

**HONEYWELL**

**MULTICS FORUM  
INTERACTIVE  
MEETING SYSTEM  
USER'S GUIDE**

**SOFTWARE**

**MULTICS FORUM  
INTERACTIVE MEETING SYSTEM  
USER'S GUIDE**

**SUBJECT**

Description of the Multics Forum Interactive Meeting System

**SPECIAL INSTRUCTIONS**

This edition supersedes the previous edition of the manual, Order No. CY74-01, dated December 1983.

Throughout the manual, change bars in the margins indicate technical changes/additions; asterisks denote deletions.

Refer to the Preface for "Significant Changes."

**SOFTWARE SUPPORTED**

Multics Software Release 11.0

**ORDER NUMBER**

CY74-02

February 1985

**Honeywell**

## PREFACE

The software product identified as Multics Forum is the property of the Massachusetts Institute of Technology and distributed by Honeywell Information Systems under license from the Massachusetts Institute of Technology.

This book is a detailed description of the Multics Forum Interactive Meeting System. It is intended for all users; both those who have relatively little experience on the Multics operating system (or any other computer system) and experienced programmers will find this a complete description. You are, however, expected to be familiar with the Multics concepts described in the 2-volume set, *New Users' Introduction to Multics* — Part I (Order No. CH24), and — Part II (Order No. CH25), referred to in this manual as New Users' Introduction.

The sections of this manual fully describe how to attend Forum's online meetings. The first five sections tell you everything you need to know to attend meetings. This part of the manual may be all you need if you are a beginning Multics user. Section 6 describes some advanced concepts, including how to tailor your Forum environment to your special needs. Section 7 contains detailed descriptions of all the Forum requests. Section 8 is an alphabetical reference section of users' commands. Section 9 describes the duties of the chairman of the meeting. Section 10 is an alphabetical reference to the chairman's commands. Appendix A contains information needed by system administrators. Appendix B contains the subroutine descriptions. Appendix C is a glossary of Forum terms.

### Manual Conventions

A few conventions and special symbols used in this manual should be introduced before you begin to explore the Multics Forum Subsystem.

Throughout the manual, "Forum" designates the Multics Forum Subsystem and the all-lowercase "forum" refers to the Multics command invoked to use this system.

Technical or other unfamiliar terms are italicized when used the first time, and are defined in the glossary in Appendix C.

The information and specifications in this document are subject to change without notice. This document contains information about Honeywell products or services that may not be available outside the United States. Consult your Honeywell Marketing Representative.

Quotation marks are used to indicate the exact spelling of a request or command name, or the way a word should appear on a line typed by a user. Requests or commands that also have a short or abbreviated name appear in parentheses following the first occurrence of the name in text—for example, when introducing the "talk" (t) request. You do not type these quotation marks or parentheses.

A convention used within examples is the use of an exclamation point (!) to indicate lines you type. The exclamation point does not appear on your terminal—you do not type it, and Multics does not type it to prompt you. Exclamation points appear only in examples, and only to show which lines you type. Remember too, that every line you type must end with a carriage return (RETURN).

Text within angle brackets (<...>) is used within examples for explanatory purposes ONLY. It is not actually typed by Multics, and it should not be typed by you.

Throughout this manual, references are made to the *Multics Programmer's Reference Manual* (Order No. AG91), *Multics Commands and Active Functions* (Order No. AG92), and *Multics Subroutines and I/O Modules* (Order No. AG93) manuals. For convenience, these are referred to in text as the Programmer's Reference manual, the Commands manual, and the Subroutines manual, respectively.

### Significant Changes in CY74-02

A forum meeting created with pre-MR11 software consists of two storage system segments which contain records of the participants in the meeting and what has been said. These meetings contain the suffixes ".control" or ".proceedings". A current version forum meeting (MR11 or later) is created as a single segment with the suffix ".forum". The current version forum software supports both pre-MR11 forum meetings and current version forum meetings.

The meetings created with current version forum software are treated as entries within the Multics storage system. Since current version forum meetings are treated as such, you can use the standard file system commands such as copy, delete, list\_acl, and set\_acl. This support also alleviates limitations on the number of meeting attendees and transactions. Current version meetings have no easily relizable limit on the amount of information which they can contain.

The current version forum also incorporates a new search strategy for locating forum meetings by looking in the forum list to find the meetings.

Forum now allows you to use transaction specifiers with forum requests. See Section 3 for details.

Forum now marks each transaction with the keyword "seen" or "unseen". See Section 3 for details.

The following new requests have been added to forum:

|                        |                     |
|------------------------|---------------------|
| add_meeting (am)       | mail                |
| announcement_info (ai) | next_meeting (nm)   |
| announce_meeting (arm) | remove_meeting (rm) |
| check_meetings (ckm)   |                     |

See Section 7 for details.

The safety switch and the seen TRANS\_SPECS switch have been added to the switch\_off and switch\_on commands. See Section 7 for details.

New control arguments have been added to the following requests:

|                  |           |
|------------------|-----------|
| list_users (lsu) | talk (t)  |
| qedx (qx)        | ted       |
| reply (rp)       | write (w) |
| reset (rs)       |           |

See Section 7 for details.

Two new user commands have been added to assist you in managing the list of meetings that you attend. The forum\_add\_meeting (fam) command adds a meeting to the list of attended meetings. The forum\_remove\_meeting (frm) command removes a meeting from the list of attended meetings. See Section 8 for details.

New control arguments have been added to the forum\_list\_users (flsu) user command.

You can now use the standard access control list (ACL) commands (list\_acl, set\_acl, and delete\_acl) with forum meetings. See Section 9 for details.

The new convert\_forum command converts a forum meeting created with pre-MR11 software to a current version forum meeting. See Section 10 for details.

The new site meeting directory is a public meeting where you can place announcements about meetings of general interest. See Appendix A for details.

The entries in the forum\_chairman\_ gate have been moved to the forum\_ gate.

The following entries have been added to the forum\_ subroutine:

```
forum_$change_chairman
forum_$chname_forum
forum_$change_chairman_idx
forum_$chname_forum_idx
forum_$create_forum
forum_$set_vl_forum_acl
forum_$convert
forum_$delete_forum_acl
forum_$expunge
forum_$get_switch
forum_$get_uid_file
forum_$list_forum_acl
forum_$replace_forum_acl
forum_$set_forum_acl
forum_$set_seen_switch
```

The following entry has been added to the forum\_admin\_ subroutine.

```
forum_admin_$convert
```

See Appendix B for details.

# CONTENTS

|           |  |     |
|-----------|--|-----|
| Section 1 | Introduction to Forum . . . . .                              | 1-1 |
|           | Meetings--With A Difference . . . . .                        | 1-1 |
|           | Benefits and Typical Uses of Forum . . . . .                 | 1-1 |
|           | The Meeting . . . . .  | 1-2 |
|           | Transactions . . . . .                                       | 1-2 |
|           | Transaction Chains . . . . .                                 | 1-3 |
| Section 2 | Getting Started . . . . .                                    | 2-1 |
|           | Entering the Forum Subsystem . . . . .                       | 2-1 |
|           | The Request Loop . . . . .                                   | 2-1 |
|           | Listing Meetings . . . . .                                   | 2-1 |
|           | Getting Help . . . . .                                       | 2-2 |
|           | Locating Meetings . . . . .                                  | 2-2 |
|           | The Central Forum Directory . . . . .                        | 2-2 |
|           | Meetings in Private Directories . . . . .                    | 2-3 |
|           | Forum Search Paths . . . . .                                 | 2-3 |
|           | Adding a Meeting . . . . .                                   | 2-4 |
|           | Attending a Meeting . . . . .                                | 2-4 |
|           | Finding Out Who Is Chairman . . . . .                        | 2-5 |
|           | Listing Other Participants . . . . .                         | 2-5 |
|           | Managing Meetings . . . . .                                  | 2-7 |
|           | Exiting Forum . . . . .                                      | 2-7 |
| Section 3 | Reading Transactions . . . . .                               | 3-1 |
|           | Listing Transactions . . . . .                               | 3-1 |
|           | Printing Transactions . . . . .                              | 3-2 |
|           | Writing Transactions . . . . .                               | 3-2 |
|           | Transaction Specifiers . . . . .                             | 3-3 |
|           | Transaction Numbers . . . . .                                | 3-3 |
|           | Current Transaction . . . . .                                | 3-3 |
|           | Keywords . . . . .   | 3-4 |
|           | Relative Order Keywords . . . . .                            | 3-4 |
|           | Chain-tracing Keywords . . . . .                             | 3-4 |
|           | Seen / Unseen Transactions . . . . .                         | 3-5 |
|           | The Chairman's Message Keyword . . . . .                     | 3-6 |
|           | Use of Keywords as Requests . . . . .                        | 3-6 |
|           | Use of Keywords as Active Requests . . . . .                 | 3-6 |
|           | Use of Keywords in Place of Transaction<br>Numbers . . . . . | 3-6 |
|           | Transaction Specification Control Arguments . . . . .        | 3-6 |
|           | Deleted Transactions . . . . .                               | 3-7 |
|           | Person_Ids . . . . .   | 3-7 |
|           | Date/Time Selection . . . . .                                | 3-7 |
|           | Sorting Transactions by Chain . . . . .                      | 3-8 |
|           | Regular Expressions . . . . .                                | 3-8 |
|           | Examples . . . . .   | 3-9 |

|           |   |      |
|-----------|---|------|
|           | How to Stay Aware of New Transactions . . . . .         | 3-11 |
|           | Interrupting Lengthy Output . . . . .                   | 3-13 |
| Section 4 | Speaking . . . . .                                      | 4-1  |
|           | Opening a New Topic--The talk Request . . . . .         | 4-1  |
|           | Commenting on an Old Topic--The reply Request . . . . . | 4-2  |
|           | Editing Your Transaction . . . . .                      | 4-3  |
|           | Editor Requests--Qedx . . . . .                         | 4-4  |
|           | Using the Emacs Editor . . . . .                        | 4-6  |
|           | Entering a Pre-written Transaction . . . . .            | 4-6  |
|           | Handling an Unprocessed Transaction . . . . .           | 4-7  |
|           | Manipulating Your Transaction . . . . .                 | 4-7  |
|           | The print Request . . . . .                             | 4-8  |
|           | The fill Request . . . . .                              | 4-8  |
|           | The subject Request . . . . .                           | 4-9  |
|           | Deleting Transactions . . . . .                         | 4-9  |
|           | The delete Request . . . . .                            | 4-9  |
|           | The retrieve Request . . . . .                          | 4-9  |
| Section 5 | How to Get Help . . . . .                               | 5-1  |
|           | The ? Request . . . . .                                 | 5-1  |
|           | The list_requests Request . . . . .                     | 5-2  |
|           | The list_help Request . . . . .                         | 5-2  |
|           | The help Request . . . . .                              | 5-3  |
|           | Where Am I? . . . . .                                   | 5-3  |
| Section 6 | Advanced Forum Features . . . . .                       | 6-1  |
|           | Control Arguments and Requests . . . . .                | 6-1  |
|           | Active Requests . . . . .                               | 6-1  |
|           | Escaping to Command Level . . . . .                     | 6-2  |
|           | The ..command_line Escape . . . . .                     | 6-2  |
|           | The execute Request . . . . .                           | 6-3  |
|           | Conditional Execution (The if Request) . . . . .        | 6-3  |
|           | The Mail Request . . . . .                              | 6-4  |
|           | The forum Command . . . . .                             | 6-4  |
|           | Using Abbreviations . . . . .                           | 6-5  |
|           | The abbrev Request . . . . .                            | 6-6  |
|           | Forum Exec_coms . . . . .                               | 6-6  |
|           | The Forum Start_up Exec_com . . . . .                   | 6-7  |
|           | Forum and your process start_up . . . . .               | 6-8  |
| Section 7 | Forum Request Descriptions . . . . .                    | 7-1  |
|           | . (current) . . . . .                                   | 7-3  |
|           | ..command_line . . . . .                                | 7-3  |
|           | abbrev (ab) . . . . .                                   | 7-4  |
|           | add_meeting (am) . . . . .                              | 7-5  |
|           | add_participant (apt) . . . . .                         | 7-7  |
|           | add_project (apj) . . . . .                             | 7-7  |
|           | announce_meeting (anm) . . . . .                        | 7-8  |
|           | announcement_info (ai) . . . . .                        | 7-9  |
|           | answer . . . . .  | 7-10 |
|           | apply (ap) . . . . .                                    | 7-12 |
|           | chairman (cm) . . . . .                                 | 7-14 |
|           | check_meetings (ckm) . . . . .                          | 7-15 |

|                                   |      |
|-----------------------------------|------|
| current_meeting (cmtg)            | 7-16 |
| delete (dl)                       | 7-16 |
| delete_participant (dlpt)         | 7-18 |
| do                                | 7-18 |
| enter (en, send)                  | 7-20 |
| exec_com (ec)                     | 7-21 |
| execute (e)                       | 7-22 |
| expunge                           | 7-22 |
| fill (fi)                         | 7-23 |
| forum_dir (fd)                    | 7-24 |
| goto (go, g)                      | 7-24 |
| help                              | 7-25 |
| if                                | 7-27 |
| list (ls)                         | 7-28 |
| list_help (lh)                    | 7-31 |
| list_meetings (lsm)               | 7-31 |
| list_requests (lr)                | 7-34 |
| list_users (lsu)                  | 7-35 |
| mail                              | 7-38 |
| make_public (mp)                  | 7-39 |
| next_meeting (nm)                 | 7-40 |
| print (pr, p)                     | 7-41 |
| qedx (qx)                         | 7-43 |
| quit (q)                          | 7-44 |
| remove_meeting, (rm)              | 7-44 |
| remove_participant (rpt)          | 7-45 |
| remove_project (rpj)              | 7-46 |
| reply (rp)                        | 7-46 |
| reset (rs)                        | 7-48 |
| retrieve (rt)                     | 7-49 |
| retrieve_participant (rtpt)       | 7-50 |
| set_message                       | 7-51 |
| subject (sj)                      | 7-52 |
| subsystem_name                    | 7-53 |
| subsystem_version                 | 7-54 |
| switch_off (swf)                  | 7-54 |
| switch_on (swn)                   | 7-55 |
| talk (t)                          | 7-56 |
| ted                               | 7-58 |
| unmake_public (ump)               | 7-59 |
| write (w)                         | 7-60 |
| <br>                              |      |
| Section 8                         |      |
| User Commands                     | 8-1  |
| forum                             | 8-2  |
| forum_accept_notifications (fant) | 8-10 |
| forum_add_meeting (fam)           | 8-11 |
| forum_delete (fdl)                | 8-12 |
| forum_dir (fd)                    | 8-13 |
| forum_list_meetings (flsm)        | 8-14 |
| forum_list_users (flsu)           | 8-18 |
| forum_refuse_notifications (frnt) | 8-21 |
| forum_remove_meeting (frm)        | 8-22 |
| <br>                              |      |
| Section 9                         |      |
| Duties of the Chairman            | 9-1  |

