Keep filename,**NO**	never purge an old file
Keep filename,**XEQ**	assign xeq access
Keep filename,**NOLABELS**	discard user labels
Keep filename,**RELEASED**	:Release security
Keep filename,**IFDIRTY**	only if changes made

Keep creates a new disc file named *filename*. You can combine several options on the same Keep command. The default *filename* is the name and domain (temporary vs. permanent) of the last Text or full Keep (i.e., it does not count if you use a *rangelist* or have reduced the margins with Set Left or Set Right). If *filename* already exists, Qedit will ask you to verify that it is okay to purge it unless you specify the ,YES or ,NO option.

Usually the file will have sequence numbers in each line (this is called numbered), but you can omit the sequence numbers with KQ, or by specifying the ,UNN option.

Keep transfers *rangelist* lines from the workfile to *filename*. The default *rangelist* is ALL. Warning: Qedit writes only the data within the current left and right margins, so reset the margins first if you want the entire line (e.g., Set Left; Set Right).

To save the current workfile lines as a COBOL Copylib member, put the member name in parentheses, optionally followed by the file name (default is "copylib" for which you usually have a :File command). If the member already exists, you will be asked if you want to purge the old copy. If the member does not exist, it will be created.

Examples

```
/text menu.schema     {make a copy of existing schema file}
QEDITSCR
/find "FUNCTION-CODE"
   14           FUNCTION-CODE,     X8;
/change "X8"X10"
   14           FUNCTION-CODE,     X10;
/keep menu.new        {create a new schema file}
    ...               {do some more changes}
/keep                 {save again with same name...}
MENU.NEW.DEV,OLD 80B FA # of records = 127
Purge existing file [No]? yes   {you must authorize purge!}

/s left 1;s right 50  {define margins as first 50 columns}
/kq nov99.datafile    {unnumbered with 50-byte records}

/k notes,UNN,TEMP,YES {unnumbered, temporary, purge old file}
/keep ,yes            {keep to last text, purging old}

/file copylib=copylib.pub.develop
/text (custrec)
/visual
/keep                {updates member}
/keep (custrec2)     {creates new member}
/keepq (custrec) copylib2.test.develop
```

Absolute File Name

If you are on a version of MPE/iX 5.0 which supports the Chdir command and the creation of new files in the POSIX namespace, you may find yourself doing the following: Text file xxx, Chdir to another directory to add from some other files, then Keep to update your original file. Keep defaults to the "absolute" name (e.g., xxx.src.util or /user/dev/lib/src/xxx). This means you can change to other directories after a Text, but still easily Keep the file back under its original name. In the past, Keep would default to the "relative" name of the Text file (e.g., xxx), saving the file in your current working directory.

Keep Only When Changes Were Made

Keep,Ifdirty only does the Keep operation if the workfile has been modified since the last Text or Keep. This can be useful in job streams that do Changes: by not Keeping files where no string changes occurred, you reduce the number of files that appear on the partial backup. To see whether your workfile is clean or dirty, do Verify Open.

Resetting File Commands

The Keep command pays attention to any :File commands that you have active. If you specify a file-close disposition like Temp or Save, and then try to text and keep the file with Qedit, the purge of the existing file cannot be carried out and Qedit will print an error message (Fclose Err: Duplicate). Qedit observes the :File equation even if you do not specify an asterisk before the file name. To avoid this confusion, :Reset the :File equation before texting or keeping the file.

```
/purge sj
/file sj;rec=-80,16,f,ascii;disc=200;nocctl;save
/showjob *sj
/t sj
Qeditscr
27 lines in file
/k
SJ.JIM.TECHSUP,OLD 80B FA # of records=27
Purge existing file [no]? y
Existing file apparently purged,
but still cannot save new file.
Fclose Err: Duplicate
SJ.JIM.TECHSUP,NEW 80B FA # of records=27
DUPLICATE PERMANENT FILE NAME  (FSERR 100)

/reset sj
/k
SJ.JIM.TECHSUP,OLD 80B FA # of records=27
Purge existing file [no]? y
27 lines saved
```

File Modification Timestamp

When you use the Text command on a file, Qedit stores the file's modification timestamp in the workfile. If you try to Keep the file, Qedit compares the stored timestamp with the file's current timestamp. If they are different, it means the original file has changed since you first opened it. Qedit will alert you to the difference by displaying a message similar to the following:

```
Warning: Original file has been modified since the initial
Text or last Keep
```

The file timestamp can change for a number of reasons. Here are few examples:

- Someone else might have been working on that same file with Qedit and saved their changes before you did.
- The file could have been restored.
- Maybe you used the file to test a program which modified the file in some way.

Because the timestamp message is just a warning, Qedit continues its processing. It then asks for Keep confirmation. If you answer "Yes", the file will be purged and you might lose someone else's changes. Qedit will also store the new modification timestamp.

If you answer "No", you should compare the contents of the file with your workfile and decide if it is safe to Keep your changes. This is one way to compare the files:

- Keep the workfile under a different name
- Use our Compare bonus program to display the differences between the original file and the new version you just created
- Look at the report and separate the lines that you changed from the ones you did not touch
- If needed, apply changes to your copy so you are not missing anything important

By default, timestamp checking on Keep is enabled. If you want to change this setting, use the Set Keep Checktimestamp command.

If you want to erase the saved timestamp, you can use the Set Keep Name command.

Notes

You do not need to Keep your Qedit workfile before compiling. Only use Keep when you need a file as input to software that does not read Qedit files. For example, you would Keep an IMAGE schema before compiling it (although you can convert DBSCHEMA to read Qedit files; see the chapter on installation at the end of this manual).

When you Text a file and Keep it again, Qedit attempts to duplicate the original file. The form of the Keep file depends upon the current language and Set options, especially Set Keep and Set Extentsize. To see what the Keep file will look like, use Verify Keep.

Keep will retain the security of your existing file (including the :Release state and the ACDs) if you answer Yes to the "Purge old?" question. ACDs (Access Control Definitions) are a form of security that allows you to say exactly which users can do what to a file. Keep does not retain the ACDs on MPE V or when purging a remote file.

:Kill Command [KI/:K]

Kills any or all of the programs that are currently held.

:KILL [@ | *progfile* [,*entrypoint*]]

(Defaults: most recently used)

When you save a son process (such as SPOOK) after returning to Qedit, you can awaken it later. The process, and its resources, will not be released until you Exit from Qedit, even if you never use it. To terminate a son process at any time, you can use the :Kill command. You can either kill all of your sons, one specified by name, or the most-recently used one (this is the default). See also Run and Activate.

Examples

```
/COMMENT Assume that suprtool is already held.
/run suprtool.pub.robelle   {activate Suprtool}
Warning: Held program activated!
>get zz;list;xeq
>exit
Program Held.  Use :Activate/:Run to rerun.
/kill
Terminate:  SUPRTOOL.PUB.ROBELLE
```

List Command [L]

Prints lines of the current workfile, an external file, a spool file, or a Copylib member, either on your screen or to a printer file.

LIST [$*option*...] [*rangelist*]

(Default: *rangelist* = *)

LIST [$*option*...] *filename*[,UNN] [*rangelist*]

(Default: *rangelist* = ALL)

(Q=no linenums, T=template, J=jumping)

If you do not specify a *filename*, List displays lines of the current workfile. If you do specify a *filename*, List displays lines from that file without Shutting your current workfile. You can refer to the "previous" file by a shorthand method, a "$".

If you specify a single line number as a rangelist and that line does not exist in the current file, Qedit's action depends on the Set List Nearest setting. If the option is Off, the default, Qedit displays a No Line warning. If the option is On, Qedit displays the nearest line. For example, if lines 100 to 120 are missing from a file, here is what would happen:

```
/List 100
Warning: No Line
/Set List Nearest On
/List 100
   121    This is line #121.
```

If you are trying to do something similar on an external file, Qedit does not display anything.

Specify *filename*,UNN when listing a data file which has numeric characters in the last 8 column positions and they are not valid sequence numbers.

When you list lines of your current workfile, Qedit shows only the columns within the current left and right margins, and the default *rangelist* is the current line (e.g., List = List *). When you List an external *filename*, margins are ignored and the default *rangelist* is ALL.

Examples

```
/list 5               {display line 5 only}
/listq 5/             {List-Quiet from 5 to Last}

/list "customer"      {all lines containing "customer"}

/list -5/+5           {display current vicinity}

/l r23gl.src          {display entire source file}

/l r23gl.job ]-10/    {print last 11 lines of job file}

/l $ "$page"(1/5)     {"$page" in column 1 of previous file}

/set left 55;set right 132  {set margins in wide file}
/listt all            {show template above columns}

/list "bob"  (upshift)      {"bob","BOB","Bob",etc.}

/list "@UPD@MAST@" (pat)  {strings UPD and MAST both in line}
                             {pattern matching}
```

$-Options

You can configure **permanent** options for the List command using Set List; you can also select **temporary** options within a specific List command. The temporary options are preceded by a dollar sign.

LIST [$*option* ...] [*filename*[,UNN]] [*rangelist*]

The temporary $-options come after the command name and before the external *filename* and *rangelist*.

Here are the $-options accepted in the List command:

[$lp | $lpa | $lpb | $record]	Overrides default output to $stdlist. $lp, $lpa and $lpb send output to a file with the same name as the option. $Record sends output to LPCRT=$stdlist via Record mode.
[$DEVice filename]	The $device option sends output to the specified file name. If the file name is not equated to a particular device, the output is sent to that file name. If the file name is redirected with a file equation (`file filename;dev=printer`), then the output is sent to that device.
[$HEX | $OCTAL | $DECIMAL]	Numeric dump
$CHAR	Remove garbage; combines with Hex/Octal/Dec
$PCL *code*	LaserJet fonts and orientation
$DUPLEX	Double-sided printing on certain LaserJets

$EVEN | $ODD	Outputs even or odd number of pages

[$COLUMNS (range, ...)]	Lists only certain columns
	The $columns option allows you to list only the contents of certain columns. You can specify up to four column ranges. The ranges have to be enclosed in parentheses and can be separated by commas or spaces.
	A range must have a start column and, optionally, an end column. If only a start column is specified, the end column is assumed to be the same. In this case, Qedit lists only one column. For example
	`/List $columns (5) {lists only the contents of column 5}`
	`/List $columns (5/10) {lists the contents of columns 5 to 10}`
	`/List $columns (5 20/30) {lists column 5 and 20 to 30}`
	Column numbers must be valid for the Language of the file. For most files, the first column is 1. For COBOL-type files, the first column is 7. Column numbers must also be within the current left and right margins. The column numbers do not have to be entered in a particular order. For example, the column numbers in the first range can be greater than the column numbers in the second range. The text appears in range order (i.e., range1, range2, range3 and range4). The same column can be included in multiple column ranges. The total number of columns listed cannot exceed the absolute line length maximum (8,172 characters).
	Although a template Listing is allowed with $columns, the output might not be very helpful. For example,
	`/LT $column (15/20)`
	`+....2`

```
1 O
2 pp
3 QQQ
4 rrrr
```

List $include is supported with $columns, but included files are treated as if they are the same type as the main file. For example, if you include a COBOL file within a Data file, the COBOL file will start at column one. You can specify a rangelist (e.g., a search string with $columns). Qedit first searches for the string, which can appear anywhere on the line, then applies the $columns specification.

$DOUBLE	Double space the listing (or $DBL)
$SHIFT	Shift the listing four spaces to the right

[$RIGHTBY spaces]	Shift the listing to the right by the number of spaces
	The $rightby option works like the $shift option. It allows you to shift the printed output to the right. The $shift option shifts the output by four spaces. The $rightby option allows you to specify the number of spaces by which the output is shifted. This number can be between 1 and 30.
	`/List $shift LP {shifts output by four spaces}`
	`/List $rightby 4 LP {also shifts output by four spaces}`
	`/List $rightby 20 LP {shifts output by 20 spaces}`

$INCLUDE	List/search $include files as well
$USE	List/search usefiles as well
$COPY	List/search COBOL Copylib files as well
$PAGE [ON|OFF]	Override Set List Page option
$LINES *count*	Override Set List Lines (per page)
$PRE | $POST	Override pre- or post-spacing (default)
$SKIP | $NOSKIP	Override skip (default) or noskip on perf

Here is an example that uses three of the $-options:

```
/list $lpa $double $shift all
```

This command would list all of the current file to the LPA with double spacing, and the listing would be shifted four spaces to the right. The file LPA defaults to Dev=LPA, but you can use :file lpa;dev=serialp to redirect it.

When listing an external file, the $-options must come before the file name:

```
/list $hex $char filename     {hex-char dump of file}
```

Include Files

Normally, Qedit only searches the current file for a string. If you specify the $include keyword, however, Qedit will also search the $include files for the string.

```
/list $include "global_variable"
```

The lines that specify Include files must begin with either "$", "#", "!", or ".". In SPL programs, an exclamation point indicates that the rest of the line should be treated as a comment. So, if a line starts with an exclamation point followed by the word Include, Qedit also assumes this to be a comment and not an actual Include statement.

The $include command must be spelled out in full, and it can be indented from the prefix character ($, #, etc.). The prefix character can be in any column as long as it is preceded by spaces only. Even though Qedit allows prefix indentation, other programs such as compilers might require prefixes to be in specific columns e.g. column 1.

So, as far as Qedit is concerned, the following examples are valid Include source lines:

```
$include 'globals.source'
    $include constant.srcinc
    $    include headers
#include <strings.h>
#include "parser/bnf.c"
!   include somefile
.include    chapter1.book
```

You cannot combine the $use and $include options.

Usefiles

The $use option is very similar to the $include option. If you specify the $use keyword, Qedit will also search any usefiles for a string. Usefiles are commonly used in PowerHouse source code, Qedit and Suprtool command files, and jobs streams that run Qedit and Suprtool.

```
/list $use "data.def"
```

The lines that contain the "use" directive must have the word "use" as the first word in the line. Leading blanks are allowed. Everything after the word "use" is assumed to be a file name.

You cannot combine the $use and $include options.

COBOL Copylib

The $copy option is very similar to the $include and $use options. This option works with files of Language COBOL, COBX or COBFREE. It does not have any effect on files with other languages.

If you specify the $copy keyword, Qedit scans all the lines in the rangelist for the word `Copy` anywhere in columns 8 to 72 (columns 1 to 256 for COBFREE files). Qedit assumes the next word on the line is the member name. It then looks for an `In` or `Of` clause. If there is one, Qedit uses the next word as the library name. If there is no `In` and `Of` clauses, the library name defaults to Copylib.

Qedit will also search any COBOL Copylib files for a string.

```
/list $copy 9/10           {list all Copylib members found}
                           {in lines 9 through 10}
/list $copy "CUSTREC"      {list all lines containing the string}
                           {also scans Copylib members}
```

You cannot combine $copy with $use and $include options.

$Device Option

The new $device option is very similar to the $lp, $lpa, and $lpb keywords.

```
/list $device printer @
```

The above command opens a file called Printer and sends the list output to it. To redirect the output from the List command to a printer, you must specify a file equation to a valid device.

```
:file printer;dev=laser
/list $device printer
```

If both the $device and $lp keywords are used, the $device takes precedence.

Configuring Printers

By using :File commands in your Qeditmgr file, you can define LP, LPA and LPB as three different printers on your system. The default device class is LP, if no file equation is specified.

```
:file lp;dev=lp
:file lpa;dev=serialp
:file lpb;dev=33
```

Merging Options

The $-options in the List command are merged with the Set List options, except that Set List Record ON applies only to the file LP, not LPA and LPB. The $-options can be combined wherever they make sense; they can be used with Jumping, Quiet and Template, and can work on the current workfile or an external file. $-Options may be shortened (e.g., $h = $hex).

Interrupting a Listing

Press the Control-S key to "pause" the listing for review. Then, press Control-Q to resume the listing. On newer HP terminals, the Stop key pauses a listing until you press Stop again. To stop the List command, press the Control-Y key.

Listing External Files

With the List command, you can look at any file on a system to which you have read access security.

```
/list catalog.pub.sys
```

Qedit studies the file and determines whether it has sequence numbers or not. If you ask for a *rangelist* of lines, Qedit implicitly numbers a file without numbers. It starts at line 1.0 and adds the current Set Increment value. If the file has sequence numbers, Qedit uses them, unless it finds illegal numbers or numbers out of sequence. It then prints the following message:

```
Error: line number out of sequence (001200) - renumbering the rest
```

The string in parentheses is the incorrect line number. You should make sure it contains numeric digits only and that it is greater than the number on the previous line. To check this information, you should text the file using the **Unnumbered** option.

After reporting the information, Qedit then assigns new numbers to the lines, starting with the last valid number and adding the current increment.

Qedit uses this shorthand character to refer to the most recent external file name: "$". For example,

```
/list abc.source "$page"(1/5)
/list $ 500/600
```

Because Qedit uses "LP" as a reserved keyword in this command, you must use a :File command if you want to list an external file named LP.

```
/:file xyzzy = lp
/list xyzzy
```

Listing Temp Files

Normally the List command looks for either a temporary file or a permanent file with the specified name. To list only a temporary file, append the Temp keyword to the file name:

```
/list output,temp
```

You can append more than one keyword to the file name:

```
/list filename,temp,unn
```

Listing Output Spool Files (NM)

On MPE XL 2.1 and later, spool files are now regular files that can be listed in Qedit. To make this easier, Qedit converts the spool file numeric format (i.e., #o1234) into an MPE file name for you. You can omit the "o" if you like.

```
/showout
/list #o1234
/lqj #456
```

Pre- Versus Post-Spacing and Skip-on-Perf

If you Text a spool file into Qedit and then reprint it using LQ, you may find that the file has switched from pre-spacing to post-spacing or from noskip-on-perforation to skip-on-perf. These are the defaults, and the information to override them is sometimes hidden in the spool file where Qedit cannot find it. Similar problems may occur when editing CCTL disc files.

List has the $pre, $post, $skip and $noskip options to deal with these problems.

```
/listq $pre $lp all          {pre-spacing on LP}
/listq $noskip $rec all      {on attached printer}
/listq $pre all              {on $stdlist}
```

A program selects these printer options by using a carriage control code. The codes can be specified in two ways: either through the Fwrite intrinsic, or the Fcontrol intrinsic (in this case they do not show up when Qedit Freads the spool file). Here are the four CCTL codes:

	Char	Dec	Octal	Hex
Post-spacing	" "	64	%100	$40
Pre-spacing	"A"	65	%101	$41
Skip-on-perf	"B"	66	%102	$42
Noskip-on-perf	"C"	67	%103	$43

Listing Copylib Members

To display a member of your Copylib file, you just put the member name in parentheses. You don't need to mention the name of the

Copylib itself if you have a :File command for "copylib". Otherwise just put the file name after the member name. For example,

```
/file copylib=copylib.pub.develop
/list (custrec)
/list (custrec) copylib.test.develop
```

To list the member names in the Copylib, instead of the members themselves, specify a pattern instead of an actual member name.

```
/list (b@)      {names starting with "b"}
/list (@)       {all the names}
```

Quiet Listing and CCTL

LQ means list without showing the line numbers. When you use LQ to list a file that has CCTL (carriage control), Qedit uses the first column of each line as carriage control. Thus, Qedit can reproduce application reports which were redirected from LP to Disc (using :file list = *xxx*, new; cctl ;dev = disc) with exactly the same spacing and paging that was used originally. Workfiles may also have CCTL (see Set Keep and Verify Keep).

Template Listing

The LT command prints a column-number template before the first line of the listing.

```
/lqt 5
....+....10...+....20...+....30...+....40...+....50..
    training of Qedit users is so easy that you will
```

Remember that the first column number in a standard COBOL source file is column 7, not column 1. For a COBFREE file, the first column is 1. In addition, if you have done Set Left and Set Right to define margins for your file, the template starts with the Left margin column and ends with the Right margin column.

```
/set left 20;set right 41
/lqt 5
20...+....30...+....40
it users is so easy th
```

Browsing or "List-Jumping"

When you add "J" to "List" it means list-jumping. This lists the lines specified, but stops every 23 lines (this pause is handy at 19.2K baud). Browse quickly throughout a file, viewing as much or as little of each section as you like. The default *rangelist* for ListJ is */Last, and ListJ *linenum* means start jumping at *linenum*. You can go into Browse mode quickly from Line mode by using the function keys. Press F6 to start browsing at the current line, press F5 to browse starting back a page, and press F2 to roll the screen forward a few lines before starting to browse.

At the end of each screen, ListJ prompts you for "what to do next?" and waits for your reply. If the user presses Return or F6, or types

"yes", Qedit displays the next screen. If the user presses F8 or Control-Y, or types "no", Qedit stops the listing. If the user types a line number, a string, or a relative line count (e.g., -50, +5), or presses F2, F3, F4, or F5, Qedit moves to a new location within the file. When you enter any command, Qedit stops the listing, returns to Command mode, and executes the command. When you are on an HP terminal, ListJ enhances and erases the line with the "what to do next?" prompt.

You can combine ListJ with the $include option to browse through the specified files as well as their $include files. You can combine with ListJ with "Q" to display the lines without sequence numbers. Also, you can combine "ListJ" with "T" to print a column template at the top of each screen. In fact, you can combine all three options into "ListJQT" to List-Jump without line numbers, but with a column template.

The *screensize* can be changed from 23 lines to another number with Set List LJ *nn* (where *nn* is some number of lines from 5 to 100). If you put the command Set List QJ On in your Qeditmgr file, you can avoid seeing sequence numbers when you browse.

When List-Jumping reaches the last line of your file, it prints "End! Are you DONE? [yes]" and waits for your answer. "Yes" ends the listing, and "No" starts listing again from the beginning. Set List Endstop On disables this question; List-Jumping just prints the last line of the file and ends the LJ command.

Controlling Printer Listings

When you put "$lp" (or "$lpa" or "$lpb") in a List command, Qedit opens a file named "LP" (or "LPA" or "LPB") with the device Class "LP." The lines that would have been printed on the terminal are written to the printer file instead. At the end of the command, Qedit closes the file, which releases it for printing.

The default Qedit listing to the printer is a raw dump of your lines, with or without line numbers. It has no page breaks, no headings, no title, and no page numbers. However, you can override this default with the Set List command.

Listing to Attached Printer

To list to a printer that is attached to your terminal, use List $record. If you want all listings to $lp to go to the attached printer, do Set List Record On and then List $lp. Qedit will use Record mode on your terminal or PC to print on the attached printer. This option opens a file named LPCRT instead of LP.

If you have a LaserJet connected to your PC and are using Reflection, you will want to Set Printer-Passthru-Conv No in Reflection. Otherwise you will find that some characters are printing oddly, such as the square block printing as a plus-minus sign. If you are using

Reflection for Windows, the above option may be called "Disable Printer Translation" or "Use Host Character Set." As well, you have to select "Bypass Windows Printing" and disable "Auto Form Feed."

You can combine this option with other listing options such as $PCL or $duplex. You cannot interrupt Record mode with Control-Y, but you can do a soft Reset. This unlocks the keyboard and causes the rest of the output to appear on the screen. You can then stop it with Control-Y.

LP Listings with Headings

To have Qedit do a page break every 60 lines and put a heading with a page number on each page, do List $page On $lp (or $record, $lpa, $lpb). To configure "paging" as the default, do Set List Page On. Two lines at the top of each page are used as a heading. The first line contains the page number, the file name (or the last Text file name in the case of Qeditscr), and the time of the listing, and the second line is blank.

In this mode, Qedit also looks for $title, $page, #pragma page, and #pragma title commands in your file and uses them to create page breaks. The optional string parameter of these commands replaces the date and time in the page heading (e.g., $page "Monthly Staff Review"). A $page or $title command without a string clears the title area of the heading. The only exception to this processing is an LQ of a CCTL file; in this case, the carriage control in column one of the file determines the format of the printer listing, and $page commands are ignored.

To vary the number of lines per page, do List $lines *nn*, or use Set List Lines *nn* for a permanent override, where *nn* is a value between 1 and 256. (Assumes Set List Page On.).

```
/set list page on lines 59
```

To print the heading only on the first page, use $lines 0. This causes continuous printing with no page ejects.

```
/list $lp $lines 0 all     {ignores $page too}
```

To perform continuous printing with no automatic page ejects but skip to a new page on $Page directives, use $lines 999.

```
/list $lp $lines 999 all     {skips to a new page on $page only}
```

To drop the file name from the page heading, do Set List Name Off. (Assumes Set List Page On.)

```
/set list page on name off
```

To drop the page numbers from each page, do Set List Num Off. (Assumes Set List Page On.)

```
/set list page on name off num off
```

To drop the title from the heading, do Set List Title Off. (Assumes Set List Page On.)

```
/set list page on title off
```

To drop the two-line heading from each page while still doing page breaks, use Set List to disable the three components of the heading:

```
/set list page on name off num off title off
```

Getting an Even or Odd Number of Pages

There are times when the number of printed pages is important. For example, you could have a printer that is always loaded with pre-printed forms that come in pairs (e.g., Page 1 of 2 and Page 2 of 2) or the paper is folded in certain ways so that a report is easier to tear up and insert into a binder. In both examples, sending a report with an odd number of pages would cause the next output to be on a wrong page.

To prevent this from happening, you can now use the $even or $odd options on the List command and ask Qedit to "round up" the number of pages. The $even option ensures that the output has an even number of pages. Similarly, the $odd option ensures there is an odd number of pages by sending an extra page eject sequence before closing the output file.

These even and odd options are mutually exclusive (i.e., they cannot be both enabled at the same time). If you try use them both on the same command, Qedit uses the last one in the sequence. For example, you can type

```
/List $even $odd $lpa myfile
```

Qedit does not see this as an error and uses the $odd option, ignoring $even.

These options only make sense if you are sending the list to a printer, either attached or spooled. They have no effect when listing the file to the screen. For this reason, you have to specify a destination printer using $lp, $lpa, $lpb, $record or $device.

You can also use one of these options as the default by using the Set List command. Specifying a $-option on the List command overrides the Set value. There is currently no way to completely ignore the Set options. If you want both options to be disabled, you have to issue

```
/Set List Even Off Odd Off
```

prior to the List command.

Double-Spaced Listings

When listing to LP, you can force the result to be double spaced with List $double. This feature can be combined with most of the other features of List, including LT, LQ, and Set List Page On. To make all printer listings double spaced, do Set List Dbl On. LQ on a CCTL file disables the Double option because the CCTL codes in the file control the spacing on the listing.

LaserJet Listings

Qedit has two special options for HP LaserJets: $duplex and $PCL. Duplex means double-sided printing, and PCL means Printer Command Language, which is used to select fonts, spacing, and orientation.

$Duplex for Two-Sided Printing. Some LaserJets can print on both sides of the paper; use List $duplex to enable this option.

```
/list $lp $duplex all
```

PCL = Printer Command Language. All LaserJets have several sizes of character fonts and can print in either landscape or portrait orientation. To help you take advantage of these features, Qedit has a number of PCL codes that can do all the work for you. PCL stands for Printer Command Language, which is the HP standard for printers. To specify a LaserJet option for a single listing, use List $PCL; to configure all listings, use Set List PCL. To disable the special PCL option, use PCL 0. Get a quick on-line listing of the PCL options with

```
/hq set,list
```

Changing Fonts and Orientation

Landscape-Tiny: PCL 1. To list to the LaserJet in the tiny font that prints across the paper sideways (i.e., 16.67 pitch, landscape), use PCL 1. The number of columns is automatically increased; you do not need to do any special Rec= on your :File command.

```
/:file lp;dev=serialp
/list $lp $pcl 1 all
```

Landscape-Regular: PCL 2. To list with the regular Courier font in landscape orientation, use PCL 2. Again, there is no need to specify Rec=.

The Standard: PCL 3. The normal default for LaserJet output is portrait orientation (across the narrow side) with the Courier font. However, once you insert a font cartridge into your LaserJet, it may select one of the cartridge fonts as the default instead of Courier. PCL 3 allows you to select the standard Courier font, even if another font cartridge is installed.

Portrait-Tiny: PCL 4. Some LaserJets provide the tiny "Line printer" font in portrait orientation as well as landscape orientation. PCL 4 selects this option.

A4 Special: PCL 5. To print 80 columns, instead of 77, across A4 paper using the standard Courier typeface, try PCL 5. This tightens the spacing between characters.

Legal-Landscape-Tiny: PCL 6. To print tiny letters in landscape orientation on legal-size paper, use PCL 6.

You can combine PCL 1, 2, 3, 4, 5, and 6 with Page On and Off, with Lines 0, with LQ, with $DBL, with $record, and with $duplex.

Two-Column Listings

If your LaserJet supports "Line printer" font in landscape orientation, you can print listings across the page with two columns of text side by side.

```
/list $lp $pcl 10 all  {two-column listing format}
/lq $rec $pcl 10 1/200
```

If you have a legal-size paper tray, you can use PCL 11 to print two wide columns of 110 characters each on a single piece of paper.

A4-Size Paper

Most of the PCL options, with the exception of PCL 5, were designed and tested with North American letter-size paper. PCL 5 is especially for A4 paper; it reduces the horizontal spacing between characters so that 80 columns of Courier output can fit on a single line. In addition, if you add 2000 to a PCL code, Qedit adjusts the number of rows and columns for that option to match A4 paper. For example, to print two-up landscape on A4 paper, use PCL 2010 instead of PCL 10.

In general, selecting A4 paper gives you more space along the long dimension of the paper and less space along the short dimension. If you are happy with the way letter-size rows and columns work on A4 paper, simply do not add 2000 to the PCL code. If for some reason you want more columns than provided by Qedit (perhaps you are using a PCL-compatible system printer with wider paper), you can override the size by using a :File command with the Rec= parameter, as in `:file lp;dev=syslp;rec=-220`.

Summary of Qedit PCL Codes

PCL	L/P	Font	A4 Rows	A4 Columns	Letter Rows	Letter Columns	Notes
1	L	lp	58	188	60	175	
2	L	courier	43	110	45	100	
3	P	courier	64	77	60	80	"standard"

4	P	lp	85	128	80	132	
5	P	courier	64	80	60	80	A4-squeeze
6	L	lp	60	223	60	223	legal-size*
10	L	lp	58	95	60	87	two columns
11	L	lp	60	110	60	110	2-up legal*

L/P mean landscape or portrait orientation.

* Note: PCL 6 and 11 were designed to print on North American legal-size paper and will select that size. However, you can see what happens with A4 paper by using 2006 and 2011. Some people have found this useful.

Roman-8 vs. ASCII

The PCL option requests a Roman-8 character set, but some combination font cartridges only supply the ASCII character set (half as many characters means twice as many fonts in a single cartridge). If you ask for landscape Line printer and get landscape Courier instead, your Line printer font probably has the ASCII character set instead of the Roman-8 character set. To request an ASCII font, add 1,000 to the PCL code. For example, if you have a Super Cartridge (55 fonts in one!), use PCL 1001, 1004, 1006, 1010 and 1011. To select both ASCII and A4 paper, add 3000.

Multiple Copies

To produce multiple copies of a listing to a spooled printer, use a :File command. For example, use these commands to produce three copies:

```
/:file lp;dev=lp,,3
/list $lp all
```

The :File command remains in effect until you enter another :File command or :Reset LP or :BYE.

Redirecting Output to Disc

You can also use :File commands to direct output to a disc file:

```
/:file lpb = discfile, old; dev = disc
/:build discfile; rec=-80,16,f,ascii
/list $lpb 100/200
```

:Listredo Command [LISTREDO/F7]

The :Listredo command displays any of the previous 1,000 commands.

LISTREDO [*start* [/ *stop*]] [;ABS] [;OUT=*file*]
[*string*] [;REL]
[ALL | @] [;UNN]

(Default: display previous 20 commands)

(BJ, F7 and ,, are short for Listredo)

Commands are numbered sequentially from 1 as entered and the last 1,000 are retained. You can display a single command, a range of commands, all 1,000, or all the commands whose name matches the string. You can print the commands with ABSolute line numbers (the default), RELative line numbers (-5/-4), or UNNumbered. You can write the commands to your terminal or OUT to a temporary file. If you want to redo any of these commands, see :Do, :Redo, and Before.

Notes

Examples

```
/listredo 5
/listredo 5/10
/listredo help           {print all Help commands}
/bj                      {historical shorthand!}
/listredo -10            {print last ten commands}
/listredo ALL            {print entire redo stack}
/listredo purge          {print all Purge commands}
/listredo purge xx       {print all "purge xx" commands}
/listredo @purge         {print all with "purge" anywhere}
/listredo @;rel          {print all, relative numbers}
/listredo 1/10;out=*lp   {dump commands to printer}
/listredo @;unn;out=save {write commands to a file}
```

Notes

The :Listredo command can be abbreviated to ",," as in MPEX, or to BJ, or can be invoked by the F7 function key. Using F7 to invoke Listredo only works in Line mode, not Visual mode. You cannot use ";" to combine commands on the same line.

:Listundo Command [LISTU]

Displays the complete Undo change log of commands that modified text, starting with the most recent and working backward.

LISTUNDO

Listundo shows the complete Undo change log, including each command, the number of lines updated, deleted, added, or renumbered by that command, and the text lines. Text for deleted lines is preceded by an underscore ("_") as in the Delete command, and the "before" value of lines that were updated has a Greater Than ">".

Commands are printed in reverse order, with the most recent command first. This is the command that would undone by the next Undo command. To stop the Listundo report, use Control-Y.

Examples

```
/listundo
```

Lsort Command [LS]

Sorts a range of lines.

LSORT *range* [KEYS *keylist*]

LSORT *string range* [KEYS *keylist*]

(Q=no display)

(Default: by entire line)

The simplest Lsort command just specifies a range of lines to be sorted and no other parameters. This means to use the entire line as the key and sort the lines into ascending order, printing them once sorted.

To stop Lsort from printing the sorted lines, use LsortQ.

Parameters

To sort by some other key fields in the lines (from one to four are supported) or to sort the lines in Descending Order, you need to specify the KEYS *keylist* parameters. The *keylist* consists of one to four keys separated by spaces or commas, with a key consisting of either a column range or a starting column and length:

column , length [DESC]

column / column [DESC]

Ascending Order is assumed by default, but you may specify DESC to sort this key in Descending Order.

Examples

```
/lsort all           {sort entire file}
/lsortq all          {sort without printing}
/lsort 10/33         {sort some lines only}
/lsort 30/last keys 10,5           {col 10 through 14}
/lsort zz keys 10/20               {col 10 through 20}
/lsort 20/last keys 1,10 20,5,desc  {two keys}
```

Merge Command [ME]

Merges an external file into the current workfile by line number. Use Merge to apply source-code "changes-files" containing new and revised text, that are distributed by some application vendors.

MERGE *filename* [(*rangelist*)]

(Q=no display, J=Justified)

(Default: *rangelist*: ALL)

MergeQ suppresses printing of the merged lines.

The optional *rangelist* specifies a subset of the external file to merge into the current file.

Examples

```
/text master.src  {start with the master file}
/merge changes    {update changed lines, add new}
```

Notes

To make your own "merge file", create a file that contains edits to be applied to your current workfile. Mark the lines of text that will replace existing lines in your workfile, with the corresponding line numbers. Give new line numbers to any completely new lines of text to be added to your workfile. To delete lines in your workfile, use the $edit Void command of the MPE compilers in the merge file. $Edit Void removes the line number specified in the command and, optionally, lines up to and including a Void= line number. **Warning:** the Void= parameter **cannot** accept a decimal point so, for example, you must enter Qedit line 60.1 as 60100. To delete from line 55 to 60.1, you would use the following:

```
55  $edit void=60100
```

Justified

The default is to replace existing lines with the corresponding line from the external file. The Justified option appends the corresponding line from the external file. Text is appended immediately after the last non-blank character if **Set Work Trailingspaces** is disabled. If Trailinspaces is enabled, text is appended immediately after the last significant trailing space. If the resulting merged line is too long for the current length, the merged line is truncated. Let's say the current workfile contains:

```
abc
def
ghj
```

and the external file contains:

```
1111
2222
3333
```

A MergeJ would result in:

```
abc1111
def2222
ghj3333
```

If the maximum length was 5, the resulting file would be:

```
/mergej myfile
    1     11111
Warning:  Result line will be too long.  Truncating merged text.
    2     22222
Warning:  Result line will be too long.  Truncating merged text.
    3     33333
Warning:  Result line will be too long.  Truncating merged text.
3 lines merged
/l all
    1     abc11
    2     def22
    3     ghj33
```

Modify Command [M]

Editing characters within lines using either Control codes (default Set Mod Robelle), D-I-R-U edits (Set Mod HP), or Control codes with visible feedback (Set Mod Qzmod).

MODIFY *rangelist*

(Q=no linenum, T=template)

(Default: *rangelist* = *)

By default, Modify displays the first line and puts the cursor under the first column. You enter an "edit-line" to specify a changes. You use spaces to move the cursor under the word you want to change, then type new characters to replace those in the columns above. For example:

```
/modify 5
   5    Over 2000 computers use Suprtool.  {prints line}
             750                           {you edit it}
   5    Over 2750 computers use Suprtool.  {prints new line}
        <Return>                           {end Modify}
```

Each time you press Return, Modify applies your changes to the line and prints the new result. This cycle continues until you enter only a Return (no more edits).

You use nonprinting Control codes for editing, such as Control-D to delete. For visual feedback, do Set Mod Qzmod, which puts your cursor right on top of the line and responds to each Control code by revising the image on the screen (i.e., Control-D actually makes the character disappear from the screen). If you would prefer to use MPE-style edits (D-I-R-U) instead of Control Codes, do Set Mod HP to reconfigure Modify.

To force the line number onto a separate line, use Set Mod Prompt OFF.

Examples

```
/modify 5/         {modify from line 5 until ^Y or end}
/find "corelate";m {find spelling error and modify line}

/mod "q_flag"      {modify all lines with "q_flag"}
```

Getting into Modify Mode

There are other commands that invoke Modify mode in Qedit:

- Change, when a line overflows or you use CJ.
- Add, when you use the *auto modify* character from Set Zip.
- Before, so that you can revise and redo a previous command.

- Redo, also enables you to revise and redo a previous command.

Edit Functions of Modify

Here are the edit functions of Modify and their Control codes, which may be changed with the Set Modify command.

Function	Key	Purpose
Overwrite	Control-O	Replace characters (default).
Delete	Control-D	Delete characters.
Before	Control-B	Insert characters before a column.
Append	Control-A	Add characters to end of the line.
Divide	Control-V	Divide line in two at this column.
Goof	Control-G	Restart Modify with original line.
Terminate	Control-T	End this edit so you can do another.
Lengthen	Control-L	Same as Append (Control-A).
Insert	Control-^	Same as Before (Control-B).

Advanced

You create Control codes by holding down the Control key while pressing the other key. Most Control codes are invisible and do not move the cursor. In the user manual, the symbol (^) as a prefix stands for the Control key (^-D for Control-D).

Some functions combine two of the Control codes: pressing ^-T then ^-V in the first column of a line *splices* two lines together (and deletes the second line if it's emptied). Actions not restricted to column 1 may be performed at any point on the line.

Function	Key	Col.	Purpose
Splice	^T ^V	1	Fills current line from next line.
Insert Line	^A ^V	1	Adds a blank line *before* current one.
Insert Line	^A ^V		Adds a blank line *after* current line.
Delete Last	^A ^D		Spaces remove characters at end of line.
Replace End	^A ^O		Replaces from end of line (overwrites).

Delete Line	^T ^D	1	Deletes current line.

Overwriting Characters

To overwrite characters in a line, type the new characters underneath the ones to be replaced. There is no need to type a control character; "overwrite" is the default edit function. Once you are in Overwrite mode, you can also use the Space bar to erase the columns that you move through. If you have not yet typed any characters, the Space bar just moves your column position to the right one place. You can get into Overwrite mode at any time while in modify by pressing Control-O. Terminate overwrite mode and go into space- transparency mode by typing Control-T.

Start Over Editing a Line

To correct a Modify mistake, enter the Goof control code (Control-G) and press Return. Qedit restores the line to its original contents and restarts the Modify cycle. Control-G does not undo Splits and Splices.

Doing Several Edits in One Line

You can do more than one edit operation in one edit-line if each edit is clearly separated from the preceding and following ones. When the edits are at different ends of the line, you must Terminate the first function so that you can move the cursor right to the next column. The Terminate control code (Control-T) provides this capability.

The following illustrates where to place your control codes (^ stands for the Control key), even though they will not appear on your screen. The first example capitalizes the "r" in "return", then replaces "in error" with "by mistake", which requires inserting the letters "ke." The second example inserts the word "Goof" and a space at the start of the line, and deletes the last two words at the end of the sentence, adding a final period.

```
/m 13
   13   a return. If you do this in error,      {displays line}
          R                      by mistake     {^codes are: }
 <spaces> R<^T, spaces>          by mista<^B>ke<Return>
   13   a Return. If you do this by mistake,    {redisplays}

/m+1
   14   control code restores the line for you. {displays line}
        Goof                           .        {^codes are: }
    <^B>Goof <^T, spaces>              .<^D, Return>
   14   Goof control code restores the line.    {redisplays}
```

Deleting Characters

To delete characters from the line, starting with the current column position, enter the Delete control code (Control-D). Then space to the right the number of columns to be deleted. Any remaining characters in the line are left-shifted to fill in the deleted columns.

In all cases, the columns deleted are those immediately above the cursor, regardless of what other functions have been performed previously on the same line. The Delete function is stopped by the first nonblank character, either Return, a printing character to switch back into Overwrite function, or another control code.

Erasing the Line

To erase from the current column to the end of the line, enter the Delete control code, followed by a Return. If you do this by mistake, the Goof control code restores the line for you.

Inserting Characters

To insert characters in the line before the current column position, enter the Before control code (Control-B). Then type the characters to be inserted. The existing characters starting in the insert column are right-shifted to make room for the new characters.

On the operator's console of certain HP e3000 models,

the Control-B character puts the terminal into "maintenance" mode. In these cases, use Control-^ instead. If you do press Control-B on the console accidentally, type "CO" on a Series 800 or 900. On a Micro3000, type "RUN".

Adding Characters to the End of a Line

To add characters to the end of the line after the last nonblank character in the line, enter the Append control code (Control-A). Then type the characters to be added. This function is independent of the current column position.

Dividing a Line into Two Lines

The Divide control code (Control-V) splits the current line into two lines at the current column position. If a line number is available, Qedit moves all characters from the current column to the end of the line to a new line that is added after the current line. The Goof function recalls the original contents of the line, but does not delete the new line (neither does Control-Y). See also Divide command.

Splicing Two Lines Together

To splice two lines together, you must be on the first column of the first line you wish to splice. Type Control-T, then Control-V, and quick as a wink, all the characters from the second line are appended to the end of your current one. Qedit moves only as many characters as will fit. If all the characters are moved, the second line, now empty, is deleted. See also the Glue command.

Editing Lines with More Than 80 Columns

To modify long lines (i.e., more than 80 columns), use Set Left and Set Right to define a slice through the lines.

```
/set left 55
/mqt *            {quiet, with template}
+....60...+....70...+....80...+....90...+....100..+....
ubsequent Sales Follow-up - Completion Ratio Report
```

Or use Set Modify Qzmodify, it handles long lines without the need to set margins.

Qzmodify: WYSIWYG

You may want to try Set Modify Qzmodify to replace the normal Qedit modify with a "visual" modify (What You See Is What You Get). Qzmodify uses the same Control codes, plus many extensions, but Qzmodify does single-character reads. This allows it to respond immediately and visually to each keystroke, but means that the performance is unacceptable over NS, packet-switching LANs, and the DTC. Once in Qzmodify, type Control-Q for a list of commands.

How to Edit in Qzmodify

In Qzmodify, "what you see is what you get". The cursor rests on the same line as the text you are editing. If you press any printable key (ASCII code 32 or greater), that key either replaces the character the cursor was on, or (if Insert mode is on) inserts the key before that character, moving the rest of line to the right by one character.

When you initially enter Qzmodify you are in Transparent mode--here, a blank simply causes the cursor to move one space to the right. Pressing any other printable character immediately terminates Transparent mode and puts you in Overwrite mode, so the character replaces the one the cursor is on. The three basic modes are:

Mode	To enter	To exit
transparent	^T	any printable char, ^B, ^O, or ^X
overwrite	^O	^T, ^B, or ^X
insert	^B or ^^	^T, ^O, or ^X

Qzmodify will not allow you to create a line longer than a maximum specified by the calling program, nor can you accidentally "lose" characters off the right edge when using Insert mode ... Qzmodify beeps when you try to do something illegal. To edit Roman-8 characters, use Set Editinput Extend ON.

Editing Commands

Qzmodify has an extensive set of commands, all of which are invoked via control characters. In this documentation, the symbol ^ means that the following character is a control character (e.g., ^G is control-G). Control characters may be entered as lowercase or uppercase letters (i.e: ^g and ^G are identical).

Char Mnemonic	Description
^A append	Go to end-of-line. Moves the cursor to just after the last character on the line. If the line is already at the maximum length, the cursor is placed at the last character.
^B before	Turn on Insert mode. Turns off Overwrite mode. If you enter a character while in Insert mode, it will be put Before the character the cursor is on, and the rest of the line will move one to the right.
^^ before	Control up-arrow...synonym of ^B. Use ^^ instead of ^B if you are on a system console!
^C case	Change case of current character. If the current character is a lowercase letter, it will be changed to an uppercase letter and vice versa.
^D delete	Delete character. Pressing ^D will cause the character under the cursor to be deleted, and the rest of the line to be moved one space to the left.
^L^D delete end	If the cursor is just past the last character in the line, (i.e., you just did a ^L or ^A), then the ^D will delete the last character of the line.
^E erase	Erase to end of line. This will erase all of the text from the cursor to the end of the line.
^F<c> find	Find next occurrence of character <c>. The cursor will be moved to the next occurrence of the character <c> to the right of the cursor. If <c> is not found, you will hear a beep.
^F<n><c>	Find nth occurrence of <c> where 1<=n<=8.
^G goof	Undo all current modifications. Restores the line of text to its original form. Note: ^V, ^K, ^T^D, and ^T^V cannot be undone.
^H backspace	Move back one character (nondestructive).
^I tab	Skip ahead to the next tab stop.
^J justify	Deletes blanks from the cursor to the first nonblank (does not delete that character).
^K add	Requests Qedit to add a line after the current line. The current line will then be redisplayed for editing and you will get to edit the new line.
^L lengthen	Go to end-of-line...synonym of ^A. Use ^L instead of ^A if you are on a Type Ahead Engine (TAE).