|            |  |      |
|------------|--|------|
|            | Creating a Meeting . . . . .                       | 9-1  |
|            | Maintaining a Meeting . . . . .                    | 9-3  |
|            | Adding a Participant . . . . .                     | 9-3  |
|            | Adding a Project . . . . .                         | 9-4  |
|            | Making a Meeting Public . . . . .                  | 9-4  |
|            | Making a Meeting Private . . . . .                 | 9-4  |
|            | Removing a Participant . . . . .                   | 9-5  |
|            | Removing a Project . . . . .                       | 9-6  |
|            | Maintaining Meeting Access . . . . .               | 9-6  |
|            | Deleting Transactions . . . . .                    | 9-7  |
|            | Retrieving Participants and Transactions . . . . . | 9-8  |
|            | Setting a Message . . . . .                        | 9-9  |
|            | Printing Eligibility Messages . . . . .            | 9-9  |
|            | Naming a New Chairman . . . . .                    | 9-10 |
|            | Adding a Chairman . . . . .                        | 9-10 |
|            | Deleting a Meeting . . . . .                       | 9-11 |
|            | Pre-MR11 Forum Meetings and Current Version        |      |
|            | Forum Meetings . . . . .                           | 9-11 |
|            | Converting a Meeting . . . . .                     | 9-12 |
| Section 10 | Chairman Commands . . . . .                        | 10-1 |
|            | forum_add_participant (fapt) . . . . .             | 10-2 |
|            | forum_add_project (fapj) . . . . .                 | 10-3 |
|            | forum_create (fcr) . . . . .                       | 10-4 |
|            | forum_make_public (fmp) . . . . .                  | 10-5 |
|            | forum_remove_participant (frpt) . . . . .          | 10-6 |
|            | forum_remove_project (frpj) . . . . .              | 10-7 |
|            | forum_unmake_public (fump) . . . . .               | 10-8 |
|            | convert_forum . . . . .                            | 10-9 |
| Appendix A | Administrative Information . . . . .               | A-1  |
|            | Installation Instructions . . . . .                | A-1  |
|            | The Central Forum Directory . . . . .              | A-1  |
|            | The Site Meeting Directory . . . . .               | A-2  |
|            | The Notifications Database . . . . .               | A-2  |
|            | Gate Access . . . . .                              | A-2  |
|            | Eligibility Messages . . . . .                     | A-3  |
|            | AIM . . . . .                                      | A-3  |
|            | forum_admin . . . . .                              | A-4  |
| Appendix B | Subroutine Descriptions . . . . .                  | B-1  |
|            | forum_ . . . . .                                   | B-2  |
|            | forum_admin_ . . . . .                             | B-42 |
| Appendix C | Glossary . . . . .                                 | C-1  |
| Index      | . . . . .  | i-1  |

# SECTION 1

## INTRODUCTION TO FORUM

### MEETINGS--WITH A DIFFERENCE

The Multics Forum subsystem lets you engage in ongoing discussions about any topic in an orderly and controlled fashion.

Forum is often described as a teleconferencing system and is sometimes described as a bulletin board system. Actually, it is a bit of both. Using Forum, you can create (convene) *meetings*; you can specify exactly who may *participate* in the meetings; and you can pose questions, make assertions, offer opinions, and express points of view to the other *participants*.

The system parallels the structure and function of "real" meetings. Forum provides *requests* that allow you to enter a meeting, see who else is participating, find out what has been said since the last time you attended the meeting, and comment on any topic under discussion.

Forum, however, overcomes the restrictions of real meetings in several important ways. Forum's meetings can last for weeks or months and, no matter when you decide to "drop in," you can read every comment made since the meeting's inception. Even if you have nothing to say in the meeting, it's a great way to keep abreast of all developments.

Another difference is that by using Forum, groups of people can effectively communicate with each other even when separated by great distance in both space and time. For instance, many meetings now in use involve people located in all parts of the United States, Canada, and much of Western Europe.

### BENEFITS AND TYPICAL USES OF FORUM

User communities put Forum to many interesting uses. Frequently, special interest groups establish meetings to allow all the members of a project team to effectively communicate and coordinate their activities (a sort of project management tool). Some meetings are useful places to solicit information from a wide body of users on a given subject ("Anyone know of a good article on PASCAL implementations?"). Often, a real bulletin board meeting is put up, so that people can advertise or solicit lodgings, places to get their cars fixed, and so on. Some meetings are design review meetings, in which someone proposes a detailed design and invites comments from co-workers and others. In general, meetings can be used for any purpose whatsoever.

The main benefit of Forum can be summarized in one word: information. Forum enables the effective distribution of information from the people who have the knowledge to the people who need the information and overcomes the barriers imposed by space, time, and number of participants. It is not meant to replace electronic mail, for there is no substitute for a secure and flexible system for one-to-one or one-to-few communication. It is rather designed to establish a wider community of users, sharing their knowledge and keeping them well-informed on issues of interest.

## THE MEETING

Meetings can be public meetings, which are open to everyone, or private meetings, which are open only to designated participants. The creation of a public or private meeting is an option available to the chairman when the meeting is created. Section 2 describes how to determine whether you are eligible to attend a meeting. Section 9 describes how a chairman can set up public and private meetings.

## Transactions

Meetings consist of a series of *transactions*. Entering a transaction in a Forum meeting is equivalent to speaking in a live meeting. If you are the *chairman* of a meeting, you first convene (create) the meeting and decide who will be eligible to attend. Then you enter the first transaction, which states the purpose of the meeting. Eligible participants can add entries (transactions)--this collection of transactions makes up the meeting. Here are some sample transactions:

```
[0001] (5 lines) Brooks.ProjA 05/18/83 0320.9 est Mon Everybody's_meeting
Subject: Reason for this meeting
This meeting is a general meeting, open to all, and open to discussion of
any issues related to the Multics system. Issues related to the
forum subsystem itself should be discussed in the forum_problems
(forprob) meeting, and so-called public notices should be placed in the
Bulletin board (bb) meeting.
---[0001]---
```

This is a sample initial transaction for a meeting called "Everybody's\_Meeting." Forum numbered the transaction and supplied the other information shown in the first line. [0001] is its transaction number. (The chairman of a meeting always enters the first transaction in a meeting.) The rest of the first line describes how long the text of the transaction is (5 lines), who entered it (Brooks.ProjA), and the date and time it was entered (5/18/83 0320.9 est Mon). The user Brooks (on the ProjA project) typed in the subject and the text.

```
[0002] (3 lines) Davis.YAK 05/20/83 0002.3 est Wed Everybody's_Meeting
Subject: Fortran for a Beginner
Does anyone have a really good, basic, simple book about Fortran and the
basic commands? I just want to put a little variety into my repertoire
of languages.
---[0002]---
```

This is a sample second transaction, entered into the meeting by a user named Davis on the YAK project. A transaction that starts discussion on a new topic is entered via Forum's "talk" (t) request (described in section 5). The talk request always prompts for the subject of your transaction.

As a participant you understand that the initial transaction and statement of purpose (see [0001] above) throws the session open to discussion. From that point on, any eligible participant can bring up any related subject or idea. The initial transaction is numbered Transaction 1, and transactions are numbered sequentially by Forum as you enter them. The meeting remains open to discussion indefinitely since meetings are open-ended and have no time limit on their existence. When the chairman feels that the meeting has fulfilled its purpose or outlived its usefulness, he or she deletes it.

### Transaction Chains

A reply to any transaction begins a *transaction chain*--a discussion concerning a previous transaction. Entering a transaction that refers to a previous transaction is equivalent to making a comment on a previous statement in a live meeting. Here is an example:

```
[0006] (1 line) Perri.YAK 05/23/81 1005.9 est Wed Everybody's_Meeting
Subject: Re: Fortran for a Beginner
Try the Fortran book by McCracken (or however you spell it!)
---[0006]---
```

User Perri wanted to make a suggestion regarding transaction [0002] (shown above) so he used Forum's "reply" request (described in Section 4). The reply request automatically generated the subject as shown here. This transaction chain now consists of transactions [0002] and [0006]. Transaction chains often grow quickly as other attendees interject opinions on the same subject.

## SECTION 2

# GETTING STARTED

This section tells you how to enter the Forum subsystem and introduces the Forum request loop. You will find out where meetings are held on your system and how to attend them.

### ENTERING THE FORUM SUBSYSTEM

#### The Request Loop

Once you invoke Forum, everything you type is interpreted by the Forum request processor, not the Multics command processor. You will use Forum requests to accomplish your tasks. To enter the Forum subsystem, simply issue the "forum" command:

```
! forum
```

```
forum:
```

This enters you into the *request loop*. The prompt "forum:" appears on your screen which is where you are to type any of the various requests in Forum's repertoire. Forum request lines must end with a carriage return, just like Multics commands. Forum processes a request by performing the desired action, and then prompts you for another request. This cycle repeats until you quit forum (by issuing the "quit" request described below).

At this point, you are not attending a meeting, but there are a number of things you can do such as list meetings and get help.

#### Listing Meetings

The forum request "list\_meetings" (or the short form, lsm) is used to print out a list of all the meetings that you are eligible to attend:

```
forum: ! lsm
Meetings = 3, Changed = 0

    Everybody's_Meeting   eve
    Bulletin_board       bb
    Personal_computers    pc

forum:
```

This is a list showing the long and short names of meetings that you can participate in. Since you have not attended any meetings yet, none of them are reported as changed ("Changed = 0"). (You can get the same information with the Multics command `forum_list_meetings` (`flsm`) described in Section 8.)

After you attend some meetings, the output also prints some flags for each meeting. The flags are the individual letters in the leftmost columns. They tell you what sort of rights you have relative to each meeting and what your state is for each meeting. The "a" flag means that you are currently attending that meeting. The "p" flag means that you are already a participant of the meeting (have previously attended the meeting). The "c" flag means that the meeting has changed (which means simply that other participants of that meeting have entered transactions since the last time you attended the meeting). The "o" flag means that you are eligible only to be an observer, i.e., you can read the transactions but cannot enter any transactions. The "n" flag means that you have the notify switch turned on, that is, that you have asked to receive an automatic online notification every time a transaction is entered in the meeting. The "r" flag means that you have removed yourself from participation in the meeting. The "j" flag indicates meetings which have been adjourned by the chairman. For a complete description of how to turn these flags on and off, see the "switch\_on" and "switch\_off" request descriptions in Section 7.

## Getting Help

Forum offers various ways to get help at your fingertips. For a list of available Forum requests, type a "?". To get a brief description of the requests, type "list\_requests" (`lr`). To get a detailed explanation of requests and other Forum topics, type "help TOPIC" where TOPIC is the name of a request or other topic. For a list of TOPICS for which help is available, type "list\_help" (`lh`). These requests are explained in more detail in Section 5.

## LOCATING MEETINGS

Before you attend a live meeting, you must first find out where it is being held. Meetings can be stored in the central Forum directory or meetings can be stored in a private directory created by any user. Directions for finding meetings are described below.

### The Central Forum Directory

The central forum directory is the main location for meetings that have been set up for public exposure at each site. The `forum_dir` (`fd`) command/active function (fully described in Section 8) prints your site's central forum directory:

```
! fd
  The central forum directory is >site>forum_dir.
  r 08:31 0.171 0
```

Thus, to attend a meeting called "fortran" in the central forum directory, you would type:

```
! forum >site>forum_dir>fortran
```

## Meetings in Private Directories

Meetings can be created and stored anywhere in the Multics storage system. In order for you to locate any of these "private" meetings, one of the participants must supply you with the full pathname of the meeting. Thus, if user JohnB creates a meeting called "new\_projects" in the directory

>udd>ProjA>JohnB>meetings, you can attend this meeting by entering the command:

```
! forum >udd>ProjA >JohnB>meetings>new_projects
```

## Forum Search Paths

A short-cut to typing the full pathname every time you want to attend a meeting is the use of the *forum search paths*.

There are usually two search paths in your *forum search list* put there automatically every time you log in. One is the central forum directory, and the other is a directory under your home directory called "meetings" (whether it exists or not).

Issue the `print_search_paths (psp)` command (fully described in the Commands manual) to print your forum search paths:

```
! psp forum
forum
  >udd>[user project]>[user name]>meetings
  >site>forum_dir
r 08:32 0.201 3
```

You can attend any meetings kept in these directories by telling Forum only the meeting's name (not the full pathname). Forum searches these directories automatically to find it.

To allow Forum to find meetings that do not reside in the central forum directory, but that you will be attending frequently, add their pathnames to the forum search list. Suppose you want to attend meetings under JohnB's home directory. Before entering Forum, type the Multics command line:

```
! asp forum >udd>ProjA>JohnB>meetings
```

to add the pathname of the directory to the forum search paths. Or, if you have already invoked the Forum subsystem, issue the request:

```
! ..asp forum >udd>ProjA>JohnB>meetings
```

to add the location of JohnB's meetings to your already-established forum search paths. Now whenever you want to attend the User\_issues meeting in that directory, simply type "forum User\_issues" at Multics command level, or "goto User\_issues" from Forum request level. The "goto" request is simply the request that tells Forum what meeting you want to attend.

If you use one of the above methods, you must type issue the `add_search_paths` command every time you log in to attend JohnB's meetings. If you modify your search list in your `start_up exec_com`, it enables Forum to locate these meetings every time you login. See the *New Users' Introduction--Part II* manual, Order No. CH25 for a description of the `start_up.ec`.

## Adding a Meeting

If you don't want to enter the full pathname of meetings, you can use the `forum_add_meeting`, (`fam`) command to add the meetings you want to attend to your forum search list. The `forum_add_meeting` command creates links to the meetings in the directory `>udd>Project>Person>meetings` and makes you a participant in the meeting. To add a meeting to your forum search list, go to your "meetings" directory.

```
| ! create_dir [hd]>meetings
```

and add the pathnames of forum meetings to be added to the search list:

```
| ! fam >udd>ProjA>BruceM>meetings>User_issues
```

Forum searches in a directory called "meetings" under your home directory by default. If the `home_directory` named `meetings` does not exist, the `add_meeting` command will create a link to this directory.

To attend the `User_issues` meetings, type "forum `User_issues`" (or "goto `User_issues`" if you are already in the request loop) and Forum will locate the link for the `User_issues` meeting.