^M return	Marks the end of editing a line. Returns the modified line to Qedit. Note that ^M is the same as Return.
^O overwrite	Initiates Overwrite mode and turns off Insert mode (^B). In Overwrite mode, if you enter a character, it will replace the one on the screen.
^P<#><dir>	Moves up or down some number of lines of text. For example, ^P3- moves back three lines.
^Q query	Displays list of Qzmodify functions.
^S<c> scan	Find previous occurrence of <c>. The cursor will be moved to the first occurrence of <c> to the left of the current cursor position. If <c> is not found, you will hear a beep.
^S<n><c>	Find nth occurrence of <c> where 1<=n<=8.
^T Transparent	Terminates Insert mode and Overwrite mode. After ^T, if you type blanks, the cursor simply moves right one space without affecting the text. Transparent mode is always turned off automatically whenever a nonblank printable character is entered, then Overwrite mode is turned on.
^T^D delete	If done at column one, this deletes the entire line.
^T^V splice	If done at column one, this will join the next line to the end of the current line and display the spliced line for editing. If not a column one, then is the same as ^V.
^U jUmpback	Move back to the previous tab stop. This is the opposite to ^I. As an aid to remembering them, ^I is the same as pressing the tab key, and ^U is just to the left of ^I on the keyboard.
^V split	Split the current line (at the cursor) into two lines and modify both of them. Note that ^Y restores the text if you decide not to make the change, but you have to manually remove the second split-off line.
^X eXamine	Examine (redisplay) the current line.
^Y abort	Terminates modify *without* changing the current line.
^W Wordproc	Shifts into "word-processor" mode. In word-processor mode, the next control character is used to select a function. The functions are:

^W^C	Compress multiple blank spaces to single blank spaces.
^W^D	Delete Word. Deletes from the cursor to the next blank, and then any following blanks up to (but not including) the next nonblank.
^W^H	Toggles a flag that remembers if you have an HP 110 (or an HP 2640). The flag is needed because the HP 110 knows only a subset of the "standard" HP 26xx escape sequences, and some of them incorrectly!
^W^L	Draws a ruled "line"; similar to the ListT command.
^W^N	Toggles Numbered mode. A line-number prefix will be displayed in front of a line of text only if both of the following are true:- line numbers have been requested (either via a Modify command from Qedit or via ^W^N);- the line number was passed to Qzmodify by Qedit (i.e., you did an Modify command, not an ModifyQ command)
^W<c>^D	Delete all characters from the cursor up to, but not including, character <c>. Note: <c> must be a printable ASCII character (character code > 31). If the cursor is currently on the same <c>, it is deleted immediately before looking for the first <c>. If <c> is not found, nothing is deleted.
^W^P<c>	Put the character into the text. This is useful when you want to put a control character into the text. All nonprintable characters will be displayed as periods (.), so they will take up one space on the line.
^W^S^D	Downshift all letters from the cursor to end-of-line.
^W^S^U	Upshift all letters from the cursor to end-of-line.
^W^S^T	Reverse the case (e.g., "a" becomes "A" and "A" becomes "a") of all letters from the cursor to end-of-line.
^W^T	Toggles the Type Ahead Engine (if you have one) through three states: disabled, enabled, ignored.
^W^V	Prints the version ID of Qzmodify.
^W?	Display the ASCII character code for the character that the cursor is on.

^W$<hh>	Replace the character at the current column position with the ASCII character whose hexadecimal value is <hh>.

Symbols Used in Qzmodify Command List

<c> is any single character. Qzmodify will search for this character. If <c> is ^W, the search will be for the next word (words are anything delimited by blanks) instead of for a single character.

<#> is zero or more digits. For example, ^P12+ would mean move forward 12 lines. ^P3- would move back three lines.

<n> is one of: ^A, ^B, ..., ^H and is interpreted as the number 1, 2, ..., 8 respectively.

<dir> is a "-" to move "back", or a "+" to move "forward".

<hh> is any pair of hexadecimal digits.

Note: When modifying a line longer than 79 characters, some commands (e.g.: ^D, ^B, ^E) will not update any line of the screen display other than the one you are on. Whenever you want to see an accurate display of your text line, press ^X to refresh the display. This limitation could be fixed, but only at the cost of slowing down response time while editing these longer lines.

Note: You cannot use the special keys on an HP terminal (e.g.: cursor keys, insert char, delete char, clear) because they are designed to either send no characters to the computer when they are pressed or two characters ... and both of these choices cause difficult problems on an HP e3000 without a Type Ahead Engine. Thus, these keys should not be used. If you use them by accident, a ^X will refresh the display of the line you are editing.

Qzmodify with a Type Ahead Engine

The Type Ahead Engine (TAE) from Telamon can be in one of three states from the Qzmodify viewpoint: disabled, enabled, or ignored. Each is defined below.

Ignored. Qzmodify will not do anything to either encourage the use, or discourage the use, of the TAE. This is usually the initial state (see below).

Enabled. Qzmodify will place the TAE in single-character mode at entry, and restore it to Line mode at exit. This means that the HP3000 won't lose typed ahead input anymore, and that the special keys (e.g., cursor keys) will work nicely.

Disabled. Qzmodify will disable typeahead (by sending ^A^V to the TAE) at entry, and enable it at exit. In this mode, the TAE is effectively taken out of the "circuit".

With Qedit, you configure TAE-treatment as part of the Set Modify Qzmodify command:

```
Set Mod Qzmodify     {ignore the TAE}
Set Mod Qzmod TAEOFF {TAE exists, disable it}

Set Mod Qzmod TAE    {TAE exists, enable it}
```

When the TAE is present and enabled, you can use these extra commands:

^W^T	Toggles the Type Ahead Engine through three states: disabled, enabled, ignored.
leftarrow	The HP26xx left-arrow key will move the cursor 1 space to the left.
rightarrow	The HP26xx right-arrow key will move the cursor 1 space to the right.
up arrow	Move up to the prior line of text, leaving cursor in the same column. The terminal screen is scrolled DOWN, so the line you were just editing is moved down 1.
down arrow	Move down to the next line of text, leaving cursor in the same column. The terminal screen is scrolled UP, so the line you were just editing is moved up 1.
delete char	Deletes the character under the cursor (like ^D).
insert char	Turns on Insert mode (like ^B).
insert line	Asks Qedit to add a new line after the current line.
delete line	Asks Qedit to delete the current line.
^leftarrow	Moves cursor LEFT to the blank just after the nearest "word" on the left of the cursor. Valid only if a Type Ahead Engine is present and enabled. Only available on HP264x terminals.
^rightarrow	Moves cursor RIGHT until it reaches the start of the next "word" (will not move past current end of text.) Valid only if a Type Ahead Engine is present and enabled. Only available on HP264x terminals.

Hpmodify: No Control Characters

Set Modify Hpmodify replaces Qedit's standard Modify in all places with MPE-style editing (D for delete, I for insert, R for replace, U for undo, > for append, >D for delete at end, >R for replace at end, and D> for clear). We suggest Hpmodify when using Qedit over finicky datacomm networks, since it does not require any Control codes.

Hpmodify Keys - Reference

Directive	Effect
i	INSERT. If text follows the i, this text is inserted in the current line, starting at the position of the i.
r	REPLACE. If text follows the r, this text replaces the same number of characters in the current line, beginning at the position of the r.
d	DELETE. Deletes a character from the current line for each d specified in the edit line. Note that "d d" does not specify a range as it does in MPE V but simply deletes one character above each d. Multiple d's may be followed by an Insert or Replace operation.
d>	DELETE. Deletes to the end of the current line from the position specified by d>. May be followed by an Insert or Replace operation.
>	APPEND. If text follows the >, this text is appended to the end of the current line. If a > without text is positioned beyond the end of the current line, then a simple replacement is performed instead.
>d	DELETE. Deletes from the end of the current line, right-to-left. Multiple d's and Insert and Replace strings may be specified after > .
>r	REPLACE. Replaces characters at the end of the command line. The last (rightmost) character of the replacement string is at the end of the line.
c	CHANGE. Changes all occurrences of one string to another in the current line starting at the c. The search string and replace string must be properly delimited. A proper delimiter is a nonalphabetic character (such as ' " or /) The substitution is specified as c*delim search-string delim* [*replace-string* [*delim*]]. Omitting the *replace-string* causes occurrences of *search-string* to be deleted, with no substitution.
u	UNDO. A single u in column one cancels the most recent edit of the current line. Using the Undo command twice in a row cancels all edits for the current line and re-establishes the original, unedited

	line. If u is placed anywhere other than column one of the current line, then a simple replacement is performed. Undo makes sense only if you have a line on which you have performed some editing that can be "undone."
other	Simple replacement. Any other character (not i, r, d, d>, >, >d, >r, c, or u) will be put into the current line at the position above where it is placed, replacing any existing character. Simple replacement also occurs for the editing characters i, r, c, or > if they are not followed by text; or if > appears at or beyond the current end of line.

Hpmodify Examples

Edit	Action
u	First occurrence undoes the previous edits. The u must be in column one.
u	Second occurrence undoes all edits on the current line. The u must be in column one.
rxyz	Replaces the current text with xyz starting at the position of r.
xyz	Replaces the current text with xyz starting at the position of x.
ixyz	Inserts xyz into the current line, starting at the position of the i.
ddd	Deletes three characters, one above each d.
d xyz	Deletes a single character above the d, skips one space, then replaces the current text with xyz starting at the position of x.
ddixy	Deletes two characters, then inserts xyz in the current line starting at the position of the i.
d d	Deletes one character above the first d, skips two spaces and deletes a second character above the second d. It does not delete a range of characters, making it unlike the MPE V version of Redo.
d d>xyz	Deletes a single character above the first d, skips two spaces and deletes to the end of the line beginning at the second d, and then places xyz at the end of line.
>xyz	Appends xyz to the end of the current line.

>ddxyz	Deletes the last two characters from the end of the current line and then places xyz at the end of the line.
>rxyz	Replaces the last three characters in the current line with xyz.
>ixyz	Appends xyz to the end of the line. In this case, the i command is superfluous, because > accomplishes the same result. Using >xyz would be sufficient.
c/ab/def	Changes all occurrences of ab to def, starting at c.
c"ab"	Deletes all occurrences of "ab" starting at c.
cxyz	Replace the current text with cxyz, starting at c. Because delimiters have not been specified (as they were in the previous two examples), this is a simple replacement with the four characters.

New Command [N]

Creates a new, empty Qedit workfile and opens it. This can be either an unnamed extra scratch file or a named workfile. The advantages of a workfile are that you can instantly Open and Shut it, and that it compresses your data. You can use Text to make a copy of a Qedit file when you wish to protect the work you have done.

NEW *filename* [,*language* [(*size*)]

NEW

(Default: extra scratch, 3200 lines)

Qedit shuts the current file and builds *filename*, which it then opens for editing. If you leave out *filename*, Qedit creates a new extra scratch file and assigns it a number (1,2,3..) so that you can recognize it in Verify Open and Open ?. Up to eight extra scratch files are allowed (see also the TextJ command). You can convert a scratch file into a named workfile at any time by Opening it and doing Shut *filename*. You cannot Exit without discarding or saving any edits you have done in an extra scratch file.

The *language* defaults to the current Set Lang value, but can be overridden. This is useful for forcing creation of a Jumbo workfile in Qedit/MPE by doing "new abc,data."

If you want to force creating a Wide-Jumbo format, you should set the Length to a value larger than 1,000 before issuing the New command.

```
/Set Length 2500
/New newwork
```

These commands create a new permanent workfile called Newwork. If you want to create a new scratch file, enter the New command by itself.

The optional *size* specifies the number of lines you expect to add to the file. The minimum *size* is 200 lines, the default is 3200 (see Set Work for increasing or decreasing the default size), and the maximum is either 65,535 or 99,999,999.

Examples

```
/new                        {create an extra scratch file}
/new memos                  {create an empty file named Memos}
/set lang job               {define file as 80-column records}
/add

/new forbig,data (100000)   {Jumbo workfile}
/new frankie(500)           {build Frankie for 500 lines}
/aq 1=johnny                {memos was shut automatically}
```

Building Workfiles with Text

You can also create new workfiles while doing a Text command.

```
/text johnny                    {copy Johnny file into Qeditscr}
/shut frankie                   {save Qeditscr as Frankie file}
    or...
/t frankie=johnny               {build Frankie file ...}
                                {and copy Johnny into it}
```

The advantage of this method over New is that Qedit ensures that the *size* of the new workfile is always large enough for the external file, plus room for expansion. When you create the workfile with New, you may not build it large enough to hold a file that you Text into it later.

Open Command [O]

Instantly opens or reopens a Qedit file for editing or browsing, as opposed to the Text command which creates a copy of a file for editing.

OPEN *filename*[,BROWSE|DEFER|NODEFER]

*

*-*n*

?

(Default: edit primary scratch file)

Qedit shuts the current workfile and opens *filename*. The *filename* must exist (see New and Text) and must be a Qedit workfile or scratch file. You cannot Open a Keep file - you must first Text it into a scratch file.

Open *filename*,Browse opens a workfile for browsing in Qedit. You can use the List command, including List-Jumping, Hold, Visual mode HH and ZZ, and any other functions of Qedit which **do not modify the file**. Open-Browse protects you from making unplanned changes to a file.

If you try to Keep the file with its original name i.e. you enter a Keep without a filename, you will get an error.

```
/Open workfile,browse
/Verify Keep
Set Keep Name txtfile
/K
File opened with Browse, please specify a Keep file name
```

You can still force a Keep by specifying an explicit filename as in:

```
/Open workfile,browse
/Keep txtfile
TXTFILE.DATA.ACCT,OLD 80B FA # of records=16
Purge existing file [no]? y
```

Open *filename*,Defer opens the workfile without write access, but acquires write access later if you attempt to modify the file. Set Open Defer On makes Defer the default and Open *filename*,Nodefer overrides that command.

It is important to remember that certain workfile attributes and settings are normally saved when the file is opened with write access. Some of these settings are the ZZ marker, the current line marker (*), and a new default Keep name modified with Set Keep Name. If you open a workfile in Browse mode, these settings are not updated unless the file is re-opened with write access.

To reopen the file most recently accessed, do `open *`; for the file before that do `open *-1`, then `open *-2`, and so. To select from a list of recently accessed files, do `open ?`.

Examples

```
/open mail              {want to edit Mail}
/c "stop"start" @
/open *                 {reopen previous file}
/list all
/open ?                 {select a recent file}
/visual
/open *-1               {select file before last}
/list "function"
/open *-2               {select file before that}
/hold 400/500
/open                   {edit scratch file}
```

Notes

Since you must Open a file before editing, any command that requires an Open file prompts you for the *filename* if none is Open.

If you attempt to Open a file which is not a Qedit workfile, you see a message similar to the following:

```
/open qpart2
QPART2 Error: you can only Open Qedit workfiles (code=111)
```

You need to Text this file, not Open it.

The Open Stack

Qedit maintains an Open-Stack of the ten most recently Opened files. One of these is always reserved for the primary scratch file. You can have up to eight extra scratch files (see TextJ and New), which take priority over named workfiles in the Open-Stack. To reopen one of these files, do an `open ?` command. Open ? prints the list and prompts for a relative file number, starting with zero for the most recent (same as Open *).

`Open *-`*n* allows you to open one of the recently accessed files directly. `Open *-2` opens the third file in the list, since zero is the first.

When you open any file it moves to the top of the list and the other files are pushed down one position. The Close command shuts the current workfile and removes it from the list of recently accessed files. This is useful to stop desired file names from dropping off the bottom of the list. If the file is a scratch file, you are prompted to Discard Changes.

Set Open Defer On

If you use Set Open Defer On, the Open command does not acquire write access to a workfile until you make a change to it. The workfile is opened with read access by default, unless Qedit knows you are going to be writing to it (as when Text or Add force an Open). If you

only browse through the file, the Last-Mod date does not change. This includes full-screen mode viewing. However, if you make any changes to the file or use Set Left/Right/Length /Lang, Qedit reopens the workfile with write access.

It is important to remember that certain workfile attributes and settings are normally saved when the file is opened with write access. Some of these settings are the ZZ marker, the current line marker (*), and a new default Keep name modified with Set Keep Name. If you explicitly open a workfile in Browse mode or use Set Open Defer On, these settings are not updated permanently unless the file is re-opened with write access.

You can override the current Set Open Defer value by doing Open *filename*,Defer or Open *filename*,Nodefer.

There are a few error conditions that may occur if you attempt to modify a file because now someone else can edit the file while you have it open. For example, you cannot obtain write access if someone else already has write access to the file. In Visual mode, you may see the error "Unable to reopen file with write access. Concurrent usage/backup?".

If "Error: EXCLUSIVE VIOLATION: FILE BEING ACCESSED" appears when you try to open a file, it means that either someone is editing the file or it is being backed up.

If you are working in Visual mode, someone can delete the lines you want to edit after Qedit has displayed them on your screen. If this happens, Qedit does not update your screen and displays this error message: "File has changed since page last displayed. Another user?"

Crash Recovery

Qedit ensures the validity of workfiles after a system crash or program :Abort. It checks to see whether the file was properly closed the last time. If the file was in the midst of Renumber, Qedit completes the renumber. If the file was in the middle of a Text, Qedit clears the file so you can do the Text over again. In all other cases, Qedit prints a RECOVERY warning and searches through the file to eliminate any duplicate lines. After a RECOVERY, examine the area of lines that you were last editing. A few lines may be missing or out-of-date, but that is all. If a workfile is ever damaged, use the Serial option of QCOPY to recover the file.

File Modification Timestamp

When you use the Text or Keep commands on a file, Qedit stores the file's modification timestamp in the workfile. If you Shut the workfile to do something else, the next time you Open it, Qedit will compare the stored value with the file's current timestamp. If they are different, it means that the original file has changed either since you last worked

on it or since the last time you saved your changes. Qedit will alert you to the difference by displaying a message similar to the following:

```
 Warning: Original file has been modified since
the

 initial Text or last Keep !
```

The file timestamp can change for a number of reasons. Here are few examples:

- Someone else might have been working on that same file with Qedit and saved their changes before you did.
- The file could have been restored.
- Maybe you used the file to test a program which modified the file in some way.

Because the timestamp message is just a warning, Qedit continues its processing. However, if you want to be sure you are not missing important data, you should compare the contents of the file with your workfile and decide if it is safe to continue editing your copy.

This is one way to compare the files:

- Use Verify Keep and write down the default Keep name
- Keep the workfile under a different name
- Use our Compare bonus program to display the differences between the original file and the new version you just created
- Look at the report and separate the lines that you changed from the ones you did not touch
- If needed, apply changes to your copy so that you do not miss anything important

It is important to remember that certain Qedit commands will shut and open workfiles on your behalf. The timestamp warning might appear when you do not expect it.

By default, timestamp checking on Open is disabled. If you want to change this setting, you can use the Set Open Checktimestamp command.

:Pause Command [PAUSE]

The Pause command has two uses: to suspend Qedit for a specified number of seconds, or to print a prompt message on the screen and wait for the user to press Return. If the parameter is numeric, Pause does a timed wait. If the parameter is not numeric, it is used as the prompt message and a wait for user Return is done instead. The Pause command is handy in usefiles to provide time for the user to read the screen before continuing.

:PAUSE [*seconds* | *message*]

(Defaults: read without a prompt)

The *message* is not in quotes and is separated from the command name by a single space.

Examples

```
/pause 5            {wait for 5 seconds}
/display To get out of Suprtool, type Exit
/pause Press Return when ready to try Suprtool.
/run suprtool.pub.robelle
```

:Prep Command [PREP/:P]

Converts the object code in a USL file into a "program file". USL files are produced by compilers. Program files are what you execute in the :Run command.

:PREP [*uslfile*] [,*progfile*] [;]
[STACK *words*]
[MAXDATA *words*]
[DLSIZE *words*]
[RL *rlfile*]
[CAP *caplist*]
[PMAP]
[QMAP]
[LP] {map to printer}
[PATCH *words*]
[ZERODB]
[FPMAP]
[NOFPMAP]
[YES]
[NO]
[NOSYM]
[CHECKSUM]

(Defaults: *uslfile* = $oldpass,
progfile = $newpass;
see Set MAXDATA for default;
see Set RL for *rlfile*)

The parameters to :Prep are the same as in MPE. Keyword parameters can, of course, occur in any order. In Qedit, all parameters including file names are optional. Most of the parameters may be shortened to a single letter.

uslfile	**USL file produced by the compiler (default = $oldpass).**
progfile	PROG file produced by the :Prep (default = $newpass).
STACK	specifies starting dynamic stack (seldom needed).
MAXDATA	specifies largest stack size (MPE expands).

CAP	specifies capabilities (example: CAP IA BA PH MR).
PMAP	causes a procedure map to be printed.
QMAP	causes the PMAP to be reorganized into a more readable report; procedures are put into alphabetical order and a segment-size histogram is added. QMAP;LP directs the QMAP to the line printer (QMAPLIST). The program Qmap.Pub.Robelle must be on the system.
LP	causes the PMAP or QMAP to appear on the printer.
PATCH	reserves a specified number of words at the end of each code segment for patches.
ZERODB	sets uninitialized global stack locations to zero.
FPMAP	writes a copy of the PMAP into the program file for debugging.
NOFPMAP	does not write a copy of the PMAP into the program file for debugging.
YES	purge any existing program without asking permission.
NO	do not purge any existing program file.
NOSYM	does not write the symbol table into the program file.
CHECKSUM	writes checksum information to the program file.

Examples

```
/open src       {open source file}
/modify ...     {make some changes}
/cobol *        {compile it, with code to $newpass}
/prep           {prep $oldpass,$newpass}
/run            {run $oldpass and see if it still works!}

/prep ,pf       {prep $oldpass into the file pf}

/prep;c mr lp   {prep with cap=mr and send pmap to printer}
```

Notes

If the program file already exists and it has CODE of "PROG", Qedit asks whether you want to purge it. If you answer NO, Qedit cancels the :Prep. After the :Prep, Qedit saves the program file, even if a nonfatal error occurs.

To send the QMAP to a disc file, use these commands:

```
/purge discfile
/build discfile;rec=-80,16,f,ascii
/file qmaplist=discfile,old;dev=disc
/prep uslfile,progfile;qmap   {do not use LP}
/list discfile
```

Proc Command [P]

Calls an external subroutine and passes it lines to examine, update, delete, or split. Qedit has two built-in routines to downshift and upshift lines, DOWN and UP.

PROC [*name*] [S|P|G|PP|PG] [*rangelist*]
[DOWN | UP]

(Q=reset workspace)

(Defaults: previous proc)

Except when *name* is one of the built-in routines (DOWN, UP), *name* must be a procedure in an SL file to be dynamically loaded and then called. If you omit *name*, PRoc calls the most recent procedure *name* (at startup this is DOWN). The procedure is only actually "loaded" the first time you mention it. Qedit keeps the procedure loaded as long as it can. Since DOWN and UP are part of Qedit, they need not be loaded from an SL, nor can they be unloaded. Use Verify Proc to list the current procedures.

Maximum

Set Limits Proc n determines the maximum number of procedures which Qedit will keep loaded for you at a time. The default is four. When you exceed the limit, Qedit unloads the one least-recently used. Normally, Qedit unloads procedures when needed to make room for new routines that you have asked to load. However, if you are using an Interface routine also, Qedit does not unload any of your procedures. That is because Qedit allows you to combine interface routines and Proc routines in the same routine and install both with a single Loadproc. The Qedit display will show that the Proc is gone, and you will no longer be able to call it, but it will not be unloaded. You will not be able to purge it from the SL unless you Exit from Qedit.

Proc passes each line of the *rangelist* to the procedure and updates the line upon return. If you omit *rangelist*, Proc passes a dummy line with all blanks and line number of " ? " instead; this allows you to call procedures without having a workfile Open.

For DOWN and UP, the default *rangelist* is the current line (*); PQ shifts quietly (i.e., without printing the lines); and PJ shifts with user verification (i.e., PJ prints each shifted line and asks you to approve it).

The library search options for the Proc command are as follows:

PROC procname S	Sl.Pub.Sys only
PROC procname P	logon Sl.Pub then Sl.Pub.Sys
PROC procname G	logon group, then Sl.Pub, then Sl.Pub.Sys

PROC procname PP	Sl.Pub in Qedit program account
PROC procname PG	SL in Qedit program account and group

Built-In PROCs to Shift Up or Down

The Up and Down Procedures put Roman-8 characters into uppercase or lowercase if Set Editinput Extend is On. Otherwise, they only operate on A-Z and a-z.

The first time that you use Down or Up after running Qedit, they ask you to configure them. There are 4 options: 1 means to shift every alpha character in the lines, 2 means to skip over characters enclosed in double quotes ("), 3 means to skip over characters enclosed in single quotes ('), and 4 means to skip over characters enclosed in either double quotes or single quotes. If Down (or Up) finds a line with unmatched quotes, it prints a warning and stops (unless the lines are part of a COBOL program, in which case unmatched quotes are okay).

```
/open qedit.doc         {open document file}
/list 415.1             {display a line}
  415.1   You will need to Purge the old file.
/proc down 415.1        {try it lowercase}
Set Shift DOWN?  1(@) 2(") 3(') 4(" or ')  [0]:2
  415.1   you will need to purge the old file.
/proc up 415.1          {try it uppercase}
Set Shift UP?  1(@) 2(") 3(') 4(" or ')  [0]:2
  415.1   YOU WILL NEED TO PURGE THE OLD FILE.
/proc down              {lowercase is better}
/proc 410/415           {downshift some more lines}
/pq 420/1002            {many more! quietly}
/pj up 1003             {upshift with approval}
 1003     >GET D-LINE (Okay?) yes
```

If you always configure the shifting routines to the same option (e.g., skip strings with double quotes), you can use Set Shift to define the configuration:

```
/set shift down 2 up 2
```

User-Written PROCs

Besides the two built-in PROCedures UP and DOWN, you can invoke any number of user-written PROCedures from SL files (four of these can be loaded at one time).

The QLIB contributed library contains two PROCedures: FINDJUNK to remove nonprinting characters from lines, and NEATER to align COBOL fields to specific columns. The easiest way to use them is to copy SL.QLIB into your logon account and/or group:

```
/:run fcopy.pub.sys
>from=sl.qlib.robelle;to=sl;new
>exit

/open memos                {open document with junk in it}
/proc findjunk,g,first/10  {cleanup start of current file}
/proc 1/50                       {cleanup some more lines}
/p findjunkq,g,51/last          {cleanup the rest quietly}
/:qhelp qlib.help.robelle,contr,findj       {check manual}

/open cobsrc                     {open a cobol source file}
/p neater40,g,12.3/14           {adjust some data division}
/:qhelp qlib.help.robelle,contr,neater
/p findjunk 2.1/2.4          {remove some phone junk too!}
```

For detailed instructions on coding user procedures, consult the index.

Q Command [Q]

Prints a message on $stdlist.

Q ["*string*"]

(Default: print a blank line)

The *string* of up to 80 characters is printed on $stdlist.

Use the Q command to print prompts from usefiles. This works especially well when you use a file quietly.

Q can be used to include comments in batch mode. Use :COMMENT in usefiles for a nonprinting comment line.

Examples

Below is a usefile for compiling and preparing a large SPL program. The program reports to the user as it progresses. Because these commands may take a long time to complete, the last line is a Q command to wake us up by ringing the Bell.

```
Q "This usefile compiles/preps Suprtool."
Q "First we Shut your Open workfile, if any."
shut
:COMMENT Purge any existing USL file.  Will build new one.
:purge suprtool.usl
:COMMENT Use Segment Stdin= commands to init new USL file.
:run segdvr.pub.sys;stdin=toolseg.job
:COMMENT Save new USL file.
:save suprtool.usl
:COMMENT Drop security; we need access from many accounts.
:release suprtool.usl
:COMMENT Compile all source modules into USL file.
Q "USL file initialized for Suprtool."
:spl commag1.suprtool,suprtool.usl
:spl commhr1.suprtool,suprtool.usl
:spl commsz1.suprtool,suprtool.usl
:spl main1.suprtool,  suprtool.usl
:spl open1.suprtool,  suprtool.usl
:spl sort1.suprtool,  suprtool.usl
:spl util1.suprtool,  suprtool.usl
Q "All Suprtool source modules compiled."
:COMMENT Nested usefile to do the Prep command.
use prep.suprtool
:COMMENT Finally, use Q command to ring Bell on user terminal.
Q "Suprtool :prep is Done! <Control-G> ..."
```

/Qedit Command

When you execute a command file (or a UDC) from within Qedit, you can also include Qedit commands in the command file by preceding the Qedit commands with a slash (for example, `/find "text"`).

/*command line*

(Defaults: none)

Qedit allows you to include Qedit command lines within UDCs and command files. You can check the result of the /Qedit command by testing CIERROR:

```
setjcw CIERROR = 0
continue
/open abc.source
/find "def"
if CIERROR=0 then
   /delete *
else
   if CIERROR=860 then
      display Invalid syntax in Qedit command!
   else
      if CIERROR=900 then
         display End of file - string not found!
      else
         if CIERROR=907 then
            display Non-existent file!
         endif
      endif
   endif
endif
```

As this example shows, the /Qedit command returns one of three CIERROR values:

860 = Illegal Keyword

907 = Non-Existent File

900 = End Of File (returned by Find and Findup)

Note that these CIERROR values are only set when the commands are being executed from a User Command, not from $stdin or a usefile.

INSIDEQEDIT JCW

You can test whether your command file is being executed by Qedit by having it check the INSIDEQEDIT job control word, so as to only execute /Qedit commands while inside Qedit.

:Qhelp Command [QHELP]

Invokes the QHELP subsystem on a specified help file. QHELP is a part of QLIB, the Robelle contributed library. The *helpfile* must have been processed by HELPCOMP.QLIB. The *keyword* parameters must be separated by commas, since blanks are allowed in a single *keyword*.

:QHELP *helpfile* [,*keyword*,...]

(Defaults: no *keyword* = start at top)

Examples

```
/qhelp qlib.help.robelle
/qhelp suprtool.help.robelle,commands,base
```

:Redo Command [REDO]

Enables you to modify and repeat any of the previous 1,000 command lines.

REDO [*start* [/ *stop*]]

[*string*]

[ALL | @]

(Default: redo the previous command)

The :Redo command allows you to modify the commands before it executes them. If you don't need to change them, use the :Do command. Commands are numbered sequentially from 1 as entered and the last 1,000 are retained. Use the :Listredo command to display the previous commands. You can redo a single command, a range of commands, or the most recent command whose name matches a string.

The :Redo command uses MPE-style commands (D, I, R, U and >) to modify a line. The following are some common commands. A complete list of commands appears at the end of this section. The default mode is to replace characters. To delete, type DDDD under the characters to be removed. To insert, type I under the insertion spot, then the new characters. To undo your changes, type U. To append to the end of the line, use >xxx. To delete from the end of the line, use >DD. To replace at the end of the line, use >Rxxx. And to erase the rest of the line, use D>. See below for a complete list of edits.

Examples

```
/listf @.soruce       {"source" is not spelled right}
NON-EXISTENT GROUP.   (CIERR 908)
/redo                 {redo most recent command}
listf @.soruce        {last command is printed}
         our          {you enter changes to it}
listf @.source        {edited command is shown}
                      {you press Return}

/listredo all
/redo 5              {redo 5th command in stack}
/redo                {redo previous command}
/redo -2             {redo command before previous}
/redo 8/10           {redo 8th through 10th}
/redo -10/           {redo -10 through last}
/redo purge          {redo last Purge command}
/redo purge temp     {redo last "purge temp"}
/redo @temp          {redo last containing "temp"}
```

Notes

The :Redo command can be abbreviated to "," as in MPEX, but you cannot use ";" to combine commands on the same line. You can, however, stop a Redo ALL using the Control-Y key. To save more commands, use a :File command on the file Qedredo before running Qedit:

```
:file qedredo;disc=5000
:run qedit.pub.robelle
```

Editing in :Redo

:Redo uses the same edits as the MPE/iX :Redo command, except that control characters in lines are printed as dots "." so that you can see them. Use Set Modify Hpmodify to select these MPE-style edits for all commands. If you prefer the Qedit-style edits, use Set Modify Robelle to select Qedit editing for all commands, including :Redo. If you prefer Qzmodify, use Set Modify Qzmodify to select Qzmodify editing for all commands.

Persistent Redo

Redo commands can be saved in a permanent file and can therefore be used from another session. You can use the Set Redo command to specify a file name to save your redo commands. Please see the Set Redo command for details.

:Reflect Command [REFLECT]

Executes a Reflection command on your PC. Qedit checks whether the command succeeds or fails. A failure is treated like the failure of an MPE command. :Reflect allows you to control a PC from within your HP e3000 UDCs or batch job (send and receive files, backup your PC, execute PC programs, etc.).

:REFLECT *reflection command*

(Defaults: none)

Examples

```
/reflect type mreport.crt
/reflect shell lotus
```

Version of Reflection

The :Reflect command depends on Reflection's ability to accept commands using an escape sequence, and to be able to pass back a status code indicating whether the command succeeded. These features are implemented in the following versions of Reflection:

- Reflection 1 for DOS version 1.40 or later
- Reflection 3/7 for DOS version 1.55 or later
- All versions of Reflection for Windows
- All versions of Reflection for Macintosh

Batch PC Control

You can use the :Reflect command in a batch job, but you must do a :File equation to specify the PC that you wish to control. The file name is Qedcrt and you must redirect it to a hard-wired PC port. If you wish to switch to another PC, use Set Vis Stop and another :File command. Here is an example:

```
!job pcbackup,user.acct
!file qedcrt;dev=29
!run qedit.pub.robelle
reflect dir
continue
reflect dri                    {oops}

Your Reflection command failed.
10 = ERROR-CODE from the Reflection PC.

UNKNOWN COMMAND NAME.  (CIERR 975)

file backup = backup.wade
continue
reflect backup c:\*.* /S       {need Reflection PLUS option}

set vis stop                   {prepare to access 2nd PC}
file qedcrt;dev=58             {define second PC}
file backup=backup.rockey
continue
reflect backup c:\*.* /S       {add /C for full backup}
exit
!eoj
```

Debugging PC Errors

The examples above show PC functions with and without error control. If you want the job to continue, even if the :Reflect command fails, put a :Continue in front of each :Reflect command. The error CIERROR 975 will be returned if the :Reflect command fails for any reason.

Remember, in order to get :Reflect to work in batch:

- The PC must be turned on.
- Reflection must be running.
- The Reflection baud rate must be the same as in the MPE configuration.
- The PC must not be logged on to the HP e3000.
- For the Backup command to work, Reflection must be a Plus version.

If the :Reflect command fails, Qedit will display the Reflection error-code. If you have a version of Reflection that is capable of passing back the error-code, Qedit will also put the error-code in a JCW named QEDPCERROR. For an explanation of Reflection error-codes, refer to the Reflection Command Language reference manual.

Using Line Mode

Some Reflection command files work fine when executed from the Alt-Y command line, but fail (possibly leaving your terminal in a locked state) when invoked with Qedit's :Reflect command.

The reason is that Qedit's :Reflect command sends an escape code to Reflection to invoke the command. Then Qedit waits for Reflection to send back a status code to indicate when the command is finished.

While Qedit is waiting for the result code from Reflection, it isn't capable of executing other Qedit commands -- it's already executing a Qedit command! The only thing that Qedit is capable of doing while it's waiting is to execute any MPE commands that Reflection might send to the HP e3000. The reason MPE commands must be accepted is that Reflection sends a :Run command for PCLINK whenever a file transfer is requested.

As long as the command or command file doesn't attempt to *transmit* any data to the HP e3000, :Reflect will probably work the same way as Alt-Y.

For example, here is a Reflection command file that works from Alt-Y, but not from :Reflect.

```
; BYE
; This command file gets me out of Qedit, logs me off
; the HP e3000 and exits from Reflection back to DOS.
;
transmit "exit^M"
wait 0:01:00 for "^Q"
transmit "yes^M"
wait 0:01:00 for "^Q"
transmit "bye^M"
wait 0:01:00 for "CONNECT"
wait 0:00:05
hardexit
```

Also see the chapter "Qedit Issues and Solutions" for more information.

Renumber Command [REN]

Renumbers a range of lines or the entire workfile.

RENUM [*firstline*] [*maxincr*]

[*startline* / *stopline*] [*maxincr*]

(Default: entire file from 1.0 by current increment)

If you specify a range of lines (e.g., 101/102), Qedit spreads out the line numbers in that range to allow as much space as possible between each line. The numbers of the *startline* and *stopline* are not changed.

If you do not specify a range, Qedit renumbers the entire file, starting at 1.0 or from the optional *startline* value.

If you specify a *maxincr* value, Renum will attempt to renumber with that increment. If it must use a smaller value, it will print a warning. If you do not specify a *maxincr* value, Renum attempts to use the current Set Increment value which defaults to 1.0 (except for standard COBOL which is 0.1).

Examples

```
/ren             {assign new numbers to all lines}
/list 10/11      {show current line numbers}
   10     The Renumber command
   10.2   has two basic modes:
   10.21     1.  renumber an entire file
   10.211    2.  spread out a range of lines
   11     to make room for new lines.
/add 10.21       {attempt to add a line}
Out of line numbers.  Suggest Renumber.
/ren 10/11       {spread out line range evenly}
/list 10/11      {check new lines numbers}
   10     The Renumber command
   10.2   has two basic modes:
   10.4     1.  renumber an entire file
   10.6     2.  spread out a range of lines
   11     to make room for new lines.
/add 10.4        {now you can add some lines}
   10.5        (usually from 1.0 by 1.0).
   10.51   //
```

Notes

If you keep adding new lines at the same spot in a file, Qedit will assign incremental line numbers such as 3.01, 3.011, but it cannot add a line between 3.011 and 3.012. The smallest increment between lines is 0.001. When you run out of line numbers, Qedit warns you. You can Renumber a range of lines or the entire file to get around this problem.

Replace Command [R]

Replaces lines with new text, either from Stdinx or from the Hold file.

REPLACE [$HOLD] *rangelist*

(Q=no printing, T=template, J=justified)

(Default: *rangelist* = *)

Replace $hold looks for new lines of text in the Hold file (see the Hold command) and uses each to replace one of the lines of the *rangelist*. Replace without $hold prints each line of *rangelist*, then waits for you to type a new line at the keyboard. **Pressing Return only erases the line!** Replacej indents the new line the same number of columns as the original line. $Hold can be abbreviated to $h.

Examples

```
/rq $hold 50/70     {replace from the Hold file}
/rq $h 50/70        {replace from the Hold file}
/rep 5              {replace line 5 only}
    5     LINE 5      {prints existing contents}
    5     NEW LINE 5  {prompts you with linenum}
```

Column Editing with $Hold

You can use the $hold option of the Replace command to do extensive column editing:

```
/lt @
          ....+....10...+....20...+....30...+....40...
     1    *****************
     2    *   Page One    *
     3    *****************
     4    *****************
     5    *   Page Two    *
     6    *****************
/holdq 4/6      {hold the second page of text}
/deleteq 4/6    {now delete those lines}
/set left 20    {set your left margin to starting column}
/repq $hold 1/3 {overlay from the Hold file}
/set left 1     {don't forget to reset left margin}
/lt @
          ....+....10...+....20...+....30...+....40...
     1    *****************  *****************
     2    *   Page One    *  *   Page Two    *
     3    *****************  *****************
```

You can copy columns of text from one position in a line to another by setting margins with the Set Left and Set Right commands, holding the columns of text that you want to copy, setting new margins, and replacing the new column range with the text in the Hold file. Here is a command file that works on MPE V and MPE/iX which does all this for you:

```
COPYCOL.CMD.SYS
```

```
parm fromcol,tocol,length,rangelist
/set right
/set left
setjcw right := !fromcol + !length
setjcw right := right - 1
/set right !right
/set left !fromcol
/holdq !rangelist
setjcw right := !tocol + !length
setjcw right = right - 1
/set left
/set right !right
/set left !tocol
/replaceq $hold !rangelist
/set right
/set left
```

For example, to copy text from columns 1/5 to column 30 in all lines, you would enter:

```
/copycol 1 30 5 @
```

:Return Command [RETURN]

Return is valid only in a UDC or command file; it exits at once, but returns a successful status rather than an error. Control returns to whatever invoked the User Command, which may be Qedit or may be another UDC or command file. Use :Return within an If or Else clause to get out. It can not be used at the Qedit prompt or in a Use file.

:RETURN

(Default: none)

Examples

```
if cierror = 999 then
   return
endif
```

See also the :Escape command.

:Run Command [RU/:R]

Executes a program without leaving Qedit; returns to Qedit when done.

:RUN [*progfile*] [,*entrypoint*] [;]
[STACK *words*]
[MAXDATA *words*]
[DLSIZE *words*]
[LIB [G|P|S]]
[PARM *value*]
[DEBUG]
[LMAP]
[[NO] HOLD] {suspending programs}
[NOPRIV]
[NOCB]
[INFO "*string*"]
[STDIN *file*]
[STDLIST *file*]
[PRI CS | DS | ES]
[QINPUT *filename*]
[NOSTOP]
[XL "*filelist*"]
[UNSAT *procname*]

(Defaults: *progfile* = $oldpass;
see Set Lib for Lib;
Parm *value* = 0;
Info *string* = null)

The parameters to :Run are the same as in MPE. The main difference is that, in Qedit, all of the parameters are optional, the parameters can be shortened, and commas and semicolons are only needed when they hold the place of a missing parameter. Here are the :Run parameters:

progfile	PROG file to "run"; created by :Prep command; if missing, the default is $oldpass (from last :Prep).
entrypoint	where to start execution in the program.

STACK	reserves a specified amount of dynamic stack from the start.
MAXDATA	specifies the maximum size the stack can grow to.
DLSIZE	specifies the initial size of DL-DB area of stack.
LIB	specifies which SL files to search (G, P, and/or S). The default for this parameter is normally S (system), but Set Lib can establish G or P as the default within Qedit.
PARM	specifies a parameter to pass to the program; the value must be between -32768 and +32767.
DEBUG	invokes the program in the Debug utility.
LMAP	prints map showing where each external procedure is "loaded" from; list file name is LOADLIST.
NOHOLD	if the program should try to suspend on exit, kill it anyway. Useful for test versions of programs. Always creates a new process; without NOHOLD, :Run will awaken a held son process instead of creating a new one.
HOLD	if the program should suspend on exit, hold onto it without asking and kill off the least-recently used Hold process if there are more than the Set Limit Hold value. If there is already a held program with the same name, entrypoint, and PARM value, activate it instead of creating a new process.
NOPRIV	see the MPE manual for this parameter.
NOCB	see the MPE manual for this parameter.
INFO	passes a string to the program as a parameter; either double quote (") or single quote (') is allowed as string delimiter, but embedded quotes are not allowed; the Info= string is upshifted if you use 'string', but not if you use "string".
STDIN	specifies redirection of $stdin file.
STDLIST	specifies redirection of $stdlist file.
PRI	execute the program at the priority specified.
QINPUT	open *filename and pass it to the program, using a message file for Qedit workfiles.
NOSTOP	continue editing in Qedit while the new program is running. Will not work if the program uses Control-Y or does terminal I/O.
XL	list of XL files to search for MPE/iX programs (in quotes).

UNSAT	procedure name to use for all unsatisfied external references. Quotes are optional but accepted. Works only on MPE/iX.

Examples

```
/run                    {run $oldpass with defaults}
/ru spook.pub.sys;hold  {hold onto spook}

/ru pf m 5000 de        {:run pf;maxdata=5000;debug}
```

Breaking a Program

If a program that you are testing from within Qedit should go into an infinite loop, you can stop it by striking the "break" key. MPE responds with a colon prompt (:), unless you have "break" disabled in your program. The :Abort command kills the program, but it also stops Qedit, and you must run Qedit again.

Suspending a Program

If you run a program that "suspends" instead of terminating, what Qedit does depends upon whether you specified the Hold keyword or the NOHOLD keyword or neither. With NOHOLD, Qedit kills the program. With Hold, Qedit saves the program and, if more programs have been saved than allowed by Set Limit Hold, kills the least-recently used one. If neither Hold nor NOHOLD was specified, Qedit asks if you would like to Hold the program. When you next :Run that program, Qedit merely activates the held process. You must :Run it with the same entrypoint and PARM value to reactivate the program. If you :Run the program a second time, but specifying NOHOLD, Qedit creates a second process. It is much faster to activate than to create. Programs run with Stdin=, Stdlist=, or Qinput= cannot be held.

Programs that suspend on exit include SPOOK, SUPRTOOL, and EQUATER. (SPOOKsters note: Exit does not release the current spool file; use Text with no parameter before Exit for that purpose.)

To see what programs you have held, use Verify Run. To enter one of your held programs, use :Run with the full program name, entrypoint name, and Parm= value (unless zero). Qedit looks first in the Hold table before it creates a new copy of the program. If Qedit finds the program there, it just activates the existing copy, which is faster. Or, :Activate with a subset of the program name and entrypoint (i.e., :A SU to activate Suprtool.Pub.Robelle). Any or all of the Hold programs can be killed with the :Kill command.

The Set Check Hold Yes option configures a default answer to the "Okay to Hold?" question of the Run command. Possible values are "YES" (always hold), "NO" (never hold; same as Set Limits Hold 0),

and "ASK" (ask users if they want to hold each process, which is the default).

Feeding Qedit Files to Programs

Qinput feeds Qedit workfiles into programs that won't read them (e.g., DBSCHEMA). For "unnumbered" input lines, use Set Lang Text, JOB or RPG. You must have a :File equation for the specified *filename* (i.e, don't specify the actual file name in the :Run command). Qinput processes Include files as well, but if it cannot open the file it passes the Include line to your program for processing (#include <stdio.h>). :Reset *filename* command is done at the end. See also the Qedify program under **Installation**.

```
:file dbstext = xxxx
:file dbslist =$stdlist
:run dbschema.pub.sys;parm=3;qinput=dbstext
```

Resetting EOF on $Stdin

When you have more than one program running on the same terminal, some unusual problems can occur. One problem has to do with end-of-file on $stdin and $stdinx. If you are running SPOOK from inside Qedit (or :Segmenter or any other program that reads from $stdin) and you try to type an MPE command such as :Listf, the program terminates with an END OF FILE warning. And, if you try to run the program again, you get the same warning and nothing will be read from the terminal. To reset EOF on $stdin, use /:Stream with no parameters. MPE attempts to read a job stream from the terminal, encounters the EOF, and resets it. You can then run your program again.

Run, Implied

When you enter a command that Qedit cannot interpret, it checks to see if it might be the name of a program. First it looks in the logon group for a file whose name matches your command name. Then it looks in the Pub group of the logon account and finally it looks in the Pub.Sys group. If it finds a program file that matches, Qedit then runs that program.

To tell Qedit which groups to search for program files, set the Hppath variable:

```
/showvar hppath
HPPATH = !hpgroup,pub,pub.sys
/setvar hppath "!hpgroup,bin,pub,pub.sys"
/set hppath "!hpgroup,bin,pub,pub.sys"   {MPE V!}
```

For example, to run Spook.Pub.Sys, you just enter

```
/spook
```

This is called an "implied Run." You are allowed two parameters on an implied Run command:

/progname ["infostring"] [,parmvalue]

or

/progname [;Info="infostring"] [;Parm=parmvalue]

You can enter the Info and Parm values as either keyworded parameters or positional parameters. If the first symbol after the program name is neither Info or Parm, it will be interpreted as the Info string (i.e., quotes are not necessary if the Info string is a single symbol). If you need other parameters, such as Maxdata or Lib, you will have to use the standard :Run command.

Examples

```
/magnet "-f@.source input-buffer -c -l -e"
```

This looks for a program called Magnet somewhere in the Hppath and executes it with an Info string.

```
/pscreen,3
```

The above command looks for a program called Pscreen, and executes it with Parm=3.

:Segmenter Command [SEG/:S]

Invokes the Classic Segmenter Subsystem from within Qedit.

:SEGMENTER [*listfile*]

(Default: $stdlist;LP for printer.)

Examples

```
/seg    {invoke the segmenter; print on $stdlist}
HP32050A.00.00 SEGMENTER/3000 (C) ...
-usl $oldpass
-sl sl.pub
-addsl utilseg
-exit
End Segmenter
/
```

Set Command [S]

Changes configuration options of Qedit.

SET *keyword* [*value* ...]

You can use Qedit in its default mode, as it comes out of the box. To get the most out of Qedit, you will eventually want to try some of the optional features. To see all of the Set options available and their minimal abbreviations, type Verify All at the prompt.

```
/set modify hp                {select MPE-style modify}
/set visual save on update on {full-screen options}
```

Each Set command may specify one *keyword* from among those listed below.

Length

Zip

Here is a list of the Set keywords:

Account	Where to find Qedified compilers and help files.
Alias	Redefine Qedit commands or create new commands.
Autocont	Do not abort in batch on errors.
Check	Verify Delete or Justify > 5 lines, hold programs.
Decimal	Apostrophe means Control Character ('7 = Bell).
DL	Reserve memory in DL area for user Procs.
Editinput	Remove line noise; allow Roman-8.
Expandtabs	Expand tab characters into spaces when Texting.
Extentsize	Minimum sectors/extent for Keep and New.
Extprog	Attach an external program such as MPEX to Qedit.
Filename	Override file names on Help, Hint, Qzmodhlp files.
FORTRAN	External files default to FORTRAN, not SPL.
Hints	Disable the "hint of the day".
Hppath	Override default path for cmd/prog files (MPE V).
Increment	Default increment between added lines.
Interactive	Override batch/session mode.
Justify	Margins and options for justifying and centering.
Keep	Format of the next Keep file.
Language	Type of program or text to be kept in this file.

Left	Left margin for edit, list, keep (default=1).
Length	Maximum characters per line for a Lang=Text file.
Lib	Default Lib= for the :Run command.
Limits	Restricting features of Qedit available to user.
List	Format of LP listings; also LJ options.
MAXDATA	Default Maxdata= value for the :Prep command.
Modify	Type of modify (Robelle, HP or Qzmodify).
Open	Default modes for Open Command (Defer, etc.)
Pattern	Switch back to old pattern-matching.
Priority	Switch Qedit execution to a new MPE subqueue.
Prompt	Replace "/" with new prompt string.
Right	Right margin for edit, list, keep, etc.
RL	Default RL= value for the :Prep command.
Shift	Configure how to up- and down-shift.
Spell	Configure how spell checks lines and words.
Statistics	Print CPU and wall time of each command.
Suspend	Whether to suspend on Exit or not.
Tabs	Set "tab" key and columns; set on terminal.
Term	Adjust number of terminal display columns.
Totals	Print number of lines processed by a command.
UDC	Recognize User Defined Commands in Qedit.
Undo	Disable/enable ability to "undo" changes.
Visual	Full-screen options (save fkeys, update, etc.).
Warnings	Print warning messages (or not!).
Whichcomp	Which COBOL compiler, etc.
Window	Rules for string search (columns, upshift, etc.).
Work	Default size/function of workfiles.
Wraparound	Move words to next line when long line Added.
X	Tag changed lines in COBOL file with string.
Zip	Configure auto-modify, first, last, all, etc.

To configure Qedit to operate as you like best, put your favorite Set commands in a file named Qeditmgr, either in Pub.Sys or in the same group as the Qedit program file (usually Pub.Robelle). If you can't build files in those groups or you don't think your Set options will appeal to everyone, create Qeditmgr in your logon group and run Qedit with Parm=2.

A typical configuration file for a COBOL shop might look like this:

```
{These are default Qedit values for all users:}
comppri=ds              {force compiles into ds}
set whichcomp cobol 85 {select default compiler}
set lang cobolx all on {always use 80 columns}
set x date list off    {mark changed lines with date}
set check on           {verify delete/format of >5 lines}
set list page on       {lp listings interpret $page}
set vis save 1         {Visual saves function keys}
set udc on             {load UDCs}
z=listj */last         {define Z command}
set shift down 3 up 3  {shift everything but strings}
```

Syntax of Set Commands

The syntax descriptions that follow list the initial values. These are also the defaults that are used if you omit values in Set commands. For example:

Set Foo [ON|OFF]

(Default: ON)

(Initially: OFF)

The (imaginary) Foo keyword may be set ON or OFF. Initially when Qedit starts up it is OFF. Thereafter, if you type `Set Foo` without specifying ON or OFF, the default will be as though you had specified ON.

Error Messages

If you type a Set command that Qedit does not understand, you usually get an error message telling you specifically what is wrong, sometimes suggesting valid values. Occasionally you will see the error message

```
Error: Param.
```

This is Qedit's catch-all message for when you have typed something that it doesn't like, and cannot guess what you meant.

Account

Set Account *accountname*

(Initially: same as the Qedit program)

By default, Qedit looks in the same account that its program file lives in for copies of the MPE CM compilers (in the Q group) and the Qmap.Pub program. If you run a copy of Qedit in the Vesoft account, Qedit looks for the compilers in the Vesoft account instead (it also looks for the help files in Vesoft -- see Set Filename).

What to do? You can either copy the files needed into the same account as the Qedit program file or you can use the Set Account command to force Qedit to look in a specific account (e.g., Robelle).

```
/set account robelle {Cobol.Q.Robelle}
```

For example, if you are running a hooked version of Qedit in Pub.Vesoft, you could put this command in the configuration file Qeditmgr.Pub.Vesoft. See "Running Qedit under MPE" for more details.

Alias

Set Alias *aliasname* **To** *aliasdefinition*

Qedit commands have priority over any external commands, such as UDCs and command files. The fact that Qedit commands can be abbreviated to a few characters (e.g., C for Change) and combined with various suffixes (e.g., CQ for Change Quiet) has caused some problems with seemingly different external commands.

The new Set Alias command now allows you to override Qedit's command priority. Aliases are always executed first. For example, SPJ is the abbreviation for Qedit's SpellJ (i.e., call the spell checker in Justify mode). If you had a command file or UDC called SPJ, you could get it to execute only by explicitly using the colon prefix (:SPJ).

Using the Alias feature, you can now use

```
/Set Alias "spj" to ":spj"
```

From that point on, entering SPJ would always call the external command.

The alias name and definition must be enclosed in a string delimiter such as quotes. You must use the same delimiter for both items.

```
/Set Alias "SPJ" to ":showout"          {valid}
/Set Alias \SPJ\ to \:showout\          {valid}
/Set Alias "SPJ" to \:showout\          {invalid}
/Set Alias \SPJ\ to ":showout"          {invalid}
```

The alias name can have up to 50 characters. It can contain only alphabetic characters. Although the alias should not contain numeric digits, special characters or spaces, the Set command does not currently prevent you from using these characters. If you do use them, the alias feature will not work properly. If you use an alias name that has already been defined, the new definition replaces the old one.

The alias definition can contain up to 77 characters and can include one or more commands. The definition can contain any command that can normally be entered at the Qedit prompt, including other aliases.

You can use Qedit's command stacking feature to enter a series of commands and create something that resembles a macro command.

```
Set Alias "Five" to "First;F 'string';List */*+5"
```

The length of all alias names and definitions cannot exceed 2,500 characters.

Stacked commands are separated by a semicolon (;). If you use MPE commands, UDCs and command files, you might have to use semicolons to separate parameters. This will confuse Qedit. There are different ways to work around this problem.

You can put the command in another UDC or command file that does not require parameters.

```
/echo listspf o@;seleq=[owner=mgr.acct] > mycmd
/Set Alias "SPJ" To "mycmd"
```

You can set an MPE variable with the appropriate information and reference the variable.

```
/setvar mycmd "listspf o@;seleq=[owner=mgr.acct]"
/Set Alias "SPJ" To ":/!mycmd"
```

The last option is to enclose the command and its parameters in parentheses.

```
/Set Alias "SPJ" To "L 1;(listspf o@;seleq=[jobnum=J123]);V"
```

If the command itself contains parentheses, you will have to use the variable or command file approach.

Function Key

Set Alias Fkey *keynumber* **To** *aliasdefinition*

You can also assign an alias definition to a function key. Let's say you want the F1 key to perform a series of commands, simply enter

```
/Set Alias Fkey 1 to "showme"
```

The function key number can only have a value of 1 through 8. The function key aliases only work in Line mode. In full-screen mode, they are redefined to the standard Visual meanings.

You can define function keys by specifying the escape sequence they transmit. For example, the F1 key sends ESC+P. Thus you could use

```
/Set Decimal On
/Set Alias '27"p" To "showme"        {'27 is the ASCII code}
```

Ignorecase

Set Alias Ignorecase [ON | OFF]

(Default: On)

(Initially: On)

On MPE, alias names are not case-sensitive by default (i.e., spj and SPJ are the same). However, you can enable sensitivity with Set Alias Ignorecase Off, in which case spj is considered different than SPJ.

Trace

Set Alias Trace [ON | OFF]

(Default: On)

(Initially: Off)

If you are nesting aliases and are experiencing problems, you can enable the alias trace with Set Alias Trace On. Qedit then displays aliases as it executes them.

Remove

Set Alias *aliasname* **OFF**

If you want to remove a single alias, you can use Set Alias "SPJ" Off.

Reset

Set Alias Reset

If you want to remove all your current aliases, enter Set Alias Reset.

Autocont

Set Autocont [ON | OFF]

(Default: ON)

(Initially: OFF)

Normally, Qedit aborts in batch mode if errors occur. Set Autocont ON disables this abort. If the ON|OFF parameter is omitted, ON is assumed. Turning on this option is the same as inserting a Continue command in front of every other command. This applies to command files and UDCs as well, even in session mode (same as Hpautocont in MPE/iX).

Check

Set Check [[Delete | Justify] ON | OFF] [Hold Yes | No | Ask]

(Initially: both OFF, Hold Ask)

Causes Qedit to ask for approval before performing certain tasks.

Set Check Hold Yes configures a default answer to the "Okay to Hold?" question of the Run command. Possible values are "YES" (always hold), "NO" (never hold; same as Set Limits Hold 0), and "ASK" (ask users if they want to hold each process, which is the default).

Set Check Delete On asks approval before deleting more than 5 lines. Set Check Justify On asks approval before formatting (i.e., Justify Format or Both) more than 5 lines. Both options are OFF by default. Set Check ON turns them both on and Set Check OFF turns them both off. Or you can adjust them individually.

When Check Delete is ON, you are asked before deleting more than five lines.

```
/dq 1/10
Delete 10 lines [no]? yes
```

Regardless of whether Check is ON or OFF, you can always undo the effects of a Delete or Justify, using the Undo command.

Decimal

Set Decimal [ON | OFF]

(Default: ON)

(Initially: OFF)

If you need to find nonprinting characters, you can enable the Decimal option. When this option is active, character strings in Qedit can refer to characters by giving the ASCII character code in decimal, preceded by an apostrophe:

```
/set decimal on    {enable entry of control codes}
/list '7           {list all lines with Bell}
/c "~" '27 all     {change "~" to Escape}
```

Set Decimal ON disables use of the apostrophe (') as a string delimiter, and the use of ' as part of a string in the Change command.

Whenever you use the apostrophe with Set Decimal On, you have to use a space as a delimiter between the search string and the replacement string. This means that you cannot use the abbreviated syntax, as in

```
/c "abc"def" all
```

Qedit is able to determine that "abc" is the target string and "def" is the replacement string. With Set Decimal On, the space between the target string and the replacement string is mandatory. Also, it is possible to mix ASCII code values and regular characters. Regular characters must be enclosed in another set of string delimiters. For example,

```
/c '27"&d@" '27"&dJ" all  { target=<ESC>&d@, replacement=<ESC>&J }
/l "abc"'13               { target is abc<CR> }
/l '9"ColumnData"'9       { target is <tab>ColumnData<tab> }
```

DL size

Set DL [*size* **]**

(Default: 132)

(Initially: 132)

Some Proc routines (see Proc command) have been written to use the area in the data stack between DB-1 and DB-132. Qedit does not touch this space , except that the Lsort command may modify DB-%12. If

you need more than 132 words, use the Set DL command. The default *size* is 132 words, but you can configure any *size* between 132 and 10,000. Set DL is rejected if you have UDCs active (see Set UDC). In order to reserve 600 words in DL-DB, enter this command:

```
/set DL 600
```

Editinput

Set Editinput *option value ...*

Data ON | OFF

Command ON | OFF

Extend ON | OFF

Asian ON | OFF

(Initially: Data=OFF, Command=OFF, Extend=ON, Asian ON)

Normally Qedit accepts whatever you type as being valid. However, if you are connected to the computer via a phone line you will probably find that strange, nonprinting characters are getting into your files. These are generated by line noise. You can use Set Editinput Data or Set Editinput Command to tell Qedit to remove nonprinting characters from your input. However, nonprinting characters include useful characters such as BELL and ESC. You can explicitly insert nonprinting characters into your text using Set Decimal and Change, or using the WP or W$ function of Set Mod Qzmod.

Set Editinput Data ON removes "noise" from text added to your file in Line mode (it has no effect on Visual mode).

Set Editinput Command ON removes "noise" from commands.

If you don't want to edit Roman-8 characters in either Line or Visual mode, use Set Editinput Extend OFF. This tells Qedit to discard the Roman-8 characters as noise, rather than allow them through as valid characters. The default setting is ON for the benefit of European users. When Extend is ON, UPSHIFT string windows will work on Roman-8 characters (e.g., List "ü" (up)).

Asian terminals use a two-character code for each symbol in the language. When you set Extend ON, you also set Asian ON by default. This validates all possible character codes from 128 to 255, not just 161 to 254 as used by the Roman-8 character set.

If you want Roman-8 characters, but don't want Qedit Visual mode to display undefined control codes (such as decimal 130, which might be included in a file as a printer control), use Set Editinput Asian OFF. Otherwise, some terminals change the value of the codes, and other terminals just drop the codes from the file. When you turn Asian OFF, Roman-8 characters may still be displayed and edited, but control

codes from 128 to 160 are displayed as dots (".") with a question mark to the left of the line, indicating that they can only be edited in Line mode, not Visual mode.

Expandtabs

Set Expandtabs ON | OFF

(Initially: Off)

When Qedit encounters tab characters in an external file, it can either copy them as is or it can expand them into the appropriate number of space characters (using the Set Tab Stops value). The default is to leave them as is, in the file. You can enable the removal of tab characters by expansion into spaces through use of Set Expandtabs On. However, there are some applications that use tab characters as field separators in their data files.

Extentsize

Set Extentsize *keepfile* **[** *workfile* **]**

(Initially: 100, 30 sectors)

Set Extentsize specifies the size in sectors of disc chunks for files built by Qedit. There are separate values for Keep files versus Qedit workfiles, since Keep files are normally static while New files are dynamic. Initially the minimum extent size for Keep files is 100 sectors and 30 sectors for work files.

For small files, Qedit reduces the number of extents by increasing the size of each to the specified minimum. This avoids generating numerous small pieces of space that clutter up the disc and make backup take longer. If you are very tight on disc space, you may want smaller values for Extentsize. If you have extra disc space, you should use a larger value such as 300 sectors. The range of values accepted is 5 to 5000 sectors.

Extprog

Set Extprog [*program* **[** *parm* **] [Com [ON | OFF]]]**

(Default: none)

(Initially: none)

Extends the power of Qedit by attaching another process to it. The *program* specified must be a program file that can be Run with Lib=S (i.e., all defaults except for *parm*) and that will suspend on exit instead of terminating. When you first enter a command that starts with a percent sign ("%"), Qedit creates the specified external program as a *son process*. Qedit waits until the son process is done. When the son

completes, Qedit prompts you for another command. On subsequent %-lines, Qedit merely "activates" the son process, which is much faster than creating a new one -- almost instantaneous.

If you use the Com ON option, Qedit sends the %-line to the son process via the MAIL intrinsic before activating the son. Qedit removes the % from the line and fills it out to a length of 256 bytes with blanks. There is no terminating character.

Do not use Com ON unless the son process is programmed to pick up the MAIL message. MPEX, for example, will do so. If the *program is either Main.Pub.Vesoft or Mpex.Pub.Vesoft, Qedit assumes Com ON. If you have a recent version of MPEX, do Set Ext Main.Pub.Vesoft as this creates one less process.*

Qedit always updates the current workfile to the disc, but does not close it. Since Qedit does not actually go to the work of creating the son process until you enter the first % command line, you can include Set Extprog in your Qeditmgr file without incurring any overhead.

```
/set extprog main.pub.vesoft
```

Entering Set Extprog without any parameters terminates the existing child process if one exists.

Filename

Set Filename Help | Hint | Qzmod *filename*

(Initially: in same account as Qedit)

By default, Qedit looks for the Help, Hint and Qzmodhlp files in the account where the Qedit program file resides. The group to search depends on the program's group of residence: for PUB the group will be HELP; for PUBNEW the group will be HELPNEW, and for PUBOLD the group will be HELPOLD. You may force Qedit to open specific file names with the Set Filename command. See also Set Account.

```
/set filename help qedit.help.util
/set filename hint qedhint.help.util
/set filename qzmodhlp qzmodhlp.help.util
```

FORTRAN

Set FORTRAN [ON | OFF]

(Default: ON)

(Initially: OFF)

When Qedit is TEXTing in a file, it must decide what language type that file has. If the file is a Qedit file, there is no problem, because the language type is stored as a field within the file.

If the file is a Keep file, Qedit examines the record length, file code, and position of the sequence number field. Unfortunately, there is no foolproof way to distinguish between SPL, PASCAL and FORTRAN source files, since all have sequence numbers in columns 73-80. If the current language is set to FORTRAN, Qedit treats the external file as FORTRAN. If the current language is not set to FORTRAN (i.e., to JOB, COBOL, SPL, etc.), Qedit treats the file as an SPL (or Pascal) file. If a file is mistakenly created as SPL or Pascal, you can change it to FORTRAN with Set Lang FORTRAN. You can also resolve the ambiguity by specifying the language after the file name when you Text it (e.g., /text abc,fortran).

If you primarily edit FORTRAN source files, you can avoid this problem with Set FORTRAN. When this option is set, Qedit will always resolve decisions on external files in favor of FORTRAN, regardless of the current language setting. You may then have to convert the occasional file from FORTRAN to SPL or Pascal.

HFS

Set HFS ON | OFF

(Initially: OFF)

For all file operations on MPE, Qedit assumes the files are in the MPE namespace. This implies certain things such as file names are always uppercase. If the file you want to work on is in the POSIX namespace, you have to remember to prefix its name with a dot (.) or a slash (/). If the file also contains $include statements, the names on these statements should also have POSIX prefix characters.

If you do not work with many POSIX files, having to include the prefix is probably not bothersome. However, if you spend most of your time in the POSIX namespace, entering the prefix may eventually become annoying. You can enable the Set HFS option and request that all file names be interpreted as POSIX names. If the name does not already start with a dot, a slash or a dollar sign ($), Qedit automatically prepends a dot-slash (./). Qedit does not upshift the file name. This logic also applies to names coded on $include statements.

If Qedit cannot find a file in the POSIX namespace, it automatically looks for it in the MPE namespace. In the MPE namespace, Qedit uses the file name exactly as it was entered, without inserting a prefix. Basically, it searches the MPE namespace in case the file is there. This adds a lot of flexibility for people working in both environments.

Halfbright

Set Halfbright ON|OFF

(Initially: ON)

Certain monitors do not support halfbright display enhancements very well. Some messages and prompts are hardly visible. To prevent Qedit from using halfbright, enter **Set Halfbright Off**.

Hints

Set Hints ON | OFF

(Initially: ON)

By default, Qedit provides all users with a "hint of the day" each time they enter Qedit. These hints introduce people to features of Qedit that they may be missing. You must have the file Qedhint.Help.Robelle on your system. To disable hints, put Set Hints OFF in any of your Qedit configuration files (Qeditmgr).

Hppath

Set Hppath "*path list*"

(Initially: "!hpgroup,pub,pub.sys")

Hppath is a feature of MPE/iX that directs Qedit to look in specific groups for program and command files to execute. The default Hppath is your logon group (!hpgroup), the Pub group of your logon account (pub.!hpaccount), and Pub.Sys. On MPE/iX, you would use these two MPE/iX commands to set and check your Hppath:

```
:setvar hppath "!hpgroup,cmd,cmd.util,pub,pub.sys"
:showvar hppath
```

MPE V does not support the :Setvar and :Showvar commands, so you would use these two Qedit commands to set and check your Hppath:

```
/set hppath "!hpgroup,cmd,bin,cmd.util,pub,pub.sys"
/verify hppath
```

The Set Hppath command allows reference to the !hpgroup, !hpaccount and !hphgroup variables within your path string. Set Hppath is only supported on MPE V.

Increment

Set Increment *linenum*

(Initially: depends)

The default increment between new lines is 1.000 in SPL, FORTRAN, Pascal, TEXT, RPG, JOB and COBFREE, and 0.100 in standard

COBOL. You can override this value with Set Increment. The linenum is a number between 0.001 and 10,000. This increment is also used as the default increment in Renumber and in assigning line numbers to external files that lack them.

Qedit will sometimes pick an increment smaller than your requested one. For example, if you Set Inc 0.2 and do Add 55.2, Qedit will increment by 0.1 based on the number of decimal places in 55.2.

Interactive

Set Interactive [ON|OFF]

(Default: no change)

(Initially: depends)

If you run Qedit from a Session, Set Interactive is ON. If you run Qedit from a batch job or with Stdin or Stdlist redirected, Set Interactive is OFF. When it is OFF, Qedit will abort on any error, will assume the default answer to any question, and will generally act as if there is not an intelligent being typing the commands. When it is ON, Qedit waits for answers to questions and does not trim trailing spaces from input lines (allowing you to enter // plus a space as a data line in the Add command).

However, if you run Qedit on a Remote Session that was created from a batch job, Set Interactive will be ON even though you are NOT interactive. If you wish to have proper batch error processing, your first command after :Run Qedit should be Set Interactive OFF.

Entering Set Interactive with no ON or OFF parameter does not change the current setting.

Justify

Set Justify [*keyword* **[***value***] ...]**

(Initially: NULL function, TWO OFF)

The Set Justify command allows you to configure Qedit for the type of justify operations that you are going to use most frequently. These are then the defaults.

For example, the command

```
/set justify margin 70 two on null
```

causes

```
/justify both 5       {J=justify, B=both}
```

to be interpreted as

```
/j both margin 70 two on 5
```

See the Justify command for further details.

Keep

Set Keep [*option value* **]...**

(Default: same as Text file)

Determines the format of the next Keep file. Attributes are taken from the previous Text or Keep, or they are based on the current Set Lang value. Qedit attempts to duplicate the Text file as much as possible when doing the Keep. Use Verify Keep to display the current Set Keep values, including the default file name.

The *option*s you can set for the Keep file are ASCII, CCTL Checktimestamp, Code, Lab, Limit, Name, Num, Var, Cobfree and Bytestream.

Set Keep ASCII ON | OFF

(Initially: ON)

Files can be either ASCII or Binary. Qedit takes this value from the file that you Text, but will revert to ASCII ON for any new workfile. Even though Qedit will create binary files with Keep, it is not recommended for use in editing binary files. The reason is that Qedit treats Carriage Return as end-of-line, which may truncate some records. ASCII files have their records padded with blanks; Binary files are padded with zeros (nulls).

Set Keep Bytestream ON | OFF

(Initially: OFF)

POSIX introduces a new type of file called Bytestream. These files do not necessarily have record structures that are similar to typical files on MPE. Bytestream files come from the UNIX environment. To application programs, they simply appear as a stream of bytes (hence the name). To MPE, these are variable-length files in which each record contains only one byte.

When a Text command is used on an existing bytestream file, Qedit is able to recognize the file and preserve its attributes on a Keep command. To create a new bytestream file, you have to use Set Keep Bytestream On.

Because bytestream is sort of an extension to variable-length files, these two options are closely linked. If you use Set Keep Bytestream On, the Variable option is also enabled. If you use Set Keep Bytestream Off, the Variable option is also disabled. If you use Set Keep Variable Off, the Bytestream option is also disabled. You can still enable Variable by itself, without enabling Bytestream.

Set Keep CCTL ON | OFF

(Initially: OFF)

Ordinary ASCII files have the CCTL value OFF. When CCTL is ON, the first column of each record must contain a carriage control value. Some of the common values are "1" for new page, "+" for overprint, and " " for normal single-space. When Qedit prints a file with CCTL in quiet-mode (i.e., no line numbers and no template), it interprets the carriage control values.

Set Keep Checktimestamp ON | OFF

(Initially: ON)

Qedit stores the file modification timestamp in the workfile. It uses the timestamp to determine whether the file has been modified since either the initial Text command or the last Keep command was used. By default, timestamp checking on Keep is enabled.

If you want to disable this feature, type

```
Set Keep Checktimestamp Off
```

If you wish to see the current saved timestamp, you have to use Verify Info.

```
Saved modification timestamp 2005/10/14  18:29:02
Trailing spaces in workfile are trimmed
```

Set Keep Cobfree ON | OFF

(Initially: OFF)

Qedit uses the file code (EDTCT or 1052) for an MPE file or the file extension (.cbl, .CBL, .cob or .pco) for a Posix file, to identify COBOL source files. The `.pco` is typically used to identify Cobol source files that needs to be processed by the Oracle pre-compiler.

If Qedit detects this attribute, it assumes the lines have a specific format. In particular, it looks for the presence (or absence) of sequence numbers in the first six (6) columns of each line.

If these columns do not contain numeric digits or spaces, Qedit assumes the file is a free-format source file without a sequence number. The file is then assigned the COBFREE language.

The Set Keep Cobfree option controls the format of the file when you Keep it back. If this option is enabled (On), it means you allow Qedit to save files in the COBFREE format (i.e., without sequence numbers). If this option is disabled (Off), it means you don't want to create COBFREE files. When this option is disabled, Qedit converts the file to COBOL, assigns it sequence numbers and writes them to the saved file. A warning is displayed before this occurs.

```
/Keep
Warning: Lines are now numbered.
         Language changed from Cobfree to Cobol.
COBFON.COBSRC.APP,OLD EDTCT # of records=26
Purge existing file [no]?
```

Set Keep Code *nnn*

(Initially: <null>, 0)

Any file can have a special file code to help identify what kind of data it contains. Qedit workfiles, for example, always have a Code of 111, while COBOL source files have a Code of 1052 (EDTCT).

You can create files with any code you like using Set Keep Code and the Keep command. However, the file code cannot be changed if the Language is COBOL or COBOLX.

Set Keep Label *num*

(Initially: 0)

This value is set to the number of user labels attached to the file, when you Text it. Text *filename*,**Labels** will copy the user labels into the new file. Keep will append those labels to the file, unless you do Keep *filename*,**Nolabels**. If you want to change the number of user labels to be created on the new Keep file, do Set Keep Label *n*.

Set Keep Limit [*Free* | *Save* | *Percent pp* | *Plus nn*]

(Initially: <Default>)

The Set Keep Limit option allows you to control how the file limit of a Keep file is derived from the current number of lines in the file or the original Text file.

Once a Set Keep Limit option is selected, it is applied to all subsequent Text operations, but not to currently open files or existing workfiles. The options are designed so that you can put them in a Qeditmgr configuration file and apply them to all Text and Keep operations, even in Qedit for Windows. However, you can also set the options before each Text and Keep sequence if you prefer to apply them only to individual files. You simply need to look at the current setting, change it to the desired value, use the Text command to access the file and make the changes to the file. Once you are done, use the Keep command to save the file and return Set Keep Limit to its original value.

If you enter Set Keep Limit with no parameters, you are selecting the default operation. This option truncates the Keep file to the current number of records, except that any expansion space beyond the EOF and File Limit of the original Text file is carried over to the new Keep file. However, Qedit does not allow the expansion space (EOF - FLIMIT) to exceed 2,000,000 records.

For example, if you use the Text command to access a file that currently contains 50 records (EOF) and has room for 100 (Limit), Qedit preserves the number of available records. If you then delete 10 lines, the new Keep file would have 40 records (EOF), but would allow up to 90 (Limit). Because the file is truncated to the current end-of-file, you cannot use a :File command to override the limit.

On the other hand, if a file contains 10 records (EOF) and has room for 3,000,000 (Limit), the limit would change to 2,000,010 after a Keep.

The Set Keep Limit Free option sets the limit to the current number of lines in the file. If you use the Keep command only on a subset, the limit is not truncated to the end-of-file. This option allows you to use a :File command to specify an explicit Limit for the Keep file.

```
file xyz;disc=10000
/keep xyz
```

The Set Keep Limit Save option retains the Limit of the original Text file as the minimum, even if you delete some lines while editing. If you add lines to the file, the original limit is increased to match the current number of lines.

The Set Keep Limit Percent option calculates the limit as a percentage of the current number of lines. The Percent value can range from 100 to 1,000. For example, if Percent is 200 and you have 50 lines in the file, a file saved by the Keep command will have a Limit of 100 lines.

The Set Keep Limit Plus option sets the Limit of the Keep file to the current number of lines plus the value specified as a parameter. The value can range from 1 to 30,000. For example, if the Plus value is 500 and you have 100 lines in the file, a new Keep file will have a limit of 600 lines.

Set Keep Name [*filename* **[,Temp]]**

(Initially: <null>)

The default name for Keep is the same name as the last Text or full Keep command, if any. A "full" Keep is one without a limiting range or margins. If the last Text or Keep was a temporary file, the default will also be temporary. The default is invoked when you do a Keep without any parameters. You can set the default name with this command. To force the file to be created as a temporary file, append the Temp keyword to the file name.

If you do not specify a file name, the default Keep name is erased as if this was a brand new file. If you erase the default Keep name or replace it with a new name, the saved modification timestamp is erased.

Set Keep Num ON | OFF

(Initially: ON)

Keep files may or may not have sequence numbers. In standard COBOL files, the sequence numbers are in columns 1 through 6. In all other files they are in the last eight columns. When Qedit copies in an external file it remembers whether that file was numbered or not (if not, new sequence numbers are assigned to each line in the workfile).

When you set the language to Job or Text, Qedit turns the Num flag Off. This means that default Keeps of these files will be without sequence numbers. You can always override the Qedit default by doing an explicit Set Keep Num prior to the Keep.

Set Keep Var ON | OFF

(Initially: OFF)

MPE files may have fixed-length records or variable-length ones. Qedit will duplicate whatever the Text file had, but the default is to create fixed-length records. Files with variable-length records are handy as job stream files because they allow you to duplicate terminal input more precisely (e.g., you can have lines with length of zero, the same as pressing only a Return on the terminal). When Keeping Var files with line numbers, the 8 digits of the line number will immediately follow the last character in the line.

```
/t qnews=news;set keep code 112 var on; verify keep
Set Keep Ascii ON Cctl OFF COde 112 Num OFF Var ON NAme NEWS
/keep vnews;:listf @news,2

ACCOUNT=  GREEN       GROUP=  BOB

FILENAME  CODE  -------LOGICAL RECORD------- ----SPACE----
                  SIZE  TYP  EOF  LIMIT R/B  SECTORS #X MX

NEWS               80B  FA   411    411  16       135  2  2
QNEWS   * 111     256W  FB    26    642   1        84  2 31
VNEWS     112    1276B  VA   411      7   1        40  8  8
```

Note that while Qedit makes every attempt to preserve file attributes when you Text and Keep a file, Qedit is unable to retain the record size of a variable-length file. A Listf before and after may show a different record size. The data in the file, however, is the same. Application programs reading the files will read the same data.

```
/listf myfile@,1
ACCOUNT=  GREEN       GROUP=  MIKE

FILENAME  CODE  ------------LOGICAL RECORD-------
                  SIZE  TYP        EOF      LIMIT

MYFILE           1276B  VA         142          5

/text myfile
/keep myfile2
/listf myfile@,1

ACCOUNT=  GREEN       GROUP=  MIKE

FILENAME  CODE  ------------LOGICAL RECORD-------
                  SIZE  TYP        EOF      LIMIT

MYFILE           1276B  VA         142          5
MYFILE2          1020B  VA         142          6
```

Notes About Set Keep. Normally, Keep truncates the Limit of your new file to the EOF, so no disc space is wasted. However, if you Text a file whose LIMIT is greater than its EOF, Keep will retain the same difference on the new file. In that case, Keep "trims" your file of any unused disc space in the last extent (up to 2000 sectors). You can still add to the file, however, since the EOF is still less than the Limit.

The record size of the Keep file comes from Set Language (SPL, FORTRAN, and Pascal equal 72 bytes, JOB and RPG equal 80 bytes, COBOL equals 66 bytes, COBOLX equals 74 bytes. For Text and Data the precise length is specified with Set Length. For Text the maximum is 256, and for Data it is 8,172. COBFREE file attributes are similar to Text files (i.e., they have the same maximum length). If Set Left/Right have been done, the record size is Right-Left+1. If Set Keep Num is ON, Qedit adds 8 bytes to the record size (6 for COBOL).

There are a number of attributes of a file that are not retained when you do a Text and Keep: message file, circular file, KSAM file, user labels (unless Set Work Labels On), security, block size (Qedit selects an appropriate one), number of extents (see Set Extentsize), and logical device.

Language

Set Language *lang*

(Initially: SPL)

The lang codes accepted by Qedit are:

COBOL, COBOLX [ALL], SPL, FORTRAN, Pascal, RPG, Job, Text,

Data, CC, CPP, PowerHouse (PH), COBFREE, Html, XML, Java and QSL (Qedit Scripting Language).

Initially when Qedit starts the language is assumed to be SPL, but this may be changed when you Text a file ("SPL" stands for Systems Programming Language, which is an obscure software tool on the

original HP e3000 system; files have 80-character records with columns 73-80 containing a sequence number). You can override this default this with Set Lang. When you Set Lang, you also reset the Window, the Length, the Left margin, and the Right margin.

The "language" sets the following file attributes:

1. Increment between lines
2. Number of digits in line number
3. Placement of line number (left or right)
4. Maximum data line length
5. Number of first data column
6. Name of compiler program file
7. Delimiters for Set Window (SMART)
8. Numbered or not for Keeps

The following chart shows the values set for each language:

Lang	1	2	3	4	5	6	7	8
COBOL	0.100	6	Left	66	7	COBOL	Special, not "-"	Yes
COBOLX	0.100	6	Left	74	7	COBOL	Special, not "-"	Yes
SPL	1.000	8	Right	72	1	SPL	Special, not """	Yes
Fortran	1.000	8	Right	72	1	Fortran	Any special	Yes
Pascal	1.000	8	Right	72	1	Pascal	Special, not "_"	Yes
RPG	1.000	8	Right	80	1	RPG	Ignored	No
Job	1.000	8	Right	80	1	Null	Any special	No
Text	1.000	8	Right	256	1	Null	Any special	No
Data	1.000	8	Right	8,172	1	Null	Any special	No
CC	1.000	8	Right	256	1	Null	Special, not "_"	No

CPP	1.000	8	Right	256	1	Null	Special, not "_"	No
PH	1.000	8	Right	256	1	Null	Special, not "-"	No
COBFREE	1.000	8	Right	256	1	Null	Special, not "-"	No
HTML	1.000	8	Right	256	1	Null	Special	No
XML	1.000	8	Right	256	1	Null	Special	No
Java	1.000	8	Right	256	1	Null	Special, not "_"	No
QSL	1.000	8	Right	256	1	Null	Special, not "_"	No

COBOL and COBOLX are identical, except that COBOLX allows data to extend into columns 73-80, while COBOL does not. This is a protection against compile errors for those programmers who do not use columns 73-80 for comments. You can force all COBOL files to be in COBOLX format by using

```
/set lang cobolx all on
```

This is useful when you are using Set X to tag program changes with a string or the date. You can change from a non-COBOL to a COBOL language, if the highest line number in your file is less than or equal to 999.999.

The COBOL and COBOLX languages follow the COBOL standards very carefully. These standards describe the format of a statement. Most, if not all, compilers support the standards. Some compilers, however, allow a source file to be in a different format. Here is a quick summary of the differences between COBOL, COBOLX and COBFREE:

	COBOL	**COBOLX**	**COBFREE**
Line numbers	columns 1-6	columns 1-6	none
Control column	column 7	column 7	column 1
Statements	columns 8-72	columns 8-72	columns 1-1,000
Comments	none	columns 73-80	none
Starting column	7	7	1

Variable length	no	no	yes
Record length	72	80	256

The Data Language setting defaults to 256 characters per record, but it can handle up to 8,172 characters in a Wide-Jumbo workfile. In a workfile of Jumbo format, the limit is actually 1,000. To use Data, your workfile must be in Jumbo or Wide-Jumbo format, which supports longer lines and more of them (99,999,999 instead of 65,535). If a non-Jumbo workfile is open, you will have to shut it before you can use Set Lang Data and create a new workfile. To check whether your open workfile is Jumbo or not, use Verify Open. If the Language value contains "Jumbo" or "W-Jumbo," you are using a Jumbo file. If you want to use a Jumbo file, set the Length to a value less than or equal to 1,000. For a Wide-Jumbo format, use a length greater than 1,000.

Because RPG is a column-oriented language, SMART searches on RPG source files are performed in DUMB mode.

In FORTRAN, spaces in the middle of names have no significance (i.e., CUST BOOK is the same as CUSTBOOK).

If a workfile is empty, you can set the Language to anything you like.

When you change Language, you change the maximum line Length. If Length is reduced, as in going from Job to SPL, the lines are not actually truncated to the shorter Length. They are only permanently truncated if you modify the lines. Therefore, you can switch back to the previous Language at once and still recover the full lines. (Note: when you switch from COBOLX to COBOL, lines with comments are actually stripped of their comments.) Of course, when you Keep your file, only the data within the new margins are kept.

Left

Set Left [*n*]

(Default: first column)

Set Left specifies a temporary left margin for your file. Existing data to the left of the margin is not changed (unless you delete a line). When you copy or move a line with Add, the entire line is moved. If you add new lines, they will contain spaces to the left of the margin.

Set Left applies to all Qedit commands, including Visual, Modify, List, and Keep. Don't forget to reset Set Left when you want to Keep a file.

Set Left resets the Set Window columns for string searches. See also Set Right.

Length

Set Length *nn*

(Initially: from file TEXTed)

Most files have a fixed record length determined by the Language setting (e.g., SPL, COBOL, etc.). Workfiles with Language Text or Data can have their maximum line length set to a custom value. "Text" defaults to 256, but can be set to any value between 1 and 256 columns. "Data" defaults to 256 as well, but can be set to lengths of up to 8,172. If you Text in a file with an unusual record size (i.e., not 72 or 80), Qedit will use Set Lang Text and Set Length to remember the record size of the external file.

Set Length will reset the Set Left/Right margins and the Set Window columns for string searches.

When you reduce the Length, you should treat data beyond the new Length as gone, unless you immediately reset the Length. As soon as you begin modifying lines, Qedit begins reducing lines to their new maximum length. If you wish to reduce the line length temporarily, use Set Right.

Lib

Set Lib G | P | S

(Initially: S)

When Qedit executes an MPE :Run command, it uses the current Set Lib value for the Lib= parameter. If most of your testing is done with a local library (i.e., with Lib=G), Set Lib G will eliminate the need to specify that option on every :Run. You can always override the default value on any :Run command (:Run PF; Lib=S).

Limits

Set Limits **[** *option value* **] ...**

Sys OFF

Run OFF

Colonreq OFF

Hold *n*

Proc *x*

(Initially: Sys ON, Run ON, Colon OFF, Hold 10, Proc 4)

This command allows the system manager to place restrictions on what commands are available within Qedit. If Run is OFF, the user

cannot use :Run, :Compile, :Segmenter, or any other command that requires creating a process.

If Sys is Off, in addition to restricting :Run commands as above, the user cannot execute any system command such as :Showjob, :Purge, or :Destroy. It also prevents Qedit for Windows users from accessing host commands. These are one-way options -- once disabled, they cannot be enabled again by the user.

Qedit normally accepts system commands with or without a colon prefix. To require a colon for system commands, use Set Limits Colonreq ON.

Set Limit Hold restricts the number of Hold processes that a user can have. A process may be held when you :Run it within Qedit and instead of terminating, the process suspends. Examples of programs that suspend are MPEX, Spook, Suprtool, and Equater. The Hold limit can be set to any value between 0 and 10.

Set Limit Proc restricts the number of "procedures" that a user can have concurrently loaded (see the Proc command). The Proc limit can be set to any value between 0 and 4.

List

Set List [*option value* **] ...**

The Set List command controls the format and functions of the List command. The valid options are:

Page ON | OFF	page breaks on List LP
Lines *nn*	lines per page with PAGE ON
Name ON | OFF	file name on each PAGE
Num ON | OFF	number on each PAGE
Title ON | OFF	title on each PAGE
Dbl ON | OFF	double-spacing of List LP
PCL *nn*	LaserJet fonts and orientation
Record ON | OFF	use attached printer via Record Mode
LJ *nn*	lines per screen for List-Jump
QJ ON | OFF	"quiet" for List-Jumping (no seq#)
Endstop ON | OFF	no "End?" question in List-Jumping.
Even ON | OFF	outputs even number of pages
Odd ON | OFF	outputs odd number of pages
Nearest ON | OFF	displays warning or nearest line

For more information on Set List options, including examples, see the List command. For a quick list of the PCL values and their meanings, see also the Quick-Help: /hq set,list

Maxdata

Set Maxdata *nnnn*

(Initially: no stack expansion)

When Qedit :Preps a compatibility-mode program, it uses the current Set Maxdata value (if any) for the Maxdata= parameter. Without Maxdata, a program may abort with stack overflow. Programs need large Maxdata when they do sorts, call V/PLUS, or have large data divisions in their DYNAMIC subprograms. You can still override the default value for Maxdata on any :Prep command. Set Maxdata does not apply to the :Run command.

Modify

Set Modify **[** *option* **[** *value* **] ...]**

Qzmodify | HP | Robelle

Prompt ON | OFF

codes

Set Modify controls what style of line modify is used throughout Qedit. The defaults are Qedit-style (^D for delete) in Modify and Before, with MPE-style (D for delete) in Redo only. Set Mod HP forces MPE-style in all places, while Set Mod Robelle selects Qedit-style and Set Mod Qzmod selects Qzmodify (a "what you see is what you get" version of the Qedit-style). If you type Set Modify with no parameters you go back to the defaults.

You also use Set Modify to control placement of the Modify line number and redefine the Qedit-style control codes.

Prompt Option: Where to Print Line Number. Robelle Modify normally prints the line number on the same line as the data. This makes lines look alike in List, Delete, Add, and Modify, and also makes maintaining your tab stops simpler. On the other hand, placing the line number on a separate line makes it easier to press Control-X and re-enter edits. Set Mod Prompt OFF separates line and number ("_" represents the cursor):

```
/set modify prompt off
/modify 10.2
   10.2
Now is the time for all good people

/set modify prompt on
/modify 10.2
   10.2   Now is the time for all good people
          _
```

You can also use the Quiet option not to see line numbers at all.

Replacing Modify with Hpmodify. If you prefer the MPE-style edits provided in the :Redo command, do Set Modify Hpmodify.

Qedit will accept DDD to delete characters, Ixxx to insert xxx, Rxxx to replace with xxx, and U to undo. Other edits include > to append, >D to delete from the end, >Rxxx to replace from the end, and D> to clear the line. HP-style modify does not support tab stops and always prints the line number on a separate line from the data. See :Redo command for a complete list of edits. Hpmodify applies in Modify, Redo, Before and modify in Change and Add.

Forcing Redo to Use Qedit-Style. If you like the Qedit-style modify better than HP style and want to use it even in Redo, do Set Modify Robelle.

Replacing Modify with Qzmodify. To make Qzmodify the style throughout Qedit, use this command:

SET MODIFY QZMODIFY [TAE|TAEOFF]

(Default: disable Qzmodify)

The TAE options apply only if you have a Telamon Type Ahead Engine:

- TAEOFF means to disable your Type Ahead Engine.
- TAE means to enable your Type Ahead Engine.
- The default is to ignore the Type Ahead Engine.

Qzmodify replaces the regular Qedit modify with a routine that allows "visual" editing on HP terminals. Once you do Set Mod Qzmod, all modify operations within Qedit will use Qzmodify, including Before, Redo, modify from within Change, and the Modify command. To disable use of Qzmodify, enter Set Modify with no parameters.

Qzmodify uses single-character reads, which you may find are a significant drain on the resources of your HP e3000. Qzmodify will work over DS lines, but will be very slow. However, avoid Control-Y and Break, because there are bugs in DS that confuse the state of the terminal. Qzmodify does Setmsg OFF on your session and Setmsg ON when it is exits; use Set Vis Msg OFF to leave Setmsg OFF all the time.

For details on the Qzmodify edit codes, either enter Qzmodify and type Control-Q or see the Modify command.

Changing the Control Characters. You can change the default code assigned to any function in the Qedit Modify command by using Set Modify:

^Set Modify (B ^*x* D ^*x* T ^*x* G ^*x* L ^*x* O ^*x* V ^*x* A ^*x*)

The Modify command uses nonprinting control characters for function codes. These characters have ASCII values between 1 and 31 which are generated by holding down the CONTROL shift key while striking another key. For example, the code for Before is Control-B (^B, decimal 2). Because many terminals use specific control codes for local functions (i.e., Control-B may clear the screen), Qedit allows you to change the control codes assigned to Modify functions. However, the control codes for Qzmodify cannot be redefined.