The `create_dir` and the `home_dir` active functions are fully described in the *Multics Commands and Active Functions* manual, Order No. AG92. The `forum_add_meeting` command is described later in this manual.

## ATTENDING A MEETING

There are two ways to enter a meeting. One way is to give the meeting's name as an argument to the `forum` command when you first invoke the subsystem. For example, to enter the `Everybody's_Meeting` (short\_name "eve"), type:

```
| forum eve
Everybody's_Meeting: 9 new, 10 last.
The meeting is public.
```

```
forum:
```

If you are already inside Forum's request loop, use the "goto" request:

```
forum: ! goto eve
Everybody's_Meeting: 9 new, 10 last.
The meeting is public.
```

forum:

You are now attending the meeting and have become a participant in it. The "9 new, 10 last" message tells you that there are 9 transactions that you have not yet seen and that the 10th transaction is the last one entered in the meeting. The first transaction, the chairman's initial message, is not included in the count.

The message "The meeting is public" is an eligibility message, which is printed automatically when you first enter a public meeting (if the chairman of the meeting and site administrator have turned it on--see Section 9 for details). If the meeting is private, the eligibility message gives you other information instead such as, "There are 20 users and 2 projects eligible to attend".

Now that you are attending "Everybody's\_Meeting," each request that you issue pertains to this meeting until you leave it and enter a different meeting with the "goto" request.

### Finding Out Who Is Chairman

To find out who is chairing the meeting, type:

```
forum: ! chairman
Brooks.ProjA
```

forum:

The "chairman" (cm) request gives you the Person\_id.Project\_id of the chairman of Everybody's\_Meeting.

### Listing Other Participants

To find out who else is participating in the meeting, use the "list\_users" (lsu) request:

```
forum: ! list_users
Users of the >udd>ProjA>forum>Everybody's_Meeting meeting.
Flags Person          Last [0010]    Last time attended
      JohnB.ProjA      [0009]    03/22/83 1103.3 est Mon
      LeeB.ProjA       *END*     04/07/83 0202.3 est Wed
```

forum:

On the header line, "Last [0010]" means that the last transaction in the meeting is number ten, and the list shows the transaction number of the last one read for each user. "\*END\*" means that the indicated user has read the proceedings through to the end (through the last transaction).

The `-eligible` control argument to the `"list_users"` request tells who is *eligible* to participate in the meeting, rather than who currently participates. This request line tells you who else is explicitly able or unable to attend.

Check the eligible users in the "eve" meeting:

```
forum: !lsu -eligible
Eligible users of the >udd>ProjA>forum>Everybody's_Meeting meeting.
The meeting is public.
```

The following users are not eligible to participate:

DVader

```
forum:
```

The "eve" meeting in the above example is a pre-MR11, public meeting in which the chairman has not (with one exception) specified any users or projects as eligible or ineligible to participate. The following is an example of the output from the same request line issued in a private, current version forum meeting:

```
forum: !lsu -eligible
Eligible users of the >lib>forum>forum_dir>Bulletin_board meeting.
```

```
rw Vade.*.*
rwc IJah
rw *.*.*
```

```
forum:
```

The access mode "r" allows you to read transactions, "w" allows you to enter transactions and "c" gives you chairman access. In the above forum meeting, all participants can read and write transactions but only the participant IJah is designated as the chairman.

## MANAGING MEETINGS

Two commands are available to assist you in managing the list of meetings that you attended. The `forum_add_meeting` (`fam`) command (described in Section 8) adds a meeting to the list of meetings attended. The `add_meeting` (`am`) request (described in Section 7) also adds a meeting to the list of meetings attended. You can invoke the `add_meeting` request on a meeting pathname or on a transaction number of a meeting announcement.

The `forum_remove_meeting` (`frm`) command (described in Section 8) removes a meeting from the list of meetings attended. The `remove_meeting` (`rm`) request (described in Section 7) also removes a meeting from the list of meetings attended. You can invoke the `remove_meeting` request on a meeting pathname.

You can use the `announce_meeting` (`anm`) request (described in Section 7) to automatically place an announcement about a newly created meeting either into the site's public `meeting_directory` or a private meeting. For more information on the Site Meeting Directory, refer to Appendix A later in this manual. This announcement is in a format acceptable to the `add_meeting` request. Other users can use this announcement with the `add_meeting` request to add the current meeting to their search list.

To specify where you want the announcement to be placed, use the `-meeting` (`-mtg`) control argument with the `announce_meeting` request. After you have used the `announce_meeting` request to place an announcement in another meeting, you can use the `announcement_info` request to extract information from a meeting announcement. This request must refer to a transaction entered by `announce_meeting`, otherwise an error will occur.

## EXITING FORUM

Maybe you've had enough for now and would like to get out of Forum. Simply use the `forum "quit"` (or `q`) request:

```
forum: ! q
r 09.19 1.007 44
```

When you receive the ready message, you know you are out of Forum and back at Multics command level.

## SECTION 3

# READING TRANSACTIONS

This section describes how to peruse the *proceedings* of a meeting. The first part of this section tells you how to list transactions, i.e., how to print a list that tells you a little bit about each transaction that was entered in the meeting. The second part of this section shows you how to print transactions, i.e., how to read the contents of the transactions that you're interested in. The third part of this section introduces the write request which is used to save transactions in a separate segment. The fourth part of this section tells you about transaction specifiers, i.e., about the ways that you can tell Forum to list, print or write only certain transactions (the ones that you specify). The last part of this section tells you how to make sure that you stay aware of new transactions in the meetings that are of importance to you.

### LISTING TRANSACTIONS

You can find out summary information about the proceedings of a meeting with the "list" (ls) request. It gives you a brief description of each transaction including the transaction number, its length (how many lines it contains), the date and time it was entered, the author's name, and the subject of the transaction.

Let's assume that you're still attending "Everybody's\_Meeting", which you entered in Section 2. The "list" request used at this point lists all transactions in this meeting. To obtain a summary report of these transactions, type:

```
forum: ! list
Trans#  Lines      Date      Time      Author      Subject
[0001]  (5)    05/18/81  03:20    Brooks.ProjA  Reason for this meeting
[0002]  (3)    05/20/81  03:46    Davis.YAK     Fortran for a Begin<More>
[0003]  (3)    05/21/81  06:49    Smith.ProjB   Other Meetings
.
.
.
forum:
```

If you don't want to see a list of all the transactions in the meeting, you can specify only those that meet a certain criteria by using *transaction specifiers*. The simplest case is specifying a transaction by its transaction number. For example, typing "list 1" will print only a summary line about transaction [0001]. See the section on "Transaction Specifiers" below.

## PRINTING TRANSACTIONS

Transaction [0001] states the reason for this meeting. To print it on your terminal, use the "print" (pr, p) request with the transaction specifier "1":

```
forum: ! print 1
[0001] (5 lines) Brooks.ProjA 05/18/81 0320.9 est Mon eve
Subject: Reason for this meeting
This meeting is a general meeting, open to all, and open to discussion
of any issues related to the Multics system. Issues related to the
forum subsystem itself should be discussed in the forum_problems
(forprob) meeting, and so-called public notices should be placed in
the Bulletin_board (bb) meeting.
---[0001]---
```

forum:

You can find out through the list request (see above) which other transactions you want to print. Use their transaction number to do so (e.g., "print 2"), or use a string of transaction numbers (e.g., "print 2 3 4"). To go through and print them one by one by use the "next" (n) *keyword*; instead of "print 2", type "print n". A keyword is another kind of transaction specifier (see "Transaction Specifiers" below).

## WRITING TRANSACTIONS

If you want to save the transactions of a meeting in a separate segment for use later, use Forum's "write" (w) request. This request writes a copy of each transaction matching your selection criteria (or the current transaction if you don't specify any in particular) to a segment created in your working directory. You can give the segment any name you want by using the "-pathname PATH" *control argument*. Forum will append the suffix ".trans" to PATH automatically if you don't supply it. If you wish to create the segment in another place in the storage system (i.e., in a directory different from your current working directory), you can give a full pathname for PATH. See the New User's Introduction--Part I for a description of pathnames. If you do not give the -pathname control argument, Forum will create <meeting\_name>.trans in your working directory, where <meeting\_name> is the name of the *current meeting*.

To write the 10th transaction in the Everybody's\_Meeting to a segment named "save\_this.trans" in your working directory, type the following:

```
forum: ! write 10 -pathname save_this
Writing 1 transaction to >udd>ProjA>Your_name>save_this.trans.
```

forum:

If you also want to save transactions 15 through 20 in the same file, type:

```
forum: ! write 15:20 -pn save_this
Appending 6 transactions to >udd>ProjA>Your_name>save_this.trans.
```

forum:

As you can see, you can specify a range of transactions in the current meeting, in this case "15:20" for transactions 15 through 20 inclusive. The above request line appends the transactions to save\_this.trans, separating the transactions by appending a formfeed character (new page) to each. Each transaction is printed on a separate page by default, but you can specify different delimiters (if any) with either the `-separator` or `-no_separator` control arguments (see the "write" request description in Section 7). If you save additional transactions in this segment, they too are appended to the end.

The most common use of the write request is to print copies of a meeting's transactions on a line printer. An option you can choose to format the output pages is the `"-format"` (`-fmt`) control argument. The display consists of a page header containing the current date and time, the name of the meeting, and the page number, and a footer containing the subject of the first transaction on the page. The header and footer are separated from the text by a line of underscores and a blank line. Transactions are only split across pages if they are longer than one page. If a transaction does not fit on the remainder of the current page, a new page is always created. The `-separator` control argument may not be used when formatting output.

## TRANSACTION SPECIFIERS

You can reference individual transactions or groups of transactions in a meeting by using transaction specifiers. The list, print, write, delete, retrieve, reset, reply, and apply requests all use transaction specifiers. These transaction specifiers can be transaction numbers, keywords, the arithmetic operations `+` and `-`, `person_ids`, control arguments, and `qedx`-type regular expressions.

In addition, you can use the keywords listed below as requests and active requests to return transaction numbers. Each transaction specifier causes forum to search the current meeting for all transactions that meet a certain criteria spelled out by the transaction specifiers.

### Transaction Numbers

Forum assigns numbers to transactions as it enters them into the proceedings of a meeting. When you enter a meeting for the first time, Forum automatically takes you to the first transaction, [0001]. You can reference any single transaction by its number (i.e., "print 3"), reference a range of transactions by putting a colon between numbers (i.e., "print 1:5"), or reference a multiple of individual transactions by numbers separated by a space (i.e., "print 3 5 9").

## CURRENT TRANSACTION

Forum keeps track of the *current transaction* just as it keeps track of the current meeting. As you refer to other transactions, the last one you have dealt with is always the current transaction. Suppose you print transaction [0010]. When it has printed and the prompt waits for your next request, the current transaction is [0010]. When you then type "print +5", Forum prints transaction [0015], that is, current (which Forum knows without being told its number) plus 5 equals [0015]. You can use a minus sign (`-`) in the same manner.

## Keywords

Keywords let you refer to transactions without knowing their actual numbers.

### | *RELATIVE ORDER KEYWORDS*

| Forum supplies keywords that let you refer to transactions by their relative order in the proceedings.

all, a

refers to all transactions (same as first:last).

current, c

refers to the transaction that was last printed, written or reset.

first, f

refers to the first transaction in the proceedings.

last, l

refers to the last transaction in the proceedings.

new

refers to the transactions that you have not yet seen.

next, n

refers to the transaction immediately after the current transaction.

previous, p

refers to the transaction immediately before the current transaction.

unprocessed, u

refers to the unprocessed transaction (i.e., a transaction that you have typed but have not yet entered into a meeting).

highest, last\_seen

refers to the highest-numbered transaction printed or written.

### *CHAIN-TRACING KEYWORDS*

Forum also supplies keywords that specifically deal with transactions that have been linked together through the use of the "reply" request (described in Section 4). If you are trying to follow transactions in a chain (which are often not entered immediately following one another in a meeting), use these keywords:

allref, aref

refers to all transactions in the current chain of transactions.

firstref, fref

refers to the first transaction in the current chain of transactions.

lastref, lref

refers to the last transaction in the current chain of transactions.

nextref, nref  
refers to the next transaction in the current chain of transactions.

previousref, pref  
refers to the previous transaction in the current chain of transactions.

restref, rref  
refers to all remaining transactions in the current transaction chain, but not including the current transaction.

### *SEEN / UNSEEN TRANSACTIONS*

Forum remembers whether a user has seen each transaction, not just the most recent transaction that has been read. Forum uses the keyword "seen" and "unseen" to mark the transactions. For the following group of keywords, "seen" means that the transaction has been printed, written, or explicitly marked as seen by the switch\_on request. "Unseen" means that the transaction has not been printed, written, or explicitly marked as seen by the switch\_on request.

seen  
refers to all transactions marked as having been seen.

first\_seen, fs  
refers to the first transaction marked as having been seen.

last\_seen  
refers to the last transaction marked as having been seen.

next\_seen, ns  
refers to the next transaction after the current one which is marked as seen.

previous\_seen, ps  
refers to the first transaction before the current one which is marked as seen.

new  
refers to transactions entered after your last\_seen transaction which were not entered by you.

unseen  
refers to all transactions not marked as having been seen.

first\_unseen, fu  
refers to the first transaction not marked as having been seen.

last\_unseen, lu  
refers to the last transaction not marked as having been seen.

next\_unseen, nu  
refers to the next transaction after the current one which is not marked as seen.

previous\_unseen, pu  
refers to the first transaction before the current one which is not marked as seen.

## *THE CHAIRMAN'S MESSAGE KEYWORD*

The "chairman\_message" (cmsg) keyword refers to the message or greeting that the chairman can set up when the meeting is created (or later, with the "set\_message" request described in Section 8). It is the message printed the first time a user enters a transaction in a meeting. This transaction specifier can be used with the print and write requests. Only the chairman is allowed to use this specifier with the delete request.

## *USE OF KEYWORDS AS REQUESTS*

All of the keywords except for "unprocessed" and "chairman\_message" can also be used as requests. They print the number of the transaction(s) that the keywords refer to. The "next", "previous", "next\_seen", "previous\_seen", "next\_unseen", and "previous\_unseen" keywords and all of the keywords that reference chains can be given an argument to use as the current transaction. The argument to these requests must be a transaction number. Thus, "aref 4" returns a list of all transaction numbers that refer to transaction [0004]:

```
forum: ! aref 4
4 5 7 10
```

```
forum:
```

## *USE OF KEYWORDS AS ACTIVE REQUESTS*

An active request is a request enclosed in brackets that is first expanded to the transaction number(s) it represents before the entire request line is executed. For example, "print [aref 4]" expands to "print 4 5 7 10" thus printing all those transactions referring to transaction [0004].

## *USE OF KEYWORDS IN PLACE OF TRANSACTION NUMBERS*

All keywords except for "unproc", "all", "new", "restref", "allref", "seen", and "unseen" can be used in place of actual transaction numbers and can be combined with either "+" or "-", as in "lref-1" or "nref+1". To reference from the current transaction use leading "+" and "-"; "-4" is the same as "current-4". To specify a range of transactions use two transaction numbers or keywords separated by a colon (:), as in "first:last" or "3:nref".

## **Transaction Specification Control Arguments**

Control arguments are another type of transaction specifier that further restrict which transactions are selected by a request. A control argument is always preceded by a "-". They can be used to specify transactions that were authored by a certain person or that match a given character string. Control arguments can also be used to choose transactions based on deletion criteria or the date and time they were entered, or to specify that all the transactions selected be grouped together by chain.

## DELETED TRANSACTIONS

Several requests will operate on deleted transactions when the `-include_deleted` or `-only_deleted` control arguments are used. Forum considers only those transactions which the user can read, so for participants other than the chairman, only deleted transactions entered by that participant are considered. All of the `chain_tracing` keywords and the `seen` and `unseen` keywords can also use control arguments. Any of the following three control arguments can be used with a `chain_tracing` keyword or a `seen` or `unseen` keyword.

- `-include_deleted, -idl`  
print or return the index of the first unseen transaction in the meeting even if it is deleted.
- `-only_deleted, -odl`  
print or return the index of the first deleted unseen transaction in the meeting.
- `-only_non_deleted, -ondl`  
print or return the index of the first non\_deleted unseen transaction in the meeting. (Default)

## PERSON\_IDS

The `"-from Person_id"` control argument indicates that only transactions authored by the person identified by `Person_id` should be selected. Thus, `"-from LeeB"` selects all transactions entered by the participant LeeB. `Person_ids` cannot contain the asterisk ("`*`") or period ("`.`") characters.

## DATE/TIME SELECTION

The following control arguments select transactions according to the date and time that the transaction was entered. The strings `DT`, `DT1`, and `DT2` are standard Multics date-time strings acceptable to the `convert_date_to_binary_` subroutine (described in *Multics Subroutines and I/O Modules*, Order No. AG93). Each must be enclosed in quotes if it contains spaces. (Examples are `"8/19/83 1500.0 edt Fri"`, `"August 8"`, `"5:00 pm 21 May 1984"`, and `midnight`.)

- `-after DT, -af DT`  
selects all transactions entered on or after the the date specified. The time of day is ignored.
- `-after_time DT, -aft DT`  
selects all transactions entered after the date-time specified.
- `-before DT, -be DT`  
selects all transactions entered before the date specified. The time of day is ignored.
- `-before_time DT, -bet DT`  
selects all transactions entered before the date-time specified.
- `-between DT1 DT2, -bt DT1 DT2`  
selects all transactions entered between the dates specified, inclusive. The times of day are ignored.

-between\_time DT1 DT2, -btt DT1 DT2  
selects all transactions entered between the date-times specified, inclusive.

-date DT, -dt DT  
selects all transactions entered on the day specified.

### *SORTING TRANSACTIONS BY CHAIN*

The "-by\_chain" control argument can be used to sort selected transactions into transaction chains if you are referring to more than one chain of transactions. This is useful when, for example, you want to write the last 50 transactions to a segment and you want those transactions to be grouped by transaction chain instead of the order they were entered into the meeting.

### **Regular Expressions**

Simple *regular expressions* are character strings enclosed in slashes (/). They are used for selecting transactions which contain a match for a given character string. The control arguments "-subject" (-sj) and "-text" (-tx) can be given immediately before a regular expression to specify that matching is to be done only against the subject or the text respectively. By default, matching is done against both the subject and the text. For example, "list /television/" lists all transactions which contain the string "television".

If the regular expression contains spaces, square brackets, or parentheses, it must be enclosed in quotes. If it contains quotes, then the quotes inside the slashes must be doubled, and the entire regular expression must be quoted. The following is a list of valid regular expressions:

```
/one/  
"/one or/"  
/FOR/  
/:/  
"/character(s),/"  
"/He said, ""/"
```

The null regular expression, //, signifies the last regular expression used.

The string is taken quite literally, i.e., "/television/" will NOT match a transaction containing the string "Television". In order to ensure that case is not an issue, it is recommended that you use "/elevisioin/" which is still a unique enough string for matching only what you want.

The following characters have specialized meanings when used in a regular expression:

- \* signifies any number (or none) of the preceding character.
- ^ when used as the first character of a regular expression, signifies the (imaginary) character preceding the first character on a line.
- \$ when used as the last character of a regular expression, signifies the (imaginary) character following the last character on a line.
- .
- matches any character on a line.

For more information on regular expressions, refer to the *Qedx Text Editor User's Guide*, Order No. CG40.

### Examples

The examples below show the use of Forum transaction specifiers combined with the "print" (p) request. You can use any of the other Forum requests that make sense in each case.

- p 14  
prints transaction 14.
- p u  
prints the unprocessed transaction.
- p +5  
prints the fifth transaction after the current transaction.
- p /budget/  
prints all transactions containing the string "budget".
- p p:l -from JBSmith  
prints all transactions in the range previous (p) through last (l) entered by participant JBSmith.
- p pref  
prints the first transaction in the current chain of transactions.
- p new  
prints all transactions not yet printed or written.

p 1:c-5 /pl1/ -from Baker  
 prints all transactions in the range 1 through the 5th before the current that contain the string "pl1" and were entered by participant Baker.

p aref /solutions/ -from JohnB  
 prints all transactions in the current reference chain that contain the string "solutions" and were entered by JohnB.

p "/one or/"  
 prints all transactions containing the string "one or".

p aref -before 8/19/83  
 prints all transactions in the current reference chain entered before 8/19/83.

p unseen -after\_time "2/2/83 12:00 pm"  
 prints all transactions entered after noon on 2/2/83 which have not been printed or written.

p -between 12/1/83 12/31/83  
 prints all transactions entered in December 1983.

Examples of transaction specifiers as requests:

next  
 returns the number of the next transaction:

```
forum: ! next
6

forum:
```

In the above example, if the current transaction is 5, when the keyword "next" is used as a request, Forum returns "6", the number of the next transaction.

previous 10  
 returns the number of the transaction before transaction 10.

fref 40  
 returns the number of the first transaction in the same reference chain as transaction 40.

aref first  
 returns the numbers of all transactions that are in the same reference chain as the first transaction.

next\_seen [fu]  
 returns the number of the first transaction that has been seen that was entered after the first transaction that has not been seen.

## HOW TO STAY AWARE OF NEW TRANSACTIONS

Once you begin to follow discussions in a meeting, you'll want to stay aware of new transactions in that meeting. You can find out which meetings have changed by using the "list\_meetings" request with the "-changed" control argument:

```
forum: ! lsm -changed
Bulletin_board (bb)
Everybody's_Meeting (eve)
Other_meetings (meetings)
```

forum:

This request line produces a list of all the meetings found via your forum search list in which new transactions have been entered since you last attended.

If you add the -count control argument to the above request line, the output also tells you the number of new transactions in each meeting.

You can also find out how meetings have changed by using the "check\_meetings (ckm)" request with the "-list, -ls" control argument. The check\_meeting request scans the forum search list looking for changed meetings (those with new transactions). To use the check\_meeting request, type:

```
forum: ! ckm -ls
Changed meetings = 25
Bulletin_board (bb) 3
Everybody's_Meeting (eve) 2
Multics_Picnic (mpic) 4
```

forum:

This request line returns the total number of changed meetings and produces a list of all the meetings found via your forum search list which have changed since you last attended. If you use the list (ls) control argument with the check\_meetings request, the name of each changed meeting and the number of new transactions in each meeting is printed.

You can then use the next\_meeting request to successively view the changed meetings in the list. The next\_meeting request has the effect of doing a "goto" to the next meeting in the changed meeting list.

Another way to find out if a meeting has changed is to "goto" it. As mentioned above, when you enter a meeting for the first time Forum sets the current transaction to transaction [0001], because you haven't seen any transactions yet. As you read transactions, Forum resets your current transaction to be the last one that you have seen. In other words, if you enter a meeting for the first time and print the first ten transactions, the next time you enter that meeting your current transaction is [0010]. The transaction indicator keeps track of the current transaction (highest number seen) so that it can keep you informed of new transactions. This is done automatically and is relayed to you whenever you enter a meeting:

```
forum: ! g bb
Bulletin_board meeting: 2 new, 15 last.
The meeting is public.
```

```
forum:
```

In the above example you can see that when you enter the Bulletin\_board meeting, Forum tells you "2 new, 15 last". This means that you have seen the first 13 transactions already, and that 2 new ones have been entered since then--transactions 14 and 15 are new and you haven't seen them yet. If you "list" the transactions in this meeting, you'll see that Forum prints an asterisk next to transaction 13, to indicate that 13 is your current transaction. When you enter a meeting, your current transaction is the last one you saw (highest-seen) when you last attended. You can reset your current transaction with the Forum "reset" request (see the forum command description in Section 7).

If there is a burning issue being discussed in a meeting and you must be aware every time a new transaction is entered, tell Forum that you need immediate notification. The forum\_accept\_notifications (fant) command (described in Section 8) informs Forum from command level that, although you may not be currently attending, you want Forum to send you a message every time a new transaction is entered in the specified meeting for the duration of this login session. To specify which meeting(s) you want to receive notifications about, go to the meeting and turn the notify flag (or switch) on with the switch\_on request:

```
! fant
r 09:59 0.216 23

! forum

forum: ! g personal_computers
personal_computers meeting: 3 new, 5 last.

forum: ! swn notify

forum:
```

The "switch\_on notify" request line turns your notify switch on for that meeting, until you explicitly turn it off with the "switch\_off" request. You can also set the switch from outside of the meeting by adding "--meeting personal\_computers" to the end of the "switch\_on" request line.

With the notify flag set to on, the next time someone enters a transaction in that meeting you will receive a message of the form:

```
From Fox.ProjA (forum) 05/18/82 1450.2 edt Tue:
A new transaction has just been added to the
>udd>ProjA>mtgs>personal_computers meeting.
```

This message from Forum tells you that participant Fox entered a new transaction in the personal\_computers meeting. But remember, you must issue the forum\_accept\_notifications command every time you log in, even though you need only issue the "switch\_on notify" request once. Although the notify flag stays turned on permanently (until you request otherwise), each time you log in you must explicitly accept the notifications. The forum\_accept\_notifications command can be inserted in your start\_up.ec.

If you need no further notifications, use the "switch\_off notify" request to turn the notify flag off. If you want to leave the flag turned on but do not wish to receive further notifications in your current login session, use the forum\_refuse\_notifications (frnt) command (described in section 9).

## INTERRUPTING LENGTHY OUTPUT

When you ask for a list of all transactions in a meeting (or anything that fills your screen with output), occasionally you may decide that you do not want to wait for all the lines to be printed. You can interrupt processing of your request by pressing the QUIT key (sometimes labeled ATTN, BREAK, or INTERRUPT). This action takes you out of Forum and back to command level; Multics prints QUIT and a ready message containing the word "level" and a number. Type the Multics command "program\_interrupt" or "pi" (described in the Commands manual) to reenter Forum. Your request has been aborted; now you are in the request loop and can issue another request. (At this point, the current meeting is still the same as before you QUIT.

```
forum: ! list
Trans#  Lines      Date      Time      Author      Subject
[0001]  (5)    05/18/81  03:20    Brooks.ProjA  Reason for this meeting
[0002]  (3)    05/20/81  03:46    Davis.YAK     Fortran for a Begin<More>
[0003]  (3)    05/21/81  06:49    Smith.ProjB   Other Meetings
.
.
.
QUIT <USER PRESSED THE INTERRUPT KEY HERE>
r 14:00 11.304 534 level 2
! pi
forum:
```

## SECTION 4

### SPEAKING

Once you get the irresistible urge to speak in a meeting, you can choose one of two Forum requests to do so:

- "talk" if you want to speak about a new topic.
- "reply" if you want to respond to an earlier transaction.

This section describes how to use these requests, how to edit your transaction before entering it into a meeting, how to delete and retrieve any transaction that you've authored.

#### OPENING A NEW TOPIC--THE TALK REQUEST

If you are currently attending a meeting and have something new to say, use the "talk" (t) request. Forum prompts you for the subject of the transaction:

```
forum: ! talk
Welcome to Everybody's_Meeting
Subject:
```

The message "Welcome to Everybody's\_Meeting" is the chairman's greeting message which, if set by the chairman, appears the first time you speak in a meeting. (See the "chairman\_message" transaction specifier in Section 3.) After the "Subject:" prompt, type in a title and another carriage return. Now Forum responds with another prompt, indicating that you can proceed with the text of your transaction.

```
forum: ! talk
Welcome to Everybody's_Meeting.
Subject: ! home computers meeting
Transaction:
```

As you type in your transaction, keep in mind that the # and @ characters are always available for correcting or erasing characters in the line you are currently working on.

If you're satisfied with entering your transaction as is, without editing it, then the simplest way to conclude your transaction is to type a period alone on a line, and then a carriage return. As soon as you do this, the transaction is entered into the meeting, and you receive a confirmation of the form, "Transaction [0015] entered into Everybody's\_Meeting." This is followed by the Forum prompt, indicating that you have been returned to Forum request level.

Here is an example of building and entering a transaction while attending a meeting. Note the use of the # character to correct a mistake in the message text.

```
forum: ! talk
Welcome to Everybody's_Meeting.
Subject: ! home computers meeting
Transaction:
! Is there sufficient interest too#
! create a meeting for home
! computers? t#To help solve
! problems, some sort of information
! exchange might be useful.
! Any takers??
! .
Transaction [0015] entered in >udd>ProjA>Everybody's_Meeting meeting.
```

forum:

When you end your transaction with a period, however, you miss the chance to check and edit it before it is entered into the meeting. Forum has a built-in text editor that gives you an easy way to edit your transactions before entering them (see "Editing Your Transaction" below).