Using Set Modify, any or all of the control function codes can be changed. The current codes are displayed in the Verify command. Each control-function change consists of the first letter of the function name, followed by a space, then the circumflex character and the desired control letter. For example:

```
/set modify (t ^Z)
```

This specifies that Control-Z (equal to decimal 26) is the control key for the TERMINATE function. Certain control codes are not allowed and will be rejected. Each function must be assigned a unique control character from among these:

```
A  B  C  D  G  K  L  N  O  P  R  T  U  V  W  Z  \  ]  ^  _
```

Open

You can control the behavior of Qedit when opening workfiles. With the first option, you can get Qedit to warn you if the workfile you are working on is not synchronized with the file it is based on. The second option helps you preserve timestamps on workfiles so that you have a better idea when the workfile has actually been accessed and modified.

Set Open Checktimestamp ON | OFF

(Initially: OFF)

Qedit stores the file modification timestamp in the workfile. It uses the timestamp to determine whether the file has been modified since the initial Text command or since the last time the Keep command was used.

By default, timestamp checking on the Open command is disabled. If you want to enable it, type

```
Set Open Checktimestamp On
```

Set Open Defer ON|OFF

(Initially: Off)

The Open command is used to access a Qedit workfile for editing. Normally, the workfile is opened with write access, which updates the "Last Modified Date" of the file, even if you don't actually make any changes to it. However, by doing Set Open Defer On you can instruct Qedit to "defer" the write access until a modification is attempted. Qedit opens the workfile with Read Access initially, then reopens it with Write Access later if it is necessary to post a modification to the file. See the Open command for more details.

It is important to remember that certain workfile attributes and settings are normally saved when the file is opened with write access. Some of these settings are the ZZ marker, the current line marker (*), and the new default Keep name modified with Set Keep Name. If you explicitly open a workfile in Browse mode or use Set Open Defer On, these settings are not updated permanently, unless the file is re-opened with write access.

Pattern

Set Pattern Old | New

(Initially: New)

Qedit uses "@", "#", "?", and "~" to define a pattern to be matched. The original pattern-match logic in Qedit did not allow you to look for a pattern that contained a literal "@". The current pattern-match logic allows "&" as an "escape" character. This means that you can look for any reserved pattern-match character by putting & in front of it. For example,

```
/list "@LISTF B&@,2@" (pat)
```

Note that the "escape" character does not match the ASCII escape character, whose value is decimal 27 or octal 33. In this case "escape" means the same as the "transparency" character in VPLUS/3000 pattern-matching: the next character following the escape is to be treated as a literal instead of a pattern-match metacharacter.

Two other characters have been reserved for future use: ^ and !.

To reset Qedit to the old pattern-match logic, use Set Pattern Old (the default is Set Pattern New).

Priority

Set Priority CS | DS | ES

(Initially: logon priority)

Qedit is moved from its current priority subqueue to the one designated. You may want to lower your priority to DS when you are about to perform tasks that will take a long time and/or consume system resources.

If you are running the PM version of Qedit (Qeditpm.Pub.Robelle) and you are on MPE V and your account has MAXPRI = BS, you can boost yourself into the BS subqueue. Don't do this if there are other users on the system! If you do not have MAXPRI = BS on your user or account, Qedit will abort if you type Set Pri BS.

Prompt

Set Prompt "*string***"**

(Initially: "/")

The default prompt string is a slash "/", but you can change that with Set Prompt.

```
set prompt "Qedit /"
set prompt "Sys2 /"
```

You can set your prompt to be the same as some MPE/iX variable such as your logon group or account, by putting the variable name inside the quotes. However, de-referencing MPE variables can only be done in a command file. The solution is to put the Set Prompt command in a command file, and execute the command file from your Qeditmgr file.

```
/set prompt "!hpsysname /"
```

Redo

Set Redo [*filename* **]**

(Default: none)

(Initially: temporary file)

Commands entered at the Qedit prompt are saved in something called the redo stack. You can recall commands from this stack by using other commands such as Before, Do and Redo. By default, the redo stack is stored in a temporary file and discarded as soon as you exit Qedit. This does no allow the stack to be preserved across Qedit invocations.

Set Redo allows you to assign a permanent file as the redo stack, allowing the stack to be available for future Qedit invocations. To assign the Myredo file as a persistent redo stack, enter

```
/Set Redo Myredo
```

If the file does not exist, Qedit creates it. Otherwise, Qedit uses the existing file. All your subsequent commands are written to the persistent redo stack. The setting is valid for the duration of the Qedit session. As soon as you exit Qedit, the setting is discarded. Next time you run Qedit, you will get the temporary stack. If you want to use a persistent stack every time you run Qedit, you have to insert the Set Redo command in one of the Qeditmgr files.

If the file name is not qualified, the redo stack is created in the logon group and account. This may be desirable if you want to have separate stacks. If you prefer to always use the same persistent stacks, you should qualify the name.

The Verify command shows which stack is currently in use. If it shows <temporary>, then Qedit is using the default stack. Anything else is the name of the file used on the Set Redo command.

Concurrency

When Qedit uses the default, the temporary stack is only accessible to that particular instance of Qedit. You can run as many Qedit instances as you need, and each one gets its own redo stack. You will never have concurrency problems.

If you start using a persistent redo stack, however, you might start running into concurrency problems. A persistent redo stack can be used only by one Qedit instance at a time. If you try to use a persistent redo stack that is already in use, you will get the following message:

```
/Set Redo Myredo
EXCLUSIVE VIOLATION: FILE BEING ACCESSED  (FSERR 90)
Unable to open file for REDO stack
```

In this situation, Qedit continues to use the redo stack active at the time and lets you continue working as normal.

Suprtool, STExport and Suprlink also have the ability to have permanent redo stacks. It is advisable to have separate redo stacks for each product, because they will write commands to each other's redo stack if you supply the same file name.

For example if you use the command

```
set redo myredo
```

you will have a redo stack called Myredo for your Qedit commands. If you exit Qedit and run Suprtool and supply the same Set Redo command, your Suprtool commands will be written to the same file that is used for your Qedit commands.

By default Qedit builds a permanent redo stack that contains 1,000 commands. If you require a larger redo stack, you can specify its size by using a file equation prior to the Set Redo command.

```
file myredo;disc=10000
set redo myredo
```

This will only be in effect the first time that the redo stack is built; subsequent file commands will not affect the size of the redo file. You can make the file bigger by using tools such as MPEX's %altfile command, or by building a larger file and copying your current redo stack into it.

This command is ignored when Qedit is run in server mode.

Right

Set Right [*n* **]**

(Default: same as Set Length)

(Initially: same as Set Length)

Set Right fixes a right margin for listing and editing lines in your workfile. Any existing data to the right of the margin is retained unchanged while you edit to the left of the margin. Set Right also resets the Set Window columns. See Set Left for setting the other margin.

Remember, the left and right margins apply to most commands, including Visual and Keep. To reset the margin to the far right edge, Set Right with no parameter.

RL file name

Set RL [*filename* **]**

(Default: none)

(Initially: none)

Specifies the default RL file for :Prep commands within Qedit. You can override the default at Prep time (e.g., :Prep ;RL=RL23). To specify no RL file in a Prep (after doing a Set RL command), use :Prep ;RL=.

Shift

Set Shift [DOWN *n* **] [UP** *n* **]**

(Default: none)

(Initially: both 0)

Configures string logic for the built-in PROCedures, DOWN and UP. Valid values are 0 through 4:

0 not configured

1 shift every character in the line

2 ignore characters within double quotes

3 ignore characters within single quotes

4 ignore characters within either single or double quotes

Spell

Set Spell [*option value* **]...**

(Default: <null>)

Set Spell determines how words and lines are spell-checked. The options that you can set are Exclude, Hyphen, Only, and Stop. For example, we use the following options when we spell-check the Robelle manuals:

```
/set spell hyphen "\" exclude ".+"
```

Set Spell Exclude "*string***"**

(Default: <null>)

Set Spell Exclude does not spell-check lines that begin with any of the characters in the *string*. This is the opposite of the Only option. Use the Exclude option to skip lines in a file that contain commands instead of text. For example, in our Prose text formatter, command lines begin with a "." and continuation command lines begin with a "+". They do not need to be spell-checked.

```
/set spell exclude ".+"
```

To reset Exclude to <null> (i.e. check all lines), use

```
/set spell exclude ""
```

Set Spell Hyphen "*char***"**

(Default: <null>)

Treats *char* as a hyphenation character. By default, all punctuation characters are word delimiters. The hyphenation character does not delimit words, nor is it part of a word. For example, if "\" is the hyphenation character, then "*hyphen\ation*" is treated as the one word "*hyphenation*".

```
/set spell hyphen "\"
```

To reset the hyphen to <null> (i.e., no hyphenation character), use

```
/set spell hyphen ""
```

Set Spell Only "*string***"**

(Default: <null>)

Set Spell Only will only spell-check lines that begin with any of the characters in the *string*. This is the opposite of the Exclude option. Use the Only option to spell-check specially formatted files that prefix each line with a special character. For example, if a file prefixes text lines with the letter "T", you can spell-check only the lines that begin with "T" or "t" with

```
/set spell only "tT"
```

To reset Only to <null> (i.e., check all lines), use

```
/set spell only ""
```

Set Spell Stop

Immediately releases the spelling dictionaries. The most common reason for using this option is to have Spell recognize the changes that you have made to your SPUSER user dictionary. See the Spell command for more information about the SPUSER user dictionary. Another reason to use this option is to release the main and auxiliary dictionaries so that they can be updated.

```
/words "Robertsmith"     {someone's name}
not found : Robertsmith

/open spuser
/add ]
100       Robertsmith
//
/shut
/words "Robertsmith"
not found : Robertsmith
/set spell stop
/words "Robertsmith"
found     : Robertsmith
```

Statistics

Set Statistics [ON | OFF]

(Default: OFF)

(Initially: OFF)

If you turn Set Stat ON, Qedit prints the CPU and wall time after each command.

Stringdelimiters

Set Stringdelimiters [POSIX | *"DelimiterList"* **]**

(Initially: |\~{}[]_@?!#>%:'")

The initial list indicates the characters that can be used as valid delimiters.

The at sign (@) and square brackets ([,]) are also defined as Zip characters. Thus, they cannot be used to delimit a string unless you

also change the Zip characters. The single quote (') is removed from the list if Set Decimal is enabled (On). Quote characters (") are always valid delimiters (i.e., they cannot be removed from the list).

From full-screen mode's homeline, a tilde always represents the most recently accessed line number. If the tilde is removed from the delimiter list, it also becomes a reference in line-mode to full-screen's mode most recently accessed line.

The delimiter list itself must be enclosed between a pair of valid delimiters. The new delimiters must be chosen from the initial list. If you do not remember what the initial list is, simply enter the Set String command with a letter or a numeric digit as a list. For example,

```
/Set String "a"
Error:  Not an acceptable quote char: a
        select from |\~{}[]_@?!#>%:'"
```

You can reduce the list to just a few characters. If you want to reduce it to just a colon (:) and a number sign (#), enter:

```
Set String ":#"
```

From that point on, only quotes, colons and number signs can surround a string.

```
/List "filename"
/Find #procedure#
/Delete :badline:
/Change 1/7 \oldtext\ @       {this is invalid now}
```

The Posix option allows you to easily bring the delimiter list down to three characters: quotation marks ("), a backslash (\) and a colon (:). This option is useful when working with file names that contain a lot of special characters. It reduces the number of parsing errors.

There is no easy way to bring the defaults back. You have to enter the Set String command with all the characters in the initial list.

Suspend

Set Suspend [ON | OFF]

(Default: varies)

When you Exit from Qedit, the process can either terminate ("End of program") or suspend. If it suspends, you can reactivate it again quickly (more quickly than running a new copy). However, if the master program does not know how to hold a suspended process, the inactive Qedit process hangs around until you terminate the master program. Therefore, Qedit does not suspend when it is run from the Command Interpreter or the POSIX shell. As well, there are two ways of disabling this feature: Set Suspend Off or Parm=32.

Tabs

Set Tabs ^*char* **HP [ON | OFF]**

(Default: Control-I, HP ON)

When you enter lines in Add, Modify, or Replace, Qedit looks for and interprets "tab" keys. Each time Qedit finds a "tab", it fills the input line with blanks to the next tab position. The default positions are every ten columns. If there are no more positions, Qedit terminates the current line and saves the remaining text for the next line.

Using Set Tabs, you can define the logical "tab" key to be any nonprinting control code such as BELL (^G, decimal 7) or a printing character such as tilde (~). Control-I is the default because it is the character most commonly used as the hardware TAB key on terminals. All HP terminals generate a Control-I when TAB is pressed.

```
/set tabs ^i
/set tabs "~"
```

Set Tabs Hp Off tells Qedit not to set physical tab stops on your terminal (for example it does not work on 2640 or non-HP terminals). With Set Tab Hp On (the default), Qedit will update your terminal's tab stops at once. With Hp On, each time you switch from Add to AQ (or any similar change that would shift the tabs left or right on the screen), Qedit also resets the tab stops.

When using the TAB Key, remember that you must not backspace past the last tab stop. If you do, Qedit will never see the TAB key.

Set Tabs STOP *columns* | NULL | *nn nn nn nn* **...**

(Default: every 10 columns

NULL means no tabs)

By default, Qedit sets the tab stops every 10 columns (MPE) or 8 columns (HP-UX). You can override this with Set Tabs NULL to set no tab stops, Set Tabs STOP *n* (every 2 to 15 columns), or Set Tabs with a custom list of column numbers. The maximum number of custom tab stops is 32. Remember that the columns of input text are numbered differently depending on the source language. In SPL, Pascal, FORTRAN, RPG, Text, Data and Job, the first column is numbered 1; in standard COBOL, it is 7. You cannot set a tab in the first column.

```
/set tabs stop 8    {every 8 columns (9 17 25 33 ...)}
/set tabs 5 10 15   {SPL,FORTRAN,RPG,Job,Text,Pas}
/set tabs 12 16 20  {COBOL}
/set tabs null      {cancel all tabs}
```

Term

Set Term Columns [*nnn* **]**

(Default: 80)

(Initially: 80)

When you run Qedit, it tries to determine the number of columns in the display width of your terminal. The default is 80. You can override this value by setting the display width manually and putting the correct value in the RCRTWIDTH variable. If the variable is not set, Qedit queries your terminal for the width. If you change it manually from within Qedit, you can force a re-query by doing **Set Visual Stop**. However, there is an easier way.

On most terminals, Set Term Columns *nnn* adjusts the display width of your terminal. You must be on an HP-type terminal whose width can be varied, and the column value *nnn* can be between 80 and 999. It is better to use this command to change the number of columns than to do it manually because the command also adjusts your terminal listing file width, the RCRTWIDTH variable, and other parameters within Qedit.

Set Term Columns is effective only for Line mode. When you enter Visual mode, Qedit may adjust your display width to suit the file being edited and resets the width when you exit completely from Visual mode or Qedit.

If you have set RCRTMODEL to 1234, Qedit assumes the terminal or emulator has limited capabilities. Qedit assumes the display width can only be changed manually. So, if Set Term Columns is used, Qedit displays:

```
Please change display width and press Enter:
```

and waits for confirmation from the user.

When you execute a command via the Home line and find yourself at the "Next Visual?" prompt, Qedit may not have reset your display width because you often immediately press Return to go back into Visual mode. Flipping the width frequently is slow, erases your display memory, and sometimes causes irritating screen flicker.

Text

Set Text Exclusive [On | Off]

(Initial: OFF)

When you text in a file, Qedit creates a workfile and copies the contents of the original file into it. The original file is then closed. This means that other users on the system can text in the file and make changes of their own. This is great for concurrency but not so great for version control.

The Set Text Exclusive option provides increased control over files that you are editing. To enable, simply enter:

```
/Set Text Exclusive On
```

When this option is enabled, files that you text in are kept open for read-only access. This means the files are still accessible to compilers and other programs with non-conflicting access including Qedit with Set Text Exclusive disabled. In the latter case, a user will be able to text the file in but will not be able to save changes with a Keep command.

Once Set Text Exclusive is enabled for all users and a particular file is being worked on, subsequent Text commands immediately fail with:

```
Error:  EXCLUSIVE VIOLATION: FILE BEING ACCESSED  (FSERR 90)
```

On a system where Qedit is the editor of choice, we recommend that Set Text Exclusive be inserted in one of the system Qeditmgr files (qeditmgr.pub.sys or qeditmgr.pub.robelle).

Once a file has been texted in, the user retains control over it. The file is released when:

- another file is texted in
- the workfile is closed explicitly by a Shut command or implicitly by a New or Open command
- the workfile is purged e.g. purge *
- Qedit is terminated

All these operations signal Qedit that the work is done on this file. When the workfile is shut (explicitly or implicitly), Qedit tries to clear its contents. If the file is clean i.e. has not been modified, the file is erased. If the file has been modified, Qedit prompts for a confirmation:

```
/shut
Reminder: you have not saved the changes to SHRFILE.\SRC.\DEVACCT
QED73068.SRC.DEVACCT,OLD Qedit File, # of lines=13
Clear file [no]?
```

If you answer No, nothing happens. The workfile remains open, the original file is still in use and a warning is displayed.

```
File NOT cleared
Files still open. When Text Exclusive is On, workfile must be cleared
to Shut.
```

If you answer Yes, the workfile is cleared and the original file is released. This accomplishes three things:

- releases the file so it can be used by someone else and does not remain blocked
- forces the user to stop and decide what should be done with the changes

- forces the user to text the file in again to make sure he has the latest version

Totals

Set Totals [ON | OFF]

(Default: ON)

(Initially: ON)

Shows the number of lines changed, deleted, added, texted and moved by each command.

The total line is considered a "warning" or status-type message. Therefore, Set Warnings Off will disable Set Totals, as will Option Nowarn in a User Command.

UDC

Set UDC [ON | OFF | *filename***] [LOCK]**

(Default: ON)

(Initially: OFF)

ON | *filename*. Turning Set Udc to ON causes Qedit to search the system UDC catalog, Command.Pub.Sys, looking for the UDC files established with :Setcatalog. Qedit simulates those UDCs, either on MPE V or MPE/iX, but not every feature is emulated (for example, Hpmsgfence). Qedit searches the user UDCs first, then the account UDCs and the system UDCs. In this way, the system UDCs cannot be circumvented.

Set Udc with a *filename* causes Qedit to simulate the UDCs in that file, without searching Command.Pub.Sys (this is faster, and there is no need for a :Setcatalog command). You can repeat the command to load up to 20 UDC files (either permanent or temporary). You may need to specify file names explicitly if you have followed VESOFT's advice regarding access to Command.Pub.Sys.

Set Udc OFF disables all recognition of UDCs by Qedit. The default is OFF, meaning no simulation of UDCs. Use Set Udc OFF and :Setcatalog with no parameters to un-catalog a user UDC file that you are editing. Otherwise you get Duplicate File errors on the Keep of the revised UDC file.

Lock Option. Once the lock option is entered, no further Set Udc commands are accepted by Qedit. This allows the system manager to control UDC processing via a Set Udc command in the Qeditmgr file. Note: For compatibility reasons, Set Udc Lock implies Set Udc On (i.e., global search).

Undo

Set Undo ON | OFF

(Initially: ON in session, OFF in batch)

"Undo" is the ability to cancel the effect of previous commands that modified your file. By default, Undo is enabled for interactive use and disabled in batch use of Qedit.

Set Undo allows you to override that default, or even disable Undo around some very large editing tasks, to speed it up.

Varsub

Set Varsub ON | OFF

(Default: Off)

When this option is enabled, Qedit parses entered commands looking for variable names. If a variable name is found and currently exists, its value is substituted before the command is executed. If the variable does not exist, the variable name is left unchanged.

Warning: The trailing comments limitation is an incompatibility with older versions.

Qedit commands are added to the Redo stack before the substitution occurs i.e. with the variable name. So, if the variable value changes between the time the command is entered and the time it is retrieved from the stack, the results may be different. It's also important to note that commands related to Redo stack operations such as **Listredo**, **Do**, **Before** can not have trailing comments enclosed in curly braces anymore. The comments are not removed and likely cause a syntax error.

```
/listredo  { see which commands I have entered so far }
Bad option, expecting ;UNN ;ABS ;REL or ;OUT
/listredo
     1) t testisql
     2) l "!myvar"
     3) s varsub on
     4) l "!myvar"
     5) setvar myvar "qed"
     6) l "!myvar"
     7) LISTREDO  { SEE WHICH COMMANDS I HAVE ENTERED SO FAR }
```

Variable names are identified by a leading exclamation point "!". For example, `!HPACCOUNT` is replaced with the current value of the HPACCOUNT system variable. Since the exclamation point is a valid Qedit string delimiter (**Verify Stringdelimiter**), Set Varsub On automatically removes it from the string delimiter list.

If you wish to prevent variable substitution and have Qedit interpret the exclamation point at face value, put 2 exclamation points as in `!!HPACCOUNT`.

Notes

The Stream command replaces all exclamation points found in column 1 of a file with a colon. So, if a variable name appears at the start of a line, it would not be substituted in the resulting batch job and would likely cause the job to abort

For example, let's say you have:

```
!job testjob,user.acct
!setvar myvar "showtime"
!run qedit
set varsub on
!myvar
e
!eoj
```

If you streamed this file, the batch job would look like this:

```
:job testjob,user.acct
:setvar myvar "showtime"
:run qedit
set varsub on
:myvar
e
:eoj
```

`:myvar` would not get subtituted and cause an error. To work around this problem, simply insert a space in front of the exclamation point on the offending command inside Qedit.

Visual

Set Visual *keyword* **[** *value* **] ...**

(Default: see Visual)

The Set Visual command controls how Visual mode operates. The following section shows how to change the number of lines per screen, how to set where the current line will appear, and other options. New users should use Set Visual Update On. This option does an automatic screen update whenever you press any function key. This saves your changes even if you forget to press Enter when changing screens.

Here are the Set Visual options, with the minimal abbreviations shown in capitals:

Above	show 0 to 9 lines above * line?
ATtachmate	allow for KEA! emulator to widen to 500 columns
BELL	define printable substitute for "Bell"
Below	show 0 to 99 lines below * line?
BUF	change size of screen buffer
Carry	carry 0 to 9 lines to next page?
CLEardisplay	clear all of display memory or not?

Cutcurrent	keep cursor near original current line after cut-and-paste
Editonopen	return to full-screen after Open at Next Command prompt
Esc	define printable substitute for "Esc"
Field	redefine the GG/VV field separator (~)
HALfbright	use fewer enhancements in the status line
Hidetags	hide +1,+2 line tags with display enhancement
Home	put cursor on home line or * line?
HOStprompt	re-enable Reflection host prompt
Ignorelf	accept screens without line feeds
Inschar	enable Insert Character on your terminal
Label	load function key labels?
Marginfixed	do not change terminal right margin
MSG	leave Setmsg OFF or mesg n on exit from Visual
Renum	renumber screen if out of line numbers?
Roll	adjust number of lines on UP (F2)
Save	save and restore existing function keys?
SI	define printable substitute for "ShiftIn"
SO	define printable substitute for "ShiftOut"
Stop	reset Visual mode, forces restart.
TAB	define printable substitute for tab characters
TAE	make Qedit work with Telamon Type Ahead Engine
Update	automatically update screen every time?
Widen	whether to go beyond 80-columns of display?
Wordwrap	enable wordwrap in Reflection?

Above

Set Visual Above [*n*]

(Default=0)

By default, the * line is the first text line on the page. Set Vis Above specifies that from 0 to 9 lines are to be shown above the * line.

ATtachmate

Set Visual Attachmate OFF | ON

(Default=Off)

When enabled and used in conjunction with the Attachmate's KEA! Terminal emulator, Qedit is able to work with up to 512 colums.

Bell

Set Visual Bell ['nnn | "char"]

(Default=None)

If you edit text containing Bell characters, they will appear as dots with a "?" at the left of the line. Otherwise, they would disappear from your file when you press Enter because Bells are not saved in display memory. To get around this problem, you can define another character as a translation for the Bell character. For example, Set Vis Bell "|" defines "|" to represent Bell.

When Visual needs to print a Bell on the screen, it prints a "|" instead. When Visual sees any "|" on the screen, it converts it into a Bell internally. To avoid turning every occurrence of the "alias" character in your file into a Bell, Visual prints a "?" for any line with a valid alias already in it and will not let you update that line in Visual mode (use Modify instead).

Below

Set Visual Below [*nn* **]**

(Default=19)

By default, Visual shows 19 lines below the * line. Set Vis Below can change this to 0 through 99 lines. Qedit reads and writes a fixed number of characters per screen (see Set Visual Buf). If you Set Vis Below to a large number of lines such as 99, Qedit may not have room in the screen write buffer for all of the lines requested. Qedit prints an error message, attempts to reduce Set Vis Below to a value that will work, and returns you to Line mode. You type "vis" to restart Visual mode.

Buf

Set Visual Buf *nnnn*

By default, Qedit reads and writes a maximum of 10,000 characters per screen. Set Vis Buf will increase or decrease the size of the screen buffer. The minimum size is 2,000 characters and the maximum is 30,000. Increasing the buffer size may increase the load on your network -- watch for hangs, delays, and write errors. On MPE V the default is 6,000 and the maximum is 8,000.

Carry

Set Visual Carry [*n* **]**

(Default=1)

The F5 and F6 keys move the screen display Backward and Forward one page. In doing this, they carry over one line from the previous display for context. You can vary the number of lines carried over from 0 to 9 with Set Vis Carry.

Cleardisplay

Set Visual Cleardisplay [OFF]

(Default=On)

This option tells Visual mode not to clear all of display memory before writing the next page of text. Instead, Visual erases enough lines at the start of display memory to make room for the Visual screen. This means that a Home Down will still show you what was last done in Line mode and a Home Up will redisplay the Visual screen. When you press Enter, only the Visual screen is transferred, up to the // template line.

Do not use this option if you only have a couple of pages of display memory, or with hpterm on HP-UX workstations (although it works fine with PC terminal emulators and Qedit/UX).

In Reflection for Windows (versions earlier than 3.70), changing the display width also clears display memory, beyond the control of Set Vis Cleardisplay. If you want to retain your display memory, you also need to use Set Vis Widen Off.

Cutcurrent

Set Visual Cutcurrent [ON | OFF]

(Default=On)

This option tells Qedit where to put the current line marker after a cut-and-paste operation. By default, Qedit sets the current line at (or near) the first pasted line. If you turn the option Off with Set Visual Cutcurrent Off, Qedit tries to keep the current line as close as possible to the current line position before the paste operation.

This option only affects full-screen mode editing.

Editonopen

Set Visual Editonopen [ON | OFF]

(Default=On)

While in full-screen mode, you can enter MPE commands at the home line. Doing so causes Qedit to temporarily switch to line mode and prompt you for more commands with NEXT COMMAND [VISUAL]. You have to hit RETURN or enter VISUAL to return to full-screen mode.

There is one exception to this. If you enter an Open command at the prompt, Qedit automatically switchs back to full-screen mode after opening the file. This is the default behavior.

If you wish to disable this option, use Set Visual Editonopen Off. When disabled, an Open command is treated as any other command. In other words, Qedit continues to prompting for more commands until you explicitly tell it to go into full-screen mode.

Esc

Set Visual Esc ['nnn | "char"]

(Default=None)

If you edit text containing Esc characters, most will appear as dots with a "?" at the left of the line. Otherwise the escape sequence would be executed by your terminal and be lost. To get around this problem, you can define another character as a translation for the Esc character. For example, Set Vis Esc "\" defines "\" as meaning Esc.

When Visual needs to print an Esc on the screen, it prints a "\" instead. When Visual sees any "\" on the screen, it converts it into an Esc internally. To avoid every valid occurrence of an alias character turning into an Esc, Visual mode looks for alias characters that already occur. Any line with a valid alias in it is printed with a "?" and Visual will not let you update it (use Modify instead).

Field

Set Visual Field ['nnn | "char"]

(Default=~)

When you divide a line with VV or glue lines with GG, Qedit looks for a special character in the first line as the field separator. The field separator is the ~ (tilde) by default, but you can redefine it to another character with Set Vis Field if you have many natural occurrences of the tilde in your text. For example, Set Vis Field "|" redefines the field separator as |.

Halfbright

Set Visual Halfbright [ON | OFF]

(Default=Off)

The standard status line uses display enhancements all across the screen to highlight the status fields. For a status line with fewer display enhancements, use Set Vis Halfbright On.

Hidetags

Set Visual Hidetags [ON | OFF]

(Default=Off)

The Hidetags option replaces the +1,+2,+3 line tags on your screen with a Security Video enhancement and some line drawing characters. This makes the Visual screen cleaner and less confusing. However, the option only works if your terminal supports both Security Video and line drawing. It works on the 700/92, the 2392, the Cumulus terminal, and with Reflection 1 for DOS. It fails with hpterm (HP-UX), on some versions of Reflection for Windows and Macintosh, and all versions of Session.

Home

Set Visual Home [ON | OFF]

(Default=On)

After processing the Enter key or a function key, Visual places the cursor on the ===> line. This makes it convenient to enter a command. You must then press Return a few times to move the cursor down into the text. Set Vis Home Off puts the cursor at the first column of the * line instead. After a Find or Findup, this means the cursor will appear on the first character of the found string.

Hostprompt

Set Visual Hostprompt [ON | OFF]

(Default=Off)

If you use a single copy of Reflection alternately between HP-UX and MPE, you may run into a problem with Set Host-Prompt "^Q". The Reflection host prompt must be configured for Visual mode to work. However, on HP-UX the host prompt must be disabled in Line mode for Reflection file transfer to work. Therefore, Qedit/UX enables the host prompt upon entry to Visual and disables it upon Exit. If you then switch to MPE, Qedit's Visual will fail because the host prompt is disabled.

Set Vis Hostprompt On forces the Reflection host prompt to ^Q in Visual. The default for this option is Off, since the host prompt should usually be set to ^Q anyway. You should only need this if you switch between MPE and HP-UX with the same copy of Reflection and use Qedit Visual on both systems.

Ignorelf

Set Visual Ignorelf [ON | OFF]

(Default=Off)

Normally, when Qedit reads the screen it finds a Return and line feed at the end of each line. Qedit uses this information to divide the

characters of the screen read into lines and then match them up with the lines in your file. However, some networks strip the line feed from the lines, sending only the Return. In this case, Qedit will print an error such as "Missing status line" and the qscreen dump will indicate that Returns were found without line feeds. It may be easier to reconfigure Qedit than your network: the Set Vis Ignorelf On option directs Qedit to accept screens with only a Return at the end of each line and without the line feed.

Qedit enables the Ignorelf option whenever it is being run on the Qcterm terminal emulator.

Inschar

Set Visual Inschar [ON | OFF]

(Default=Off)

By default, Visual mode disables Insert Char and you must enable it after each time you press Enter or a function key. Set Vis Inschar On tells Visual to enable Insert Char each time it displays the screen.

Label

Set Visual Label [ON | OFF]

(Default=On)

When you memorize the eight function keys, you can speed entry into Visual by disabling the "labels" on the screen. Use Set Vis Label OFF. This only works with a 2645 terminal, where the labels must actually be painted into the display memory every time a new page is written.

Marginfixed

Set Visual Marginfixed ON | OFF

(Default=none)

Qedit normally adjusts the terminal right margin and display width based on the file's record length. This caused some terminal emulators like hpterm to behave erratically.

When Marginfixed is enabled, Qedit does not change the terminal settings. It assumes the right margin is the physical display width. This should work properly as long as the user let's Qedit poll the terminal for the information. If the user decides to override this function by setting the RCRTWIDTH variable or change the width with **Set Term Columns**, Qedit trusts that the user has set the terminal properly.

Users should be aware of two things when Set Marginfixed is ON. If a file is narrower than the configured width, nothing prevents the user

from entering text beyond the file's right edge. This extra text will simply be ignored.

If the file is wider than the configured width, Qedit tries to display as much text as it thinks it can. This causes the text to overflow. However, instead of truncating the extra characters, the emulator writes them out on the last displayable column. For example, if a file has 100 characters but the configured width is 80, the first 79 characters are displayed correctly. Characters 80 through 100 are written to column 80. The net result is characters 80 to 99 are lost and character 100 ends up in column 80 on the screen.

Msg

Set Visual Msg [OFF | ON]

(Default=On)

Visual always disables messages from other users (using Setmsg OFF on MPE and mesg n on HP-UX). On MPE, this is why a Showjob will show QUIET. Normally, Visual re-enables messages upon Exit (using Setmsg ON on MPE and mesg y on HP-UX). If you want messages to be left disabled at all times, use Set Vis Msg OFF. These same rules apply to Qzmodify.

Renum

Set Visual Renum [ON | OFF]

(Default=On)

When you insert lines, Qedit attempts to assign them new line numbers between the existing lines. Sometimes this is impossible, as between 500.01 and 500.011. In this case, Qedit will renumber the lines on your screen to make room for the new lines. Qedit uses the appropriate Increment value that ensures proper renumbering. The value it chooses might be different from the current Increment value.

Although this value also affects operation of the Add command in Line mode, it does not affect the Divide command.

You can disable this option with Set Vis Renum Off.

Roll

Set Visual Roll [*nn* **]**

(Default=6)

The F2 key means "roll the current screen up" by 6 lines. You can vary the number of "roll" lines from 1 to 20 by doing Set Vis Roll *nn.* You can also do an individual "roll" of any size by pressing Home Up, typing +*n* or -*n* and F7.

Save

Set Visual Save [Fast | ON | OFF | 1]

(Default=Off)

Set Vis Save ON causes Qedit to save your function keys upon entry into Visual and reset them again on exit. The first execution of this command must occur before Set UDC, since they both allocate memory space from the same pool. If you only want to save the keys on the first entry into Visual (and reset them to the same values on every Exit), use Set Vis Save 1.

The 700/92 terminal and Reflection have the ability to save and restore the current user function keys within the terminal memory. If you do Set Vis Save Fast, Visual will take advantage of this feature, which is much faster and invisible to the user. This feature only works on Reflection if the Terminal ID is configured to 700/92 and on versions greater than 3.3 (DOS), 3.6 (Macintosh), or 3.7 (Windows). If Qedit decides that you do not have this feature, it will revert to a regular Set Vis Save On.

Screen

Set Visual Screen [ON | OFF]

This option, only available on HP-UX, controls which full-screen editing interface Qedit will use. When it is set to Off, Qedit uses Visual mode. When it is set to On, Qedit uses Screen mode. On HP terminals, Off is the default; on VT terminals, On is the default.

SI

Set Visual SI ['nnn | "char"]

(Default=None)

If you edit text containing ShiftIn characters, they will not appear on the screen. Even worse, if there is ShiftIn character but no ShiftOut character preceding it on a line, the ShiftIn character disappears from your file when you press Enter. This is done "on your behalf" by the terminal or terminal emulator. To get around these problems, you can define another character as a translation for the ShiftIn character. For example, Set Vis SI "|" defines "|" to represent ShiftIn.

When Visual needs to print a ShiftIn on the screen, it prints a "|" instead. When Visual sees any "|" on the screen, it converts it into a ShiftIn internally. To avoid turning every occurrence of the "alias" character in your file into a Shiftin, Visual prints a "?" for any line with a valid alias already in it and will not let you update that line in Visual mode (use Modify instead).

SO

Set Visual SO ['nnn | "char"]

(Default=None)

If you edit text containing ShiftOut characters, they will not appear on the screen. From the location of ShiftOut, the display switches to the alternate character set which typically is the Line Drawing set. When you press Enter, the terminal or terminal emulator automatically inserts an escape sequence in front of the ShiftOut. The escape sequence is <esc>)B. To get around this problem, you can define another character as a translation for the ShiftOut character. For example, Set Vis SO "|" defines "|" to represent ShiftOut.

When Visual needs to print a ShiftOut on the screen, it prints a "|" instead. When Visual sees any "|" on the screen, it converts it into a ShiftOut internally. To avoid turning every occurrence of the "alias" character in your file into a ShiftOut, Visual prints a "?" for any line with a valid alias already in it and will not let you update that line in Visual mode (use Modify instead).

Scrollup

Set Visual Scrollup 'nnn | "char"

(Default="-")

You can enter a minus sign in one (or both) copy/paste columns in full-screen mode. A single character scrolls up the number of lines defined in the |5Set Visual Roll option. Enter 2 minus signs to scroll up twice the number of lines and so on.

The minus sign is the default scrollup character. You can change it to another character that you may find easier to type. It must be a printable character and must not be a valid copy/paste code. Valid codes are: `A B C D F G H J M P R V Z ? !`. Use Set Visual Scrollup "*c*" to change the character.

You can enter Set Visual Scrollup "" to reset it back to the default character.

Stop

Set Visual Stop

The Set Visual Stop command resets Qedit to an uninitialized state. On your next function, Qedit will re-identify your terminal and re-check the entire context. Use this when changing your terminal configuration while inside Qedit.

Tab

Set Visual Tab ['nnn | "char"]

(Default=None)

If you edit text containing tab characters, most will appear as dots with a "?" at the left of the line. Otherwise the tab characters would be executed by your terminal and be lost. To get around this problem, you can define another character as a translation for the tab character. For example, Set Vis Tab "\" defines "\" as meaning tab.

When Visual needs to print a tab on the screen, it prints a "\" instead. When Visual sees any "\" on the screen, it converts it into a tab internally. To avoid every valid occurrence of an alias character turning into a tab, Visual mode looks for alias characters that already occur in the text. Any line with a valid alias in it is printed with a "?" and Visual will not let you update it (use Modify instead).

TAE

Set Visual TAE [ON | OFF]

(Default=OFF)

To make Visual mode work with Telamon's Type Ahead Engine, use Set Vis Tae On. Qedit sends out a Control-A "A" upon entry to Visual mode and a Control-A "V" on exit. These special codes disable and re-enable the TAE. However, Control-A may be a code for your modem or network and could cause a problem. If you do not have a TAE, the "V" may appear on your screen upon exit from Visual mode.

Update

Set Visual Update [ON | OFF] [Except 7]

(Default=Off)

If you find that you are losing work by pressing F5 or another function key before you have saved your screen work with the Enter key, this option is for you. When Set Vis Update is ON, Qedit does an automatic screen update with every function key. This makes it almost impossible to lose your changes, but it does slow down Visual mode. However, you may do *> F7 or *< F7 to move ahead or back one page, without updating the current page. Note: to refresh the screen, type * in the home line before pressing any function key or Enter.

If you want to be able to execute a command via F7 without updating the screen, use Set Vis Update On Except 7.

Widen

Set Visual Widen [76 | 80 | OFF]

(Default=80)

The Widen option controls whether and when Visual will request and use more than 80 display columns on your terminal. For example, you

can control whether to switch the 700-series terminal into 132-column mode and widen Reflection's Display Memory. The default value is Set Vis Widen 80, which causes Visual to go into wider-mode whenever Length is greater than 80 columns. Therefore, with this value Visual will switch your 700 series terminal into 132-column mode and expand the width of Reflection's Display Memory. Set Vis Widen Off restricts Visual mode to at most 80 columns.

Reflection version 5.*x* and later allows you to set the display width to a value between 80 and 512. Qedit can detect this feature and use it whenever possible. Qcterm emulates a 700/92 terminal but supports up to 200 columns. Full-screen mode takes advantage of the extended width when appropriate.

If Visual switches into 132-column mode when the Length value for your file is higher than 80 columns, this means that a Job file with exactly 80 columns will not go into 132-column mode and you won't be able to see columns 77 through 80. However, you can reconfigure Visual to switch into 132-column mode when Length is greater than 76 by doing Set Vis Widen 76.

Some new versions of Reflection will automatically switch into 132-column display when Qedit asks to widen display memory. To have Qedit follow the Set Vis Widen rules, you must have Reflection 4.2 for DOS, Reflection 3.6 for the Macintosh, Reflection 4.0 for Windows; add 20,000 to the value in your RPCVERSION JCW. In some versions of terminal emulators, you have to explicitly tell the software which type of graphics adaptor you have. You need to refer to your computer manual, or use the MSD utility program included with newer versions of DOS and Windows. The RCRTMODEL JCW is also useful for controlling 132-column mode.

Wordwrap

Set Visual Wordwrap [ON | OFF]

(Default=Off)

The Set Vis Wordwrap option enables wordwrap for new lines. This makes Visual mode much better for entering memos and documentation. If you have Reflection 4.00 for DOS or Reflection 5.0 for Windows, Set Vis Wordwrap allows you to keep typing at the end of your line. There is no need to press Return. The overflow words will automatically be moved to the following line. Words will not be split arbitrarily.

The Reflection Wordwrap feature only works when entering new lines. It does not work with INS CHAR. Because it does not work in Line mode, Qedit enables and disables it as you enter and exit Visual. The Reflection configuration setting called Force-80-Columns must be set to No for Wordwrap to work properly. If you cannot turn off this

setting for compatibility with other software, then try Set Visual Widen Off in Qedit.

XX

Set Visual XX [*startline* **[** / *endline* **]]**

(Default=reset)

Set Visual XX defines the lines that should be excluded from the full-screen mode display. Excluded lines are replaced by a single line.

```
--- Excluded Area --- 10/34.5
```

This line shows the line numbers which are currently excluded. If no parameters are specified, the current excluded area is reset. An excluded area must have a start and an end line. If only *startline* is specified, the excluded area is incomplete. An appropriate message is going to be displayed on the status line next time the user goes into full-screen mode.

To complete the excluded area, enter another Set Visual XX command with another line number. This number is going to be used as the *endline*. Of course, you can specify both *startline* and *endline* on a single command.

```
/Set Visual XX 5      { Sets the start line. XX incomplete. }
/Set Visual XX 10     { Sets the end line. XX=5/10          }
/Set Visual XX 5/10   { Sets XX to 5/10 }
```

Labels in Line Mode

This is not a Set command, but a JCW value.

Normally, Qedit always displays the modes keys except within Visual mode. You have the option of displaying the User Keys instead, or removing the labels from the screen. This is done by setting an MPE JCW before running Qedit:

```
:setjcw rlabeldefault = 2   {user keys}
```

Valid values for this JCW are as follows:

0 don't care, Qedit displays modes

1 terminal has NO labels (2645)

2 display user keys

3 display modes keys

4 remove labels from screen

5 display default F1-F8 key labels

6 display the Qedit labels

These values define which key labels will be displayed when you are in Line mode rather than Screen mode. To change your choice while

within Qedit, set the JCW and then do Set Vis Stop to force Qedit to re-initialize.

Technical Notes

On MPE, Qedit opens the Visual terminal file with file name QEDCRT, REC=-6000. Qedit turns echo off (echo is reset to its previous state on exit), disables the Break key, and disables messages from other users (:Setmsg OFF on MPE and mesg n on HP-UX). Visual disables your Type Ahead Engine (if you have one and have not done Set Vis TAE Off), disables MPE/iX typeahead, and puts your HP terminal into block-mode, page-mode, but with Format off. Qedit loads the function keys with their default values, and writes descriptive labels for them.

Warnings

Set Warnings [ON | OFF]

(Default: OFF)

(Initially: ON)

When you put commands in a usefile for an end-user, it is often irritating to have Qedit print numerous warnings and status messages (i.e., Shut Qeditscr, * = 55, Warning: Noline, etc.). Set Warnings OFF will suppress all of those warnings. It also suppresses printing the line when you enter a line number to move the current position (i.e., /55 sets * to 55, but does not print line 55).

Whichcomp

Set Whichcomp *keyword value* **...**

(Initially: COBOL, FORTRAN 66, Pascal V, IN Robelle)

When you use :Compile to compile your program, Qedit often has a choice of compatibility mode (CM) compilers. Set Whichcomp selects which compiler programs to use as the default for each language, as well as where to look for it. The syntax is as follows:

Set WHichcomp [*options*]

Cobol	[68 | 74 | 85]	I, II or II,coboliix	default is none
Fortran	66 | 77	FORTRAN or FTN	default is 66
In	Sys | Robelle	Pub.Sys or Q.Robelle	default is in Robelle

Pascal	V | R	Pascal/V or Pascal/Robelle	default is Pascal V

COBOL. By default, the :COBOL command runs the compiler program named COBOL. This may reside in Q.Robelle or Pub.Sys (see below). The compiler named "COBOL" may contain any version of COBOL, but is usually COBOL-74 on MPE V and native-mode COBOL on MPE/iX. If you want to run some other program file when you do :Cobol or :Compile, Set Which COBOL will select either COBOLI (68), COBOLII (74), or COBOLII,COBOLIIX (85). Remember, you can always use the :COBOLI and :COBOLII commands to invoke those two specific compiler programs.

FORTRAN. By default, :FORTRAN runs the program named FORTRAN, which is usually FORTRAN 66. Set Which FORTRAN 77 causes the :FORTRAN command to invoke the compiler program named FTN instead. If you need access to both compilers, don't use Set Which, but use :FTN and :FORTRAN instead.

In Sys|Robelle. By default, Qedit looks in the Q.Robelle group for copies of the compatibility-mode MPE compilers which have been "qedified" to read Qedit workfiles. If a compiler is not found there, Qedit switches to Pub.Sys. You can use Set Which In Sys or Set Which In Robelle to force where Qedit will look first on the next compile. If it doesn't find the compiler where you say it is, it will reverse the setting of the Sys/Robelle flag, so that next time it has a better chance of finding it.

Pascal. By default, the :Pascal command runs the HP Pascal V compiler. An alternative is Pascal/Robelle (in the Greer account), selected via Set Which Pascal R.

Window

Set Window ([*window* **])**

(Default: all columns, exact match)

Set Window establishes the default window, or conditions, for string searches in all Qedit commands. You can override the default by specifying an explicit window in any command (e.g., `list ".BEGINKEY" (1/10 UPS)`). Once a window is set, it remains in effect until the next Set Window command. See the Change command and the "Glossary" for further details on window.

The window itself consists of two parts: a range of *column* numbers to search, and four independently enabled options that determine how to select a line.

([*column* / *column*] [*option* ...])

A *column* is a number between the Left and Right margins of the file. Qedit searches only the specified range. An *option* is one or more of these:

[NO]Match	select lines with[out] string
[NO]Upshift	upshift before searching [or not]
[NO]Smart	ensure match is a "symbol" [or not]
[NO]Pattern	string is a pattern to find [or not]
[NO]Regexp	string is a regular expression to find [or not]

The default window is all columns, Nosmart, Noupshift, Match, Nopattern and Noregexp.