#### COMMENTING ON AN OLD TOPIC--THE REPLY REQUEST

As we know, the pleasure of a "real" meeting is not just speaking or hearing the comments of others, but agreeing with wonderful ideas and challenging the mediocre ones. The Forum "reply" (rp) request works much the same as talk, except that your subject line contains an automatic reference to the transaction you are replying to, instead of a new subject. Assume that you have just printed transaction 15, shown above, regarding home\_computers and wish to show your support:

```
forum: ! reply 15
Subject: Re: home computers meeting
Transaction:
! Yes, I second the motion!
! .
Transaction [0016] entered in >udd>ProjA>Everybody's_Meeting meeting.
```

forum:

The reply request assumes the subject of the reply to be a reference to the subject line of the transaction you are replying to. You are then prompted for the text of your reply ("Transaction:").

Once your reply is entered, it is linked to the transaction to which it is a reply, forming a transaction chain. Transaction chains are very easy to follow via the keywords specifically designed to follow the progress of chains (see "Chain-tracing Keywords" in Section 3).

## EDITING YOUR TRANSACTION

Forum offers two built-in editors to allow you to change, delete, and add to your transaction while you remain in Forum. You can enter them by typing either "qedx" (or qx) to enter the Qedx editor or "ted" to enter the Ted editor.

The Qedx editor is introduced in the New Users' Introduction—Part I, and explained fully in the *Qedx Text Editor Users' Guide* (Order No. CG40). You are strongly encouraged to turn to one or both of those manuals, because this manual contains only a review of the simplest subset of editor requests.

Ted is a slightly more sophisticated editor than Qedx, and offers powerful requests and macro capabilities. See the *Multics Text Editor (TED) Reference Manual* (Order No. CP50) for a complete description of this editor. In the examples shown in this section, the qedx request is used, although you can use the ted request similarly to accomplish the same tasks.

When you are first typing in your transaction and you want to make changes, type \f alone on a line (instead of a period):

```
Transaction:
! <text as shown above>
! Any takers??
! \f
```

This enters you into the Qedx editor where you can clean up your transaction.

## Editor Requests--Qedx

Once you are in the editor, you issue editor requests as opposed to Forum requests. Here is a list of basic editor requests (the "\$" means the last line in your transaction, regardless of its line number):

| REQUEST     | DESCRIPTION   | EXAMPLES                        |
|-------------|---|---------------------------------|
| p           | prints the specified line(s)  | p 2p 1,3p                       |
| =           | prints the line number of the specified line  | = \$=                           |
| d           | deletes the specified line(s)   | d 3d 1,\$d                      |
| a           | adds lines of text after the specified line   | a 2a                            |
| s/old/new/  | substitutes every occurrence of the first character string with the second character string, on the specified line(s) | s/hte/the/<br>1,\$s/11:00/9:30/ |
| s/old/new/p | same as above, but also prints the changed line   | s/hte/the/p                     |

To leave the qedx editor, type w (write) to save the changes, and then q (quit) to return to the Forum request loop. The write request may be used as often as desired to checkpoint the editing process. Note that these are qedx editor requests, not Forum requests (the Forum quit request is described under "Exiting Forum" in Section 2; the Forum write request is described under "Writing Transactions" in Section 3).

If the quit (q) request is issued and the transaction has been modified since it was last written, the editor will query for permission to exit. If permission is given, any changes made since the last write request will be lost. The quit-force (qf in qedx or q in ted) request can be used to abort unwanted editing of the transaction without being queried.

To restore the original transaction text after you have made changes but before you issued a write request, type "1,\$dr". If you did issue a write request, this sequence will restore the text as it was last written.

Below is an extended example of how the transaction shown above might have been constructed. Supplemental comments are displayed to the right of the example. Spaces that would not necessarily be in an actual session are included here for clarity.

forum: ! talk  
Subject: ! home computers meeting

Transaction:  
! Is there sufficient interest <a first draft>  
! create a meeting for home  
! ccomputers? To@  
! computers? To help solve  
! problms some sort of information  
! exchange might be useful.  
! Any takers??  
! \f <enter edit mode>  
  
! !s/ce/cie/p <correct one spelling error>  
! Is there sufficient interest  
  
! s/est/est to/ <add more>  
  
! !, \$p <print entire message>  
! Is there sufficient interest to  
! create a meeting for home  
  
computers? To help solve  
problms some sort of information  
exchange might be might be useful.  
Any takers??  
  
<--  
! 5 <print line 5>  
! problms, some sort of information  
! s/ims/lems/p <correct another error,>  
! problems, some sort of information < and print the line >  
  
! 3d <delete empty line>  
! w <save the changes>  
! q <leave editor>

forum:

You are now in possession of an *unprocessed transaction*. You can issue other requests (i.e., "print" to have another look at it), or further manipulate it. Maybe you want to adjust the margins or change the subject line. See the next section for more options to use on unprocessed transactions.

If you have typed in a new transaction and do not require the editor at this time, but you do not want to enter it into the proceedings of the meeting just yet, end your input with "\q" (instead of "." or "\f"). This puts you back at Forum request level where you can issue other requests to manipulate your unprocessed transaction.

```
! forum: ! talk
  Subject: ! home computers meeting
  Transaction:
! <Text as shown above>
! \q
```

forum:

Once you are satisfied with the contents of your transaction, issue the "enter" (en, send) request to enter it in the proceedings of the current meeting.

You can modify the contents of an unprocessed transaction in a number of ways but once you enter the transaction in a meeting, it is no longer unprocessed and you can no longer manipulate it. At request level, you can issue requests that will print, format, re-edit, and otherwise perfect the text of your unprocessed transaction.

### Using the Emacs Editor

If you prefer, you can edit your unprocessed transaction with the Multics Emacs text editor, a display-oriented editor designed for use with video terminals. You can call Emacs from within Forum via the "apply" (ap) request:

```
forum: ! apply emacs
```

```
<system enters Emacs, showing transaction in buffer>
```

This places your unprocessed transaction in an Emacs buffer where you can edit it. You must save any changes with the Emacs write request (^X^S) and quit the editor with ^X^C. Once you quit the editor, you are returned to the Forum request loop where you can enter your transaction with the "enter" (e) request.

For a complete description of the Emacs editor, see the *Emacs Text Editor Users' Guide*, Order No. CH27.

### ENTERING A PRE-WRITTEN TRANSACTION

The talk and reply requests accept the "--input\_file" (-if) control argument which allows you to enter a free-standing segment as the text of your transaction. Forum automatically supplies the header information, and (with the talk request) prompts you for the subject. For instance, if your comments were contained in a segment named "home\_computers\_talk" they could be entered in this way:

```
forum: ! talk -if home_computers_talk
Subject: ! home computers meeting
Use the "enter" request to enter the transaction.
```

forum:

Notice that you are now in possession of an unprocessed transaction. Forum reminds you to use the enter request to enter it into the proceedings of the meeting.

## HANDLING AN UNPROCESSED TRANSACTION

If you have an unprocessed transaction and you "goto" a different meeting, Forum tells you that you left something behind:

```
forum (goto): Warning, there is an unprocessed transaction in the
               Everybody's_Meeting meeting.
```

In the above example, you built the transaction in "Everybody's\_Meeting" and then attended a different meeting without first entering the transaction. The warning message reminds you that there is an unprocessed transaction to deal with--probably you'll want to enter it in "Everybody's\_Meeting" from your current location ("en -meeting eve") or throw it away ("dl unproc").

You can use the "." (current) request to check the subject and number of lines in your unprocessed transaction. For example, if you're attending the meeting in which you created the transaction, the output resembles this:

```
forum: ! .
forum 1.8: 72 new, 277 last, 205 current.
Attending the >udd>ProjA>forum>Everybody's_Meeting meeting.
1 line unprocessed.
subject: home computers meeting
```

```
forum:
```

If you're attending a meeting other than the one in which you built the unprocessed transaction, the output tells you where that transaction is:

```
forum: ! .
forum 1.8: 0 new, 8 last.
Attending the >udd>ProjA>mtgs>Other_Meetings meeting.
1 line unprocessed in the Everybody's_Meeting meeting.
subject: home computers meeting
```

```
forum:
```

If you attempt to exit Forum via the "quit" request while you have an unprocessed transaction, Forum warns you that you have an unprocessed transaction (which will be thrown away if you quit now) and asks you if you really want to quit before entering your transaction in a meeting.

## Manipulating Your Transaction

If you print your unprocessed transaction, you will see question marks in place of a transaction number. Remember that if you don't end a transaction with a period when you first type it in, you must explicitly *enter* it before you exit Forum, or else Forum throws it away. Use the Forum "enter" (en, send) request to enter an unprocessed transaction.

### *THE PRINT REQUEST*

The forum "print" (p) request displays text of the transaction preceded by a version of the transaction header that indicates an unprocessed transaction. The example transaction, which is your current transaction, is used for illustration:

```
forum: ! p
[????] (3 lines) Your_name.Your_project **UNPROCESSED**
Subject: home computers meeting
Is there sufficient interest to
create a meeting for home
computers? To help solve
problems, some sort of information
exchange might be useful.
Any takers???
---[????]---
```

forum:

### *THE FILL REQUEST*

The "fill" (fi) request reformats the text of your transaction by adjusting the right margin so that no line has more than a certain number of characters. By default, the maximum line length is set at 72 characters but if you prefer, you can specify another length with the `-line_length (-ll)` control argument followed by the maximum number of characters you want on a line.

```
forum:: ! fill -ll 50; p
[????] (4 lines) Your_name.Your_project **UNPROCESSED**
Subject: home computers meeting
Is there sufficient interest to create a meeting
for home computers? To help solve problems, some
sort of information exchange might be useful. Any
takers???
---[????]---
```

forum:

## THE SUBJECT REQUEST

The "subject" (sj) request can be used to print the subject of your unprocessed transaction:

forum: !

Suppose you decide that you want to change the subject of your transaction. The subject request can also be used to change the subject. If the new subject contains spaces, it must be quoted.

forum: ! subject "Personal Computers"

forum: ! subject  
Subject: Personal Computers

## DELETING TRANSACTIONS

Transactions can be deleted (and retrieved) as described below.

### The delete Request

You can delete any transaction that you have entered, for whatever reason, by using the Forum "delete" (dl) request, making the transaction unavailable to other participants. Only you and the meeting chairman have access to them. Only the chairman can delete a transaction authored by someone else. Your deleted transactions can be read again with the list, print and write requests if you give the `-include_deleted` or `-only_deleted` control arguments to these requests.

Deleted transactions remain deleted indefinitely but also remain accessible to you until the chairman issues the "expunge" request which kills deleted transactions permanently. (See "expunge" in Section 7.)

### The retrieve Request

It is also possible, once you have deleted a transaction, to retrieve it again and thus re-enter it into the meeting. The "retrieve" (rt) request does just that. Only transactions that were deleted by you (and therefore authored by you) can be retrieved by you. Only the chairman can retrieve a transaction deleted by someone else. See the full description of the retrieve request in Section 7.

If the chairman has issued the "expunge" request since the transaction was deleted, then it cannot be retrieved.

## SECTION 5

# HOW TO GET HELP

Forum supplies several help requests that give you information about Forum requests in graduated levels of detail.

### THE ? REQUEST

When you forget the short name of a request or need to be reminded of the names of any of the basic requests, use the "?" request. It prints a memory-jogging list of the most important requests.

|                       |                    |                   |
|-----------------------|--------------------|-------------------|
| .                     | enter, en, send    | switch_off, swf   |
| goto, g, go           | fill, fi           | switch_on, swn    |
| list, ls              | forum_dir, fd      | talk, t           |
| print, p, pr          | list_meetings, lsm | ted               |
| quit, q               | list_users, lsu    | write, w          |
| add_meeting, am       | mail               | help              |
| announce_meeting, anm | next_meeting, nm   | list_help, lh     |
| announcement_info, ai | qedx, qx           | list_requests, lr |
| apply, ap             | remove_meeting, rm | abbrev, ab        |
| chairman, cm          | reply, rp          | exec_com, ec      |
| check_meetings, ckm   | reset, rs          | do                |
| current_meeting, cmtg | retrieve, rt       | if                |
| delete, dl, d         | subject, sj        | answer            |
|                       |                    | execute           |

\*

## THE LIST\_REQUESTS REQUEST

The "list\_requests" (lr) request gives you a one-line description of each Forum request. It also tells you how you can send a command line to Multics from within Forum and how you can get more detailed help on any of the requests in this list.

```
forum: ! list_requests
Summary of forum requests:
```

```
Use "..COMMAND_LINE" to escape a command line to Multics.
Type "list_help" for a list of topics available to the help request.
Type "help TOPIC" for more information on a given topic.
```

|                   |   |
|-------------------|---|
| .                 | Print current status.                     |
| help              | Obtain detailed information on forum.     |
| list_help, lh     | List topics for which help is available.  |
| list_requests, lr | List brief information on forum requests. |
| quit, q           | Exit forum.                               |
| goto, g, go       | Enter a meeting.                          |
| print, p, pr      | Print the specified transactions.         |
| list, ls          | List the specified transactions.          |
| abbrev, ab        | Turn abbreviation processing on or off.   |
| .                 |   |
| .                 |   |
| .                 |   |
| .                 |   |
| .                 |   |

```
forum:
```

There are many more requests that normally appear in the list but are not displayed in this example.

## THE LIST\_HELP REQUEST

The "list\_help" (lh) request gives you a list of every single possible Forum request, or a list of requests related to the TOPIC that you name. For example:

```
forum: ! list_help ready
Topics available for forum:
```

```
ready_off
ready_on
ready
```

```
forum:
```

You can ask for detailed, specific help on any topic returned by list\_help by naming it as the TOPIC argument to the "help" request (described below).

## THE HELP REQUEST

For detailed information on how to use a particular Forum request, type "help" followed by the name of the request. (i.e., "help reply"). The "help" request offers complete information on every Forum request and on other selected topics concerning Forum.

The "help" request enters you into a sub-request loop, asking you at several points if you want more information ("More help?"). The most basic answers to this prompt is either "yes" or "no". A response of "?" gives you a list of all possible answers known to the help request. For a more detailed explanation of the help request, see Section 8.

## WHERE AM I?

If you've lost your place in the request loop, you can find out exactly where you are at any time with the Forum "." (dot) request. If you are not currently attending a meeting, it simply gives you Forum's version number:

```
forum: ! .  
forum 1.10
```

```
forum:
```

If you are attending a meeting, it tells you the location of the meeting and transaction information in addition to Forum's version number:

```
forum: ! .  
forum 1.10: 9 new, 10 last.  
Attending the >udd>ProjA>forum>Everybody's_Meeting meeting.
```

```
forum:
```

If you have seen some, but not all, of the transactions in this meeting, this request gives you the number of the last transaction you saw.

This request also tells you if you have any unprocessed transactions (unprocessed transactions are created when you speak in a meeting--they are fully described in Section 4).

## SECTION 6

# ADVANCED FORUM FEATURES

Many of the Forum components already discussed, such as control arguments on the command line, transaction editing, and powerful request language, have additional features that enable you to use Forum to perform more specialized functions. These advanced techniques derive their strength by using command level capabilities from within Forum.

### CONTROL ARGUMENTS AND REQUESTS

Almost all Forum requests take control arguments. Here are some examples showing a specialized usage of the list\_users request.

To find out if the user JPSea is a participant of the current meeting, type:

```
forum: ! lsu -user JPSea
```

and if she is, Forum prints the summarization line showing last transaction seen, last time attended, and any flags for JPSea.

To get a listing of all users who are currently attending the meeting, type:

```
forum: ! lsu -attending
```

### ACTIVE REQUESTS

An active request is a request line enclosed in brackets that is first expanded to its return value before the entire request line is executed. The following is a list of Forum active requests:

|                       |                    |
|-----------------------|--------------------|
| current_meeting, cmtg | list_meetings, lsm |
| do                    | list_users, lsu    |
| exec_com, ec          | next_meeting, nm   |
| execute, e            | subject, sj        |
| forum_dir, fd         | subsystem_name     |
| if                    | subsystem_version  |
| list, ls              |                    |

The "cmtg" active request returns the pathname of the current meeting you are attending. Whenever you type "[cmtg]" on a request line, Forum replaces that with the name of the current meeting. One way of using this active request is:

```
forum: ! write -pn [cmtg]
```

which places the current transaction in a saved segment with the name of the current meeting as its name.

With the "e" active request, you can incorporate Multics active functions into Forum request lines. Here are a few examples:

```
forum: ! write 3 -pn [e home_dir]>feline
```

for saving transaction [0003] in a segment named "feline" in your home directory;

```
forum: ! lsm -part -user [e last_message_sender]
```

for determining which meetings the user who last sent you an interactive message participates in;

```
forum: ! pr -date [e date]
```

for printing all transactions in the current meeting that were entered today.

For a detailed discussion of the usage of each active request, refer to section 8.

## ESCAPING TO COMMAND LEVEL

There are several ways to use the Multics command environment while you remain inside Forum. This ability can be handy for a variety of purposes.

### The ..command\_line Escape

To issue a Multics command within Forum, simply type two periods directly after the prompt, followed by the command line:

```
forum: ! ..who
```

When the command has finished, you receive another Forum prompt.

You can use this escape to check on which saved transactions you have in your directory ("..list") and to attend to other Multics activities when they occur to you ("..sm Brie.ProjDog Let's eat.") without having to end your Forum session prematurely.

You are free to use any command language conventions and facilities in the same way you do outside Forum. Active functions (discussed in the New Users' Introduction--Part II) are especially useful in providing the command language with extra flexibility. Here are two examples:

```
forum: ! ..sm [last_message_sender] Sure, I'm hungry too
forum: ! ..eor [home_dir]>canine.mail
```

Standard quoting and semicolon conventions also apply when using the ..COMMAND\_LINE escape.

Forum requests and active requests can not be used with the ".." request. The command line is made up of Multics commands and active functions only.

### The execute Request

The "execute" (e) request performs a function very similar to that of the ..COMMAND\_LINE escape, because it also passes the rest of the line to command level to be acted on. Before the command line reaches command level, however, it passes through the Forum request processor. This means that all forum active requests (which are enclosed in brackets as described above) get processed first. The results are placed in the request line, and then the line gets processed as a command line. To illustrate with the cmtg active request, which returns the pathname of the meeting you are currently attending, you can type:

```
forum: ! execute list [cmtg].trans
```

which expands to:

```
forum: execute list Everybody's_Meeting.trans
```

to see whether you have saved any transactions with the default name of the current meeting.

### CONDITIONAL EXECUTION (THE IF REQUEST)

There may be times when you want to execute a request only on certain conditions, or execute a request if a condition is met and another if it is not met. The forum "if" request allows you to conditionally execute one of two request lines depending on the value of a returned active string. For example:

```
forum: ! if [e exists seg [cmtg].trans] -then "e dl [cmtg].trans; w new"
        -else "w new"
```

which asks if a segment named <current\_meeting>.trans exists in your working directory, then delete it and write all the new transactions in the current meeting to the default segment named <current\_meeting>.trans. If the segment does not exist, then simply write the new transactions to the segment. The active strings being expanded here are Forum active requests. Thus, to execute a Multics active request, the "e" active request must be used. The actions to take follow the -then and -else control arguments, and they must be enclosed in quotes if they contain spaces or other command language characters. If the "-else" action is not specified and the condition returns "false", no action is taken.

The if active request returns one of two character strings to the Forum request processor depending on the value of an active string. For example,

```
forum: ! write all [if [e equal [subsystem_version] 1.10]
      -then "-by_chain -format" -else "-fill"]
```

which will execute the request line "write all -by\_chain -format" if the subsystem\_version is 1.10, or "write all -fill" if it is not.

## THE MAIL REQUEST

If you want to send a transaction or set of transactions to other users, mailing lists, or Forum meetings you can use the forum mail request. To send transactions to another user:

```
forum: ! mail 10 11 12 -to McElvenny.Pubs
!.
Mail delivered to McElvenny.Pubs
```

forum:

This request line sends transactions 10 through 12 to the mailbox of McElvenny.Pubs. Within the mail system the User\_id is considered one form of address, because the mail system uses this information to deliver the transactions to the correct mailbox.

To send transactions to Forum meetings:

```
forum: ! mail 10 11 12 -to -meeting >site>forum_dir>picnic_talk
!.
Mail delivered to >site>forum_dir>picnic_talk
```

forum:

This request line sends transactions 10 through 12 to the picnic\_talk forum meeting. If you give just an entryname (no ">" or "<" characters) instead of the absolute pathname, the forum commands search path is used to find the meeting. For more information on the mail request, see "Forum Request Description" later in this manual. For more information on the Multics mail system, refer to the *Multics Extended Mail System Users' Guide*, Order No. CH23.

## THE FORUM COMMAND

Many forum command control arguments have been described in earlier sections of this manual. They allow you to personalize your Forum environment. All of the forum command control arguments are described in the forum command description in Section 8.

To illustrate a few simple possibilities, here are some sample command lines using some control arguments that have not previously been discussed:

```
forum -meeting mgr_meeting -list -quit
forum -abbrev -brief
```

The first Forum command line above enters Forum, goes to the mgr\_meeting meeting, lists all transactions, and quits, returning you directly to command level. The second example invokes Forum with abbreviation processing turned on and the briefest form of the Forum messages are to be printed.

```
forum -prompt Next -output_fill
forum -meeting pubs -no_prompt
```

The first example above enters Forum, prompts you with "Next" instead of "forum:" and fills all transactions before writing or printing them. The second example enters the pubs meeting and asks that you not be prompted at all in the request loop.

```
forum -meeting mgr_meeting -rq "write new -pn [e hd]>my; quit"
```

This command line enters the mgr\_meeting meeting, writes any new transactions into a segment named my.trans (in your home directory), and exits Forum.

## USING ABBREVIATIONS

If you are using one particular Forum command line frequently, you will find that creating an abbreviation for the command line, with the abbrev command, is a much simpler way of specifying that information. Here is how to use the abbrev command to make an abbreviation for one of the example command lines above:

```
! .ab my_forum forum -prompt Next -output_fill
```

Now when you want to enter forum with "Next" as your prompt, and to have your transactions filled on output, type "my\_forum". In the example above, it is assumed that you have abbreviation processing turned on for your process. Refer to the New Users' Introduction--Part II for details concerning the abbrev command and the creation of abbreviations.

There is a whole set of "inverse" control arguments that are useful for reversing the effect of one (or more) of the control arguments you have included in an abbreviation. If for example you do not always want your transactions filled on output, you can type "my\_forum -no\_output\_fill" which is expanded into the command line:

```
forum -prompt Next -output_fill -no_output_fill
```

Whenever conflicting control arguments appear on a command line, Forum uses the last one to appear. Thus the above example restores the default filling action.

### The abbrev Request

Abbreviations are a shorthand version of an otherwise lengthy or often-used request line. You must either use the -abbrev control argument when you invoke forum or use the Forum "abbrev" request to initiate abbreviation processing within the current Forum session. Forum abbreviations can either be defined at Multics command level or from within Forum via the ".." request.

You may want to define an abbreviation for the "talk" request, such as the one shown below which, upon termination of input, places your unprocessed transaction in an Emacs buffer for editing:

```
! .ab T do "talk -rql; apply emacs"
```

This abbreviation contains two request lines, thereby requiring the use of the "do" command.

### FORUM EXEC\_COMS

If you have specific sets of Forum requests that you use frequently, you can put them together in an exec\_com segment which can be executed via the Forum "exec\_com" (ec) request. The Forum exec\_com segment can be written in either version 1 or version 2 exec\_com (see the Commands manual) and must have the suffix of ".fmec". It is just like a Multics exec\_com segment except that it contains forum request lines instead of Multics command lines. This means that to execute Multics commands from within the exec\_com, you must use the "execute" request, and with Multics active functions, use the "e" active request. The following example shows the contents of a forum exec\_com, and the method of executing it:

Contents of [home\_dir]>sample\_ec.fmec:

```
(1) &command_line off
(2) e cwd [e hd]
(3) goto &1
(4) if [e exists seg [cmtg].trans] -then "e dl [cmtg].trans"
(5) w new -after "Sunday - lweek" -format -by_chain -bf
(6) e eor [cmtg].trans
(7) &quit
```

```
forum: ! ec sample_ec eve
```

The "sample\_ec.fmec" program executes the following:

- (1) changes your working directory to your home\_dir.
- (2) goes to the meeting you specified as an argument to the exec\_com request ("eve").
- (3) checks to see if a segment named "Everybody's\_meeting.trans" exists in your home directory and if it does, delete it.
- (4) writes all new transactions that were entered after Sunday (i.e., this week's new transactions) to a segment with the default pathname of [home\_dir]>Everybody's\_meeting.trans. The transactions are sorted by chain, formatted for output, and no message is printed if no transactions were selected.
- (5) prints the segment on the default line printer.

The forum request:

```
forum: ! ec sample_ec ([lsm -changed])
```

executes the sample\_ec exec\_com for every meeting that has changed as returned by the list\_meetings active request.

Forum searches the "exec\_com" search list for segments with the ".fmec" suffix. An absolute pathname can also be specified which bypasses the search facility.

#### The Forum Start\_up Exec\_com

When forum is invoked, it searches for a start-up segment with the name "start\_up.fmec". The start\_up exec\_com creates a specially tailored forum environment every time you enter forum. This segment is a Forum exec\_com segment written in either version 1 or version 2 exec\_com with Forum request lines. A sample start\_up.fmec segment written in version 1 exec\_com is shown below.

```
&command_line off
ab
lsm -changed -no_adjourned -long
&quit
```

This start\_up turns on abbreviation processing and lists all meetings in which you are a participant that have changed, not including adjourned ones. If no meetings have changed, the message "No meetings have changed" will be printed instead. If you supplied the name of a meeting to attend on the forum command line, this information will be printed before entering the specified meeting and being placed in the forum request loop.

The directories that are searched for start\_up.fmec are your home directory, your project directory, and >site, in that order.

The forum command allows you to bypass execution of the start\_up exec\_com with the "-no\_start\_up" control argument.

## FORUM AND YOUR PROCESS START\_UP

Another method of setting up your own Forum environment is to place a Forum command line at the end of your process start\_up exec\_com segment. For example:

```
fant; forum
```

tells Forum that from the time you log in, you want to be notified of any new transactions in any meetings where you have previously asked for immediate notification of new transactions (with the switch\_on request). The rest of the command line tells Multics to enter you immediately into Forum while executing your process start\_up.

## SECTION 7

# FORUM REQUEST DESCRIPTIONS

This section contains descriptions of the Forum requests, presented in alphabetical order. These requests are for all users except where otherwise noted. Each description contains the name of the request (including the abbreviated form, if any), discusses the purpose of the request, and shows the correct usage. Notes and examples are included when deemed necessary for clarity. The discussion below briefly describes the content of the various divisions of the request descriptions.

### Name:

This heading lists the full request name and its abbreviated form.

### Syntax

This part of the request description shows a single line that demonstrates the proper format to use when using (invoking) the request. Any elements in the line that follows the name of the request are explained under subsequent headings.

The following conventions apply in the syntax line:

1. Optional arguments are enclosed in braces (e.g., {path}, {User\_ids}). All other arguments are required.
2. Control arguments are identified in the usage line with a leading hyphen (e.g., {-control\_args}) simply as a reminder that all control arguments must be preceded by a hyphen in the actual invocation of the request.

### Function

This heading discusses the purpose and function of the request and what happens when you use it.

### Arguments and Control Arguments

These headings describe the other elements shown in the "Syntax" line, which tell Forum exactly what it should perform the request on, and specifically how it should be performed. Common arguments are meeting\_name (the name of the meeting), STR (any character string), and N (an integer).

Control arguments are always preceded by a "-" character, and are typed as you see it (i.e., -off, -on). They sometimes have a short name as well as a long name (i.e., -brief, -bf). Some control arguments also have another argument associated with it as in "-date DT" where DT is a date-time value (i.e., -date "08/30/83 11:30 edt"). If any of these arguments contain spaces, parentheses, or quote characters, they must be enclosed in quotes.

## Notes

Comments or clarifications that relate to the request as a whole are given under the "Notes" heading. Also, where applicable, the required access modes, the default operation (when invoked without arguments), and any special case information are included.

## Examples

The examples show different valid invocations of the request. An exclamation mark (!) is printed at the beginning of each line typed by the user. This is done only to distinguish user-typed lines from system-typed lines. The results of each example request line are either shown or described.

## Other Headings

Additional headings are used in some descriptions, particularly the more lengthy ones, to introduce specific subject matter. These additional headings may appear in place of, or in addition to, the notes.

---

**. (current)**

---

---

**..command\_line**

---

**Name: . (current)**

**SYNTAX**

.

**FUNCTION**

prints information about the current version of Forum, the meeting the user is attending (if any) and the unprocessed transaction (if any). The format of the output is:

```
forum 1.8: 0 new, 220 last, 220 current.  
Attending the >udd>Company>meetings>excursions meeting.  
12 lines unprocessed.  
subject: Re: picnic
```

If the user is attending a meeting, the number of new (unseen) transactions, the transaction number of the last transaction, and the number of the current transaction are printed. If the user has built a transaction but not yet entered it into a meeting, the subject and number of lines in that transaction are printed. If the user is about to enter an unprocessed transaction in a meeting other than the current meeting, this request also prints the name of the meeting that the transaction will be entered in (e.g., "12 lines unprocessed in the eve meeting." if attending the excursions meeting but entering a transaction in the eve meeting).