A pattern may include at-signs (@) to match anything, # to match a single numeric character, ? to match a single alpha-numeric, and tilde (~, wavy line) to match zero or more blanks. Any other character must be matched exactly. (To match a pattern character itself, precede it with an ampersand: "& ".) For example, to look for "QEDIT" followed by "TOOL" in the same line, use:

```
/set window (pattern upshift)
/list "@Qedit@Tool@"
```

Either or both parts of the *window* can be Set in one command:

```
/set window (1/10)
/set window (smart upshift)
/set window (1/20 upshift)
/set window (pattern)
```

To reset the *window* to the defaults, enter:

```
/set window ( )
```

Work

Set Work *keyword value* **...**

(Initially: Block 8, Temp ON, Labels OFF,

Jumbo ON, Random OFF, Trailingspaces OFF, Size 3200)

Set Work specifies the default size, attributes and functions of Qedit workfiles. The syntax of Set Work is as follows:

Set WORK [*options*]

Jumbo	ON | OFF	Control use of Jumbo workfiles	default ON

Random	ON | OFF	Control use of random scratch file name	default OFF
Block	*nn*	Average lines expected to fit per block	default is 8, minimum is 2
Labels	ON	Force Text to retain user labels	default OFF
Size	*nn*	Default size for new workfiles in *lines*	default 3200, min. 200, max. 99,999,999
Temp	ON	Create Qeditscr temporary workfile or random scratchfiles	default ON
Trailingspaces	ON | OFF	Preserves or removes trailing spaces	default OFF

Workfile Size. Qedit workfiles have a file code of 111 and their physical block size is 512 bytes (original format), 1,024 bytes (Jumbo format), or 8,192 bytes (Wide-Jumbo format). As many lines as possible are compressed and packed into each block, making it difficult to decide on the exact number of blocks to allocate for a new Qedit file. The default workfile size is 3,200 lines, assuming that each block can fit 8 lines. You can make the default workfile size smaller or larger by using Set Work Block *nn* Size *nn*. A workfile in original format cannot contain more than 65,535 lines or 32,767 blocks. A Jumbo or Wide-Jumbo workfile can hold up to 99,999,999 lines (maximum size is 4 GB). To make very small default workfiles, use Set Work Block 16 Size 200. To make the largest possible workfiles, use Set Work Block 2 Size 99999999. In either case, the Text command will increase the size of a new workfile above the default if needed to hold the file being copied.

Qeditscr. By default, Qedit creates a temporary workfile called Qeditscr whenever necessary. You can force Qedit to use only named (by you), permanent workfiles with Set Work Temp OFF (this might be helpful if you use unreliable telephone lines).

If you have Set Work Random ON, Qedit will use a random file name (determined when Qedit first starts up) in the form QED*nnnnn*. This allows you to have multiple Qedit sessions running at the same time.

Even though random scratch files are created in MPE's permanent domain, they are temporary in the sense that they are purged upon exit.

You must have Set Work Temp ON in order to use random scratch files.

User Labels. Set Work Labels ON forces the Text command to retain user labels unless you do Text filename,Nolabels (the default is to discard the user labels unless you do Text filename,Labels).

Trailing Spaces. By default, Qedit removes trailing spaces on all lines in a variable-length file. Set Work Trailingspaces ON requests that Qedit preserves trailing spaces and make them significant characters. The option also allows creation of odd-length lines. Once enabled, all workfiles created or opened from that point will have trailingspaces preserved. To check the current status, do:

```
/Verify Work       { Checks global setting }
Set WOrk Jumbo ON Block 8 Labels OFF Temp ON Size 3200 Random ON
Set WOrk TRailingspaces ON
/Verify Keep       { Checks current workfile }
Set Keep Ascii OFF Cctl OFF COde 0 Lab 0 Num OFF Var ON Checktimestamp
ON
Set Keep COBfree ON NAme AFILE.GROUP.ACCT
Set Keep LF ON
/Verify Info
Saved modification timestamp 2003/04/30  13:23:17
Trailing spaces preserved
```

The last line shows that trailing spaces are preserved in this workfile. If the option is disabled, that line reads `Trailing spaces trimmed`. Disabling the global setting with Set Work Trailing Off does not disable the option in the workfile. You have to clear the workfile after disabling it.

Wraparound

Set Wraparound [*chars* **| ON | OFF]**

(Default: ON)

(Initially: OFF)

The Wraparound option is intended to make line-overflow in the Add command more friendly. When it is enabled and a line-overflow occurs during entry of new lines, Qedit splits the long line between two "words" and prompts you with the overflow words on the next line. An appropriate continuation line is generated for FORTRAN and COBOL source files. There is no wraparound capability in Visual mode, due to limitations of the HP terminals. The Reflection for DOS terminal emulator, however, can do wraparound in Visual mode. See Set Visual Wrap for details.

The *chars* option allows you to specify the maximum number of characters you will be able to type before pressing the Return key. You

can specify any number of *chars* between 150 and 5000. When Wraparound is ON, and no *chars* parameter is specified, the default maximum number of characters that you can type before pressing Return is 256.

When you do an Add command, you can "burst" enter an entire page without looking at the screen. Do not press Return at the end of each line -- just keep typing. Qedit will put the words into lines for you. Press Return once only at the end of each page of text.

At the end of a paragraph (or any other time that you need to do an "end of line"), type Control-C and start typing the next line. Do not put a space after the Control-C unless you want the next line indented. For a blank line, press Control-C twice in succession.

You end the Add command as always by entering "//". Then you may use Visual or Modify to correct any typing mistakes you may have made. Qedit will fill the words into lines that are less than or equal to the current Set Length value. To create lines of a specific length, use Set Lang Data and Set Length.

X

Set X *keyword value* **...**

(J=justified)

(Initially: <null> List ON Tab OFF Local OFF Global OFF)

Set X configures automatic tagging of source changes in COBOL programs. The syntax of Set X is as follows:

Set X [*options*]

["xx"][dateform]["xx"]	define the tag content	default is a null string
List ON | OFF	control the display of tag columns	default ON
Tab ON | OFF	allow manual editing of tag columns	default OFF
Local ON | OFF	tag value saved in workfile	default OFF
Global ON | OFF	allow use of local tags	default OFF
Null	reset global and local tags	

To check on the current tag value and options, use Verify X.

If you want all COBOL changes to be tagged, all files must be have Set Lang Cobolx, not Set Lang Cobol. You can enforce this for all users by putting Set Lang Cobolx All On into your Qeditmgr file.

Tag format. The Set X command allows several formats for the date tag, plus the ability to replace, precede or follow the date with a short string. Once you have configured your "X" tag, Qedit will automatically mark all changed lines in COBOLX files with that tag in columns 73 to 80.

The *dateform* parameter can be any of these options:

Keyword	Sample
DATE	22 NOV99
DDMMMYY	22 Nov99
CCYYMMDD	19991122
YYMMDD	991122
MMDDYY	112299
DDMMYY	221199

DDMMMYY and CCYYMMDD occupy 8 characters, but YYMMDD, MMDDYY and DDMMYY occupy only 6. Therefore, the last three can be combined with a string giving your initials, before or after today's date.

```
/set x "rg" yymmdd       {tag is "rg991122" }
```

Null vs Blanks

Entering Set X without parameters, Set X Null, or Set X "" effectively turns off the tagging feature. Tags on modified lines are not changed. Lines without tags do not get one. Lines that already have tags retain their current values.

This is different from setting the value to blanks, as in Set X " ". With this setting, tags on modified lines are actually cleared.

List. The List option tells whether the comment tag should be shown during normal editing and listing of lines. The default value is ON, but you can disable listing with S X List OFF. Even though the comment tag is not listed, it is still part of the line and is retained when you Text or Keep the file.

When you edit a COBOLX file in Visual, Qedit sets the right margin in column 72 (instead of column 80). In this way, you can see the comment field (columns 73 through 80) but it won't shift left when you delete characters.

Line Overflow

Tagging can be disabled by specifying an empty string.

```
Set X Null
Set X ""
```

While disabled, the text and tag areas are treated as one. As such, edit commands, such as Change, are applied to the complete line.

Also, if a tag is specified and the List option is On, tag values are treated as part of the text.

If a line has a tag value and an edit operation, such as Change or Modify, causes the line to expand, Qedit reports an overflow error. To avoid this, you can Set X to Null, but you would have to remember the previous setting. A better solution is to turn the List option Off temporarily. The X value is preserved, but the tag area cannot be edited.

Margins. For those users who still must enter and edit the tag field manually, Set X Tab On puts Qedit's Visual right margin at column 80 instead of column 72. This makes it much easier to edit those columns because you can tab to them.

Local Tag. Users can define a tag that is specific to the workfile currently opened. The local tag value is stored in the Qedit control blocks. Thus, the local tag is preserved when you Shut the workfile. You can also control the tag display for a specific workfile with the List option.

To enable the local tag option, simply enter

```
/Set X Local On
```

From that point, any changes to the tag are recorded in the workfile. The statement above sets the local tag to a null value. You can specify the new value on a similar statement so that it can be used immediately. Because a local tag is workfile-specific, if you switch to a different workfile, the local tag option is automatically disabled and Qedit starts to use the default tag again.

If you want to stop using the local tag, enter Set X Local Off. This clears the local tag value and Qedit starts using the default tag. Enabling the local option again does not return the tag to its previous value.

If you are strictly using the Text and Keep commands to edit your source files, the information is lost as soon as the workfile is purged or cleared.

Global. By default, users can define their own local COBOL tag. If this is undesirable, system managers can enforce the use of a single tag for all COBOL files by using

```
/Set X Global On
```

Once enabled, users are not allowed to use the Local option of the Set X command. They can still use the Set X command, but only the global tag value can be changed.

To allow the use of local COBOL tags again, simply enter

```
/Set X Global Off
```

The global tag has priority over any local tag. If you are accessing a workfile with a local tag and you disable the Global option, Qedit resumes using the saved local tag.

```
/Set X "localtag" Local On
/Verify X
Set X "localtag" Local On Default "ME990204" List ON Tab OFF

/Set X Global On
/Verify X
Set X "ME990204" Global On List ON Tab OFF

/Set X Global Off
/Verify X
Set X "localtag" Local On Default "ME990204" List ON Tab OFF
```

When the local option is enabled, the first tag shown on the Verify output is the local value. It is followed by the words Local On. The global tag is displayed after the keyword Default.

Null. If you want to reset all COBOL tags currently in use (global and local), use the Set X Null command.

Change Confirmation. The justified option, "SetJ", displays the current X values including the active tag, the default tag and the local tag settings. It applies the changed settings entered on the command and, lastly, it displays the revised settings. When none of the Cobx tags are set, the output is:

```
Set X values before this command:
Active tag value=, List ON
Default tag value=, List ON
Local tag value. NONE  List  NOT SAVED

Set X values AFTER the command:
Active tag value=, List ON
Default tag value=, List ON
Local tag value. NONE  List  NOT SAVED
```

The first 4 lines show the current settings. The last 4 show the settings after the requested change has been applied. When there is no tag value, Qedit displays an empty string or the word "NONE". When the List option displays as "NOT SAVED", it means the Local feature is enabled but the List setting has not been explicitly set yet.

If the tag values are set, the result strings are displayed as in:

```
/set x local off
/set x "GB" yymmdd
/set x local on
/setj x "LC" yymmdd

Set X values before this command:
Active tag value=, List ON
Default tag value=GB011213, List ON
Local tag value. prefix=     suffix=     dateform=0 List  NOT SAVED

Warning:  Local ON: only updates tag for this workfile, not defaults.
Set X values AFTER the command:
Active tag value=LC011213, List ON
Default tag value=GB011213, List ON
Local tag value. prefix=LC   suffix=     dateform=2 List  NOT SAVED
```

In this example, the first Set command turns Local X off. The second Set command changes the default tag to the prefix "GB" followed by the current date in year-month-day format. The third Set command turns Local X back on and, finally, the SetJ command sets the local tag to the prefix "LC" followed by the date in the same format. Looking at the SetJ output, there is the then-current default tag, "GB011213", with List enabled. There was no local tag and List was not set at that point.

The new local tag is applied and produces a warning. After the change, The active tag is the local one and List is enabled (default value). The default tag is unchanged. The last line provides details on how the local tag was constructed. The List option still shows as NOT SAVED because it has not been changed explicitly after Local X was turned on.

Verify. The Verify command displays detailed information about the local and default settings.

```
/verify x
Set X Tab OFF "ME011214" List ON
/set x local on
/verify x
Set X Tab OFF Local On "LC011214" List ON Default: "ME011214" List ON
```

YNone

Set YNone [ON | OFF]

(Default: ON)

(Initially: OFF)

Whenever Qedit asks for a Yes or No confirmation, you have to enter at least one letter (Y or N) followed by a carriage return. If you want Qedit to read just a single character (i.e., no need for a carriage return), simply enable YNone.

Zip

Set Zip *characters*

(Initially: []@{})

The Set Zip command changes the special abbreviation keys provided in Qedit. The Zip list of characters is positional and without quotes:

1st character	FIRST	[is the default
2nd character	LAST	] is the default
3rd character	ALL	@ is the default
4th character	Left	{ is the default (see Add)
5th character	Right	} is the default (see Add)
6th character	auto-mod	OFF by default (inactive)

Therefore, the default Zip list is: []@{}. The only way to reset ZIP to its default value is to re-enter these codes in a Set Zip command.

Auto-Modify in Add. The "auto-modify" character (the 6th one) is disabled by default. If you do Set Zip []@{}_ to specify "_" as the "auto-mod" character, whenever you end a command line, or a new text line in Add, with an underline, Qedit puts you into Modify on that line.

For example, Set Zip [%:~+? specifies [for FIRST, % for LAST, : for ALL, ~ for shift-left, + for shift-right, and ? for auto-modify. You may specify any special characters you like for these functions, but each must be unique and must not conflict with the other characters configured in Qedit (e.g., TAB, $).

Shut Command [SH]

Closes the current workfile. May also rename it.

SHUT [*filename*]

(Default: close with same name)

With no *filename* parameter, Qedit merely stops editing the current file. Although Qedit will close the current workfile for you when you Open another one, you may sometimes want to Shut explicitly. One thing that Shut does is guarantee that all of your changes are actually posted to the disc and will not be lost if the system fails or you disconnect yourself by attempting to make a phone call on your modem phone. To post your changes to the disc without closing the workfile, use the :Continue command or any colon-command.

You may want to leave your terminal for lunch, in which case it is a good idea to Shut your current file. You can always use Open * to reopen it when you return.

```
/shut              {you may shorten Shut to SH}
/open *            {reopen same file later}
```

If you specify a *filename* parameter, Qedit renames the workfile to the new name before closing it. If the workfile is currently a temporary file, the rename option also saves it as a permanent file. This command can be very helpful when you want to save the contents of Qeditscr as a permanent Qedit file.

If the *filename* already exists, Shut asks if you wish to purge the old file. If you specify * as *filename*, Shut uses the name of the last file Texted. Even though you have renamed Qeditscr, Qedit will create a new one when it next needs it. You can automatically purge any existing file by doing Shut *filename*,YES. Or you can automatically abort the Shut command in that case by doing Shut *filename*,No.

To save the current scratch file in the temporary file domain, add ,TEMP to the *filename* parameter: Shut *filename*,Temp.

Examples

```
/open crept45.dev     {open source file to edit}
/modify 5/  ...       {make some changes...}
/shut                 {close workfile}

/t quser.doc          {make temporary copy of file}
QEDITSCR
 ...                  {make changes to a copy of Quser.doc}
/list lp all          {list scratch file to printer}
/shut *               {save Qeditscr back as Quser.doc}
QUSER.DOC.ROBELLE,OLD Qedit File, # of lines=451
Purge existing file [no]? yes

/open crept45.dev     {open development version}
/shut crept45.src     {move to production group}
/text file1
/shut file1x,temp     {save as temporary file}
/text file1
/shut file1y,yes      {purge existing file}
```

Spell Command [SP]

Checks the spelling of the words in the rangelist. This command will only work if you have the dictionary of the Spell (Bonus) program installed on your system.

SPELL [*rangelist*]

(Default: *rangelist* = *)

Qedit prints the lines that contain misspellings and highlights the words that are misspelled. Use Spellj to modify each line that contains a misspelling, with the style of line modify defined by Set Modify.

Examples

```
/spell               {check current line}
/spell @             {check current file}
/spell 10/20         {check lines 10/20}
/spell "xxx"         {check lines with "xxx"}

/spell ".inx"(1/4)   {check lines with ".inx"}
                     {in the first 4 columns}

/spellj 1/10         {check and modify lines 1/10}
```

User Dictionary

If you have some words that you frequently use that are not in the main dictionaries, you can put them into a local user dictionary. You can have up to 2500 words in this dictionary. Just create a file called SPUSER in your logon group. This file can be a Qedit file or a Keep file. Add your words, one word per line. The words do not have to be sorted, although a sorted list may be easier to manage.

Spell reads in the words from the SPUSER user dictionary the first time you use the Spell command, then no longer refers to SPUSER. If you then add or delete words from the SPUSER dictionary, you must tell Spell to re-read the words the next time it spell-checks a word:

```
/set spell stop
```

Main and Auxiliary Dictionaries

The spelling checker's dictionaries must be installed before this command can work. If you get a message saying "file system error opening main dictionary" (or aux dictionary), it means that the main or auxiliary dictionaries have not been installed correctly, or are not accessible. The two Spell dictionary files are:

Main.Spdata.Robelle	{must be present}
Aux.Spdata.Robelle	{optional}

See the chapter "Installing Qedit" for detailed instructions about installing the dictionaries.

Notes

See Set Spell for information on configuring Spell. Use the Words command to check the spelling of a specific word.

If your UDC or command file for running the spell checker program is also called "Spell", you have either to change the name of the UDC, or to use :Spell to access it.

```
/:spell file      {we suggest Spellf instead}
```

Currently, the spell checker can only verify the first 1,000 characters of a line. It does not break the line on a word boundary. If character 1,000 is the middle of a word, Spell checks only the first few characters and likely return a spelling error.

If Spell has to truncate a line, it displays a warning:

```
/spell
Warning: Only first 1000 of 7993 characters will be
spell-checked.
```

:Stream Command [STREAM]

Streams a Qedit file or Keep file containing a batch job. :Stream enters a file of MPE commands into the batch processing queue.

:STREAM [*filename*] [,*promptchar*] [;AT=*time...*]

(Defaults: *filename* = $stdin,

promptchar = !.)

Examples

```
/stream job23           {job23 is a qedit or keep file}
/l all                  {check job stream}
   1    !job mgr.robelle/password
   2    !file infile=qedit.doc
   3    !run prose.qlib.robelle
   4    !eoj
/stream *               {stream the current workfile}
  #J123

/stream backup;at=02:00 {backup at 2 in the morning}

/list comp.streams{check contents of job stream}
/stream  $              {...then stream it}
```

:Stream Resets Dirty Flag

When you text a file, Qedit copies the contents of the file into a workfile, and marks the workfile as "clean." Once you make changes to the workfile, it is considered "dirty." To see if your workfile is clean or dirty, do Verify Open.

The dirty flag is reset to clean if you Keep the file, or stream the current workfile with `stream *`. This is so that you can stream jobs from templates, inserting passwords, etc., without having to answer YES to clear the workfile on the next Text command. If you don't want Qedit to reset the dirty flag when streaming the current workfile (so that Qedit won't let you Text over your workfile or exit without reminding you to save your changes), you should shut the workfile and then stream it. This is handy when you want to make changes to a job, test it, and keep the file once you are satisfied with the changes:

```
/t fulldump.job
/c "xyz"abc" @        {make some changes to the job}
/sh;stream *
```

:Tdpfinal and :Tdpdraft Commands

Because a number of our users have TDP for driving the 2680 printer but desire to do their editing in Qedit, we allow you to invoke the TDP formatter from within Qedit on either Editor files or Qedit files:

:TDPDRAFT [FROM *filename*] [TO *filename*] [COPIES *nn*] ...

:TDPFINAL

:TDPDRAFTQ

:TDPFINALQ

(Defaults: current workfile)

Use Tdpdraft to print a "draft" of your document. Use Tdpfinal to print a "final" version of your document. Use the TdpdraftQ or TdpfinalQ options to suppress TDP's final page of statistics.

The *filename* may be * for the current or previous workfile, but \IN is not supported yet for Qedit workfiles. The default input file is your current workfile, if you do not specify any parameters to the command. If you include TO, then FROM does not default to the current workfile. Instead, TDP will prompt you for the input file. If TDP must prompt you, then the input file you specify cannot be a Qedit workfile.

Qedit does not know about TDP's configured printers, so you cannot use `':tdpfinal from * to *quality'`, for example. Instead, you must set up a file command to point TDP's formal file designator, which may be STERM or SLP, to the appropriate device, then do `` `:tdpfinal from * to *device' ``. You must specify a valid TDP output device, not a TDPCONFG mnemonic name. There is no interface to the TDP spooler.

Example

```
/file slp;dev=pp
/tdpfinal from * to *hp2680
/reset slp
```

Text Command [T]

Copies a file into Qedit, retaining line numbers, file attributes, and optionally, user labels. Also works on spool files and Copylib members. Use Text to convert a file into Qedit format or to make a copy of an existing file. After a Text, the new copy is "open" and ready to edit or browse.

TEXT *filename* [,*type*] [,*clearoption*]

filename [,SAVETABS] [,*clearoption*]

filename [,BROWSE] [,*clearoption*]

filename [,NEW] [,*clearoption*]

filename [,SETINCR] [,*clearoption*]

filename [,LABELS] [,*clearoption*]

workfile [,*workformat*] [(*size*)] = *filename* [,*type*]

(Q=unnumbered)

(J=extra scr file, same as ,NEW)

(Defaults: size = 50% bigger)

If you do not specify a *workfile,* Qedit checks to see if you have a workfile Open and it is empty. If it is, Qedit will Text *filename* into it. If not, Text uses the primary scratch file named Qeditscr in your logon group. If you do Text xx,New or TextJ, Qedit creates an extra scratch file to receive the copied file. You can have up to eight extra scratch files (as well as the primary scratch file) and switch among them with Open ?.

Use *filename,type* to override the attributes that Qedit assigns to your file. Use *workfile,workformat* to override the attributes assigned to the workfile. See below for details.

The Text command works on any file that you can read, but it truncates records longer than 8,172 columns and prints a warning. You can use Qedit to edit program files.

The Text *filename,*Browse command copies a file into Qedit, but it won't let you modify the file. You can use the List command, including List-Jumping, Hold, Visual mode HH and ZZ, and any other Qedit functions that *do not modify the file*. There are two advantages to Browse mode: it protects you from making unplanned changes to a file, and it does not update the Mod-Date of the file.

An asterisk (*) as *filename* means the workfile most recently shut. Text * is useful when you want to expand a workfile that is full; use Shut * to rename the new workfile to the old name.

If you do specify a *workfile* name, Qedit shuts your current workfile and creates a new *workfile* to hold a copy of *filename*.

If you try to Keep the file with its original name i.e. you enter a Keep without a filename, you will get an error.

```
/Text txtfile,browse
/K
File opened with Browse, please specify a Keep file name
```

You can still force a Keep by specifying an explicit filename as in:

```
/Text txtfile,browse
/Keep txtfile
TXTFILE.DATA.ACCT,OLD 80B FA # of records=16
Purge existing file [no]? y
```

The *size* will be 50% larger, unless you specify an explicit *size* for the number of lines for the file to hold (from 200 to a maximum of 99,999,999).

Use the *clearoption* to explicitly specify what Qedit should do when the modified content of the workfile is about to be overwritten. Enter Yes to confirm it is OK to clear the workfile. Enter No to prevent the overwrite. See "Clearing the Workfile" below.

See Set Work for details on calculating nominal size versus real size, as well as options that control treatment of user labels, Qeditscr and non-empty workfiles.

Examples

Copy in a sample job, modify, and :stream:

```
/text jobfile        {copy Jobfile into Qeditscr}
/mod "XXX"           {make changes to template job}
/:stream *           {launch job into MPE batch queue}
```

Make copy of source file, start new version:

```
/text hwsy.src       {copy Hwsy.Src into Qeditscr}
/shut hwsy.bob       {save as permanent file}
/open *              {open Hwsy.Bob and edit it}
```

Copy a source file without using a scratch file:

```
/text audit.bob = audit.source
```

Use Text and Keep to revise a schema file:

```
/text schema         {copy Schema into Qeditscr}
/mod 5/10            {make some changes}
/keep                {update master copy of schema}
SCHEMA.BOB.GREEN,OLD 80B FA # of records=86
Purge existing file [no]? yes
```

Text two files and copy lines between them:

```
/text One             {copy One into primary scratch}
/text Two,New         {copy Two into extra scratch}
/hold 10/20           {or use HH in Visual mode}
/open *               {switch back to file One}
/add 100=hold         {or use AH in Visual mode}
/keep                 {save changes to One}
```

Text a data file with its user labels:

```
/text quizsub.data,labels
```

Expand a Qedit workfile when it is full:

```
/shut
/text filename
/shut filename
/open *
```

Absolute File Name

When you Text a file, Qedit remembers the **absolute path** name of the file, not the relative name. This becomes the default for the Keep command. If you Keep with an explicit name, Qedit remembers the absolute path of that name. If you do Set Keep Name xxx to override the default Keep name, Qedit remembers xxx as a **relative** name, not as an absolute name. This gives you all the options you need to take advantage of the POSIX namespace and Change Directory (Chdir) command in MPE/iX 5.0.

Native-Mode Spool Files

Qedit can Text output spool files on MPE/iX, but does not Keep them (use List LP instead).

```
/showout
/text #o1234
/text #9876
```

COBOL Copylib Members

To edit a Copylib member with Qedit, you Text it in like an ordinary file and Keep it with your changes. The member name goes in parentheses and the name of the Copylib file goes after that (the file name may be omitted if you have a :File command for "copylib").

```
/file copylib=copylib.pub.develop
/text (custrec)
/text (custrec) copylib.test.develop
```

How to Text Several Files?

Qedit has a primary scratch file that is referred to as "Qeditscr". Any time you take the default options for Opening or Texting a file, your work will be in the Qeditscr primary scratch file.

What if you want to edit two or more files and copy lines between them? You could Text the first file, Hold the desired lines, Keep your changes, then Text the second file and insert the lines. However, if you are doing a large number of edits, the constant Text and Keep operations are inconvenient.

A faster method is to Text each file into an **extra scratch file** of its own. Then use the Open ? or Open *-*n* command to switch quickly among them. By default Text always copies the file into the primary Qeditscr scratch file. However, Qedit can supply up to eight extra scratch files. Use the New option (text abcdef,new) or do Text-J (textj abcdef).

The New command can also create extra scratch files. *Warning:* If you do New;Text file,New you will create two Extra Scratch Files, not one.

Saving Your Work

When you Exit, Qedit checks whether you have any unsaved edits in any of your Extra scratch files. If so, you are prompted to Discard? them, or stay in Qedit to save them. Qedit also asks you to Discard your changes if you Close a scratch file, which removes it from the Open-Stack and purges the file.

Clearing the Workfile

Sometimes Qedit will ask you if it is okay to clear the existing contents of the scratch file and sometimes it won't. If you have not made any changes to the scratch file since you last did a Text or Keep, or :Stream *, Qedit assumes that you have another copy of the lines and it is okay to delete the copy in the scratch file.

In batch, the answer to the "Clear?" question will always be "yes". If you know the answer you want, you can append it to the file name parameter just as you do in the Keep command:

```
/text abc,yes
/text def,no
```

Using Set Keep for File Attributes

When you Text a file, Qedit remembers as many attributes of the file as possible. When you later Keep the file, Qedit attempts to reproduce the original file. The Text command does an implicit Set Keep command to record what it has discovered about the Text file. You can use Verify Keep to see whether the Text file had sequence numbers, was permanent or temporary, etc., and then use Set Keep to override any of those attributes.

Using TextQ for Numeric Data Files

TextQ means "text quiet" or "text unnumbered" and is the same as using ,UNN after the *filename*. Use TextQ to edit any data file that may contain numeric digits in the last eight columns. Otherwise, Qedit may interpret those digits as sequence numbers, if the first five records of the file contain data that looks like ascending sequence numbers.

Treatment of Sequence Numbers

Qedit retains whatever sequence numbers it finds in the external file. If Qedit finds an invalid number, it begins assigning new numbers starting from the last valid number and adding Increment.

If the file does not have sequence numbers, Qedit assigns new ones, starting at 1.0 and going up by a calculated increment. The calculated increment is based on the file's current characteristics such as the number of records.

This works well in the majority of cases. However, there are cases where the calculated increment is not accurate enough or the user wishes to have a specific increment. This can be done by setting the increment with the Set Increment command. Then, use the Setincr option on the Text command.

```
/Text bigfile                {Use calculated increment}
/Set Increment .02           {Set the increment value}
/Text bigfile,Setincr        {Override the calculated increment}
```

Files with User Labels

By default, Text discards the user labels of the external file. However, if you specify Text file,Labels, Qedit attempts to copy user labels into your workfile, so that it can write them out again when you do a Keep. This is handy if you are editing a Cognos sub-file. If you do Text file2=file1,Labels, Qedit can make room for up to 252 user labels. If you Text into an existing workfile, there may not be enough room in it for all of the user labels.

To make Text,Labels the default, use Set Work Labels ON.

Files with Header Records

Text has an option to skip 1 to 9 records before deciding the "language" of the external file. The format is as follows:

TEXT *lines/filename*

where *lines* is the number of lines to skip over.

This is useful with source files from external sources, such as IBM machines, that may have control cards without sequence numbers, followed by a numbered COBOL source program. By skipping the control cards, Qedit may recognize the file as a COBOL program, instead of a Job file.

Tab Character

By default, Qedit retains tab characters in a file when it Texts the file. However, another option is to expand the tab characters into spaces (to the next tab as established by Set Tabs Stop). You can expand tabs on a specific file by using the Expandtabs option on the Text (or List or Add-File) command. To force all file accesses to expand tabs, do Set Expandtabs On (the default is Off). With Set Expandtabs On, use the Savetabs option to access a file without expanding tabs into spaces:

```
/text srcfile,expandtabs
/set expandtabs on
/text dbfile,savetabs  {override Set Expandtabs On}
```

If you are editing files with tab characters, see Set Vis Tab.

Overriding Qedit's File Type

Sometimes Qedit will interpret the format of the external file incorrectly. For example, if you have COBOL source code from an IBM system, it will probably not have a 1052 file code. Thus, Qedit will treat it as a JOB file. You can override the file type that Qedit would assign by appending a file type *keyword* to the file name:

filename,COBOL	
filename,FTN	or FORTRAN
filename,SPL	
filename,PASCAL	
filename,JOB	
filename,RPG	
filename,TEXT	
filename,COBFREE	
filename,DATA	forces Jumbo workfile
filename,UNNUMBERED	
filename,HTML	
filename,XML	
filename,QSL	
filename,JAVA	

The *keyword* may be shortened to any leading substring, but the *comma is required*. You cannot use this option to force Qedit to warp a file into something that it is not. You can only use it to resolve ambiguities (i.e., between FORTRAN, Pascal, and SPL, which look the same).

```
/text funny              {this should be a COBOL file}
Language is now JOB      {but it has a file code of 0}
678 lines in file
/text funny,cobol
Language is now COBX
678 lines in file
```

Overriding the Workfile Format

You can override the workfile format that Qedit would use by appending a workfile format *keyword* to the workfile name:

workfile,DATA {forces Jumbo workfile}

workfile,WIDE {forces Wide-Jumbo workfile}

The *keyword* may be shortened to any leading substring, but the *comma is required*. If you don't specify a *keyword*, Qedit will use the format that is most appropriate for the file you are texting in. If the lines have 256 characters or less, Qedit creates a regular workfile. If the lines are between 257 and 1,000 characters, Qedit creates a Jumbo workfile. If the lines are wider than 1,000 characters, Qedit creates a Wide-Jumbo workfile.

You can force Qedit to use a wider format by using the Data or Wide keywords to override Qedit's choice. If you want the Jumbo format, use the Data option. If you want the Wide-Jumbo format, use the Wide option.

You cannot force Qedit to use a smaller workfile format.

Let's assume that we have a file called Funny, which has 80-character lines.

```
/text funny           {this would create a regular workfile}
Language is now JOB
678 lines in file
/v open
Open: QED35753.SRC.DEVACCT,Scratch JOB Length:80 Margins:1/80

/text wrkdata,DATA=funny  {this creates a Jumbo workfile}
Language is now JOB
678 lines in file
/v open
Open: WRKDATA.SRC.DEVACCT JOB Jumbo Length:80 Margins:1/80

/text wrkwide,WIDE=funny  {this creates a Wide-Jumbo workfile}
Language is now JOB
678 lines in file
/v open
Open: WRKWIDE.SRC.DEVACCT JOB W-jumbo Length:80 Margins:1/80
```

These examples require that you name the workfiles and make them permanent. If you want to have a scratchfile while making it a Jumbo workfile, you should

```
/Set Lang Data
/Set Length 1000
/AQ 1=funny
```

If you want to make a Wide-Jumbo scratch file, set the Length to a value larger than 1,000. Note that the Language remains Data.

CCTL Disc Files

When you text in a disc file that was created with the CCTL attribute, the first column of each line contains a "carriage control" code. For example, "1" means page eject and "+" means overprint. There are two codes for single space: " " (i.e., blank) and binary zero (i.e., the null character). Unfortunately, binary zero is nonprinting, so when you List a line the rest of the columns are shifted over one space. Also, if you

use Visual to edit such a file, the Binary Zero in column one is printed as a dot and you cannot edit the line. To avoid these problems, Qedit replaces the Binary Zero in column one with a Space character, which means the same thing.

File Modification Timestamp

When you use the Text command on a file, Qedit stores the file's modification timestamp in the workfile. You can display the timestamp by using the Verify command. Qedit uses the stored timestamp to perform some verification if you try to either Keep the file or Shut and re-open the workfile.

$File Keyword

File names containing special characters might cause problems to Qedit. For example,

```
/Text ./file:name
Error:  Extra or invalid character in Text command
```

If you run into this problem, you can use the $file keyword instead. The $file keyword can be used wherever a file name is expected, such as in Text, Add, List. The syntax is:

```
$file[=]"filename"
```

$File is a reserved keyword, which is followed by an optional equal sign and the actual file name enclosed in string delimiters. Without doing anything to the string, Qedit tries to open the specified file. The previous example now becomes:

```
/Text $file="./file:name"
10 lines in file
```

In this example, the file name is assumed to be in the POSIX namespace. If you want to access files in the MPE namespace, you now have to enter the name in uppercase and use the POSIX notation:

```
/ACCOUNT/GROUP/FILENAME
```

Undo Command [UN]

Reverses the effect of the previous command that modified text, after showing you the command and asking your permission.

UNDO [ALL | REDO]

(Default: the last editing task)

Undo prints the command to be undone and how many lines it actually updated, added, deleted, and/or renumbered. The commands can only be undone in reverse order, one at a time, and no commands can be skipped. Therefore, you don't have to specify which command to Undo; you are always presented with the next one, then asked if you want to actually undo it.

If you want to see the commands in the Undo Stack, use the Listundo command.

After an Undo, another Undo will cancel the command that was one further back. In this way, you can Undo back to the time the file was first Texted or Opened. If you Undo one step too far, you can cancel your preceding Undo task using the Undo Redo command. This option is accepted until there are no more Undo tasks to be cancelled. Once you enter a non-Undo edit command, you have approved your Undo tasks and they can no longer be cancelled.

Or, you can use Undo All to undo all the updates since the last Text or Open. If you don't like the results after an Undo All, you can put the file back in the edited state by doing another Undo (i.e., you can Undo the Undo All).

Examples

```
/cq "Bob"Robret" all  {mistake in Change}
23 lines changed
/undo                 {reverse Change command}
Command to Undo:  CQ "Bob"Robret" all
   ( Update:8 )       {shows actual update counts}
```

Undoing Changes in Visual Mode

You can use the Undo command to cancel changes in Visual mode as well as in Line mode. All of the changes you make on the screen before pressing Enter are treated by Qedit as one "undo-able" command, except for cut-and-paste operations. Qedit always executes your cut-and-paste operation last after updating the file with any other changes, no matter what order the changes were made in. This means that you can choose to undo just the cut-and-paste operation, or undo it and all of the other changes. You can continue undoing your previous changes from each Enter, one at a time, until your file is back to its original state.

Notes

An Undo cannot be undone, except by Undo All.

The Undo change log is reset by a Text command (but not a Keep), by a Delete All, or by making changes to another file. The Undo log is temporary and is not retained if you exit Qedit or log off the system. You cannot go back and undo changes that you made to a file after you leave Qedit.

You can Undo any text-altering commands since the last Text or Open command, except for Delete All. Delete All can be canceled before the next command line is executed using Control-Y. You can shut and then reopen a file and undo changes as long as you don't make any changes in any other files.

In the unlikely event that the undo log file (i.e., "undolog") overflows, Qedit will print a warning message and disable the Undo feature. Undo is disabled in batch by default, and active in session usage. Using the Set Undo command you may override this default or disable Undo for a particularly large edit, to save overhead.

```
/set undo on
/set undo off
```

Up Command [UP/F2]

Starts "browsing" the current file by displaying one page, starting about six lines forward. You stay in "browse" mode until you enter any command (see List, jumping option).

UP

(F2 key does the same)

In Line mode, Up (or F2) puts you into List-Jumping's browse-mode. The starting location is a few lines ahead of the current position, where the actual number of lines is determined by the Set Visual Roll amount. Qedit displays a screen of text, where the screen size is either 23 lines or what you specify with Set List LJ, then waits for you by asking "More?". Press Return to see the next screen, typing a line number moves you to the screen starting at that line, pressing F2-F6 does the appropriate action, and F8 or "//" or Control-Y or typing any command gets you out of browse-mode. At the "More" prompt, the * "current" line is the last line displayed.

Use Command [U]

Executes part or all of the commands in a file.

USE *filename* [*rangelist*]

(Q=no display, J=no open error)

(Default: * means current or last workfile, range=all)

Qedit opens *filename* and reads command lines from it, instead of from Stdin. "*" as the *filename* either closes the current workfile and Uses it, or Uses the workfile most recently closed, including a scratch file. Execution continues until the last line of the usefile or until you strike Control-Y.

Qedit prints the commands on Stdlist, unless you do UQ. To print instructions to the user even when UQ is in effect, put Q commands in your usefile. :Comment commands will document the usefile; the comment is not printed with UQ.

Examples

```
/use fixspell              {execute a list of Changes}
ch "reveiw"review" @       {commands are printed}
ch "corelate"correlate" @
/use $ 30/                 {rangelist, last file}

/use *                     {* = last Open workfile}
/use fixit 2/5             {do lines 2/5 only}
/use compile "extfile"     {do lines with string}
```

{See the Q command for a sample usefile that compiles}

Notes

The Use command temporarily redirects Qedit's command input device, reading commands from a file. The same features and restrictions apply to the commands in a usefile as would apply to commands typed on the terminal. For example, a command cannot be continued from one line to the next, usefiles do not accept parameters, etc. For these types of features, see User Commands (UDCs and command files).

The usefile can be of any file type allowed in Text or Add. Although Qedit allows nested usefiles, you cannot have nested loops. Usefiles support :If and :Else for conditional logic, but not :While. For looping and parameter power, use command files.

If the usefile does not exist, UJ suppresses the error message that would be printed, allowing optional Use commands in Qeditmgr files.

Verify Command [V]

Prints the status of Qedit, the current workfile, and Set options.

VERIFY [@ | ALL]
[LP]
[*keyword* ...]

(Default: show nonstandard options)

The default is to show the options which are not in their default state. Verify All shows every Set option in the exact form that Qedit accepts (the shortest form is shown in uppercase).

The *keywords* may be any Set option, or Alias, Exit, Proc, Prog, Run, String, Lastfile, Visual, Version, Z for Zave, or ZZ for the marked range.

Examples

```
/verify             {show nondefault values}
/ver open           {describe the Open workfile}
/ver visual         {Visual mode status and options}
/v @                {print full status on Stdlist}
/verify lp          {print full status on LP}
/verify version     {Qedit version number}
/verify string      {current "string" for F3/F4}
/verify lastfile    {previous file for List $}
/v $                {abbreviation for previous file}
/verify prog        {Qedit program file, parm=, info=}
/verify run         {suspended programs, if any}
/verify proc        {active Procedures}
/verify exit        {does Qedit suspend on Exit?}
/verify zz          {currently marked range}
```

Visual Command [VI/F1]

Switches to full-screen editing at the current line, at a specified line, or at the next occurrence of a specified string.

VISUAL [*linenum* | "*string*"]

(Default: *linenum* = *)

Qedit allows you to edit text in "full-screen" mode on most HP terminals that have block-mode, and on PCs equipped with terminal emulators such as Reflection and AdvanceLink. You use the terminal's special keys to edit the screen, instead of using Qedit commands. When the image on the screen suits you, press Enter and Qedit reads the screen and records the changes in your file. For full details, see the "Getting a Quick Start with Full-Screen Editing" chapter.

Examples

```
/visual    {start full-screen editing now}
/vis 45    {start full-screen editing at line 45}

/vi "go"   {find "go" then change to full-screen}
```

Notes

For a help screen that summarizes most of Visual mode, type a "?" in the top screen line (at the ===>) and press the F7 key.

If you are a novice, use Set Vis Update ON. Qedit now automatically reads your updated screen when you browse or use a function key.

Other tips: Do not add more than 60 lines before pressing Enter. If you have trouble at 9600 baud try turning your terminal down to 2400 baud. Avoid the Clear Display key; if you press it by mistake, type "*" in the top screen line and press F7 (this will refresh the screen). To save and restore your function keys, use Set Vis Save ON. To get out of Visual, use the F8 function key.

Right Margin and Display Width

Full-screen mode can take advantage of most features available on the terminal or emulator it's running on. A couple of these features are the ability to adjust the display width and the right margin based on the file's record length. Unfortunately, these features are not implemented equally well on all devices and may cause undesirable behavior.

For example, the hpterm emulator supports display width larger than the standard 80 columns. However, Qedit can not change the display width using the usual escape sequences. Setting the right margin also caused problems for some users. That's why we introduced the RCRTMODEL 1234. This tells Qedit that the terminal can be polled to determine the current display width and has basic block-mode capabilities.

At the same time, we introduced **Set Visual Marginfixed**. When RCRTMODEL is set to 1234, Marginfixed is automatically enabled. In this case, Qedit does not try to change the display width nor does it change the right margin. It assumes both are set by the user and have the same value. If needed, a user can manually enable Marginfixed on a terminal or emulator other than hpterm.

:While and :Endwhile Commands

In command files and UDCs, you may use :While and :Endwhile commands to create program loops. See also the :If command, the /Qedit command and the INSIDEQEDIT JCW. The :While command can be nested, just like the :If command, but may not be continued with &. :While and :Endwhile cannot be used at the /-prompt or in usefiles. When used in a UDC or a command file, :While and :Endwhile can not be prefixed with a slash "/".

:WHILE *expression* DO

:ENDWHILE

Examples

This example lists the line containing a search string, plus the next the three lines. To try the example, enter the following commands into Qedit and Keep them as LOOPER.

```
PARM string
/set window (up)
setjcw cierror = 0
continue
/findq "!string" first
while cierror=0 do
    display FOUND "!string":
    /list */*+3
    display
    continue
    /findq "!string"
endwhile
```

You invoke the command file by typing the file name and the parameter:

```
/open myfile
/looper alberta
/shut
```

Do I Really Need to Use the :While Command?

You may not need to use the :While command. Most Qedit commands accept a rangelist, which makes it easy to include a search string in the command itself. For example, to change "oldpass" to "newpass" in all lines that contain "!job " in the first five columns, you would

```
/change "oldpass"newpass"  "!job " (1/5)
```

Words Command [W]

Looks up each word in the spelling dictionaries. This command will only work if you have the dictionary of the Spell (Bonus) program installed on your system.

WORDS *"string of words"*

The Words command can check the spelling of words, or search the dictionary for similar words. Words in the string must be separated by blanks.

Check spelling

When Words checks the spelling, it will tell you whether the words in the string are correctly spelled (found), incorrectly spelled (not found), or incorrectly cased (wrong case).

Example

```
/words "right wroung david"
found     : right
not found : wroung
wrong case: david
```

Searching for Words

Words can search for similar words in one of two ways. The first, called prefix search, searches for words that begin with the same letters as the given word. The second, called soundex search, searches for words that sound like the given word. To specify a prefix search, add an at-sign (@) after the search word; to specify a soundex search, add an exclamation mark (!) after the search word.

Examples

```
/words "quicks@"     {find words prefixed with "quicks"}
word      : quicks
prefix    : quicksand
          : quicksands
          : quicksilver
          : quickstep
4 matches

/words "vegetable!" {find sound-alikes for "vegetable"}
word      : vegetable
soundex   : vegetable
          : vestibule
          : visitable
3 matches
```

Notes

The spelling checker's dictionaries must be installed for this command to work. See the chapter "Installing Qedit" for instructions about installing the dictionaries, and the notes under the Spell command for more information. Use the Spell command to spell-check a range of lines.

:Xltrim Command [XLTRIM]

This command allows you to reduce the disc space allocated to some MPE/iX files, especially Qedit files, which have space left for expansion (i.e., the ultimate file Limit is greater than the current End of File). :Xltrim gives back any sectors beyond the EOF, but leaves the Limit above the EOF for future expansion. :Xltrim does not work on on MPE V, because MPE V does not have the special Fclose option that is needed.

:XLTRIM *fileset*

(Defaults: none)

:Xltrim finds all the files in *fileset* which have their EOF below their Limit and have unused disc space beyond their EOF. On current versions of MPE/iX you need Write-Access security to the file, but on older systems you only need Read Access. :Xltrim opens each file and then closes it with the bit 11 of the **disposition** set to 1; this returns any unused disc space beyond the EOF, but does not reduce the Limit. Therefore, the next time you use the file, MPE/iX can still expand in size as needed. This command can save thousands of sectors of disc space. If the EOF equals the Limit, nothing is done to file. If the Limit is greater than the EOF, there may or may not be unused space to be recovered by :Xltrim; this depends upon how MPE/iX has allocated disc extents to the file.

Examples

```
/xltrim @.source
/xltrim @.@.green
```

Zave Command [Z]

Saves or recalls a string of Qedit commands.

Z [= [*commands*]]

(Default: if no *commands*, Z= prompts)

Use Z= to save some Qedit *commands* for later use. Use ";" to combine multiple Qedit commands. If Qedit does not find anything after the "=", it reads the *commands* from the terminal. Qedit saves the *commands* and you can execute them again at any time by typing Z. There is only one "Z" in Qedit. When you enter a new Z string, you lose the existing one.

When you type Z with no = sign, Qedit inserts the saved *commands* in place of Z. The total length of the Z string plus the remainder of the original line must be 80 characters or less.

Examples

```
/z=            {redefine value of Z string}
list */last    {you enter new line of commands}
/z             {use Z to mean "list */last"}

/z=l*-5/*+5    {define z as "list vicinity"}
/fq "trish";z {find string and display around it}
/z=f"`|1@"(p); a*=*; c"`".ent "
               {find string that matches pattern; copy line}
               {change a string in the new line}
```

Notes

You can display and edit the current Z string only if you entered the Z string at the same time as the Z= command.

```
/z=q "hi"
/z
hi
/redo z=
/Z=q "hi"
      hello"
/z
Hello
```

Although the line saved in Z need not be a complete command, it is recommended that incomplete strings not be put in Z, as they may be upshifted.

"ListJ *" is a useful command string to save. Just type Z, and Qedit will start listing from your current position. When you find what you want, press Control-Y to stop the listing.

ZZ Command

Marks a block of lines so you can refer to them in any command.

ZZ [*line* [/ *line*] | OFF]

ZZ [[*string range*] | OFF]

(Q=no display)

(Default: * becomes start or end of block)

ZZ line/line marks a range of lines, while **ZZ line** marks the start or end of a range. ZZ marks one range only, not a rangelist. To mark a single line, say 5, use `zz 5/5`.

ZZ OFF cancels the currently marked range, eliminating the half-bright display enhancement in Visual.

Examples

```
/zz  5/10
/change "prog"program" zz

/find "procedure open" (up)
/zz                      {mark start of block}
/find "@end;~{open}@" (pattern up)
/zz                      {mark end of block}
/keep savefile zz        {save block in a file}
/verify zz               {check current range}
/zz off                  {cancel current range}
```

Notes

The marked range is remembered when you Shut and reopen the file and is adjusted for Renum operations. Use Verify ZZ or List ZZ to check the currently marked range. ZZ is also valid as a cut-and-paste operator in Visual mode.

Using a string range on a **Find** command automatically updates the ZZ marker. For example:

```
/v zz
ZZ OFF
/find "start"/"end" [
Lines 5/11 saved in ZZ
/v zz
ZZ 5/11
```

User Defined Commands

You can execute MPE User Defined Commands, also known as UDCs, inside Qedit. You must first do a Set Udc command to tell Qedit which UDCs to recognize. To check on your UDCs, use Verify Udc, :Setcatalog and :Help *udc*.

The wider concept, User Commands, includes both UDCs and command files. Command files are like UDCs, but do not have to be cataloged, since each file contains a single command whose name is the file name itself. Many users are switching from UDCs to command files, because the maintenance is easier.

Qedit accepts UDC commands with or **without** the leading colon (":"). You must precede a UDC name with a colon if the name of the UDC is the same as a Qedit command (e.g., :R, :L). Beware of some unobvious Qedit commands composed of abbreviations and options. For example, PRT is interpreted as a Qedit command (Proc with the template option) so you must put a colon in front of it to have Qedit execute it as a User Command.

UDCs may contain MPE commands such as Listf, conditional logic commands such as If-Else-Endif and While-Endwhile, Qedit-simulated MPE commands such as :Editerror or :Display, other UDCs, command files, calculator commands (=5*80), external commands (%purge t@), and Qedit commands (precede them by a slash, as in /list abc). Qedit commands in command files and UDCs will set the CIERROR JCW so that you can test the result of the command. See the /Qedit Command for more details.

Sample UDCs

UDCs allow you to abbreviate the MPE commands that you use frequently and to create complex new commands. We provide a sample UDC file in the Robelle account that you may find useful:

```
/set udc udc.catalog.robelle
/:showcatalog
UDC.CATALOG.ROBELLE
   PROSE                USER
   PDISC                USER
   SEG                  USER
   TIME                 USER
   SPOOK                USER
   DUP                  USER
/:help time
USER DEFINED COMMAND:
time
comment show the date and time
showtime
/:time
FRI, OCT 14, 2000,  9:24 PM
/:SPOOK     {runs spook on any CM system}
```

Restriction on Qedit UDCs

There are three restrictions on the User Commands that Qedit can handle: no more than 32 parameters or more than 256 bytes of parameters, no expanded line greater than 279 characters, and no I/O redirection on MPE V.

Qedit supports If/Else commands and the While-Endwhile loop of MPE/iX, but the CIERROR JCW is not updated exactly the same as MPE for all errors.

INSIDEQEDIT JCW

Since UDCs and command files are not exactly the same when executed inside Qedit, as they are when executed by MPE, we provide a JCW that tells you where you are. INSIDEQEDIT is set to 0 the first time you run Qedit. You should also set it to 0 in your logon UDC. If you do a ShowJCW, INSIDEQEDIT will always show a value of 0. When you refer to INSIDEQEDIT from within Qedit (in an If or While command), Qedit does *not* look at the real JCW. Instead, it inserts a constant value of 1. Nor does Qedit set the real JCW to 1; it is still 0. Thus, you have a JCW that acts differently within Qedit, giving you a way to find out where you are. Since /Qedit commands can only be executed when the command file is executed by Qedit, the INSIDEQEDIT JCW gives you a way to test this.

```
if insideqedit=1 then
   run spook5.pub.sys;hold
else
   run spook5.pub.sys
endif
```

Warning and Error Messages

You can control the appearance of warning and error messages via the HPMSGFENCE variable when executing commands, UDCs and command files by MPE. Qedit has no way to check the value of this variable when it executes the same commands, thus HPMSGFENCE has no effect. An equivalent feature has been implemented via a user variable called ROBMSGFENCE. It uses the same values and meanings as HPMSGFENCE but applies only to commands executed by Qedit. You can change its value at any time and the change takes effect immediately.

```
setvar robmsgfence 1   {suppress warning messages}
setvar robmsgfence 2   {suppress error and warning messages}
setvar robmsgfence 0   {default, displays warning and error messages}
```

Here are some examples:

```
/purge nofile
File "!" not found.  No purge done.  (CIWARN 383)
/setvar robmsgfence 1        {suppress warnings}
/purge nofile
/build nofile;temporary
Unknown keyword for BUILD command.  (CIERR 299)
/setvar robmsgfence 2        {suppress errors and warnings}
/build nofile;temporary
/setvar robmsgfence 0        {display errors and warnings}
/build nofile;temporary
Unknown keyword for BUILD command.  (CIERR 299)
/purge nofile
File "!" not found.  No purge done.  (CIWARN 383)
```

UDC Security

Some users have altered the security of Command.Pub.Sys to be (X,L:ANY; R,A,W:CR). If you do this, the Set Udc On command will not be able to search Command.Pub.Sys. Use Set Udc with file names instead.

UDCs with Parameter Substitution

Here are two UDCs with parameters, :Compare and :Seg.

```
/set udc compudc.catalog.robelle
/:help compare
USER DEFINED COMMAND:

COMPARE filea, fileb, outfile="$STDLIST", info=""
comment
comment  Compare two files using the Compare program.
comment
file filea=!filea
file fileb=!fileb
file outfile=!outfile
run compare.pub.robelle;info="!info"
reset filea
reset fileb
reset outfile
****
```

You invoke the Compare UDC by entering:

```
/:compare *,origfile  {* means current workfile}
```

In Qedit, an * as a parameter to a User Command substitutes the name of your current workfile or the last one you Shut. As well, $ as a parameter substitutes the name of the last external file name mentioned (Verify Lastfile).

The Seg UDC gives you the ability to execute a file of :Segmenter commands without typing them interactively and without streaming a batch job.

```
/setcatalog udc.catalog.robelle
/:help seg
USER DEFINED COMMAND:

seg parm1
comment execute segmenter commands from a file.
run segdvr.pub.sys;stdin=!parm1
*
```

To invoke Seg, specify the file name that contains Segmenter commands:

```
/:seg seg055
```

Variables

On MPE/iX, commands in UDCs and command files may reference variables by preceding them with an exclamation mark, just as you do for parameters (e.g. `display !hpgroup`). Variables are also allowed in MPE commands which you enter through $stdin or a usefile. On MPE V, Qedit allows you to refer to the value of a JCW in the same way (e.g., display !cierror).

Current Workfile (*)

The :Prose command is even more useful than it appears, due to an extension to the UDC-concept that Qedit provides: * as a parameter is replaced by the name of the current workfile, or the workfile just closed if none is Open. Thus, you can easily edit and print a Prose document from within Qedit:

```
/open rpt003.doc      {open file for changes}
/modify ...           {edit the document}
/set udc udc.catalog.robelle
/:prose *             {print final-stop with control-y}
                      {Prose may take a while}
/modify ...           {more changes...}
/add .001             {select pages to print}
  0.001 .sel (1:4)
  0.002 //
/:prose *,*lp         {print copy on line printer}
```

When you specify * as a UDC parameter and the current file is in your logon group, Qedit passes the unqualified file name as the UDC parameter instead of the fully qualified file name. This allows you to append group names to it in the UDC body.

Options for UDCs

Qedit supports the MPE options for List, Nohelp, and Nobreak, plus:

```
OPTION NOERROR        {suppress all MPE error messages}
OPTION NOWARN         {suppress all warning messages}
```

Option List, Nolist, Recursion and Norecursion can be used at the beginning of a UDC as well as anywhere in the body of a UDC to enable or disable the corresponding feature. Other options are recognized only at the beginning of the UDC.

Option List and Nolist controls the display of individual commands that make up a UDC. When Option List is encountered, Qedit echoes every command back to $stdlist as they are executed. Option Nolist suppresses the display. The option can be enabled and disabled as often as needed.

In addition to User, Account and System UDCs loaded with Set Udc On, you can add session-level UDCs. These are loaded by the Set Udc *filename* command and are valid for the duration of the current Qedit session.

You can have session header and trailer UDCs. Session header UDCs precede the MPE-equivalent UDCs loaded with Set Udc On. Session trailer UDCs follow these same UDCs. For example, if you use all UDC levels, you would have:

1. Session header
2. User
3. Account
4. System
5. Session trailer

Even though the first and last levels are designated as session UDCs, Qedit treats them as separate, unrelated levels.

Set Udc On loads all 3 levels automatically. If you wish to load files from a single level, you have to use Set Udc *filename* to load individual files.

When Qedit searches UDCs, it starts from the session header level and goes down the list. By default, a UDC can only call a UDC that is defined at a lower level. This is non-recursive execution.

In some instances, it might be desirable or necessary to call UDC that is higher up in the search order. To achieve this, you can insert an Option Recursion statement in the calling UDC. From that point, Qedit starts the search at the top of the current level. For example, if the UDC currently executing is at the Account level, the search starts with the first account UDC. If the currently executing UDC is a Session Trailer, the search starts with the first session trailer UDC.

To disable recursion, insert an Option norecursion statement at the desired location. Recursion can be disabled or enabled as often as needed.

Because recursion can cause infinite loops if not used properly, UDCs can be nested only 30 levels deep or until allocated stack space is used up.

Command Files

A command file is a file that contains a set of commands which will be executed when you type the name of the file (like a DOS batch file). Command files are similar to UDCs except that you do not need to catalog them. Like UDCs, command files can have parameters.

Qedit accepts command file names with or **without** the leading colon (":"). You must precede the command file name with a colon if the name of the command file is the same as a Qedit command (e.g., :R, :L). Beware of some unobvious Qedit commands composed of abbreviations and options. For example, PRT is interpreted as a Qedit command (Proc with the template option.) If you have a command file call PRT, you must put a colon in front of it to have Qedit execute it as a User Command.

You can use command files as a "command language" to write customized functions in Qedit. Command files may contain MPE commands like :Listf, Qedit commands preceded with a slash, conditional logic commands such as :If and :Else, :While loops, Qedit-simulated MPE commands such as :Editerror, other command files, UDCs, external commands (%purge t@), and calculator commands (=5*80). You can include Qedit commands in a command file by preceding them with a slash "/". Qedit commands in command files and UDCs will set the CIERROR JCW so that you can test the result of the command. See the /Qedit Command section for more details.

A command file can start with the optional header lines: PARM, ANYPARM and OPTION. These define the parameters and options of the command file. The command file terminates at the end of file or the first * line. If you need to pass an exclamation mark as parameter, use !! (for example, use `!!xx` if you want to pass in the string `!xxx`).

For example, here is a command file to print the spool files for a job number:

```
SSP.BOB.GREEN
parm jobnum="0"
if !jobnum > 0 then
   showout job=#j!jobnum
endif
```

To invoke SSP.Bob.Green within Qedit, you just type

```
/ssp 67
```

Qedit follows the Hppath variable in searching for a command file named "ssp". The default is to look in your logon group, then your Pub group, then Pub.Sys. You can override the default path by doing :Setvar Hppath on MPE/iX or Set Hppath on MPE V (simulated).

```
/:setvar hppath "!hpgroup,cmd,pub,pub.sys" {MPE/iX}
/set hppath "!hpgroup,cmd,pub,pub.sys"     {MPE V}
```

Warning: When you convert a UDC into a command file, don't forget to replace the UDC name in the first line by the literal "PARM". If you forget, you can easily create a recursive loop, since the PARM line is optional in command files. A command file can invoke itself recursively, but only up to 10 levels deep.

Restriction: Command files must be permanent files on MPE V, but they can be either temporary or permanent files on MPE/iX.

Variables in Command Files

On MPE/iX, commands in command files may refer to variables by preceding them with an exclam, just as you do for parameters (i.e., `display !hpgroup`). On MPE V, Qedit allows you to refer to the value of a JCW in the same way (i.e., `display !cierror`).

Here is a command file that updates a record with today's date in YY/MM/DD format. The date is derived from the pre-defined HP JCWs *hpyear*, *hpmonth*, and *hpdate*:

TODAY.CMD.SYS

```
/t file                  {replace columns 1/8 with date}
/set win (1/8)
/c 1/8 "!hpyear/!hpmonth/!hpdate"
/l "/" (5/5) *           {check for "/" in column 5}
if qeditcount = 1
   /c 4 "0"              {insert leading 0 before month}
endif
/l " " (8/8) *           {check for " " in column 8}
if qeditcount = 1
   /c 7 "0"              {insert leading 0 before day}
endif
/set win ( )
```

The value of the JCWs *hpmonth* and *hpdate* may be single digits (for example on January 1, 2000) so we may need to insert leading zeros (99/1/1 becomes 99/01/01). We do this by testing for the existence of a "/" and a " " in specific columns. If there is a "/" in column 5, we know that the month value is a single digit.

I/O Redirection

On MPE/iX, you can have I/O redirection in command files. The "<" and ">" characters are used to specify I/O redirection, so there are some restrictions in using them in a command file's Qedit commands.

Any occurrence of "<" or ">" means I/O redirection, unless these characters are part of a string. However, the string can only be delimited by a single quote (') or a double quote ("). The other string delimiters usually accepted by Qedit do not work. For example,

```
/find \<comment>\
```

works as a Qedit command on-line, but does not work in a command file, because the "<" and ">" are interpreted as I/O redirection.

Command Files Security

Qedit needs only Read or eXecute access to command files. However, for security reasons you should use only eXecute access. This way, no one will be able to look at the file contents, nor will they be able to use a Help command on it.

Users will be able to run only the command file.

QEFILE Variable

When executing a command file from inside Qedit, Qedit updates the variable QEFILE with the name of the file. This variable is a substitute for the MPE variable HPFILE, which is used in the same manner by the Command Interpreter.

You can write your command files using only HPFILE. During execution, Qedit replaces all occurrences of the word HPFILE wit QEFILE before executing each command. This way, your command files should execute the same way whether they run from the CI or from Qedit. You don't have to check the INSIDEQEDIT JCW.

You have to keep in mind that, if you use Option List or if there are messages that contain HPFILE, the messages will now show QEFILE.

Warning and Error Messages

You can control the appearance of warning and error messages via the HPMSGFENCE variable when executing commands, UDCs and command files by MPE. Qedit has no way to check the value of this variable when it executes the same commands, thus HPMSGFENCE has no effect. An equivalent feature has been implemented via a user variable called ROBMSGFENCE. It uses the same values and meanings as HPMSGFENCE but applies only to commands executed by Qedit. You can change its value at any time and the change takes effect immediately.

```
setvar robmsgfence 1   {suppress warning messages}
setvar robmsgfence 2   {suppress error and warning messages}
setvar robmsgfence 0   {default, displays warning and error messages}
```

Here are some examples:

```
/purge nofile
File "!" not found.  No purge done.  (CIWARN 383)
/setvar robmsgfence 1        {suppress warnings}
/purge nofile
/build nofile;temporary
Unknown keyword for BUILD command.  (CIERR 299)
/setvar robmsgfence 2        {suppress errors and warnings}
/build nofile;temporary
/setvar robmsgfence 0        {display errors and warnings}
/build nofile;temporary
Unknown keyword for BUILD command.  (CIERR 299)
/purge nofile
File "!" not found.  No purge done.  (CIWARN 383)
```

Calculator Command [=]

The calculator evaluates an expression and prints the result.

=*expression* [,O | D | B | H | A | # % $]

Any command that begins with an equal sign (=) is treated as an *expression* to be evaluated. An expression consists of numbers and operators, followed by an optional display format. The operators can be addition (+), subtraction (-), multiplication (*), division (/), or exponentiation (**). The value of the expression is printed immediately on Stdlist.

```
=20+15              {add two numbers together}
Result=35.0
=20*15              {multiply the same numbers}
Result=300.0
=20-15              {subtraction}
Result=5.0
=20/15              {divide, print precise result}
Result=1.33333333333
=20**15             {20 raised to the 15th power}
Result=.327680000000E+20
```

Order of Evaluation

Unlike most programming languages, the calculator always evaluates the calculation from left to right. This is similar to an electronic calculator, where each keystroke is operated on immediately. You can use parentheses to force the calculator to evaluate the expression in a different order.

```
=14+16+15/3       {compute an average}
Result=15.0
=14+16+(15/3)     {add 14, 16, and the result of 15/3}
Result=35.0
=14+((16+15)/3)   {divide 16+15 by 3, then add to 14}
Result=24.3333333333
```

Percentages

A number in the calculator *expression* may be followed by a percent sign (%). The calculator assumes that you want to qualify the number as a percentage.

```
=125*5%           {what is 5% of 125}
Result=6.25
=125+125*5%       {add 5% of 125 to 125}
Result=12.5
=125+(125*5%)     {oops, we needed to change the order}
Result=131.25     {this looks like the answer we wanted}
```

The last two examples show the importance of the order in which calculator evaluates the expression. We needed to use parentheses to force calculator to evaluate our *expression* in the correct order.

Display Formats

A calculator *expression* may be followed by a comma and a display letter. The default is decimal (#) and the options are Hex ($ or H),

Octal (% or O), Double (D), ASCII (A) and Binary (B). With these options, the result is treated as a 32-bit integer.

```
=10,%            {standard octal format}
Result=%000012
=-10,%           {negative number in octal}
Result=%37777777766
=100,$           {hexadecimal}
Result=$0064
```

In Double format, calculator prints the double result as two octal numbers. The first number represents the high-order 16-bits and the second number represents the low-order 16-bits.

```
=10,d            {treat result as two 16-bit octal words}
Result=%000000 %000012
=1000000000,d    {high-order 16-bits are nonzero}
Result=%035632 %145000
=-10,d           {note negative value, 2's complement}
Result= %177777 %177766
```

In ASCII format, up to four characters are printed in hexadecimal, decimal, and ASCII display format.

```
=$2020,a
Result=$2020: 32,32 :"  "
=%20161 %72145,a
Result=$2071: 32,113:" q"  $7465:116,101:"te"
```

In Binary format, the high-order 16-bits are examined. If these bits are not zero, they are printed as two groups of eight bits. A one (1) means that the bit is on and a zero (0) means that the bit is off. The low-order 16-bits are always printed as two groups of eight bits.

```
=10,b            {high-order 16-bits suppressed}
Result=%(2)00000000 00001010
=-10,b           {note negative value, 2's complement}
Result=%(2)11111111 11111111 %(2)11111111 11110110
=1000000000,b    {high-order 16-bits are nonzero}
Result=%(2)00111011 10011010 %(2)11001010 00000000
```

Input Format

The calculator supports different input formats for numbers. Octal values are prefixed with a percent sign (%) and hexadecimal values with a dollar sign ($). Decimal is assumed by default, but decimal values may be prefixed with # if desired. An ASCII string of up to 4 characters is entered in quotes. The result of the last calculation is referred to using #.

```
=%12              {octal 12 or decimal 10}
Result=10.0
=%12,o            {octal input and octal display format}
Result=%000012
=$10
Result=16.0
=%177766          {octal number that is really negative}
Result=-10.0
="abcd",h
Result=$61626364
=#,a
Result=$6162: 97,98 :"ab"  $6364: 99,100:"cd"
```

Programmers who make use of octal dumps are often frustrated when 32-bit integers are printed as two 16-bit integers. To help with this problem, the calculator will accept two octal numbers as input and print the result in standard decimal format.

```
=%35632 %145000   {treat as one 32-bit integer value}
Result=1000000000.0
=%177777 %177766  {negative 32-bit integer value}
Result=-10.0
```

Calculator Help

The calculator offers a number of options. You can refresh your memory on the calculator's abilities by entering

```
=?                {? gives help}
                  {prints a summary of = functions}
```

POSIX Commands [!]

There is an easy way invoke and execute the Posix shell (SH.HPBIN.SYS). Any command that starts with an exclamation mark "!" is interpreted as a Posix command. If the exclamation mark is the only character entered, Qedit starts the Posix shell. The user has to exit out of the shell to get back in Qedit.

```
/!
###################################

            MPE/iX Shell and Utilities (A.50.02)
 COPYRIGHT (c) Hewlett-Packard Company 1992, All Rights Reserved.

###################################

/MYACCT/MYGROUP> exit
/
```

Qedit uses the following command to start the shell:

```
xeq sh.hpbin.sys info="-L"
```

If the line contains text after the exclamation mark, Qedit assumes the text is a Posix command. The text is then passed as is to the Posix shell for execution. The shell terminates automatically at the end of execution and returns to Qedit.

```
/!uname -a
###################################
            MPE/iX Shell and Utilities (A.50.02)
 COPYRIGHT (c) Hewlett-Packard Company 1992, All Rights Reserved.
###################################
MPE/iX CALVIN  C.60.00 C.16.01  SERIES 968LX
/
```

Qedit uses the following command to execute Posix commands:

```
xeq sh.hpbin.sys info="-L -c 'uname -a'"
```

Notice the command text is enclosed in single quotes to preserve delimiters. If a command already contains quotes and double-quotes, Qedit automatically doubles them up in the final command. For example,

```
/!echo "This is 'my' message"
###################################
            MPE/iX Shell and Utilities (A.50.02)
 COPYRIGHT (c) Hewlett-Packard Company 1992, All Rights Reserved.
###################################
This is 'my' message
```

Internally, Qedit uses the following command:

```
xeq sh.hpbin.sys info="-L -c 'echo ""This is ''my'' message""'"
```

The command text must not contain another exclamation mark. Otherwise, Qedit interprets them as string delimiters and tries to search for the text in the current workfile.

Troubleshooting and Error Messages

Introduction

When Qedit encounters an error condition, it prints an error message (Error: xxx) or a warning message (Warning: xxx). For file errors, Qedit prints the intrinsic name (Fopen), the file system error number (Err. 50, or a message for common errors) and the file name, if available. An error message will cause the rest of the command line to be skipped, and, in batch mode, will cause Qedit to terminate with an error abort. A warning message, on the other hand, does not stop the rest of the command line from being executed, nor does it cause Qedit to abort in batch mode.

Messages

Most error and warning messages are self-explanatory. The older, more cryptic ones are explained below.

Message	Explanation
Already.	The line number that would next be created already exists in the workfile; duplicate line numbers are not allowed. This error often stops an Add command.
Com Name.	The first character of a line or after a semi-colon is not a valid command.
Create.	Unable to create a process needed to complete a :Compile, :Run, or :Prep command. There may be too many jobs on the system, or the program may be allocated with a different LIB= option.
Empty.	The external file you have referenced does not contain any lines.

EOF In.	Caused by an :EOD or :EOJ entered in column one of a command or data input line. This error always terminates Qedit (example: :EOD).
Equals.	Equals sign (=) is missing from the command (example: Add 5 FILE); most are optional.
Extra.	A command is followed by extra characters when it should be ended (example: A 500?).
Fclose.	Unable to close a new workfile or Keep file. Most common reasons are Error 93 (file security), or Error 100 (already exists).
Fcontrol.	Unable to perform a control operation (such as logical rewind) on a file.
Fgetinfo.	Unable to get file status.
Filename.	An invalid file name has been specified (e.g., K 123).
Fopen.	Unable to open a file. Most common reasons are "no such file" and "bad file name" (example: L ABC1234567).
Fread.	Unable to read sequentially from an external file. There is no good reason for this error that we are aware of.
Freaddir.	Unable to read a block from a workfile. Almost always indicates a "broken" Qedit workfile.
Full.	The current workfile is full, and the last line added is lost. Text the workfile into a new, larger workfile e.g. Text workfile (newsize), or use Garbage to compact the current workfile. Read the section on Set Work to see some examples that increase the size of a workfile.
Fwrite.	Unable to write to a file (example: L LP,ALL; K KFILE).
Fwritedir.	Unable to write a block to the current workfile. Probably indicates a confused workfile.
In Use.	The external workfile cannot be accessed, because it is being edited on some other terminal, or someone aborted Qedit with the file open. You can recover such files by Opening them.
'Language' is now *xxx*	The current language setting has been changed by Open, Text or Set Lang. This may also change the INCR, WINDOW, etc.
Linenum.	The command contains an invalid line number (example: L 5.9999).

LP Open.	Unable to open a file to the LP (formal designator is LP; device is LP, unless changed via the :File command).
Modify.	Illegal control character in a Modify line; an ASCII character with a value less than 32, that is not in the Set Modify list of codes.
No Line.	A specific line number is required, but does not exist (example: AJ 100, when line 100 doesn't exist).
No Open.	A workfile must be Opened before any editing can be done.
No Write.	The workfile cannot be Opened with write access. Someone else may be editing the file, or you may not have proper security access to the file.
Overflow.	A data line has been entered (Add, Replace) or created (Change, Modify) that is greater than the maximum length allowed by the current language setting. Or, a file has been Texted that is too large for the workfile (the Text is rejected; you may have to adjust Set Work Block to allow for line lengths greater than 60 bytes average).
Param.	A parameter of the command is illegal (example: S Work Size ABC)
Paren.	A required left or right parenthesis is missing (example: Set Window (Up)). Many are optional.
Priority.	You have been dropped into a lower priority level because of a system limit. Use V to examine the limits and Set PRI to resume your previous level.
Proc.	Unable to load the procedure named from the library specified; you may have specified the wrong library, or spelled the procedure name incorrectly (example: P ROUTINE-1,S,1).
Range.	In a range, the second line number is less than the first (example: List 4/3).
Recovery.	The file just Opened was not closed properly the last time it was used; the file is being recovered. See Open command.
Size.	An illegal *size* in a new workfile (example: New ABC(1B3)).

String.	The string is not correctly formatted; either the ending quote is missing, or the string is too long (example: C 1,"ABC!,510).
Target.	Format error in the target area of the Change command (example: C 53,"ABC",1).
Too High.	In Renumber, the starting line number is too high. Qedit cannot find an increment small enough to renumber all of the lines in the file. (example: Ren 99999). Choose a lower starting line number.
Window.	Format error in column search window (example: Set Window (1020,MART)).

System Errors

For certain errors, Qedit prints a file "tombstone" to give the reason for the error. The message is formatted as a large block of information in a box. Although all of the fields printed can be important, the two most useful things are the FILE NAME (first line) and the ERROR NUMBER (second from last line). You should determine whether the file in question is your current workfile, an external file, or a listfile (LP). The most common ERROR NUMBERS are as follows:

0	end of file
46	out of disc space
50	no such account
51	no such group
52	no such file
54	invalid file name
55	device not available
61	out of group space
62	out of account space
63	need ND capability
90/91	file in use
92	lockword error
93	security violation
100	duplicate file name

Quit Errors

After serious file system errors, Qedit will print the file system error and the following message, and then abort:

```
Warning: This error can only occur if 1) :File is used to fool Qedit,
2) hardware has problems, 3) you have exceeded your group or account
disc space limits, or 4) Qedit has a bug. Qedit will now abort to
prevent any damage to your workfile. Before attempting to recover your
file, you should back it up with Fcopy, Suprtool, or :Copy. If recovery
after an Open command is not complete, use Qcopy with the Serial option
on the backup.
```

Errors in Visual

There are a number of problems that you may encounter when using Visual. We have tried to list all of them here.

Using Visual with X.25

When configuring X.25 pads, be certain to configure large enough buffers. Visual can transfer up to 30,000 bytes in a single read (see Set Visual Buf).

With Term Type 24, Visual enables Auto-Keyboard Lock on your terminal to lock the keyboard during block-mode transfers. MPE takes care of this with direct connect. Older terminals lack Auto-Keyboard Lock.

If you use Term Type 10 or a special Term Type created with the Workstation Configurator, you will need to use Set Vis Packet On to get the F7 key to work.

Using Visual on MPE/iX

On MPE/iX, Visual will enable Auto-Keyboard Lock on your terminal, as described above for X.25. You must configure your terminal for Transmit and Receive XON/XOFF Pacing or you risk file system errors.

Qedit can detect whether your terminal is connected to a DTC and adjust itself. You can over-ride the DTC-detection with Set Vis DTC ON (for example, in the case where you NS from a MPE/iX to a MPE V machine and run Qedit on the MPE V machine)

Accidental Invocation of MPE/iX CI

If you make a typo and accidentally type CI instead of VI when you want to get into Visual mode, a new copy of the MPE/iX Command Interpreter (CI) is started inside Qedit, and you end up at the MPE prompt. This can be very confusing, especially since it looks as though

you just pressed Break. In fact, the "CI" was interpreted by Qedit as an implied :Run command because there is a program called CI.Pub.Sys (the MPE/iX Command Interpreter). You should see the following message:

```
Warning:  Nested MPE XL Cmd Intrptr.  :EXIT will get you back
```

To check whether you are in this second Command Interpreter, you can SHOWVAR HPCIDEPTH. If you ran Qedit from the MPE prompt, this value will now be 2.

To get back to Qedit, do not run Qedit again. Instead, type EXIT or a colon, to get out of the CI and back to Qedit.

Using Visual on HP-UX

Visual mode should work on HP-UX, providing you have an HP terminal or an HP terminal emulator. You must configure your terminal for Transmit and Receive XON/XOFF Pacing or you risk file system errors.

You must also configure the host prompt to be a DC1 (Control-Q). Because there are few block-mode applications for HP-UX, the host prompt is often configured as null.

Terminals Supported by Visual

Visual will work on most HP terminals with block-mode, such as the 700/9x, and 2392. It also works on most emulators of HP terminals, such as Reflection for DOS, Windows, and Macintosh; AdvanceLink for DOS and Windows; and Session for Windows and Macintosh.

Visual may work over DS, but only one machine away and only if you define sufficient buffers for your DSLINE.

Visual does not work on the 2640/41/44, 2621, 125, 120, 110, or the 700/4x terminals.

Problems with 700/9x Terminals

Occasionally a 700/92 or 700/94 terminal will refuse to work properly in Visual mode. Symptoms include Qedit saying that it is not a supported terminal, or giving the infamous "No // at end" message, when the "//" is clearly on the screen. We have found that resetting the terminal to factory default settings sometimes sets this right again. This is more than a regular soft or hard reset, more than turning the terminal off and on: it is a special reset, involving a reboot of the terminal firmware from ROM.

Verify the baud rate at which the terminal is configured, then log off the host, and power off the 700/9x terminal. Wait a few seconds, then

turn the terminal back on WHILE HOLDING DOWN THE "D" KEY. Keep the "D" key pressed until you hear a beep. The terminal will show the message "default configs used". Set the baud rate, and ensure that the Xmit Pacing and Recv Pacing fields are both set to XON/XOFF. Log on again and try Qedit Visual mode.

Visual Error Messages

Here are the messages that may appear if you encounter errors in Visual mode.

Define String: press Home Up, Clear Line, type "string", press Enter. You cannot use F3 or F4 (Findup, Find) until you have defined and found the string once. Press Home Up, type "string" (or ^"string" for Findup), then press F7 or Enter.

Parameter missing or illegal in home line. You have typed a command in the home line that Qedit cannot understand because it is incomplete or typed incorrectly.

Not enough line numbers to add new lines. If you add too many lines in one area, Qedit can run out of unique line numbers to assign to new lines. Check that Set Vis Renum is ON (it is by default). Unfortunately, even this will sometimes not make room. In this case, Qedit writes your screen image to a disc file named qscreen (the file is temporary on MPE) and *does not update the lines*.

A recovery method is to renumber that part or all of your file and then copy in the lost lines from the qscreen file. Since qscreen contains a screen image, you will need to remove certain rows and columns to extract the raw text:

Press F8 to return to Line mode

```
/renum all;list *-10/*+10
/list qscreen            {now select line range to copy}
/add 100.10=qscreen 5/23 {text lines only}
/change 1/4 "" 100.10/*  {remove columns}
```

No // at the end, so no UPDATE (see qscreen).

If you press the Clear Display key and then press Enter, Qedit will read your screen and object to it. Qedit looks for // in the first two columns of the last screen line -- the one containing the column template. If Qedit does not find these two slashes, it concludes that you have done a Clear Display, or deleted the template line, or typed in so many new lines or characters that Qedit does not have a big enough buffer to read the entire screen. Qedit then appends your screen image to the qscreen file and does not attempt to update the lines. If the Clear Display was legitimate, type // in column 1 after the last line.

Missing or invalid status line, no UPDATE (see qscreen). Under some circumstances the start of the status line is not transmitted

properly to Qedit, even though the rest of the screen is okay. Therefore, Qedit now looks for the line number field in the status line, enhanced as Inverse Halfbright. If that is not found you will get the message "Missing or invalid status line". Your screen has not been updated, but it has been appended to the qscreen file. You can do `list $char qscreen` to see what was actually received by Qedit or to recover your lines.

Home line (===>) not transmitted, no UPDATE (see qscreen). If Qedit detects the status line as the first line of your screen, you will get the error message "Home line (===>) not transmitted". This either means that you deleted the home line or data was lost at the start of your transmission or you inserted too many lines with Set Vis Cleardisplay Off. Your screen has not been updated, but has been appended to the qscreen file. You can do `list $char qscreen` to see what went wrong or to recover the data.

NO UPD: bad format left 4 columns (see qscreen). Qedit uses + and - indicators in columns 1 and 2 to keep track internally of which line on your screen has which line number. If you move the lines around (not using cut-and-paste) so that these indicators are out of sequence, Qedit objects. Qedit does not update your lines, but it does write them to qscreen. If you move lines around on the screen, you should erase the +*n* to -*n* indicators.

Cannot update. To Exit, press * F7 (refresh), then F8 (exit). Set Vis Update is ON and you have pressed F8 to exit. However, Qedit is unable to update the current screen likely due to the bad screen format described above. To exit, first refresh the screen (* in the ===> line, press F7), then press F8 again.

Inconsistent or badly formed cut-and-paste task (DD/MM/CC/HH). If you put both a CC and an MM on the same screen, you will get this error message. It means that the indicators you have used do not combine in a logical way. Check the Status line to see what cut-and-paste function is pending. You may also see this message if you enter an unknown indicator (e.g., NN instead of MM).

Duplicate cut-and-paste task; press F7 to reset DD/MM/CC/HH. Only one cut-and-paste function is permitted per update. For example, you cannot copy a block of lines to the Hold file with HH, and on the same screen use R to replicate a line.

Cut-and-paste operations are limited to 32000 lines or less. The maximum number of lines that you can move, copy, hold or delete in a single task is 32000.

Problem accessing Hold file; unable to cut-and-paste. When you use HH, HJ, AH, BH, PH, or FH, Qedit must access a temporary file called Hold. When you use MM, CC, DD, JJ, RR, A0, B0, F0, or P0,

Qedit must access a file called Hold0. This message means that an error has occurred in accessing this file. Does another process in your session have it open? Or are you out of disc space?

File full. Part update. Suggest Exit, see qscreen. If you add enough lines to a workfile, eventually it will fill up! Visual will then be unable to add in the new lines from your screen. When this happens, Qedit appends a copy of your screen image to the qscreen file (from this file you can recover the lines that were not added, if you desire). To expand a workfile named ABC, do Text ABC and Shut *.

File nearly full! Qedit will warn you when your workfile has only a block or two left. This is your advance warning that soon you must do a Garbage collection in your workfile, or expand the workfile.

Read error on CRT. Try again or reduce speed. You will probably have some problems if you run your terminals at 9600 baud on ADCCs (Series 40, 44, 48, etc.) or you do not configure your system with enough terminal buffers (Visual screen reads can be up to 30,000 characters).

To turn down your terminal speed, use F8 to get out of Visual (after updating the screen), then:

```
/Exit    {or F8 again}
END OF PROGRAM
:SPEED 240,240
CHANGE SPEED AND INPUT "MPE":
```

Overflow of screen buffer (maximum is 30,000).

Cutting screen in half.

Consider using Set Vis Widen Off.

It seems that some LANs cannot tolerate Qedit's huge 6000 byte transfers. If Qedit/MPE determines that you are operating over a LAN, and your Visual screen would be more than 3500 bytes, it issues an error message which includes a hint on how to reduce your screen size. The size of the write is determined by the left and right margins of your text, and the number of lines that you want shown on the screen (configured via Set Visual Above and Below).

Analyzing Compiler Problems

Qedit provides interfaces that allow both the CM and NM compilers to read Qedit files. Since both interfaces are simulating the file system, problems do occasionally arise.

QCOMPXLTRACE JCW

When you have a problem where the NM compiler fails with XL= "Qcompxl.Pub.Robelle", but works without it or when compiling a Keep file, you should report it to Robelle for correction.

If you Setjcw QCOMPXLTRACE to 1 before compiling, Qcompxl will print a trace of all file activity, which may assist us in resolving the problem. It is also helpful if you can send us compiler listings and even the source code so that we can duplicate the problem on our system.

Control-Y and NM Compiles

Normally, Qcompxl (the interface to NM compilers like Pasxl) enables Control-Y so that you can stop the compile by depressing Control and the Y key. If the tool that you are using Qcompxl with has its own Control-Y interrupt, you can tell Qcompxl to leave Control-Y alone. Before you run with XL="Qcompxl", do this command:

```
:setjcw qcompconyoff 1
```

How to Bypass Qcompxl

You may find that a tool will read Qedit files when run with XL = "Qcompxl", but has certain functions such as file copy where it needs to treat the Qedit file as a regular binary file. In that case, the tool could be modified to bypass Qcompxl for certain functions. Set the QCOMPXLBYPASS JCW to 1 before the exception function, then reset it to 0 after.

Problems with HP's C Compiler

If you have trouble compiling a Qedit file with HP's C compiler, first check that the file is "unnumbered" (Verify Keep Num Off). Then check that the CCXL command file has Xl='qcompxl' in it; if not, stream Savecmdf.Qeditjob and Qcompxl.Qeditjob to update the command file.

As a final step, you can check the C run-time. The Qcompxl compiler interface contains a copy of the C run-time library so that it can trap file opens. After an HP update, it is possible that this run-time library may be incompatible with your new compiler. To copy the C/iX run-time code from your system XL to Qcompxl, use the Fixccxl.Qeditjob job stream.

Unresolved External Reference

When Qedit is installed, it changes the CM compilers slightly to redirect file system calls to the Qcompusl routines instead. If you get an "Unresolved External" error message when you compile, it means you are running a "Qedit-compiler" without the Qedit library routines. The most probable cause is that you have just done an MPE update, which removes the Qedit routines from the System SL. The solution is to re-install the Qedit compiler fixes.

Illegal Characters

When you compile a Qedit workfile and the compiler gives you a hundred "illegal character" or "invalid symbol" errors, it means you are not using the Qedit compiler interface. You may have just installed an MPE update and thus have standard compilers and command files in Pub.Sys again.

If you are using a CM compiler and installed the CM interface isolated in the Robelle account, you may have tried compiling from the MPE prompt. Qedit workfiles can only be compiled from within Qedit, not through the regular :MPE commands.

Pascal/V Compiler Stack Overflow

The compatibility-mode HP Pascal compiler may stack overflow when compiling large source files, especially when it has been "Qedified" to read files in Qedit format. This is because when we "hook" the compiler to read Qedit files, we steal a couple of hundred words of global storage space from the compiler's stack. We recommend that you use the `$bigcompile$` compiler directive to prevent this stack overflow problem. For smaller source files, this option will slow down the compilation speed.

File Formats

Introduction

Here we describe the format of Qedit workfiles, external Keep files, and error-files used by the Editerror command.

Qedit Workfiles

The Qedit workfile provides both random and sequential access to variable-length lines of text. The file code is 111, the file is Binary, and the block factor is 1. The workfile is broken into blocks. Each block contains several Qedit lines (the exact number depends on the length of the lines). The lines in a block have contiguous line numbers and are extracted from the block by Qedit.

Block 0 of the workfile has a special format because it contains the control and indexing information.

The first Qedit line is always in block 1, and the start of block 1 points to the next sequential block in the file, which need not be block 2. Each block points to the next, and end-of-file occurs when the forward pointer is zero.

There are three different formats of Qedit workfiles: original, Jumbo, and Wide-Jumbo. All formats work in Qedit for MPE and Qedit for HP-UX, but the default for MPE is the original format while the default for HP-UX is Wide-Jumbo.

Original Format Workfiles

The original Qedit workfiles have a block size of 512 bytes and can hold up to 65,535 lines with a maximum length of 256 characters. Added control information is kept in user labels.

Within an original format data block, the structure is as follows:

```
Word Within Block    Contents            Comment
      (000)       Forward-pointer   First word in block
      (001)       Line-number       First word of first line
      (002)         (cont.)
      (003)       Data and Indent   Descriptor for first line
      (004)       "AB"              Contents of first line
      (005)       "CD"
      (...)         (cont.)
      (...)
 (Data+003)       "YZ"              End of first line
 (Data+004)       Line-number       Start of second line
 (Data+005)         (cont.)
 (Data+006)       Data and Indent
 (Data+007)       "12"
      (...)
      (...)       "89"              End of last line
      (...)       Binary-zero       Unused portion of block.
      (...)         (cont.)         Binary-zeros are missing
      (255)         (cont.)           if the block is full.
```

The following definitions are used above:

Forward-pointer: block number of the next block (16-bit unsigned).

Line-number: a 32-bit integer containing the line number in binary (1,000 = 1.0).

Data: the number of words of data in the line (byte).

Indent: number of full words of blanks before the data (byte).

Qedit Version Number

Open stores the version number of the Qedit program file into the workfile that it opens. A 16-bit integer is stored at word offset 107 of user label 0 ("QEDIT0") or at word offset 363 of Block 0 for Jumbo files. The format is, for example, 4258 for version 4.2.58, 4300 for 4.3, and 4301 for 4.3.01.

Jumbo Workfiles

The Qedit Jumbo workfile is an extension of the original Qedit workfile. This format allows files to be up to 1,000 characters wide, and up to 99 million lines long. The file code is still 111, the type is still Binary and the block factor is still 1. The blocks are 1024 bytes long instead of 512.

Wide-Jumbo workfiles allow lines of up to 8,172 characters and limit the number of lines to 99 million. The blocks are 8,192 bytes long instead of 1,024 for Jumbo workfiles.

As in the old Qedit format, each block in Jumbo or Wide-Jumbo contains several Qedit lines (the exact number depends on the length of the lines). The lines in a block have contiguous line numbers and are extracted from the block by Qedit.

Block 0 of the workfile has a special format because it contains the language of the file and the number of lines, and provides indexing.

Jumbo workfiles do not have user labels. Information that was in user labels 0 and 1 is now in Block 0.

The first Qedit line is always in Block 1, and the first word of Block 1 points to the next sequential block in the file. Each block points to the next, and end-of-file occurs when the forward pointer is zero.

Within a data block, the structure is as follows:

```
Word Within Block    Contents            Comment
      (000)       Block type         First double-word in block
      (002)       Forward-pointer    Second double-word in block
      (004)       Line-number        First word of first line
      (005)         (cont.)
      (006)       Data length        Descriptor for first line
      (007)       Indent
      (008)       "AB"               Contents of first line
      (009)       "CD"
      (...)         (cont.)
      (...)
 (Data+004)       "YZ"               End of first line
 (Data+005)       Line-number        Start of second line
 (Data+006)         (cont.)
 (Data+007)       Data
 (Data+008)       Indent
 (Data+009)       "12"
      (...)
      (...)       "89"               End of last line
      (...)       Binary-zero        Unused portion of block.
      (...)         (cont.)          Binary-zeros are missing
      (511)         (cont.)            if the block is full.
```

The following definitions are used above:

Forward-pointer: block number of the next block (32-bit unsigned).

Line-number: a 32-bit integer containing the line number in binary (1,000 = 1.0).

Data: the number of words of data in the line (16-bit word).

Indent: number of full words of blanks before the data (16-bit word).

External Files

As well as its own workfiles, Qedit recognizes "external" files of other formats (in List *file*, Add 5=*file*, Text *file*, etc.). When Qedit opens an external file, it determines the language of the source program in that file according to the following chart. If the file code is 1052, the file is always recognized as a COBOL-type file. Note that "file code" refers to the MPE file code. Posix files with a ".cbl," ".cob", ".CBL" or ".pco" extension are treated as COBOL source files. In this case, Qedit does not assume there is a sequence number in the first 6 columns; it checks the first 5 lines of the file. The `.pco` extension is typically used to identify Cobol source files that needs to be processed by the Oracle pre-compiler.

If the lines contain only numeric digits in these columns, Qedit assumes the file contains sequence numbers and uses them

appropriately. These numbers are written back to the file when a Keep command is executed.

If the lines only contain spaces in these columns, Qedit assumes the file is unnumbered and automatically assigns numbers during the Text operation. If some of the lines have a sequence number already, this number is replaced with Qedit's calculated number. When the file is saved, the sequence numbers are replaced by spaces.

If the first 6 columns do not contain either numeric digits or spaces, Qedit assumes the file is free-format and assigns it line numbers in the same way that numbers are assigned to Text files. The file format might change on a Keep command, depending on the Set Keep Cobfree option.