---

**Name: ..command\_line**

**SYNTAX**

**..command\_line**

**FUNCTION**

executes a Multics command line from within the Forum request loop.

**ARGUMENTS**

**command\_line**

is any Multics command line. When the command has executed, you are returned to the Forum request loop.

---

abbrev

---

---

abbrev

---

**Name:** abbrev, ab

*SYNTAX*

ab {-control\_args}

*FUNCTION*

controls abbreviation processing within Forum.

*CONTROL ARGUMENTS*

-off

specifies that abbreviations are not to be expanded.

-on

specifies that abbreviations should be expanded. (Default)

-profile PATH

specifies that the segment named by PATH is to be used as the profile segment; the suffix ".profile" is added to PATH if not present. The segment named by PATH must exist.

*NOTES*

Forum provides command line control arguments (-abbrev, -no\_abbrev, -profile) to the forum command to specify the initial state of abbreviation processing.

If invoked with no arguments, this request enables abbreviation processing within Forum using the profile that was last used in this Forum invocation. If abbreviation processing was not previously enabled, the profile in use at Multics command level is used; this profile is normally [home\_dir]>Person\_id.profile.

See the abbrev command in the Commands manual for a description of abbreviation processing.

---

add\_meeting

---

---

add\_meeting

---

Name: add\_meeting, am

*SYNTAX*

am {trans\_specs} {meeting\_names} {-control\_args}

*FUNCTION*

adds meetings to the user's forum search list by placing links to them in the directory >udd>Project>Person>meetings and makes the user a participant in the meeting.

*ARGUMENTS*

trans\_specs

are transaction specifiers identifying transactions created by the announce\_meeting request. If any trans\_specs are given, they must precede all meeting\_names. At least one trans\_spec or meeting\_name must be given. For more information on transaction specifiers, refer to "Reading Transactions" later in this manual.

meeting\_names

are pathnames of forum meetings to be added to the search list.

*CONTROL ARGUMENTS*

-current\_meeting, -cmtg

adds the current meeting to the search list.

-directory PATH, -dr PATH

places the links in the specified directory instead of the default directory of >udd>Project>Person>meetings.

-force, -fc

adds the link even if the user is not eligible to participate in the meeting.

-no\_force, -nfc

does not add the link if the user is not eligible to participate in the meeting. (Default)

-update, -ud

changes all links to version 1 meetings into links to a version 2 meeting if that meeting exists in the directory that the link points to. For more information on version 1 and version 2 forum meetings, refer to "Duties of the Chairman" later in this manual.

*LIST OF TRANSACTION SPECIFICATION CONTROL ARGUMENTS:*

-after DT, -af DT

selects transactions entered on or after the the date specified. The time of day is ignored.

-after\_time DT, -aft DT

selects transactions entered after the date\_time specified.

- `-before DT, -be DT`  
selects transactions entered before the date specified. The time of day is ignored.
- `-before_time DT, -bet DT`  
selects transactions entered before the date\_time specified.
- `-between DT1 DT2, -bt DT1 DT2`  
selects transactions entered between the dates specified, inclusive. The times of day are ignored.
- `-between_time DT1 DT2, -btt DT1 DT2`  
selects transactions entered between the date\_times specified, inclusive.
- `-date DT, -dt DT`  
selects transactions entered on the day specified.
- `-from Person_id, -fm Person_id`  
selects transactions entered by the participant named Person\_id.
- `-include_deleted, -idl`  
prints or returns the index of the first unseen transaction in the meeting even if it is deleted.
- `-only_deleted, -odlw`  
prints or returns the index of the first deleted unseen transaction in the meeting.
- `-only_non_deleted, -ondl`  
prints or returns the index of the first non\_deleted unseen transaction in the meeting.  
(Default)
- `-subject /regexp/, -sj /regexp/`  
selects transactions whose subjects match the given regular expression.
- `-text /regexp/, -st /regexp/`  
selects transactions whose subjects match the given regular expression.

#### *NOTES*

If the directory >udd>Project>Person>meetings does not exist, and the -directory control argument is not given, a link with that name pointing to >udd>Project>Person is created in >udd>Project>Person.

---

**add\_participant**

---

---

**add\_project**

---

**Name:** **add\_participant, apt**

*SYNTAX*

apt person\_id {-control\_args}

*FUNCTION*

makes the person identified by Person\_id eligible to participate in the current meeting. You can use this request if you have either modify permission on the containing directory or chairman access to the meeting.

*ARGUMENTS*

person\_id  
is the Person\_id of the participant to be added.

*CONTROL ARGUMENTS*

-chairman, -cm  
gives chairman access (c) to the added participant. This control argument is not valid for meetings created with pre-MR11 software.

-read\_only, -ro  
allows the added participant to read transactions but not to enter them.

*NOTES*

The -read\_only and -chairman control arguments cannot both be specified. For information on converting a meeting, refer to "Duties of the Chairman" later in this manual.

---

**Name:** **add\_project, apj**

*SYNTAX*

apj project\_id {-control\_args}

*FUNCTION*

Allows users from the project identified by project\_id to become participants of the current meeting. You can use this request if you have either modify permission on the containing directory or chairman access to the meeting.

*ARGUMENTS*

project\_id  
is the Project\_id for the project to be admitted to the meeting.

*CONTROL ARGUMENTS*

**-chairman, -cm**

gives chairman access (c) to the added project. This control argument is not valid for meetings created with pre-MR11 software.

**-read\_only, -ro**

allows users on the added project to read transactions but not to enter them.

*NOTES*

The **-read\_only** and **-chairman** control arguments cannot both be specified. For information on converting a meeting, refer to "Duties of the Chairman" later in this manual.

---

**Name: announce\_meeting, anm**

*SYNTAX*

anm {-control\_argument}

*FUNCTION*

places an announcement of the current meeting in another meeting. This announcement can be used with the **add\_meeting** request by other users in order to add this meeting to their search list.

*CONTROL ARGUMENTS*

**-enter\_description, -eds**

prompts the user for a textual description of the meeting instead of using the text of the first transaction in the announcement.

**-meeting MEETING, -mtg MEETING**

specifies the name of the meeting where the announcement is to be placed. If **-meeting** is not given, the announcement is placed in the site's default directory, normally >site>forum\_dir>Meetings\_Directory.

---

announcement\_info

---

---

announcement\_info

---

**Name:** announcement\_info, ai

*SYNTAX*

ai {trans\_spec} {-control\_args}

*SYNTAX AS AN ACTIVE REQUEST*

[ai {trans\_spec} -control\_arg]

*FUNCTION*

Extracts information from a meeting announcement produced by the announce\_meeting request.

*ARGUMENTS*

*trans\_spec*

is a transaction specifier designating the transaction containing the meeting announcement. An error occurs if this does not refer to a transaction entered by announce\_meeting. See Section 3 for more information on transaction specifiers. Only one transaction may be selected.

*CONTROL ARGUMENTS*

-absolute\_pathname, -absp

print or return the absolute pathname of the announced meeting.

-chairman, -cm

print or return the user\_id of the chairman of the announced meeting.

-entry\_name, -etnm

print or return the entry name of the announced meeting.

*LIST OF TRANSACTION SPECIFICATION CONTROL ARGUMENTS:*

-after DT, -af DT

selects transactions entered on or after the the date specified. The time of day is ignored.

-after\_time DT, -aft DT

selects transactions entered after the date\_time specified.

-before DT, -be DT

selects transactions entered before the date specified. The time of day is ignored.

-before\_time DT, -bet DT

selects transactions entered before the date\_time specified.

-between DT1 DT2, -bt DT1 DT2

selects transactions entered between the dates specified, inclusive. The times of day are ignored.

- between\_time DT1 DT2, -btt DT1 DT2  
selects transactions entered between the date\_times specified, inclusive.
  - date DT, -dt DT  
selects transactions entered on the day specified.
  - from Person\_id, -fm Person\_id  
selects transactions entered by the participant named Person\_id.
  - subject /regexp/, -sj /regexp/  
selects transactions whose subjects match the given regular expression.
  - text /regexp/, -tx /regexp/  
selects transactions whose subjects match the given regular expression.
- 

**Name:** answer

*SYNTAX*

answer STR {-control\_args} request\_line

*FUNCTION*

provides preset answers to questions asked by another request.

*ARGUMENTS*

**STR**

is the desired answer to any question asked by request\_line. If the answer is more than one word, it must be enclosed in quotes. If STR is -query, the question is passed on to the user. The -query control argument is the only one that can be used in place of STR.

**request\_line**

is any Forum request line. It can contain any number of separate arguments (i.e., have spaces within it) and need not be enclosed in quotes.

*CONTROL ARGUMENTS*

**-brief, -bf**

suppresses printing (on the user's terminal) of both the question and the answer.

---

answer

---

---

answer

---

**-call STR**

evaluates the active string STR to obtain the next answer in a sequence. The active string is constructed from Forum active requests and Multics active strings (using Forum's "execute" active request). The outermost level of brackets must be omitted (ie: "forum\_list -changed") and the entire string must be enclosed in quotes if it contains request processor special characters. The return value "true" is translated to "yes", and "false" to "no". All other return values are passed as is.

**-exclude STR, -ex STR**

passes on, to the user or other handler, questions whose text matches STR. If STR is surrounded by slashes (/), it is interpreted as a qedx regular expression. Otherwise, answer tests whether STR is literally contained in the text of the question. Multiple occurrences of -match and -exclude are allowed (see "Notes" below). They apply to the entire request line.

**-match STR**

answers only questions whose text matches STR. If STR is surrounded by slashes (/), it is interpreted as a qedx regular expression. Otherwise, answer tests whether STR is literally contained in the text of the question. Multiple occurrences of -match and -exclude are allowed (see "Notes" below). They apply to the entire request line.

**-query**

skips the next answer in a sequence, passing the question on to the user. The answer is read from the user\_i/o I/O switch.

**-then STR**

supplies the next answer in a sequence.

**-times N**

gives the previous answer (STR, -then STR, or -query) N times only (where N is an integer).

**NOTES**

Answer provides preset responses to questions by establishing a unit for the condition command\_question and then executing the designated request line. If any request in the request line calls the command\_query\_ subroutine (described in the Subroutines manual) to ask a question, the on unit is invoked to supply the answer. The on unit is reverted when the answer request returns to Forum request level. See the *Multics Programmers' Reference Manual*, Order No. AG91 for a discussion of the command\_question condition.

If a question is asked that requires a yes or no answer and the preset answer is neither "yes" nor "no", the on unit is not invoked.

The last answer specified is issued as many times as necessary, unless followed by the -times N control argument.

---

answer

---

---

apply

---

The `-match` and `-exclude` control arguments are applied in the order specified. Each `-match` causes a given question to be answered if it matches STR; each `-exclude` causes it to be passed on if it matches STR. A question that has been excluded by the `-exclude` control argument is reconsidered if it matches a `-match` later in the request line. For example, the request line:

```
! answer yes -match /fortran/ -exclude /fortran_io/ -match /^fortran_io/
```

answers questions containing the string "fortran", except that it does not answer questions containing "fortran\_io". It does, however, answer questions *beginning* with "^fortran\_io".

---

**Name:** apply, ap

### SYNTAX

```
ap {trans_specs} {-control_args} command_line
```

### FUNCTION

places the text of the specified transaction into a temporary segment, appends the pathname of this segment to the end of `command_line`, and executes the resulting Multics command line. If an unprocessed transaction is specified, the transaction text is updated from the contents of the temporary segment after execution.

### ARGUMENTS

#### trans\_specs

are transaction specifiers (see "List of transaction specification control arguments" below). If no `trans_specs` are given, the unprocessed transaction is selected. If there is no unprocessed transaction, one is created. See Section 3 for more information on transaction specifiers.

#### command\_line

is any Multics command line.

### CONTROL ARGUMENTS

#### -by\_chain

specifies that transactions are to be grouped by transaction chain.

#### -fill, -fi

specifies that the unprocessed transaction is to be refilled upon return from the command. This is the default unless the `-no_input_fill` control argument was given to the forum command or unless the `-no_fill` control argument was given to the talk or reply request.

\_\_\_\_\_  
apply  
\_\_\_\_\_

\_\_\_\_\_  
apply  
\_\_\_\_\_

**-include\_deleted, -idl**  
processes transactions even if they have been deleted. See "Notes" below. Default is **-only\_non\_deleted**.

**-initial**  
processes only the transactions that are first in transaction chains.

**-no\_fill, -nfi**  
specifies that the unprocessed transaction is not to be refilled upon return from the command. (Default)

**-only\_deleted, -odl**  
processes only deleted transactions. See "Notes" below. Default is **-only\_non\_deleted**.

**-only\_non\_deleted, -ondl**  
processes only non-deleted transactions. (Default)

**-reverse, -rv**  
causes transactions to be processed in the reverse order that they were given in the transaction specifier.

#### *LIST OF TRANSACTION SPECIFICATION CONTROL ARGUMENTS*

**-after DT, -af DT**  
selects transactions entered on or after the the date specified. The time of day is ignored.

**-after\_time DT, -aft DT**  
selects transactions entered after the date\_time specified.

**-before DT, -be DT**  
selects transactions entered before the date specified. The time of day is ignored.

**-before\_time DT, -bet DT**  
selects transactions entered before the date\_time specified.

**-between DT1 DT2, -bt DT1 DT2**  
selects transactions entered between the dates specified, inclusive. The times of day are ignored.

**-between\_time DT1 DT2, -btt DT1 DT2**  
selects transactions entered between the date\_times specified, inclusive.

**-date DT, -dt DT**  
selects transactions entered on the day specified.

**-from Person\_id, -fm Person\_id**  
selects transactions entered by the participant named Person\_id.

---

apply

---

---

chairman

---

`-subject /REGEXP/, -sj /REGEXP/`  
selects transactions whose subject matches the given regular expression.

`-text /REGEXP/, -tx /REGEXP/`  
selects transactions whose text matches the given regular expression.

### NOTES

The supplied command line need not be enclosed in quotes. However, if it contains parentheses, square brackets, semicolon, or quote characters they should be enclosed in quotes to prevent processing by Forum's request processor.

If more than one transaction is selected, the command line is applied to each selected transaction in turn. In order to select a deleted transaction, the user must either be the chairman of the meeting or the author of the deleted transaction.

### EXAMPLES

This request can be used to edit the transaction with an editor other than `qedx` or `ted`. For example, the request:

```
! apply emacs
```

will invoke the emacs editor on the transaction.