When accessing files in the Posix namespace, Qedit checks the extension of the file, if any. It then tries to determine the language based on the extension.The following languages are recognized:

Language	Extensions
Cobol	CBL, COB
CC	H, C
CPP	CPP
HTML	HTM, HTML, ASP
JAVA	JAVA
PASCAL	P, PAS, PASCAL, MODULE, INCLUDE, FORWARD, EXTERNAL
QSL	QSL
XML	XML

Extensions are not case-sensitive i.e. cbl is the same as CBL.

Record Size (bytes)	Leading Columns (1-6) Contain	Last 8 Columns of First Line	Current Language Setting*	File Code / Ext.	Num / Unn?	LANG Used
74				both	Unn	COBOLX
66				both	Unn	COBOL
80	6 digits			both	Num	COBOLX
80	6 digits			not code	Unn	JOB

80	no digits	no digits	RPG		Unn	RPG
80	no digits	8 digits	FORTRAN		Num	FTN
80	no digits	8 digits	Pascal	ext.	Num	Pascal
80	no digits	8 digits	not Ftn/Pas		Num	SPL*
72	6 digits				Num	COBOL
72	no digits		FORTRAN		Unn	FTN
72	no digits		Pascal	ext.	Unn	Pascal
72	no digits		not Ftn/Pas		Unn	SPL*
80	no digits	no digits			Unn	JOB
88	8 digits				Num	JOB
9-264	8 digits				Num	TEXT
1-256	no digits				Unn	TEXT
1-256	no digits or spaces			both	Unn	COBFREE
1-256	no digits				Unn	HTML
1-256	no digits				Unn	XML
1-256	no digits				Unn	JAVA
1-256	no digits				Unn	QSL

* see Set FORTRAN ON.

In this table, the "File code / Ext." column indicates how Qedit determines which language to use. *Code* means it uses the file code only. *Ext.* means it uses the file extension only. *Both* means it checks the file code and the file extension.

Qedit maps an ASCII external file into one of these file formats. Qedit checks the last eight columns of each of the first five lines for an ascending sequence number. If five lines with valid sequence numbers are found, the file is treated as a Numbered file. Qedit may sometimes mistake a data file for a source file with sequence numbers. If there is an ambiguity in identifying the language of an external file, you can direct Qedit to the proper choice by appending a **file type** to the file name in the Text, List, and Add commands. For example, /List abc,unn;Text def,pascal.

External files with 80-character records and no valid SPL sequence numbers are treated as RPG files, if the current language setting is RPG; otherwise, they are treated as JOB files.

Qedit creates workfiles with two user labels for new control information. The user labels are self-identifying and have internal version numbers. The first user label contains status fields (saved on Shut and recalled on Open). This label is identified by the string "QEDIT0" in the first 6 bytes, followed by a word containing the binary version number. The second user label is identified as "QEDIT1" and is reserved for future speed improvements.

If you are creating a new Qedit file by hand and you forget the user labels, Qedit will still edit your file, but will not save the context when you shut the file. If you create a new workfile with two user labels defined but NOT written, Qedit will initialize the user labels the first time that you Open the files. This is how our QOUT routines work.

User programs can create and read Qedit workfiles using the Qeditaccess routine in our QLIB.

Error Files for Editerror

The :Editerror command in Qedit uses an error file to Open source files, position the cursor to the line with the error, and print the error message at the top of the screen. This useful feature works well with the Splash compiler, since it generates error files in a format that Qedit expects. For other compilers, you could write an error processor to generate this file.

When using the :Editerror command, the format of the **error file** is as follows:

1. Lines are variable-length or fixed-length.
2. The file should be ASCII.
3. Each line has the form: **prefix-character** blank **data**
4. The format of the data varies depending on the prefix-character.

Prefix Characters & Data

Prefix	Purpose
#	open workfile whose name is left-justified in column 3.
@	**syntax error**, location and message, in last file opened:
>	open of $include workfile, with name of new input file starting in column 3 (or use "#" if you prefer).

<	close of $include file, with name of prior input file starting in column 3 (or use "#"). The ">" and "<" instead of "#" do not have any deep meaning: they only improve readability of the file.

@ Syntax Error Record

The "@" error record must be preceded by a record that opens the file containing the error. This can be either a "#", ">", or "<" record.

Column	Content
1:	@
2:	Blank
3-10:	**Sequence number**
11:	Blank
12-end:	error message or, optionally,
12-15:	(##) column number of error, 1 = first column
16:	blank
17-end:	error message

The **sequence number** can be the full 8 digits that would appear in the last 8 columns of the Keep file (or 6 digits that would appear in the first 6 columns of a COBOL file). For unnumbered files, the sequence number would appear as either of the following:

- 1-based record number, up to 5 digits, followed by "000" (first record is "00001000"), or
- "R#" followed by 1-based record number and spaces (first record is "R#1 ").

Here is a sample **error file** with two compile errors:

```
# ERRFILE.BOB.GREEN
# cstdio.pub.tym
# ERRFILE.BOB.GREEN
# INCFILE.BOB.GREEN
@ 00002000  Identifier expected.
# ERRFILE.BOB.GREEN
@ 00012000  Undeclared identifier "k".
```

Here is another errors file, with column numbers:

```
# errfile.bob.green
@ 00005000 (11) Identifier "dddd" not defined.
@ 00009000 (23) Type Incompatibility for assignment.
@ 00012000 (11) Missing ":" or undeclared identifier.
@ 00014000 ( 7) Label referenced but not found: fast
```

User Routines

Introduction

The user can direct Qedit to call "interface" procedures to customize certain aspects of Qedit. Interface "hooks" are available for initiation ("Init") and termination of Qedit ("Exit"); for processing command input ("Com"); for examining new lines ("Add") entered via the Add command; and for intercepting all Modify operations (see below). You activate the interface procedures via a special command in the Qeditmgr file:

```
interface add,com,exit
interfaceg add,com,exit     {searches sl.logongroup}
interfacep add,com,exit     {searches sl.pub.logon}
```

Interface causes the "Init" procedure to be called, and "Add", "Com" and "Exit" select which interfaces to activate (any or all). If different options are desired for different users, the Interface command can also be invoked through a usefile. These procedures are loaded dynamically from the System SL by default. In order to load from the logon account SL, use INTERFACEP; and from the logon group SL, use INTERFACEG. There is another faster way to activate interface procedures, described below under *Alternate Activation*.

Wide Lines and User Procedures

In order to support wider files, we had to increase the size of numerous internal data structures. Because the CM stack did not provide enough space for these structures, we were able to make this feature available only in the NM version.

You can write User Interface procedures to perform additional processing of either new lines or commands you enter. Typically, these routines are written in SPL and are compiled in SL files. The new wide-line structures cannot be passed to CM routines without changing and recompiling them. These routines would also have to be revised to make sure they can handle the extra amount of text. That's assuming there was enough stack space left.

For these reasons, we have decided to continue using CM functions to exchange information with user procedures. In order to do this, we had to limit the information to 1,000 characters. If you are trying to edit a file with lines wider than 1,000 bytes, Qedit displays the following warning:

```
User Procedures can not handle more than 1000 characters...
```

Qedit then truncates the line to the first 1,000 characters before it hands it off to the user procedure.

"Init" Interface Procedure

```
logical procedure qedit'userinit
   (string,len,userspace,procspace);
   byte array string;
   integer len;
   array userspace,procspace;
   option external;
```

The "Init" procedure is called once when the Interface configuration command is processed. The procedure can return a string of commands to be executed, and activate, deactivate, or initialize working storage for other interface procedures.

Parameters of "Init"

STRING is a byte array where the Init procedure can return the characters of a command line; there may be up to 256 characters. The string can contain multiple commands, if separated by semicolons. The STRING does not need to have any special terminating character, but the buffer is actually 257 characters long to allow room for a stop byte if you need it. (Note: this command line will be passed to the "Com" interface procedure.)

LEN is the number of command characters in the STRING. This variable must be set to the proper value by the Init procedure. In no case can it have a value greater than 256; this results in Qedit abort #112. Upon entry, this parameter has a value of 0 (see "Exit" interface below). The STRING will always be executed, if the LEN is greater than zero.

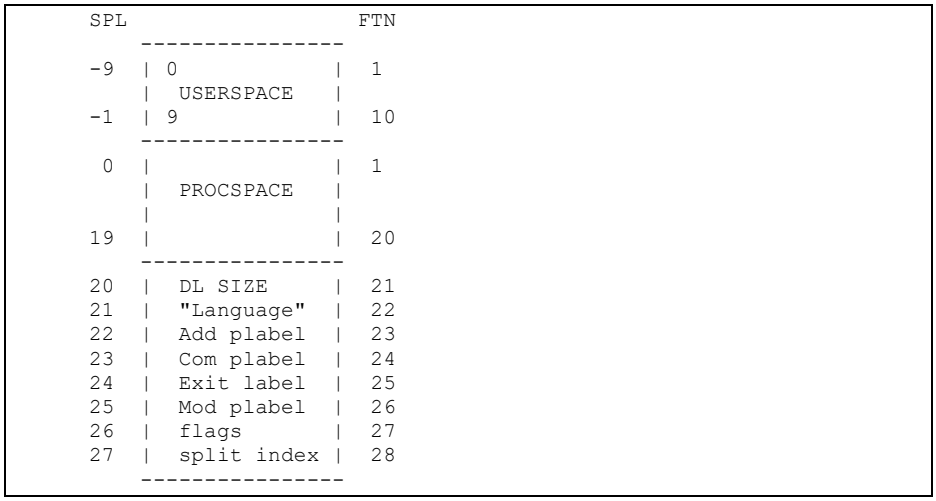
USERSPACE is a 10-word array that provides "global" storage for interface procedures; it can be used to pass parameters between the various interface procedures. The 10 words are initially set to binary zero and can be used for any purpose. EDIT/3000 places file numbers in the first two words of the USERSPACE and Qedit does not; therefore, it is possible for an interface routine to check whether it has been called from Qedit or Editor, by checking the first word of USERSPACE for zero (Qedit) or nonzero (HP Editor).

PROCSPACE is a 28-word array that is shared with the PROCEDURE command. The first 20 words are reserved for the user code and are

initialized to zero. In Qedit/V only (not Qedit/iX), the USERSPACE is located directly before the PROCSPACE (i.e., they are contiguous in memory).

Following the 20 user words, PROCSPACE contains 8 words that hold context values and flags. The first word contains the number of words of DL space reserved for the PROCEDURE command (see Set DL). The second word contains the current language setting (0=SPL, 1=FTN, 2=COBOL, 3=undefined, 4=COBX, 5=JOB, 6=RPG, 7=TEXT, 8=PASC). These two words must not be modified. The other words are described below under "Alternate Activation".

Here is a diagram of the USERSPACE and PROCSPACE:



Return value: Return False to stop Qedit from loading the other procedures called for in the Interface command (alternate activation is not suppressed, see below). Return True to allow Qedit to load the procedures listed in the Interface command ("Add", "Com", "Exit"). If you are using the Alternate Activation method (below), return False to suppress Qedit's loading the routines again. If Len is returned with a value greater than 0, the String commands will be executed, regardless of whether True or False is returned.

"Com" Interface Procedure

```
logical procedure qedit'usercommand
   (string,len,userspace,procspace);
   byte array string;
   integer len;
   array userspace,procspace;
   option external;
```

The USERCOMMAND procedure allows the user to scan command input lines and change commands within the line. This procedure is called each time a command input line is read from the terminal, from a usefile, or from the Init procedure.

Parameters of "Com"

STRING is a byte array containing up to 256 characters of a command input line. If the line contains multiple commands, they must be separated by semicolons. Upshifting has not yet occurred, nor is there a terminating carriage return. Auto-modify (special character at the end of the line) and Before have been processed, trailing blanks have been eliminated, the command line has been echoed, and the line has been saved as the "last command". MPE commands have not been intercepted yet. They are passed to the interface. A few special commands from usefiles such as COMPPRI are never sent to the interface command. The user interface procedure is also allowed to use two more bytes (i.e., a total of 258) beyond the length of the STRING for internal purposes, such as inserting a terminating carriage return.

LEN is the number of characters in STRING. If the user procedure changes the length of the command line, it must ensure that LEN is updated. In no case can LEN exceed 256 characters (Qedit abort #113).

USERSPACE and PROCSPACE: same as above (Init).

Return value: FALSE rejects the command line; TRUE causes it to be processed by Qedit.

"Add" Interface Procedure

```
logical procedure qedit'useradd
   (string,len,userspace,procspace);
   byte array string;
   integer len;
   array userspace,procspace;
   option external;
```

This procedure is activated by the "Add" parameter of the Interface command.

The "Add" procedure allows you to examine (and modify) each line that the user Adds into the workfile (only basic Add, not copy, move or join from file).

Parameters of "Add"

STRING is a byte array containing the characters of a workfile line entered by the user. Maximum length is determined by the current language setting (JOB=80, SPL=72, FTN=72, COB=66, COBX=74, RPG=80, PASC=72, TEXT<=256). Any TABs and shift operations have been performed.

LEN is the number of characters in the line. If the user procedure adjusts the length of the line, this variable must also be adjusted. If the user procedure extends the length beyond the current language limit, Qedit truncates the line. In no case can it exceed 1,000 characters

(Qedit abort #111). The user procedure is allowed to use two bytes beyond LEN for internal purposes (such as a terminating character).

USERSPACE and PROCSPACE: same as above (Init).

Return value: FALSE causes the line to be rejected; TRUE causes it to be Added to the workfile.

"Exit" Interface Procedure

```
logical procedure qedit'userinit
   (string,len,userspace,procspace);
   byte array string;
   integer len;
   array workspace,procspace;
   option external;
```

This procedure is activated by the "Exit" parameter in the Interface command. When Qedit is about to terminate, it calls the Exit procedure. (Note: Exit is actually the same as the Init procedure, except that upon entry, LEN equals 4 and STRING contains the word "Exit".)

Since this is called once upon Exit from Qedit, it can be used to complete the work of other user procedures.

Parameters of "Exit"

STRING and LEN are set to "Exit" and 4 respectively; these should not be changed. The current workfile has been closed, and no further commands can be executed.

USERSPACE and PROCSPACE: same as above (Init).

Return value: ignored.

Installing Your Interface Procedures

The interface procedures should be written in SPL and must be loaded into an SL. For all users to have access to them, they must be loaded into the System SL (SL.Pub.Sys). If only the users of one account are to access them, they can be installed in the account SL (SL.Pub.account). Assuming that the routines are in a source file called Qhooks.Source.User, and that the segment name assigned to these routines is QUSER, these are the commands to install or update the routines in the System SL:

```
:hello manager.sys
:spl qhooks.source.user
:segmenter
-sl sl
-usl $oldpass
-purgesl segment,quser    {only required for update}
-addsl quser
-exit
```

When the Interface configuration command is read from the Qeditmgr file, the interface routines are linked to Qedit by calling the LOADPROC intrinsic.

Alternate Activation

To allow more flexibility in the use of interface routines and to reduce the system overhead (three calls to LOADPROC take a considerable time), Qedit provides an alternate method for activating interface routines. This method requires only one call to LOADPROC, and also allows you to disable and enable each interface routine dynamically, or even switch interface routines.

This alternate method uses three communication words beyond the end of the PROCSPACE. The 3rd, 4th and 5th words after the PROCSPACE contain the "plabels" for the Qedit interface procedures. When the "plabel" word is a binary zero, the interface routine is disabled. When it is nonzero, the routine is enabled and the word is used to do a "PCAL 0" to that routine.

The global space for user PROCEDUREs and Interface routines is laid out as follows (remember, FORTRAN tables start at 1, SPL at 0):

SPL references	Contains	FORTRAN references
procspace(-10:-1)	the Userspace	userspace(1) to (10)
procspace(0) to (19)	the Procspace	procspace(1) to (20)
procspace(20)	words of DL	procspace(21)
procspace(21)	"language"	procspace(22)
procspace(22)	plabel of Add	procspace(23)
procspace(23)	plabel of Com	procspace(24)
procspace(24)	plabel of Exit	procspace(25)
procspace(25)	plabel of Mod	procspace(26)
procspace(26)	flags	procspace(27)
procspace(27)	split index	procspace(28)

Because the four "plabel" words are accessible to a user PROCEDURE, as well as to the Init interface routine, it is possible for one routine to enable all three interface routines. This is done by including in the source code of the procedure at least one "dummy" reference to each routine (e.g., procspace(23) := @int'command in

SPL). This dummy reference forces MPE to load the procedure at the same time that it loads the first routine.

With this approach, it is possible for the names of the interface routines to be arbitrary. In fact, you can have several sets of interface routines and switch them dynamically. Here is an extract from an SPL procedure to show how to define the interface routine and then link it to Qedit:

```
procedure example'command
  (string,length,userspace,procspace);
  byte array string;
  integer length;
  array userspace,procspace;
  option external;

procspace(23) := @example'command;
```

The Modify User Hook

Qedit provides a user exit for the Modify commands. To activate this hook, your interface routine or PROCEDURE must store the "plabel" of your modify routine in word 25 of the PROCSPACE (word 26 in FORTRAN). Qedit then sends all Modify operations to this PROCEDURE, which must be structured exactly like a procedure to be called with the Proc command. (See *Writing a User Procedure*.) To disable the Modify hook, replace the "plabel" word with a zero.

The Set Modify Qzmodify command of Qedit makes use of this user exit to replace the standard Qedit modify routine with a "visual" modify routine.

Writing a User Procedure

Procedures to be called by the Proc command must be written in SPL or FORTRAN and have the following header structure:

```
logical procedure name
     (linebuffer,
      linelength,
      linenumber,
      procspace);
byte array linebuffer, <<type char in ftn>>
      linenumber;
array procspace;
integer linelength;
option external;
```

The parameters are defined as follows:

LINEBUFFER: A character array containing the data of a line, left-justified. If the line is to be modified, the procedure must return the new line data in this buffer. There is room in LINEBUFFER for an extra stop character if you need it.

LINELENGTH: An integer simple variable containing the length of the line in bytes. If the procedure changes the length of the line, it must update this variable. If the new length is greater than the size allowed, Qedit truncates the length. If the value returned is less than 0 and the procedure returns a "true" result, but not 111, Qedit deletes the line.

LINENUMBER: A byte array containing the line number in 10 ASCII characters, display format. This field must not be changed by the procedure. If invoked to modify a command line, LINENUMBER is set to "COMMAND".

PROCSPACE: A global array of 28 words that remains the same between calls to procedures. The first 20 words of PROCSPACE are reserved for user code and are initialized to binary zero; they can be reset to zero by using PQ (example: PQ M,S,510). Individual words in the workspace can be changed with the Proc command itself (see below). For the meaning of the other 8 words of PROCSPACE and for access to the 10-word USERSPACE array, see *User Interface Procedures*.

The procedure must return a "true" (-1) or "false" (0) result in its name, since it is a function. If the procedure returns "false", the Proc command stops, even though the *rangelist* may not be done, and the line is not updated. Only the first LINELENGTH bytes of LINEBUFFER are guaranteed to have meaningful characters in them, although the buffer is actually 257 bytes long. If the result is 111 (true), Qedit continues processing the rangelist, but does not update the current line; this can save considerable overhead in scanning procedures.

See FINDJUNK and NEATER in Routines.Qlibsrc.Robelle.

DL Space

Some user procedures have been written that use the DL-DB area of the editor stack for storage. The contributed "ALTER" procedure is an example. HP Editor does not use this area, but Qedit does. To reserve DB-132 to DB-1 for procedures, use Set DL before any Proc commands.

Passing Procspace Values

The terminal user can explicitly set the first 20 words of PROCSPACE in the Proc command itself. This is done by including a list of integer word values in parentheses in the Proc command. Values are assigned consecutively to the workspace, starting with the first word. Individual words can be left unchanged by including consecutive commas in the

parameter list. For example, to change the first word to octal 23 and the third to -59, enter this command:

```
/P XXX(%23,,-59) 5/10
```

If the procedure name is left out, the parameter list must occur before the rangelist. For example:

```
/P (5,0,73,2,,-2) 5/10
```

If the procedure uses any of the MPE "trap" intrinsics (XCONTRAP, XSYSTRAP, etc.), it must reset the original traps before returning to Qedit.

PROC procedures can also be substituted for the standard Qedit Modify routine. See *User Interface Procedures*.

To load the procedure without actually calling it, as you might want to do in the Qeditmgr file, use the PJ command. This also suppresses the error message, if the procedure cannot be found!

Communication Flags for User Code

Qedit also provides the user interface and PROC routines with the the following powerful control capabilities:

- Control can pass between PROC routines and user command interfaces without a user prompt by Qedit.
- PROC routines can request that Qedit add a new line after the current line.
- PROC routines can divide a single line into two lines.
- PROC routines can splice two lines into a single line.

These capabilities are provided through a "flags" word appended to the PROCSPACE. This word contains flags for requesting special actions and status replies from Qedit. The flags word is located at PROCSPACE(26) in SPL (PROCSPACE(27) in FORTRAN).

The bits are defined as:

Bit 15: No-prompt-flag. Command input must be provided totally by the User Command-interface routine. "/" is not printed.

Bit 14: Add-line-flag. PROC requests that Qedit create a new blank line immediately following the current line. Control returns to the PROC routine after the add, with the original line.

Bit 13: Add-failed-flag. On the next call to PROC following an "add-line" request, this bit will be turned on if the add failed due to insufficient line numbers.

Bit 12: Restart-line-flag. If you return from a user PROC with this bit set and you return TRUE as the result and not Control-Y, Qedit resets your data buffer to the original contents of the line and calls you again.

Split: If you turn on the add-line-bit and use the "split index" word, PROCSPACE(27) in SPL or PROCSPACE(28) in FORTRAN, you can emulate the function of Control-V in Modify. The value of "split index" defaults to -1, which causes Qedit to create a blank new line (ordinary add-line). Or you can specify how many bytes of the current buffer to retain for the current line and how many to transfer to the new line. Split index equal to zero will move all of the data buffer to the new line and leave the data buffer with length = 0. Split index greater than zero retains the first "split index" bytes in the current and moves the remainder to the next line. The current line is not updated by add-line. Therefore, you can use the restart-bit to recall the previous contents. After an add-line, the PROC routine is still called with the current line, then with the new line.

Bit 11: Splice-line bit. PROC routines may splice the next line to the current line by setting bit 11 to 1, then returning with a TRUE result and LEN set to the true length of their data buffer. Qedit performs the splice function AND updates the current line, then calls the PROC routine for that line again.

Bit 10: Extended-ASCII bit. Qedit turns this bit on when the user has done Set Editinput Extend ON. This indicates that the user would like to be able to use the Roman-8 extensions to the ASCII character set (codes 161 through 254).

Qcopy

Introduction

Qcopy is a contributed program that reads and writes Qedit files. Qedit files exist in a special compressed format which can only be read by Qedit or software such as Qcopy that has been modified to read them. Qcopy is used to convert files to and from Qedit's special format.

Along with Qcopy we provide a stand-alone routine named Qeditaccess that provides the actual decoding of Qedit files. You may merge this routine into your own programs if you wish. The code is available in both compatibility-mode and native-mode formats.

Qcopy is also used to recover Qedit files that have been corrupted. While this happens rarely, Qcopy is the only program which can recover the lines of a Qedit file.

Qcopy is part of the Robelle QLIB, a set of contributed tools included with Robelle software at no extra charge. You may use Qcopy, even if you are not licensed to use Qedit.

Accessing Qcopy

Run Qcopy using the following command:

```
:run qcopy.qlib.robelle
```

Qcopy syntax is similar to the MPE FCOPY utility. You specify a FROM file and a TO file, and some options.

```
>from=xyz.src                    {copy file to itself}
>from=xyz.src;to=                {print on $stdlist}
>from=xyz.src;to=abc.doc         {copy to an existing file}
>from=xyz.src;to=abc.doc;new     {create a new editor file}
>from=xyz.src;to=abc.doc;qedit   {make new qedit file}
>from=@.me;to=@.you              {copy a group of files}
```

Qcopy Documentation

You can print the Qcopy User Manual easily using the Printdoc program; you simply answer questions about which printer you have.

```
:run printdoc.pub.robelle;info="qcopy.qlibdoc.robelle"
```

Qedit-Compatible Software Tools

Introduction

The MPE software tools listed here are compatible with Qedit files. These tools either have Qedit "hooks" built in, or they can be "Qedified" as explained in the chapter on Installation at the end of this manual. So far, there are no HP-UX software tools that are compatible with Qedit.

Note re Jumbo Files: Not all these tools are able to read the files of language Data. They will probably see them as empty files. Contact us or the vendor for details.

Compare/iX

Compare/iX is a Bonus program that is provided with Qedit for use only by Robelle customers. This program compares two text files (Keep or Qedit format) and prints out the differences. The basic comparison unit is a line. Compare/iX identifies three types of differences: lines that are in the first file but not in the second; lines that are in the second file but not in the first; and lines that are in both files, but don't match. There is no Classic version of Compare/iX for MPE V.

We provide a UDC which makes it easy to access Compare. The Outfile parameter is optional and defaults to $stdlist. The Info parameter is also optional, and it defaults to a null string. To see all the program options, use `info="?"`.

```
/set udc compudc.catalog.robelle
/Compare myfile, yourfile,,?
/Compare myfile, yourfile
/Compare myfile, yourfile, *lp, L2
/Compare myfile, yourfile,,"L2 J+"
```

The job stream Bonus.Job.Robelle installs all Robelle Bonus programs, including Compare/iX. The file Compare.Doc.Robelle is the user manual, which you can print with our Printdoc program:

```
:run printdoc.pub.robelle;info="compare.doc.robelle"
```

OMNIDEX

OMNIDEX is a product from Dynamic Information Systems Corporation that adds keyword and indexed sequential access to IMAGE and Turbo IMAGE. It has an option to do keyword retrieval on text files, including Qedit files. You record the names of the files in the OMNIDEX database and it keeps track of what keywords occur in what files. Given some keyword criteria, OMNIDEX shows the files that qualify, then gives you the option of viewing those files. For more information, call D.I.S.C. at (303) 444-4000.

Adager

Adager is a database restructuring tool for TurboImage and TurboImage/iX. Adager will read and write schema files that are in Qedit format. For more information, call 1-800-LDD-REGO (533-7346).

CCS - Corporate Computer Systems

CCS has several products for the HP3000 that can be used with Qedit. Their compatibility-mode C compiler can be Qedified to read Qedit files (see the instructions in the installation chapter of this manual). Their native-mode C/iX compiler will read Qedit files if you fix the C command file to reference Qedit's compiler library "Qcompxl". CCS reports that their newest C compilers have a -Q option to create an error file that is compatible with Qedit's :Editerror command. CCS also sells a COBOL symbolic debugger for MPE V which is compatible with Qedit. For more information, call (908) 946-3800.

Reflection

Reflection is the most widely used PC emulator of HP terminals. They have several models for DOS, Windows and Macintosh. The file transfer function in Reflection can read and write Qedit files. And, when you download a Qedit file to the PC, Reflection keeps track of what "language" it is, so that when you upload it later it will still be, say, a "COBOL" file. For more information, contact Walker Richer & Quinn at (206) 217-7500, (800) 872-2829.

ROBOT

ROBOT/3000, an automatic documenter package, supports Qedit files. It will cross-reference elements of your application, including sets, items, programs, and jobs, that reside in Qedit workfiles (COBOL, FORTRAN, Pascal, JOB, SPL, etc.). ROBOT has many other functions, such as auditing which files have been changed and when, and seems to add new ones regularly (e.g., cross-reference PowerHouse and Rapid modules). For more information, contact Productive Software Systems Inc., (612) 831-8866 or (800) 726-4099.

PowerHouse

PowerHouse is a popular fourth generation language from Cognos Corporation. PowerHouse has a number of components, only a few of which are described here: QDD, a data dictionary; QUICK, an on-line transaction processor; QTP, a batch transaction processor; and QUIZ, a report writer. They all employ nonprocedural languages that should speed development and reduce maintenance. All modules of PowerHouse will read Qedit files (original format) where appropriate, including the native-mode versions on MPE/iX. For more information in the United States, call (800) 4-COGNOS; in Canada, call (613) 738-1440 or (800) 267-2777; and in Europe, call U.K. (0344) 486668.

Splash for Native-Mode SPL

The Splash compiler from Allegro Consultants is a native-mode compiler for the SPL/3000 language. Not only does it read Qedit source files, but it will generate an error file that is compatible with the :Editerror command in Qedit. For information, call (206) 463-3030.

Documentation/3000

Documentation/3000 from Diamond Optimum Systems scans your source files and automatically documents use of files, formats, data items, copylibs, $includes, subprograms, databases, datasets, etc. It cross-references all elements in its own data dictionary, but will also extract information from HP's Dictionary/3000. For more information, call (800) DOC-VCS-1 (362-8271), or (818) 224-2010.

Prose Text Formatter

Prose is a text formatter that is compatible with Qedit. Prose is suitable for many text processing tasks; we use it for most Robelle documents. For sample documents that contain Prose "commands", see the file

Prose.Qlibdoc.Robelle or HowMessy.Doc.Robelle. Prose is in the Qlib for use by anyone.

Spell: Spelling Checker

Spell is a spelling checker that will read a file and produce a list of misspelled words. Spell comes with an 80,000 word English dictionary, and you can add your own words into global or local auxiliary dictionaries. Spell will read Qedit files, and it has an option to generate an error file that is compatible with Qedit's :Editerror command. Spell is a Bonus program from Robelle included with Qedit for use by Robelle customers.

Qhelp Help System

Qhelp is Robelle's interactive Help facility. It works exclusively with Qedit workfiles. To experiment with Qhelp yourself, do

```
:run qhelp.qlib.robelle;info="robelle.help.robelle"
```

Qhelp is built into most Robelle products and is in the Qlib for use by anyone.

TRANSACT

HP's TRANSACT compiler will accept Qedit files for the main source file, but not "include" files. The standard Qedit installation job will "qedify" TRANCOMP. TRANSACT $include files are processed correctly when TRANCOMP is invoked from within Qedit.

MPEX and STREAMX

MPEX/3000 allows you to apply many commands, including Qedit commands, to file sets such as GL@.SOURCE. MPEX's usefiles and "indirect" file-sets, a file containing a list of file names, can also be Qedit files. This is also a very useful tool for managing disc space. MPEX can list all of the files in the system with more than, say, 2000 sectors of space, showing which devices they are on, etc. MPEX also has the ability to search a set of files for a string. The files may be Qedit files. The Set Extprog command of Qedit will integrate MPEX commands into Qedit.

VESOFT has an MPEX %Listf format that is especially useful for Qedit files. It displays the logical record length, language, number of lines, and the first three lines of text files, all without changing the access date and time of the files. This new %LISTF,ID option is available in version 25 of MPEX.

```
%listf q@,id
                    MPEX %LISTF q@    PAGE 1
              BOB,MGR.ADMIN,PUB   TUE, DEC  6, 2000, 12:34 PM

ACCOUNT=  ADMIN       GROUP=  PUB

                   Rec
Filename  Code   Size Type EOF  Sect Identification
--------  -----  ----- ---- --- ----- ----------------------

QJUMBO    QEDIT+ 256B DATA   3    16 Welcome to Qedit, Robel
                                       :run qedit.pub.robell
QJUMBO2   QEDIT+  32B TEXT   3    16 this is a Jumbo file
                                       that has very short
                                       lines
QKEEP              80B FA     9    16 !job testjob,bob.admin/
                                       !comment
                                       !comment
QORIG     QEDIT   72B SPL   68    16 subroutine setup'worksp
                                       value   version;
                                       logical version;

GROUP     TOTAL:      4 FILES              64 SECTORS
```

STREAMX allows you to keep job streams on the system without passwords. STREAMX will supply the necessary passwords, and lets you write smart job streams with its job stream programming language. The job streams can be Qedit files. Warning: Qedit permits comments on command lines using the characters { and }. If you use this feature, you may need to alter your STREAMX character set.

MPEX/3000 and STREAMX/3000 are products of VESOFT Inc., (310) 282-0420.

SCOMPARE and ANALYZER

SCOMPARE takes two source files and tells you their differences. ANALYZER tests and measures COBOL programs. Both products accept Qedit files as input. These products can be obtained from the Aldon Computer Group, 1-800-825-5858, or (510) 839-3535.

Xpedit Full-Screen Editor

Xpedit can be used by anyone who needs a quick, simple-to-operate full-screen editor for editing small application data files. Xpedit can read and write Qedit files, in addition to regular files. Xpedit is a bonus program for use by Robelle customers. For more information, contact Robelle Solutions Technology Inc.

Nuggets

Lund Performance Solutions sells a collections of utilities for MPE/iX systems called Nuggets. One of the utilities in the Nuggets Emerald collection is Magnet, which is very, very fast at finding strings in files,

including Qedit files. For information on Nuggets, contact Lund Performance Solutions, (503) 926-3800.

Fantasia

Fantasia lets you produce typeset quality documents on the HP3000 for printing on LaserJet and series 5000 laser printers. Fantasia can read Qedit files. Contact Proactive Systems at 1-800-321-4531.

TDP

TDP is HP's text and document processor. Although is does not support Qedit files and cannot be "Qedified", you can use the TDP formatter with Qedit. Qedit has two commands, :Tdpfinal and :Tdpdraft, that invoke TDP to format a Qedit file. Look under those commands for more information, or type `/help tdp`.

Network Engine

The Network Engine is a communications product that allows you to set up script files, similar in concept to Reflection command files. These script files may be Qedit files or regular *editor* files. Also, Network can be used effectively in a process-handling environment like Qedit. Running Network from Qedit, you can initiate a file transfer, then go back to Qedit while the transfer is happening in the background. For more information, contact Telamon at (916) 622-0630.

Regular Expressions

Introduction

Regular expressions might look like wildcards used in the Pattern search option. Regular expressions are sometimes compared to wildcards but, in fact, they are much more powerful and can be much more complex. You have to practice in order to use them efficiently and to their full potential. For brevity, we will often refer to regular expressions simply as regexp.

In Qedit's line-mode, you can use regular expression in most places where you can use a string or pattern. In fact, you specify regular expressions in Qedit similar to the way you specify patterns, by specifying the "regexp" keyword in a window:

```
/list "Robel+e"(regexp)  {Robelle or Robele}
/change "[rR]obel+e?"(reg) "ROBELLE"  {robell Robele...}
```

Although all regexp implementations share a basic set of metacharacters and syntax rules, other tools and programs might have different extensions and variations than Qedit. For example, the alternation metacharacter "|" (equivalent to an "or" function) is not provided in Qedit. As the first implementation of regular expressions in Robelle products, this version of Qedit might not have all the extensions you are currently familiar with. We will be looking at other tools as we explore the possibility of extending our own implementation in future releases.

If you are interested in learning more about regular expressions, you should get a copy of *Mastering Regular Expressions* written by Jeffrey E. F. Friedl and published at O'Reilly & Associates, Inc. This book covers most regular expression implementations, the differences between each one, how most regexp engines work and some tips on how to get the best performance from each type.

Metacharacters

Qedit supports the following metacharacters:

^	Start-of-line anchor
$	End-of-line anchor
.	Matches any character
?	Optional character
*	Matches zero or more of the preceding character
+	Matches one or more of the preceding character
[	Start a character class
]	End a character class
^	If first character in character class, negate class
(	Subpattern start
)	Subpattern end

Anchor Characters.

In general, a regexp can find a match anywhere in the text as long as it appears on a single line. There are two exceptions to this rule. The start-of-line (^) and the end-of-line ($) anchors. They are called anchors for very good reasons. These anchors actually indicate that the match must occur at fixed positions within the line.

The start-of-line anchor specifies that the string must appear at the very beginning of the line. If you enter

```
^abc
```

the line will be selected only if the string "abc" is the first thing on the line. Thus,

```
abcdefghij          {will be selected}
xyzabc              {will not be selected}
```

Similarly, the end-of-line anchor specifies that the string must appear as the last thing on the line. In this example,

```
abc$
```

the lines must end with the string "abc." There must not be anything else after it, not even spaces.

```
abcdef              {will not be selected}
xyzabc              {will be selected}
```

You can combine the anchors to verify that lines contain only a certain string and nothing else. Simply use

```
^abc$
```

Every line has a start and an end anchor. If you search for the start or the end anchor (^ or $) by itself, Qedit matches all the lines in the file.

TIP: If you edit your file in full-screen mode with Set Visual Home Off, searching for the start-of-line anchor moves to the next line and puts the cursor at the first position. If you search for the end-of-line anchor, Qedit goes to the next line and puts the cursor after the last character on the line (if the last character is visible).

If the anchor characters are used anywhere else, they lose their metacharacter status and become ordinary characters.

Match Any Character.

The period, or dot, is used to match any character. The character can be of any type. As long as there is something in that position, there will be a match. For example,

```
abc.xyz
```

selects any line that contains the strings "abc" and "xyz" separated by a single character. That character can be anything (e.g., 1, w, #, etc).

Optional Character.

You can check the absence or presence of a character by following it with a question mark (?). In a regexp, the question mark indicates that the preceding character is optional. If it is present, it must appear only once.

```
ab?c      {matches only "ac" and "abc"}
```

Repeating Characters.

There are different ways you can check for the repetition of characters. If there is potential for a character to appear more than once, you can use the asterisk (*) or the plus sign (+) quantifier. These quantifiers are applied only to the character to their immediate left.

There is a very small difference between the two quantifiers. The asterisk represents *zero* or more occurrences of the preceding character. In other words, the character is optional, but, if it is there, it can appear multiple times. The plus sign represents *one* or more occurrences. This means the character must appear at least once, but it can appear multiple times.

```
ab*c      {matches "ac," "abc," "abbc," etc.}
ab+c      {matches "abc," "abbc," but not "ac"}
```

Character Class

When you have to check for a fixed string of characters, it is easy enough to simply type it at the actual regexp. Entering "abc123" will only find exact matches. What if you want to find the string "abc" followed by a numeric digit? There are no specific metacharacters for digits or alphabetic characters. However, regular expressions have a concept called **character class** to address these issues. Actually,

character class is a lot more powerful and flexible than metacharacters for specific types of text.

A character class is enclosed between brackets. The closing bracket can be left out. However, it is good practice to code it explicitly to avoid ambiguity.

Note that most regexp metacharacters listed above lose their meaning inside a character class. The start-of-line anchor acquires a different definition and a new metacharacter, hyphen (-), appears.

A character class is a list of possible values for a specific position in the string. The character class can be as long as needed. A character class for numeric digits would be

```
[0123456789]
```

Note, the list does not have to be in sorted order. You could have entered the digits in reverse order or in random order and the character class would still be valid. It is just harder to verify that all digits are included. Similarly, a character class for lowercase letters would be

```
[abcdefghijklmnopqrstuvwxyz]
```

It is really important to understand that a match occurs if **one** of the characters in the class is found. Using the "abc" example above, if we want to find this string followed by a digit, we would enter

```
abc[0123456789]    {matches "abc0", "abc1", etc.  to "abc9"}
```

To further restrict the search, we could have used

```
abc[13579]         {matches "abc" followed by one odd digit}
```

Because a character class is only a list of possible values, you can mix and match all the characters in the ASCII code table.

```
p[imy246!.*]e      {matches "pie," "pme," "p4e," "p*e," etc.}
```

This example would find text starting with the letter *p* and ending with an *e* that encloses a single character matching one of the letters *a*, *m* or *y*, one of the digits 2, 4 or 6, an exclamation mark (!), a period (.) or an asterisk (*). Note the period and asterisk are not metacharacters anymore.

Of course, if the character class contains many possible values, it can be tedious and error-prone to enter each character. The hyphen is a character-class metacharacter that can be used as a range indicator. Simply specify the first and last characters in the range. Numeric digits could then be coded as [0-9]. Lowercase letters could be coded as [a-z]. You can also combine ranges with single values, as in

```
abc[0-9a-z!.*]
```

A character class range is based on the ASCII character set. You could specify a range of

```
[A-z]
```

and it would be perfectly valid. In this case, the range would include all uppercase letters, a series of special characters ([,\,],^,_,`) and all lowercase letters. Typically, you would enter the character with the smallest ASCII value as the lower limit and the character with the largest value as the upper limit. Qedit accepts characters even if they are reversed (i.e., the largest value first) as in:

```
[Z-A]
```

Qedit detects this situation and swaps the values internally so [a-z] and [z-a] are really equivalent. To avoid ambiguity, it is recommended that you use the first format.

The hyphen is interpreted as a range indicator only if it is at a logical place between two other characters. If it is somewhere else in the class, it is used at face value.

```
[-a-z]      {hyphen and lowercase letters}
[a-z-]      {lowercase letters and hyphen}
[a-z-9]     {lowercase letters, hyphen and digit 9}
[a-z0-9]    {lowercase letters and digits 0 to 9}
```

Negated Character Class.

The caret (^) takes on a different meaning inside a character class. It is used at face value anywhere in the class, except if it is the first character in which case the caret negates the whole class. This means a match is found if the text *does not* contain any of the characters in the class.

```
p[246^]e          {matches "p2e", "p^e", etc.}
p[^246]e          {matches "pae", "p3e", etc.}
```

In the last example, the caret negates 2, 4 and 6. The regexp is true if the text starts with the letter *p*, ends with the letter *e* and encloses a single character that is not 2, 4 or 6.

Repeating Character Class.

Because a character class is interpreted as a single character, you can use the optional (?) and quantifier (* and +) metacharacters to further qualify a character class. For example, if we want to allow one or more numeric digits after the "abc" string, we could use the following regexp:

```
abc[0-9]+
```

Escape Character

Other characters used in a regular expression might also have special meanings. The most important one is probably the escape character. In Qedit, the backslash is the escape character. A metacharacter,

however, loses its special meaning if preceded by a backslash. In the example,

```
abc[123]
```

square brackets indicate a character class. This regexp would match "abc1," "abc2" or "abc3." If we escape the square brackets as in

```
abc\[123\]
```

the square brackets are then used as literals. This means they are now part of the string. The only matching value is then "abc[123]."

If you want to search for a backslash, simply enter two of them in a row (\\). The only exception to this is the start-of-line metacharacter. Because it (^) is also a valid escaped sequence (see next section), there is no way to tell Qedit to search for the caret as a literal. You should use an expression with the corresponding hexadecimal value.

```
x05e
```

Escaped Sequences in Regular Expressions

The escape character can be combined with other characters to represent nonprinting characters. Qedit recognizes the following escaped characters: (These should not be confused with escape sequences that control the display on HP-type terminals. They are also not metacharacters.)

\b	Backspace
\e	ASCII escape character (ESC)
\f	Form feed
\n	New line (line feed)
\r	Carriage return
\s	Space
\t	Horizontal tab
\DDD	1-3 octal digits representing a character's ASCII value
\xDDD	1-3 hex digits representing a character's ASCII value
\^C	Control code (e.g., Control-G (^G) is the Bell character)

For example, you would use:

```
\t          {all lines with a tab character}
\e&d@&      {terminal escape sequence ESC&d@}
```

Escaped characters can be used anywhere an ordinary character is used, including a character class and to declare a character range.

Backreferences in Regular Expressions

We have seen basic expressions in which almost everything revolves around single characters of text. Even character class lists are really used to match a single position.

You can use parentheses to divide a long regular expression into smaller portions. Each portion then becomes a regexp on its own. This does not affect the way a string search is done. However, each subpattern can then be used in a replacement operation.

Subpatterns are numbered from 0 to 9. Subpattern 0 is reserved and represents the complete matched string. Note that subpattern 0 is implicit and is always available, even if the expression does not contain parentheses. Explicit subpatterns are numbered from 1 to 9, starting from the left of the expression.

Subpatterns can be referenced in a replacement regexp by using the escape character, a backslash, followed by the subpattern number. When applying the replacement string, backreferences are substituted with the actual matching text. Backreferences can be used as many times as needed. Each reference ends up with the original text.

Let's say we have a file that contains a series of phone numbers. In North America (and possibly other countries), phone numbers contain a 3-digit area code followed by a 3-digit exchange number and, finally, a 4-digit individual number. Unfortunately, in our case, the phone numbers are just series of 10 numeric digits without separators. For example,

```
1234567890
1112224444
9087374456
```

We would like a fast and easy way to format them so that the numbers are easier to read. To find all these strings, we can use the following regexp:

```
([0-9][0-9][0-9])([0-9][0-9][0-9])([0-9][0-9][0-9][0-9])
```

We use the [0-9] character class to specify that we are expecting only numeric digits.

In this example there are three subpatterns in the regexp. Each subpattern is enclosed in a set of parentheses.

The first subpattern (\1) repeats the numeric character class 3 times. It represents the digits in the area code. The second subpattern (\2) also has the character class repeated 3 times. It represents the exchange number. The third and last subpattern (\3) repeats the character class 4 times. It represents the individual number.

Subpattern \0 represents all 10 digits.

To reformat this information, we can now combine backreferences with other characters to arrange the numbers any way we like. Let's say we want to put the area code in parentheses, insert a space after it and insert a dash (-) between the exchange number and the individual number. We would use the following substitution string:

```
(\1) \2-\3
```

The list would appear as follows:

```
(123) 456-7890
(111) 222-4444
(908) 737-4456
```

You can use subexpressions to reorder the text in lines. For example, if we want to reverse the telephone numbers (show the last four digits first, then the first three digits of the telephone number, followed by the area code), we could use

```
Last: \3 Middle: \2 Area: \1 Complete: \0
```

This substitution string produces the following list (assuming that we started with the same data in this example and used the same regexp):

```
Last: 7890 Middle: 456 Area: 123 Complete: 1234567890
Last: 4444 Middle: 222 Area: 111 Complete: 1112224444
Last: 4456 Middle: 737 Area: 908 Complete: 9087374456
```

Escaped Characters in Replacement String

Escaped sequences can also be used in the replacement string of a Change command, making it easier to insert special characters.

All escaped sequences are valid in the replacement, except for octal values (these are coded using octal digits). For example, "\007" can be used to represent the bell character. However, backreferences in the replacement string are represented by *n*, where *n* is a digit from 0 to 9. Because of that, \007 might be interpreted as backreference \0 followed by the literal 07 (bell character).

To work around this limitation, a backslash followed by a digit in a replacement string is always assumed to be a backreference. To specify special characters using numeric values, you should use hexadecimal notation (e.g., \x007).

Qedit Glossary

Introduction

Certain symbols and terms are common to many Qedit commands. They are defined here, in alphabetical order.

The slots for variables within the command definitions are highlighted in the text. You replace these variable fields with your real-life item. For instance, the syntax for the Use command is "Use *filename*". You replace the term *filename* with any valid filename. For example,

```
/use qedseg.job
```

Terms

Abbreviating

You can abbreviate many Qedit commands. You can shorten command names, for example, to a single letter, unless more than one command starts with the same letter. If that's so, enter enough of the command name to distinguish it. The reserved words First, Last, and All can be replaced by [,] and @ in Qedit commands. Sometimes you can even dispense with the command completely: /? means help, /\ means back one line, /55 means go to line 55, /"string" means find this string, /^"string" means search backwards for this string, and a simple Return means go ahead one line.

Batch

Although Qedit is primarily designed for interactive editing, all commands except Visual can be used in a batch :JOB. There are two differences in operation:

An error causes Qedit to terminate in batch mode, but only skips the current command line in session mode;

Where a "Yes-or-No" question is asked in session mode (e.g., "Clear?"), the question is printed with an implicit "Yes" answer in batch mode (e.g., "Clear? Yes").

In both session and batch, a "warning" message is nonfatal. Set Autocont ON causes errors to be nonfatal in batch mode. New work lines can be Added in batch, but because Control-Y cannot be used, the Add should be ended with "//".

Calculator

Qedit will treat any command that begins with an equal sign ("=") as an expression to be evaluated. To add two numbers together:

```
=125+512
Result= 637.0
```

An expression consists of numbers and operators. The operators can be addition (+), subtraction (-), multiplication (*), division (/), or exponentiation (**). The value of the expression is printed immediately.

For a complete description of calculator, type `help calc`.

Column

Individual character positions within lines are called columns and have column numbers. See *template* for a method of drawing a column template above any line. Column numbers are referenced in the Change command and string *windows*. For example:

```
/change 1/4 "" 23 {delete first 4 columns in line 23}
/change 1 " " 4/9 {insert 2 columns at front}
/l "begin"(1/10) {find "begin" in first 10 columns}
```

A *column* is an integer number between the lowest column of the line and the highest column. The lowest column number is 7 for standard COBOL, and 1 for SPL, FORTRAN, Pascal, RPG, Text, COBFREE, Data and Job files. The highest column number is 72 for standard COBOL, SPL, Pascal and FORTRAN files, 256 for COBFREE, 256 for TEXT, 80 for COBOLX, RPG and Job files, and 8,172 for Data files. When in doubt as to column numbers, use LT to list a line with column headings. Shorthand: (1) = (1/1), ([/30) = (first column/30), (30/]) = (30/last column).

Using Set Left *column* and Set Right *column*, you can set *margins* in specific columns. Any existing data beyond the margins is retained, but new lines added will have blanks outside the margins.

Command

Qedit accepts two basic types of commands: those such as Add, Change and Text that can be combined on a line using semicolon to separate them; and those such as File and Listf which can only appear once on a command line because semicolon is reserved for separating parameters.

```
/text abc;modify 5 {two Qedit commands}

/file abc;rec=-56;disc=10 {one MPE command}

/new abc;listf abc {Qedit and mpe command}
```

We call the first style "qedit" commands and the second style "mpe" commands, although they are all equally Qedit commands. With the first style, the command name can usually be abbreviated to one letter (Add is A), although some commands require several letters (Findu for Findup). With the "mpe" style, the command name must usually be spelled out completely (e.g., Listf), although some commands do have short forms (Seg for Segmenter, the F7 key for Listredo).

```
/vi {"vi" means Visual}

/c "abc"xxx" all {"c" means Change}

/run $oldpass;maxdata=1000

/ru ;m 10000 {short form okay in Qedit}
```

Because the syntax rules vary for these two styles of commands, we show the "mpe" commands in the manual with a colon (:). This does not mean that you need to type a colon with those commands - Qedit will recognize 99% of them without a colon (as long as there is not a "qedit" command with the same name!)

Control Character

You create a control character by holding down the Control key while you strike another key. Control plus "A" generates Control-A. These are normally nonprinting characters, but they may do things to your terminal. For example, Control-G rings the bell. Qedit uses control characters for a number of purposes:

In Modify, control characters specify the edit functions: Control-D for delete, Control-B for before, etc.

Control-Y stops execution of the current Qedit command.

Control-H causes the cursor to backspace one position in the current line.

Control-I skips to the next tab position.

Control-X cancels the current input line.

Control-S pauses a listing that is printing too fast for you to read.

Control-Q resumes a listing that you have paused with Control-S.

Editing control characters can be tricky. If you use Set Editinput to clean your text of line "noise", Qedit will not let you enter control characters in Add or Replace. If you use Modify, it treats all control characters as edit functions. If you use Visual, the block-mode terminal strips all control characters from the text. There are three things that you can do: 1) use Set Decimal ON and insert control characters using Change "$" '26, 2) use Set Editinput Data OFF and enter them using Display Functions in Add and Replace, and 3) use Set Mod Qzmod and insert them using Control-W, Control-P (put).

Copylib Members

COBOL allows you to maintain libraries of common code and data called "copylibs". Each library consists of several members, each with an eight-character name. You use HP's Cobedit program to create the Copylib file but you can use Qedit to list copylib member names, and to Text, Keep, List and Destroy Copylib members. Wherever you may type a *filename* in Qedit, just substitute a member name in parentheses, optionally followed by the name of the Copylib file (default = "copylib" for which you usually have a :File command).

```
/file copylib=copylib.pub.develop
/list (custrec)
/text (custrec) {looks in Copylib}
/keep {same member, same file}
/keep (custrec2) {new member, same file}
/keep (custrec) copylib2 {same member, different file}
```

CRT

CRT (Cathode Ray Tube) is a generic term used to refer to the terminal. It refers equally to "real" HP terminals, clones of HP terminals made by other companies, and PCs that run terminal emulation software.

Current Line

The current line is the line you last accessed. You can refer to it using the special character "*" instead of a *linenum*. For most commands, * is also the default *rangelist*. For example, VIS sends you into full-screen mode around the current line.

Defaults

When Qedit asks you a question, it puts the "default" answer in brackets (e.g., Purge file? [no]). The default is usually the option that would do the least harm to your file. That is, "do not complete the task", "do not erase the file", or "do not upshift the line". If you press Return to the question, Qedit will take the default. In batch processing, there is no one available to answer the question, so Qedit must decide on the proper answer for you. Qedit assumes that you want your batch task to complete, so it always selects the option that will complete the command successfully. That is, "do clear the file", or "do upshift the line".

External File

Although you can only edit the workfile that is currently Open, Qedit accesses files for other purposes than editing. Qedit accepts commands and lines of text from $stdinx. Qedit prints lines and messages on $stdlist. The List and Verify commands allow output to be directed to an external file named LP that defaults to the LP device: List LP ALL; Verify LP.

Qedit reads external files in the Add, Hold, List, Merge, Text and Use commands:

`/add 100.1=tfile` {adds lines from "tfile" at line 100.1}

`/list tfile` {lists the contents of "tfile"}

`/text tfile` {makes a copy of "tfile"}

`/use tfile` {executes Qedit commands from "tfile"}

`/merge tfile` {merge in contents of "tfile"}

`/hold sample 1/5` {write lines 1/5 of sample to Hold file}

Qedit recognizes three types of external files:

Other Qedit workfiles.

NUMBERED text files. Each record contains a line number field. The lines are sorted by the line number. This is the file created by a Keep command. If the record length is not 80 bytes (or 74 for COBOL), the LANGUAGE is always TEXT.

UNNUMBERED text files. Records with no line number field. These are created by a KQ command or by Keep file,UNN. If the record size is not standard, the language is set to TEXT (record <= 256) or DATA (record > 256).

File Names

A *filename* is any valid MPE file name and is used in Qedit commands to identify a *workfile* for editing (Open, New, Text) or an *external file* to be accessed in some way (Add, Keep, List, Text and Use). On MPE/iX 5.0, Qedit accepts file names up to 240 characters long, containing underbars (_) and dashes (-). On MPE, a POSIX file name must be preceded by a period (.) or a slash (/). The following commands all contain valid file names:

```
/open qedt3p1.source {open file for editing work}
/add 50.1 = abcd.pub {copy in lines from a file}
/new qedt3p2.source {create a new Qedit workfile}
/keep ktemp.stream {convert workfile to Keep file}
/text #o1234 {see Spool Files}
/text (custrec) {see Copylib Members}
/keep /GREEN/BOB/temp.dot {MPE/iX 5.0 or later}
/text /GREEN/BOB/temp-dash
/list /GREEN/BOB/temp_underbar
/list ./temp-dash {current working directory}
/list ../SRC/lowercs {parent directory}
```

File names that include special characters might cause problems to Qedit. For example,

```
/Text ./file:name
Error: Extra or invalid character in Text command
```

If you run into this, you can use the $file keyword instead. The $file keyword can be used wherever a file name is expected such as in the Text, Add, List commands. The syntax is:

```
$file[=]"filename"
```

$File is a reserved keyword, which is followed by an optional equal sign and the file name enclosed in string delimiters. Without doing anything to the string, Qedit tries to open the specified file. The previous example now becomes:

```
/Text $file="./file:name"
10 lines in file
```

This means the file name is assumed to be in the POSIX namespace. If you wish to access files in the MPE namespace, you have to enter the name in uppercase and use the POSIX notation.

```
/ACCOUNT/GROUP/FILENAME
```

Full-Screen Editing

To use the full-screen editor of Qedit, use the Visual command. This feature works on most HP terminals with block-mode and provides many powerful features, including navigation while in Visual mode.

Hold File

There are two Hold files. You can explicitly save lines in the file called Hold by using the Hold command, or HH /HJ in Visual mode. Lines are written to the Hold0 file every time you move or copy with the Add command (MM, CC, and DD in Visual mode). You can refer to the contents of these files by their file names in any of the commands that access external files, such as Add-File, List, and Use.

J Option

You may append one or two option letters to a command name: Q, T, or J. For example, the List command has these options: LQ, LT, LJ, LQJ, and LQT. The J option specifies left-justified or "jumping" or other options. For example:

```
/lj {List-Jumping to browse; type N to stop}
/lqj {List-Jumping without sequence numbers}
/cj"*"." {verify each change before updating}
/aj * {add-justified after *; same indentation}
/rj 423 {replace-justified; same indentation}
/hoj 1/9 {append rangelist to end of holdfile}
```

Jumbo Files

Introduced in Qedit 4.3, Jumbo files are files in a new Qedit file format. They are similar in structure to original Qedit files, but Jumbo files can hold lines up to 1,000 characters. In addition, Jumbo files can contain up to 99 million lines.

Starting in Qedit 4.6.57, there is a new workfile format known as Wide-Jumbo. These expanded Jumbo files can hold lines up to 8,172 characters.

If you pass a Jumbo file to a program that knows about Qedit files but not Jumbo files, the file will appear to be empty to the program.

Keep File

A Keep file is a disc file that is created by the Keep command of Qedit or EDIT/3000. See *external file*. A Keep file cannot be edited per se, because you cannot insert lines in it. A Qedit workfile is designed to hold the same data as a Keep file, but more compactly and with the ability to insert lines. Use the Text command to copy a Keep file into Qedit format.

Language

Qedit works on files of standardized formats called *languages*. Most are programming languages: COBOL, FORTRAN, SPL, and Pascal. We provide the "language" JOB for files with 80 columns per line, without sequence numbers (e.g., batch job streams). The "language" Data is provided for files with a nonstandard line length (e.g., Set Length 45, Set Length 132), but less than or equal to 1,000 columns per line. The "language" Text is like the language Data, but for lines with less than 256 columns. The *language* of a file tells Qedit how long the records may be, where the sequence number goes, what compiler to use on the file, and much more.

For Qedit workfiles, the *language* is assigned to the file when it is created (see Set Lang, New and Text).

Qedit also determines a language for each external file (COBOL, COBOLX, SPL, FORTRAN, Pascal, RPG, Job, Text) by looking at the record length, the file code and the format of the first record. When external files are accessed, Qedit determines these attributes following rules that are defined in appendix B. There is no need to specify the Lang explicitly, unless there is an ambiguity (e.g., /Text datafile,UNN because the file has numbers in last eight columns).

Left

The Set Left command allows you to set a left margin for lines in your workfile. When you do this, existing data to the left of the margin column is retained unchanged, even though you may edit the rest of the line. Of course, if you Delete a line, the entire line is gone. You can also use Set Right to create a right margin.

Length

The maximum *length* of lines in a Qedit workfile is 8,172 columns, if the file has Set Lang Data. Other Lang values are limited to length 80 or less (72 for SPL, FORTRAN, and Pascal, 74 for COBOLX and 66 for COBOL without the comment columns). For Text and Data files, the maximum line length can be defined using Set Length (maximum is 256 for Text, and 8,172 for Data).

Line

A *line* is a sequence of characters within a Qedit workfile. It has a length which may vary as the line is edited and a maximum *length*. Many Qedit commands are based on the *line*. List displays lines, Delete deletes lines, etc. If you use *margins* (Set Left, Set Right), you can only list and edit the portion of the line within the margins. Each unique line has a *linenum* that determines its position within the workfile.

```
55.01 Sample line of text.
```

Linenum

Each line in the workfile has a *linenum* (e.g., 999.99) that determines its relative location in the workfile. Because each line number has a fractional part, lines can be added between existing lines. For example:

```
/add 1.1
1.1 line inserted between 1 and 2.
1.2 line inserted between 1.1 and 2.
1.3 //
/list 1/2
1 *REMARK
1.1 line inserted between 1 and 2.
1.2 line inserted between 1.1 and 2.
2 IDENTIFICATION DIVISION.
```

The smallest increment that you can have between two lines is 0.001. After adding enough lines in a single spot, you will not be able to add any more. For example, lines cannot be added between 5.111 and 5.112. When this happens, use Renum to renumber all or part of your file, or use Set Vis Renum On.

The simplest form of Qedit commands refers to a single *linenum*:

nnnnn.nnn: 1 1.0 1.05 .05 100 1000 10000.001

FIRST: the first line in the file (lowest line number)

LAST: the last line in the file (highest line number)

[: default abbreviation for FIRST

] : default abbreviation for LAST

* : the most recently accessed line

Examples of commands that refer to a single *linenum* are:

```
/add 50.1
```
{add new lines at line 50.1}

```
/c "X"Y" 100 {change X to Y in line 100}
/delete last {delete the last line in the file}
/list [ {list the first line in the file}
/modify * {modify the "current" line}
/replace ]-1 {replace penultimate line in file}
/list 200.1 {list line 200.1, if it exists}
```

Qedit also supports *relative line numbers*, as in List LAST-5 or Modify *-5/*+5.

Looping

Qedit allows looping string searches in almost every command. To list all lines containing "Sam Spade", use:

```
/list "Sam Spade"
```

In command files and UDCs you have another choice: the While command. This allows you to execute a set of commands each time a string is located.

Note that While looping is not required to replace strings in all lines containing a search string. The Change command will do it, as in this example, where any lines containing the string "!job" in the first four columns will have the string "oldpass" changed to "newpass".

```
/change "oldpass","newpass" "!job"(1/4)
```

You can also modify, delete, replace, hold, keep, or copy lines that match a string.

Margins

Using Set Left and Set Right you can define margins for your workfile. The existing data outside the margins is unchanged when you edit within the margins. This can be extremely useful for editing files with more than 80 columns per line.

Member

See *Copylib Members*.

Memory Lock

Qedit has commands for enabling and disabling the terminal Memory Lock. This is so that you can leave the User Keys displayed on your terminal and still access the Memory Lock function:

```
/$ {or $+enables memory lock}
```

```
/$-  {disables memory lock}
```

To use memory lock when prompted for a command, just move the cursor up to the desired line, type "$" and hit Return. This feature does not work in Visual mode.

MPE Command

Qedit can execute MPE commands, including Run and Prep. If Qedit does not recognize the command as one of its own or as a UDC, it tries to treat it as an MPE command. If your command can be treated as a Qedit command, it will. This means the some MPE commands such as Help and many short UDC names such as UT must be entered with a colon prefix. To require a colon for MPE commands, use Set Limit Colonreq ON.

Examples of MPE commands are :Listf to get a list of your files; :Tell to send messages to other users, :Showtime to get the date and time, :Showjob to get a list of other users on the computer, :Cobol to compile, and :Stream to launch a job.

```
/:showjob
/showjob
```

Patterns

You can ask Qedit to look for a *pattern* instead of a specific string by using the Pattern *window* option:

```
/list ".@key@" (pattern)
```

The command above displays all lines that contain a period in column 1, and the string "key" with anything in between and at the end. The string window can also specify Upshift to ignore case and Nomatch to select lines that fail to match.

Organize your PATTERN string like an MPE pattern-match (i.e., "@UPD@MASTER@"). You can combine it with the UPSHIFT option. Qedit will only find the pattern within a single line of text, not spanning two lines.

The special characters in a pattern are:

@ to match anything, including nothing

to match a single numeric digit

? to match a single alphanumeric character

~ (tilde or wavy line) to match zero or more spaces

& match next character (use to match "@")

^ (reserved for future use)

! (reserved for future use)

Important: At-signs (@) are needed at both ends of a pattern if you want to search for a pattern at any spot in the line. List "QEDIT" (PATTERN) matches only lines consisting of "QEDIT" only, starting in column 1.

The Nomatch and Pattern options are ignored for the Change target *string*. If you try to use them, Qedit prints a warning.

Here are some sample commands containing window options:

`/list "bob" (upshift)` {"bob","BOB","Bob",etc.}

`/list "@BOB@" (pattern)` {lines containing "BOB" anywhere}

`/list "BOB@" (pattern)` {lines with "BOB" in column 1}

`/del "&@@" (pattern)` {delete lines starting with @}

`/mod "@fix@QEDIT@"(pat)` {lines with two strings}

`/delete "~" (pattern)` {delete all blank lines}

`/list "^[A-Z][a-z]*" (regexp)` {lines starting with an uppercase}

Procedure

The Proc command allows you to add your own commands to Qedit. Proc will load a "procedure" (subroutine, function, whatever) from an SL file using the Loadproc intrinsic and then treat it as part of Qedit. We provide two sample Proc routines in the file Routines.Qlib.Robelle: NEATER to neaten COBOL source, and FINDJUNK to remove nonprinting characters from files. The rules for writing a Qedit *procedure* can be found in Appendix C.

The Proc command has two useful procedures built into it at all times: DOWN and UP to downshift and upshift lines.

Qeditscr

Qedit uses a job-temporary scratch file called Qeditscr whenever you have not provided a workfile for Add or Text, and Random scratch files are not used (see Set Work). This can be useful for preparing production batch jobs from skeleton jobs (Text JOB23), or in any situation where you want to edit a Keep file and Keep it again immediately.

If you decide that you want to save the contents of the current Qeditscr file as a regular, permanent Qedit file, use Shut *filename*. Once created, Qeditscr remains as an old temporary file until you log off the

system with :BYE, even if you leave and re-enter Qedit. Each time Qeditscr is opened or closed, a warning is printed.

Set Work Temp OFF disables the use of Qeditscr on Add or Text. This is a good idea if you're using a modem line which might end your session unexpectedly. On disconnection, a temporary file evaporates. A permanent file would be saved, even though your last few changes may not have been applied.

If you have Set Work Random On, Qedit will use Qed*nnnnn* in your logon group and account, where *nnnnn* is a random number.

Quiet-Q Option

You may append one or two option letters to a command name: J, T, and Q. For example, the Add command has these variations: AddQ, AddT, AddJ, AddQT, and AddQJ. The Q option means QUIET, without line numbers, or without printing the lines processed. For example:

`/lq 5/10` {list lines 5/10 without line numbers}

`/kq paul` {save lines without line numbers}

`/aq 5.01` {add new lines, but don't prompt}

`/aq 10.00=abc` {add file without printing the lines}

`/hq 45.1/.9` {replace Hold, but don't print lines}

`/cq "X"Y"` {change X to Y, but don't print line}

Range

A *range* is just a series of lines defined by a starting line number, a slash (/) and an ending line number. ALL is short for FIRST/LAST and @ is short for ALL. If the ending line is left off, Qedit assumes LAST. You can shorten a range like 516/516.554 to 516/.554.

`/a 20=100/120` {copy range 100/120 after line 20}

`/c "X"Y" */200` {change X to Y in current line to 200}

`/delete all` {delete the range *ALL*}

`/keep tF3 [/200` {write the range *[/200* to a file}

`/list 100/` {list the range *100 to LAST*}

`/m 1111/.99` {modify the range *1111/1111.99*}

`/list last-10/` {list the last 11 lines in the file}

`/l @` {list the entire workfile}

`/zz 5/10;l zz` {mark a range, then list it}

Rangelist

Qedit commands usually contain a part called the *rangelist*. A *rangelist* is simply a sequence of line *ranges* separated by spaces or commas. A rangelist indicates which lines the command should operate on. Here are some sample *ranges*:

```
1          {a single line}
1/4        {lines 1 through 4, inclusive}
25/100.1   {lines 25 through 100.1}
100/       {lines 100 through the LAST line}
ALL        {lines FIRST through LAST}
*-9/*+9    {area around current line}
```

Here are some sample *rangelists*:

```
1,5        {lines 1 and 5}
1/5 10/20  {lines 1 through 5 and 10 through 20}
25,33/100  {lines 25 and 33 through 100}
```

A *rangelist* can contain overlapping lines. Qedit does not try to resolve the ranges into a list of ordered, unique lines. The ranges are processed as they appear in the list.

```
30/40,1/10   {lines 30 to 40, then 1 to 10}
1/10 5/20    {lines 5 to 10 are processed twice}
all,all      {process the entire file twice}
```

A *rangelist* can also contain a string search:

```
"strg"       {search the entire file for "strg"}
"strg" 10/20 {search only lines 10 through 20}
```

A rangelist can include up to 10 strings (see String for definition). Strings are separated from each other by an `OR` or `AND` keyword. Each string can have its own search setting such as column range and options. `OR` and `AND` keywords can not be mixed in a rangelist.

When `OR` is used, each string is compared in turn against the text. As soon as a match is found, the line is selected. Thus, most commonly found strings should be placed at the beginning of the list to increase speed. For example,

```
/List "abc" or "xyz"
    { search for "abc" or "xyz" }
/C 1/2 "ME" "abc" (u 30/35) or "xyz" (50/60 s)
    { search for caseless "abc" in columns 30/35 or }
    { smart "xyz" in columns 50/60 }
```

When AND is used, all strings are searched for on each line and all strings must be found for the line to be selected. The strings do not have to be in the same order. As soon as one string is not found, the line is rejected.

For example,

```
/List "abc" and "xyz"
    { search for "abc" and "xyz". Both strings must be present, }
    { anywhere on the line, in any order                        }
/C 1/2 "ME" "abc" (u 30/35) and "xyz" (50/60 s)
    { search for caseless "abc" in columns 30/35 and         }
    { smart "xyz" in columns 50/60                           }
    { If either string is missing, the line is not selected. }
```

The complete rangelist is saved and used when the "previous string" syntax (i.e., a null string) is entered. For example, `/List ""`.

Each command has a default *rangelist*. The following commands default to "*", the current line:

Add, Append, Change, Delete, Find (start search at *), Hold, List, Modify, Proc, Replace, Visual (enter Visual mode at current line), ZZ.

Justify defaults to "*" for Center, Left, or Right, and to */end (maintaining blank lines between paragraphs) for Format or Both.

Before, Do, and Redo defaults to the last command entered.

Relative Line Numbers

When you tell Qedit which line you are interested in, you can either specify the exact line number, as in

`/list 5` or `/list last`

or you can specify a position relative to an exact line, as in

`/list *+6` or `/list last-1`

The first lists a line that is 6 lines after the current line and second lists the second from last line in the file. The "*" is optional. Relative line numbers can go forward or backward 10,000 lines.

To modify the text around the current line, use

`/modify *-5/` {use Control-Y to stop the Modify}

`/modify -5/` {the * is optional}

Qedit will even let you use relative line numbers when looking at an external file, as in

`/list invoice.job last-10/last`

Right

You can use the Set Right command to define a right margin for the lines in your file. Any data beyond the margin will remain unchanged as you edit the data to the left of the margin. You can also set a left margin with Set Left.

Shifting

The Qedit string *window* has an option to match strings even if they differ in case. If you want to match "speed demon", "SPEED DEMON" or even "Speed Demon", do:

```
/list "speed demon" (upshift)
```

If you want to change the case of letters in your text, use either Proc DOWN (downshift entire lines), Proc UP (upshift entire lines), ^W^S^D in Qzmodify (downshift from cursor to end of line), ^W^S^U in Qzmodify (upshift to end of line), or ^C in Qzmodify (reverse case of cursor).

Size

A *size* is an integer that specifies the number of lines to be allowed in a workfile. The minimum *size* is 200 lines, and the the maximum is either 65,535 (original-format workfiles) or 99,999,999 (Jumbo and Wide-Jumbo workfiles). The default size is 3,200 lines, but can be changed with Set Work Size. This term occurs in the New, Text and Set Work Size commands:

```
/new abc(1000)  {build "abc" with room for 1,000 lines}
/text q(5000)=s  {build "q" for 5,000 lines, copy S in}
/s work size 600  {set default size for NEW workfiles}
```

Spool Files

Output spool files (sometimes called "spoofles") hold reports or listings that are waiting to print on a shared system printer. On MPE V you must use the Spook program to look at spool files, but on MPE/iX they are normal files that can be Texted, Listed and Destroyed in Qedit. To make this easier, Qedit recognizes # as preceding a spool file number and automatically converts it into the proper file name:

```
/showout sp;ready
/text #1234  {O for output is assumed}
/list #o899
/destroy #889
```

$Stdin / $Stdinx

A system-defined file name referring to the standard input "file" (which can be an actual file or a device). $Stdin usually refers to the keyboard for interactive sessions and an input spool file for batch jobs. $Stdin treats a line starting with a colon as end-of-file. $Stdinx treats the colon (:) prompt appearing in the first column of input data as part of the data file, rather than as an end-of-file indicator. Qedit reads from $stdinx so that MPE commands entered with a colon do not cause Qedit to terminate.

$Stdlist

A system-defined file name referring to the standard output "file" (which can be file or a device). $Stdlist usually refers to the terminal for interactive sessions and the printer for batch jobs.

String

Most Qedit commands can specify a *string* of characters to be searched for in the workfile. Only lines containing the string are processed by the command. A *string* is delimited by quote characters ("SAM") or by one of these other special characters:

```
'  |  \  ~  _  !  #  &  :  (as in :SAM:)
```

The delimiter list can be customized with the Set Stringdelimiters command.

The maximum length of a string is 80 characters. Apostrophe is a valid string delimiter when Set Decimal is OFF (handy because ' is an unshifted key on many keyboards). All these delimiters can be used within Qedit commands. Some delimiters, like the colon, cannot be used in an implied search or on the home line (===>) in full-screen mode.

```
/QEDIT {find the next occurrence of the word QEDIT}
/:QEDIT: {colon prefix identifies a system command}
```

You can specify more precise string matching by appending a *window* to the string ("SAM" (UPSHIFT), etc.). A null string ("") refers to the previous string entered, with the same window as before. For example:

```
/c "QEDIT"Quedit"@ {change spelling in all lines}
/l 'QEDIT' (upshift) {match uppercase and lowercase}
/find \withh\ {find spelling error; fix it}
/change \\with\
```

Tab

The TAB key can be used to skip logically to the next Tab stop (also physically, if Tabs are set on the terminal). If more Tabs are included in a line than there are Tab stops, a new work line is created. The default tab key is Control-I (TAB), but it can be changed (Set Tabs "_"). The default Tab stops are every 10 columns (MPE) or every 8 columns (HP-UX), but you can set the tabs to whatever columns you like with Set Tabs.

Template-T Option

You may append one, two, or three option letters to a command: Q, J, or T. For example, the List command has these variations: ListQ, ListT, ListJ, ListQJ, and ListQT. The T option causes a column-number template to be printed once before the command is processed. The T option is most useful with Add, List and Modify.

```
 /LQT 1 {T=template of column numbers}


1...+....10...+....20...+....30...+....40...+..
..
 LINE 1.
```

UDC

UDC stands for "User Defined Command", a feature of MPE that allows you to abbreviate MPE commands and make up new, complex commands from existing commands. Qedit has the ability to recognize and execute many common user defined commands (UDCs). Use the Set UDC command to tell Qedit what UDCs you wish to have it recognize.

Visual Editing

Besides the traditional Line mode editing that Qedit supplies, it has another editor built into it, a full-screen editor entered via the Visual command.

Window

A *window* is used to limit the extent of string matching. Normally, specifying a string in a rangelist implies processing all lines where the string occurs anywhere within the line, regardless of starting column and surrounding context.

With a *window*, string matching can be restricted to a specified column window (example: 10/30 means column 10 through column 30).

Shorthand: (1) = (1/1), ([/30) = (first column/30), and (30/]) = (30/last column). Use a (1/132) window with "TEXT" files to reduce the record width to 132 columns. The column numbers begin with 7 in COBOL and 1 in the other languages.

The complete syntax for a *window* is: ([*column*/*column*] [*keyword*]...)

The window keywords are

(SMART | NOSMART)	{default=NOSMART}
(UPSHIFT | NOUPSHIFT)	{default=NOUPSHIFT}
(PATTERN | NOPATTERN)	{default=NOPATTERN}
(MATCH | NOMATCH)	{default=MATCH}
(REGEXP | NOREGEXP)	{default=MATCH}

A single window may specify multiple options separated by spaces or commas and following the column range, but if Pattern is included the Smart-NoSmart option is ignored. That is, (Upshift Pattern) makes sense, but (NoSmart Pattern) does not. The options are independent and setting or resetting one does not change the others.

With the Smart keyword, Qedit matches a string only if the string is preceded by a "special" character, or the start of the window, and is followed by a "special" character, or the end of the window. In SPL, the apostrophe is not "special". In COBOL, the hyphen is not "special". In Pascal, the underline is not "special". In FORTRAN, embedded spaces are allowed.

When you specify Nomatch, Qedit selects the lines that do not contain the string. The default of course is MATCH to select lines that do contain the string.

With the Upshift window keyword, Qedit ignores the case of letters in deciding whether to find a match.

Pattern means that the string in the window is to be treated as a pattern to be matched (i.e., "@UPD@MASTER@"). It may be combined with Upshift.

Regexp means that the string in the window is to be treated as a regular expression to be matched (i.e., "UPD.*MASTER"). It may be combined with Upshift.

Here are some example uses of windows:

```
 /list ".begin" (1/10 upshift)
```
{.begin in 1st 10 cols}

```
 /list "@begin@end@" (pattern upshift)
```
{...begin...end...}

```
 /list "^begin.*end$" (regexp noup)
```
{begin...end}

A *window* can be specified permanently with the Set Window command, or temporarily after any *string* in a rangelist. For example:

```
/set window (smart) {use Smart for all string searches}
/list "sum" {defaults to Smart searching}
/l "Sam" (upshift) {upshift in this command only}
```

Workfile

Qedit manipulates a collection of text lines that is called a *workfile*. The workfile is a compact disc file with a permanent name that you can edit and compile. It replaces the standard Keep file and the Editor K-file, and eliminates high-overhead "Text" and "Keep" operations. Workfiles have a CODE of 111. Use New or Text to build them. The scratch file is a special workfile that is the default, temporary workfile.

To provide the fastest possible response time, Qedit does not write every word that you type out to the disc. Thus, after a system crash (or phone disconnection), you could lose up to 10 lines of text. If you wish to force Qedit to post your changes to the disc, you can either Shut the workfile or do a :Continue command.

Qedit saves the "context" of the workfile (i.e., Set Left/Right, current line number, Set Length, etc.) when you Shut it. When you Open the workfile again, Qedit recalls the same context. The Open command prints a compact warning of any features it sets from the user label.

Special Characters

Certain nonalpha and nonnumeric characters like * and / have special meaning within Qedit:

?
Means Help, Nonprinting Characters, Alphanumeric (in Patterns) or Optional (in Regexp)

Typing a question mark in the Visual home line or in response to the Line mode prompt (/), is a request for on-line Help. In Visual you can get more detailed assistance by typing Help, instead of "?," in the home line.

When Visual prints a ? at the start of a line, it means that the line contains nonprinting characters, which are replaced by dots (.).

Question mark "?" in patterns matches a single alphabetic or numeric character:

```
/list "BASE??"(pattern) {"BASE" plus 2 alphanumerics}
```

A question mark (?) in regular expressions qualifies the preceding character and makes it optional. This means the character may or may not be there. In either case, the search is successful.

```
/list "cancell?ed" (regexp)
```
{"canceled" and "cancelled" are found}

$
Means Hex, Standard File, Memory Lock, List Option, Previous File or End-Of-Line (in Regexp)

Dollar sign is used by MPE for standard file names ($oldpass, etc.).

Dollar sign is used by Qedit to enable (/$) and disable (/$-) memory lock at the current line.

Dollar sign is used by many compilers as the prefix for commands (e.g., $include, $control, etc.).

In the calculator, $ is the prefix for a hexadecimal value (=$FF).

The List command has a variety of temporary options preceded by $. For example:

```
/list $octal 5/6
```
{octal dump}

```
/list $incl abc
```
{Include files}

$ can be used as a shortcut to refer to the "previous" file name referenced in a Qedit command. For example, after List XXX, Add 1=XXX, Use XXX, Destroy XXX, Stream XXX, Keep XXX, or Shut XXX, the $ file name is XXX. If you already have an open workfile or scratch file, a Text or Open command makes Qedit shut the current workfile. Thus, the $ file name now contains the previous workfile name. If you are not using a workfile, then $ is not updated by the Text or Open command. However, it is updated by a Shut command without a file name. You can use $ as a shortcut in commands that refer to an external file name (Open $, Add 1 = $, List $, Destroy $, Use $, etc.). Verify $ shows you the name of the "previous" file. $ is also valid as a parameter in a User Command.

A dollar sign ($) in regular expressions identifies the end of a line. It takes on this meaning only if it is the last character in the regexp. If used anywhere else in the expression, the dollar sign is used as a literal.

When it represents the end of a line, the dollar sign can find a successful match only when the string is the last thing on a line.

```
/list "The END$" (regexp)
```
{line must end with "The END"}

^

Means Findup, Control-Char, Start-of-line (in Regexp) or Negate (in Regexp)

The circumflex character (^) is a short name for the Findup command. In documentation, it often indicates a control character (^A is Control-A). If you are not on an HP terminal, you can use ^1 through ^8 to simulate the user function keys in Line mode. That's circumflex-1, not Control-1!

The circumflex (^) in regular expressions identifies the start of a line. It takes on this meaning only if it is the first character in the regexp. If used as the start-of-line, it indicates that the string must be the first thing on that line for a successful match.

```
/list "^Once upon" (regexp)
```
{line must start with "Once upon"}

If it used anywhere in the expression and is not preceded by a backslash, it is used as a literal.

If the circumflex (^) in a regular expression is preceded by a backslash (\), it indicates a control-character combination. The character to the right of the circumflex makes up the actual control character.

```
/list "\^G" (regexp)
```
{Control-G or Bell character}

The circumflex (^) in a character class within regular expressions negates the list of characters in the class. It takes on this meaning only if it is the first character in the class. If used anywhere else in the class, it is used as a literal.

If used as a negation, it indicates that the match is successful if the character in the specified position of the text *is not* in the class list.

```
/list "[^abc]" (regexp)
```
{successful if not "a," "b," or "c"}

.

Means Nonprinting, Reset, Decimal Point or Any Character (in Regexp)

The most common use of a period is as a decimal point in line numbers: 12.3.

Visual, Qzmodify and List $char use a period to represent nonprinting characters in displays.

A period as a command at the Visual home line means "reset the current Cut and Paste task".

A period or dot (.) in regular expressions is a placeholder for any character.

`/list "[a.c]" (regexp)` {one character between "a" and "c"}

!
Means Posix Command or Too Long

When a line is too long to print on the Visual screen, Qedit prints an exclamation mark at the start of the line.

Put an exclam "!" at the start of a line to indicate a Posix shell script or command.

`/!ls` {list current directory}

%
Means Octal or String

Percent (%) means either an octal value (%454) or a string (/list %xxx%).

*
Means Current, Refresh, Multiply or Quantifier (in Regexp)

In the calculator, * means multiply, as in `=5*30`.

In Visual, an * at the ===> command lines tells Qedit to Refresh the screen. When using Set Vis Update On to automatically update the screen, *> or *< moves ahead or back one page, without updating the current page.

You can refer to the current line in your workfile by means of "*" (e.g., Modify *-10/*+10). "*" is usually the default *rangelist* for a command if you do not specify one. The *-pointer is moved by these commands:

Command	Status of "*" After the Command
Add	last line added.
Change	last line changed.
Delete	previous or next line, it depends.
Find	last line found or end-of-file.
Findup	last line found or start-of-file.
Hold	last line held.
Justify	last line updated.
Keep	no change to current line.

List last line listed.

Lsort last line sorted.

Modify last line modified.

Proc last line passed.

Replace last line replaced.

Text first line in file.

Visual *-line of last page displayed.

An * can also refer to the "current" (or recent) workfile; as in Open *, Use *, :Cobol *, :Stream *, Text *, or Shut *. The * shortcut refers to the currently open Qedit workfile unless none is open, then it refers to the one most recently Shut. An * also works as a parameter in a User Command.

An asterisk (*) in regular expressions indicates the preceding element might repeat zero (optional) or more times in the text.

```
/list "op*q" (regexp)
```
{"p" might be missing or appears many times}

\
Means Previous, String, Literal Match (in Regexp) or Special Characters (in Regexp)

If you enter only a Return in a command line, Qedit increments the current line pointer to the next line and displays it.

If you enter a command line containing only a backslash ("\"), Qedit decrements the current line to the previous line and displays it. Entering several backslashes ("\\\") displays backwards several lines.

You can also use \ as a string delimiter (e.g., /list \xxx\).

A backslash (\) in regular expressions is used to indicate the next character must be used as a literal. It removes any special meaning this character might otherwise have.

```
/list "\[" (regexp)
```
{"[" is not start of character class}

A backslash (\) in regular expressions might qualify the next character as a special, nonprinting character. These are special characters:

\b Backspace

\f Form feed

\n New line (line feed)

\r Carriage return

\s Space

\t Horizontal tab

\e ASCII escape character (ESC)

\DDD 1-3 octal digits representing a character's ASCII value

\xDDD 1-3 hex digits representing a character's ASCII value

\^C Control code (e.g,. Control-G (^G) is the Bell character)

/
Means Prompt, Range Delimiter, Stop, Exit, or Divide

Qedit uses the slash "/" in many places:

As the Qedit prompt character (e.g., /Add).

As the delimiter in a line *range* (e.g., 500/600).

As the delimiter in a column range (e.g., Change 1/2 "").

// (two slashes) terminate input in the Add command

(same as Control-Y).

In Visual, / at the ===> line means Exit from Visual mode.

In the calculator, as a divide (e.g., =100/5).

[
Means FIRST, [default] or Start Class (in Regexp)

Left bracket ([) is short for the FIRST line in the file, by default. This abbreviation can be changed with Set Zip.

```
/list [ {list first line}
```

In questions, Qedit shows the default answer in square brackets:

```
Purge existing file [No]?
```

In the documentation, [and] indicate optional fields in commands (e.g., List [*rangelist*]).

Left square bracket ([) in regular expressions indicates the start of a character class.

```
/List "x[abc]z" {character class starts with "a"}
```

]
Means LAST or End Class (in Regexp)

Right bracket (]) is short for the LAST line in the file, by default. This abbreviation can be changed with Set Zip.

```
/delete ] {delete last line}
```

In the documentation, [and] indicate optional syntax fields (e.g., Delete [*rangelist*]).

Right square bracket (]) in regular expressions indicates the end of a character class.

```
/List "x[abc]z"  {character class ends with "c"}
```

{ }
Are for Comments or Indentation

Qedit commands can have comments attached to them, as long as they are enclosed in curly braces:

```
/keep justify.stream,yes  {update disc file}
```

Qedit recognizes these comments at the "/" prompt, in usefiles, command files, and, although MPE won't like them, in UDCs. Qedit also accepts comments on the home line in Visual mode, and at the **More?** prompt in Browse mode. In command files and UDCs, you can place your {comment} on continuation lines, before or after the ampersand (&).

STREAMX Warning: Don't use these {comments} in job streams if you use STREAMX from VESOFT because it interprets them as parameters to be substituted.

Braces are also used in the Add Justified and Replace Justified commands to indicate a change of indentation.

@
Means ALL

The at sign (@) means "all" in some fashion:

```
/list @  {all lines in a file}

/help list,@  {all information about List}

/:listf @.source  {all files in a group}

/l "Cu@"(pattern)  {all strings starting with "Cu"}
```

The abbreviation for "all lines" is @ by default, but can be changed with the Set Zip command.

&
Means Literal Match or Continue MPE Command

Ampersand (&) in a pattern-match string means to match the next character literally, even if it is an "@" or other character with pattern meaning:

```
/list "&@@"(pat)  {all lines starting with "@"}
```

In command files and UDCs, & is used at the end of lines to continue the command to the next line.

:
Means MPE or String

Colon ":" at the start of a command line indicates an MPE command:

```
/:listf  {list files while within Qedit}
```

Colon is also a valid string delimiter:

```
/list :barbara:
```

;
Means Multiple Commands

Semicolon ";" combines two or more Qedit commands on a single line:

```
/list 5/10;add 5.5
```

Entering several semicolons ("`;;;`") displays forward several lines.

When combining Qedit commands, be sure to use the same quote character in all of them.

Incorrect: Correct:

```
/c7/7"DISPLAY";c\.\\ /c7/7"DISPLAY";c"."
```

If you want to include MPE commands in the list and their syntax requires semicolons, Qedit might not be able to parse the list correctly. To work around this problem, you can put parentheses around the whole command. For example,

List 5;Listspf o ;seleq=[owner=mgr.acct];List 4 fails

List 5;(Listspf o ;seleq=[owner=mgr.acct]);List 4 works fine

If some commands require semicolons and parentheses, you have to put the problematic command in a command file, UDC or set an MPE variable and use it in the command list instead.

,
Means a List

Comma "," separates items in a list:

```
/modify 5, 10, 20/30, 44
```

Most commas are optional in Qedit.

=
Means Copy or Calculate

Equal sign "=" usually means copy something:

```
/add 5 = inclfile {copy "inclfile" into your file}
/add 5 = 10/20 {copy lines 10/20 after line 5}
/text w2 = w1 {build "w2" and copy "w1" into it}
```

Equal sign at the start of a command means to calculate something:

```
=10+25 {evaluate the expression}
Result= 35.0
```

<
Means Move, I/O Redirection or Backward Page

Less than "<" in the Add command means to move the lines instead of copying them:

```
/add 5 < 10/20 {move lines 10/20 after line 5}
```

Less than "<" in an MPE/iX command means to read input from an external file.

```
/suprtool.pub.robelle <mycomm
```

Less than "<" in the Visual home line means to move backwards one or more pages.

```
===><3 {move back 3 pages after Enter or F7}
```

>
Means Forward Page, I/O Redirection, Modify or Qhelp

Greater than ">" in the Visual home line means to move forward one or more pages.

```
===>>5 {move ahead 5 pages}
```

Greater than ">" in an MPE/iX command means redirection of output to a file other than stdlist.

```
/showproc >myfile
```

The ">" symbol is used as a subcommand of HP-style modify, invoked as part of the Modify, Redo or Before command, and meaning "end of line".

">" is the prompt when in the QHELP subsystem.

"
Means String

Double quotes are the nominal string delimiter in Qedit (List "BOB"). However, you can use any of several special keys for string delimiters in a command:

```
/find "witth" {double quotes as quote}
/find :witth: {use colon instead of quote}
```

(
Means Start Parameter, Member, Command or Subpattern (in Regexp)

Left parentheses "(" introduces the size of a file, a window for string matches, or the name of a Copylib member, and is always matched by an ending ")".

```
/list "string" (smart upshift)
```

Left parentheses "(" can be used to enclose commands which include commas or semicolons that might be confused with delimiters. Qedit considers everything between the left and right parentheses as one command. This is mostly useful when multiple commands appear on one line.

```
/F "test";(listspf o
;seleq=[owner=mgr.acct]);Li */*+5
```

Left parentheses "(" are used to divide regular expressions into smaller portions called subpatterns. Left parentheses identify the start of a subpattern.

```
/List "x(abc)z" {subpattern starts with "a"}
```

)
Means End Parameter, Member, Command or Subpattern (in Regexp)

Right parentheses ")" completes a file size, a window for string matches, or a Copylib member name, and is irresistibly attached to "(".

```
/list "Robelle" (upshift)
```

Right parentheses ")" completes command enclosure which include commas or semicolons that might be confused with delimiters. Qedit considers everything between the left and right parentheses as one command. This is mostly useful when multiple commands appear on one line.

```
 /F "test";(listspf o
;seleq=[owner=mgr.acct]);Li */*+5
```

Right parentheses ")" identify the end of subpatterns inside regular expressions.

```
 /List "x(abc)z"
```
{subpattern ends with "c"}

+
Means Ahead Some Lines, Add or Quantifier (in Regexp)

Plus (+) means move ahead a relative number of lines.

```
 /mod *+1
```

A plus sign at the Visual home line means move roll ahead a number of lines.

```
 ===>+15
```
{roll ahead 15 lines}

Plus in the calculator means add (e.g., =5+10).

A plus sign (+) in regular expressions indicates the preceding element might repeat one or more times in the text.

```
 /list "op+q" (regexp)
```
{"p" must be there one or more times}

-
Means Back Some Lines, Minus or Range (in Regexp)

Minus (-) means back a relative number of lines.

```
 /list *-20/
```

Minus in the Visual home line means roll back a number of lines.

```
 ===>-10
```
{roll back 10 lines}

Minus in the calculator means subtract (e.g., =1010-40).

Minus (-) in a character class within regular expressions indicates a range of characters. It takes on this meaning if it appears between two other characters. If it appears at the beginning or end of the class, it is used as a literal.

```
 /list "[a-z]" (regexp)
```
{range of lowercase letters}

```
 /list "[-az]" (regexp)
```
{character class "-," "a" and "z"

#
Means Numeric Pattern, Spool File or Previous Result

In a **filename**, crosshatch "#" precedes the number of a spool file:

```
/text #o123
```

In pattern-matching, crosshatch "#" matches a single numeric character:

```
/list "rec##"(pattern)
```
{"rec" followed by 2 digits}

In the calculator, you can use # to include the previous result in the next calculation.

~
Means Spaces (Pattern), Recent Page or Field

In a Pattern, ~ (tilde) means to look for zero or more spaces.

At the Visual home line, the ~ (tilde) command means display the page that you most recently left. It actually corresponds to the Visual current line "*". So, it can be used from line-mode to reference that line.

The tilde is also used in Visual mode as a field separator within text lines that are to be divided (VV) or glued (GG).

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Introduction

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Index