The request:

```
! apply aref send_mail Smith -sj Transactions -if
```

will send each transaction in the current chain as mail to the user Smith.

---

Name: chairman, cm

### SYNTAX

```
cm {meeting} {-control_args}
```

### SYNTAX AS AN ACTIVE REQUEST

```
[cm {meeting}]
```

---

chairman

---

---

check\_meetings

---

### *FUNCTION*

prints or returns the User\_id (Person\_id.Project\_id) of the chairman of the specified meeting, or changes the chairman of the current meeting. If no arguments are given, the name of the chairman of the current meeting is printed.

### *ARGUMENTS*

meeting  
is the name or pathname of a Forum meeting.

### *CONTROL ARGUMENTS*

- force, -fc  
tells Forum not to ask if the chairman should be changed when using the -set control argument.
- set new\_chairman  
changes the chairman of the current meeting. new\_chairman must be of the form Person\_id.Project\_id. Only the current chairman is allowed to change the chairman.

---

Name: check\_\_meetings, ckm

### *SYNTAX*

ckm {meeting\_names} {-control\_arg}

### *FUNCTION*

establishes a list of meetings to be checked when changed. The user is notified when the meeting is changed. The meetings can be successfully viewed with the next\_meeting (nm) request.

### *ARGUMENTS*

meeting\_names  
are names of meetings to be checked. The star convention is allowed. If meeting\_names are given, the list of changed meetings will consist of any changed meetings in the list given. If no meeting\_names are given, information for all meetings found in the forum search path are printed.

### *CONTROL ARGUMENTS*

- list, -ls  
prints the name of each changed meeting and the number of new transactions in each.

---

current\_meeting

---

---

delete

---

**Name:** current\_meeting, cmtg

*SYNTAX*

cmtg {-control\_args}

*SYNTAX AS AN ACTIVE REQUEST*

[cmtg {-control\_args}]

*FUNCTION*

prints or returns the entry name or pathname of the meeting that the user is currently attending.

*CONTROL ARGUMENTS*

-absolute\_pathname, -absp  
prints or returns the full pathname of the meeting.

-entry, -et  
prints or returns only the entry name portion of the pathname of the current meeting.  
(Default)

---

**Name:** delete, dl

*SYNTAX*

dl trans\_specs

*FUNCTION*

Allows participants to logically remove specified transactions from a meeting. The chairman of a meeting can delete any transaction, and a participant can delete any transaction that he/she submitted. These transactions can then be physically removed from the meeting by the chairman with the "expunge" request.

*ARGUMENTS*

trans\_specs  
are transaction specifiers that determine which transactions are deleted (see below). See Section 3 for complete information on transaction specifiers. At least one transaction must be specified with this request.

delete

delete

### *LIST OF TRANSACTION SPECIFICATION CONTROL ARGUMENTS*

- after DT, -af DT  
selects transactions entered on or after the the date specified. The time of day is ignored.
- after\_time DT, -aft DT  
selects transactions entered after the date\_time specified.
- before DT, -be DT  
selects transactions entered before the date specified. The time of day is ignored.
- before\_time DT, -bet DT  
selects transactions entered before the date\_time specified.
- between DT1 DT2, -bt DT1 DT2  
selects transactions entered between the dates specified, inclusive. The times of day are ignored.
- between\_time DT1 DT2, -btt DT1 DT2  
selects transactions entered between the date\_times specified, inclusive.
- date DT, -dt DT  
selects transactions entered on the day specified.
- from Person\_id, -fm Person\_id  
selects transactions entered by the participant named Person\_id.
- subject /REGEXP/, -sj /REGEXP/  
selects transactions whose subject matches the given regular expression.
- text /REGEXP/, -tx /REGEXP/  
selects transactions whose text matches the given regular expression.

### *NOTES*

Deleted transactions are ignored by all requests that process transactions. Deleted transactions can be restored by using the "retrieve" request.

---

delete\_participant

---

do

---

**Name:** delete\_participant, dlpt

*SYNTAX*

dlpt Person\_ids {-control\_args}

*FUNCTION*

logically removes the record of participation (attendee record) of a participant in a meeting. Once removed, these attendee records can be deleted with the "expunge" request. Only the chairman of the meeting can issue either request.

*ARGUMENTS*

Person\_ids

are the name(s) of the participants whose records are to be deleted.

*CONTROL ARGUMENTS*

-brief, -bf

suppresses the message "Specified switch was not changed."

-long, -lg

prints the message "Specified switch was not changed." if the record for that participant has already been deleted. (Default)

*NOTES*

Deleted participants are ignored by all requests that list participants. Deleted participants can be restored by using the "retrieve\_participant" request.

---

**Name:** do

*SYNTAX*

do request\_string {args}  
or: do -control\_args

*SYNTAX AS AN ACTIVE REQUEST*

[do "request\_string" args]

*FUNCTION*

expands a request line by substituting the supplied arguments into the line before execution. As an active request, returns the expanded request\_string rather than executing it.

- do -  
- -

### *ARGUMENTS*

**request\_string**  
is a Forum request line enclosed in quotes.

**args**  
are character string arguments that replace parameters in request\_string.

### *CONTROL ARGUMENTS*

These control arguments set the mode of operation of the do request:

**-absentee**  
establishes an any\_other handler that catches all conditions and aborts execution of the request line without aborting the process.

**-brief, -bf**  
does not print the expanded request line before execution. (Default)

**-go**  
passes on the expanded request line for execution. (Default)

**-interactive**  
does not establish the any\_other handler. (Default)

**-long, -lg**  
prints the expanded request line before execution.

**-nogo**  
does not pass on the expanded request line for execution.

### *LIST OF PARAMETERS*

Any sequence beginning with & in the request line is expanded by the do request using the arguments given on the request line.

**&1 ... &9** are replaced by the first through 9th arguments respectively.

**&(N)** is replaced by argN where N is any integer.

**&q1 ... &q9** is replaced by the first through 9th arguments with any quotes doubled.

**&q(N)** is replaced by argN with any quotes doubled. N can be any integer.

**&rf1 ... &rf9** is replaced by the first through 9th arguments surrounded by a level of quotes with any contained quotes doubled.

**&r(N)** is replaced by a requoted argN. N can be any integer.

**&fN** is replaced by all the arguments starting with argN where N must be a digit from 1 to 9.

do

enter

- &f(N)** is replaced by all the arguments starting with argN where N can be any integer.
- &qfN** is replaced by all the arguments starting with argN with any quotes doubled. N must be a digit from 1 to 9.
- &qf(N)** is replaced by all the arguments starting with argN with quotes doubled where N can be any integer.
- &rN** is replaced by all the arguments starting with argN. Each argument is placed in a level of quotes with contained quotes doubled. N must be a digit from 1 to 9.
- &rf(N)** is replaced by all the arguments starting with argN, requoted. N can be any value.
- &&** is replaced by an ampersand.
- &!** is replaced by a 15 character unique string. The string used is the same everywhere & appears in the request line.
- &n** is replaced by the actual number of arguments supplied.
- &f&n** is replaced by the last argument supplied.

---

**Name:** enter, en, send

#### *SYNTAX*

en {-control\_args}

#### *FUNCTION*

enters an unprocessed transaction, that was created either by escaping to the Forum request loop via "talk" mode or by using the "qedx" or "ted" requests.

#### *CONTROL ARGUMENTS*

-brief, -bf

suppresses the message indicating the transaction was entered.

-long, -lg

prints a message indicating that the transaction was successfully entered. (Default)

—  
enter  
—

—  
exec\_com  
—

**-meeting meeting\_name, -mtg meeting\_name**

enters the transaction into the proceedings of the meeting\_name meeting. The default is to enter the transaction into the meeting that the user was attending when the transaction was created. Meeting\_name can be the name or pathname of a meeting. This control argument cannot be used if the transaction was built using the "reply" request.

---

**Name:** exec\_com, ec

**SYNTAX**

ec ec\_path {ec\_args}

**SYNTAX AS AN ACTIVE REQUEST**

[ec ec\_path {ec\_args}]

**FUNCTION**

executes a exec\_com segment containing forum requests. As an active request, it returns a value passed from the exec\_com segment with the &return statement.

**ARGUMENTS**

**ec\_paths**

is the pathname of an exec\_com program. The ".fmec" suffix is assumed if not specified.

**ec\_args**

are optional arguments to the exec\_com program and are substituted for parameter references in the program.

**NOTES**

Forum searches the "exec\_com" search list for ec\_paths with the ".fmec" suffix unless an absolute pathname is given.

For a description of the exec\_com language (both version 1 and version 2), see the Commands manual.

When evaluating a subsystem exec\_com program, Forum active requests are used rather than Multics active functions when evaluating the &[...] construct and the active string in an &if statement. The subsystem's execute active request must be used to evaluate Multics active strings within the exec\_com.

---

**execute**

---

---

**expunge**

---

**Name:** execute, e

**SYNTAX**

e LINE

**SYNTAX AS AN ACTIVE REQUEST**

[e LINE]

**FUNCTION**

executes the supplied line as a Multics command line. As an active request, evaluates a Multics active string and returns the result to the Forum request processor.

**ARGUMENTS**

**LINE**

is the Multics command line to be executed or the Multics active string to be evaluated. It need not be enclosed in quotes.

**NOTES**

The recommended method to execute a Multics command line from within Forum is the ".." escape sequence which does not expand Forum active requests in the line before passing it to the command processor. The "execute" request is intended as a means of passing information from Forum to the Multics command processor.

All unquoted (), [], and " characters in the given line are processed by the Forum request processor and not the Multics command processor. This fact permits the passing of the values of Forum active requests to Multics commands when using the "execute" request or, when using the "execute" active request, to Multics active functions for further manipulation before returning the values to the Forum request processor for use within a request line.

---

**Name:** expunge

**SYNTAX**

expunge {-control\_args}

**FUNCTION**

physically removes deleted participant records and transactions from a meeting and frees their storage. This request also checks the consistency of the control segment and attempts to salvage invalid transaction and attendee records (see "Notes" below). Only the chairman of the meeting can issue this request.

\_\_\_\_\_

expunge

\_\_\_\_\_

\_\_\_\_\_

fill

\_\_\_\_\_

### *CONTROL ARGUMENTS*

**-brief, -bf**

suppresses the messages indicating how many participants and transactions were expunged.

**-force, -fc**

does not ask if the user really wants to expunge the meeting.

**-long, -lg**

prints messages indicating how many participants and transactions were expunged.  
(Default)

**-participants, -part**

expunges only attendee records. The default expunges both attendee records and transactions.

**-transactions, -trans**

expunges only transactions. The default expunges both attendee records and transactions.

### *NOTES*

A user's attendee record is his record of participation in the meeting, which displays his User\_id, last time attended, and last transaction seen. Attendee records are printed by the "list\_users" request.

---

**Name:** fill, fi

### *SYNTAX*

fi {-control\_args}

### *FUNCTION*

reformats the text of the unprocessed transaction to fit within a given line length. It is also used to control whether or not the transaction is filled after it is entered.

### *CONTROL ARGUMENTS*

**-line\_length N, -ll N**

is the width to be used when reformatting the text. (Default-- either the value specified by the -line\_length argument to the forum command or 72 if this argument was not given). The line length given must be between 10 and 136.

**-off**

does not fill this transaction by default when printed or written.

**-on**

fills this transaction by default when printed or written.

forum\_dir

goto

**Name:** forum\_dir, fd

**SYNTAX**

fd

**SYNTAX AS AN ACTIVE REQUEST**

[fd]

**FUNCTION**

prints/returns the absolute pathname of the central forum directory.

**NOTES**

The central forum directory is the location for site-approved public meetings. This directory is included in the default forum search path. The forum request:

```
! e add_search_paths forum [forum_dir]
```

can be used to add the central directory to the forum search path. See Section 3 for more information on search paths.

**Name:** goto, go, g

**SYNTAX**

g {meeting\_name} {-control\_arg}

**FUNCTION**

enters a meeting or switches from one meeting to another. This request requires access to the meeting\_name meeting.

**ARGUMENTS**

meeting\_name

is the pathname or entryname of an established meeting. If a pathname is specified, it identifies the meeting directly. Otherwise, the forum search list will be used in an attempt to locate the meeting. The ".control" suffix is optional. Either this argument or the "-meeting" control argument must be given.

**CONTROL ARGUMENTS**

-meeting meeting\_name, -mtg meeting\_name

enters the meeting whose pathname or entryname is meeting\_name. See the description of the meeting\_name argument above.

—  
goto  
—

—  
help  
—

**-no\_return\_on\_error, -nroe**

does not return to the current meeting if meeting\_name does not exist or cannot be accessed for any other reason (this is the default).

**-return\_on\_error, -roe**

returns to the current meeting if the new meeting cannot be accessed.

---

**Name: help**

**SYNTAX**

help {topics} {-control\_args}

**FUNCTION**

prints information about various Forum topics including detailed descriptions of Forum requests.

**ARGUMENTS**

topics

are the topics on which information is to be printed. The topics available within Forum can be determined by using the "list\_help" request (see "list\_help" below).

**CONTROL ARGUMENTS**

The following specify information selection. All but -all and -brief leave you in help's request loop after they have printed their specific information.

**-all, -a**

prints the entire info without intervening questions.

**-brief, -bf**

prints only a summary of a request or active request, including the syntax section, list of arguments, control arguments, etc.

**-brief\_header, -bfhe**

prints a brief heading with the info.

**-control\_arg STR, -ca STR**

prints the descriptions of control (or other) arguments containing the string STR.

**-header, -he**

prints only the heading line.

**-search STRs, -srh STRs**

begins printing with the paragraph containing all the strings STRs. By default, printing begins at the top of the information.

—  
help  
—

—  
help  
—

**-section STRs, -scn STRs**

begins printing at the section whose title contains all the strings STRs. By default, printing begins at the top of the information.

**-title**

prints section titles and section line counts, then asks if the user wants to see the first paragraph of information.

### *LIST OF RESPONSES*

**?**

prints the list of responses allowed to help queries.

identifies the current Forum environment.

**.. command\_line**

treats the remainder of the response as a Multics command line.

**brief, bf**

prints a brief summary, including the Syntax section and a list of arguments, then repeats the previous question.

**control\_arg STR, ca STR**

prints the descriptions of control (or other) arguments whose names contain STR.

**header, he**

prints a long heading line consisting of the pathname of the info seg, heading, and line count.

**no, n**

stops printing information for this topic and proceeds to the next topic, if any.

**quit, q**

stops printing information for this topic and returns to the Forum's request level.

**rest {-scn}, r {-scn}**

prints remaining information for this topic without intervening questions. If **-section** or **-scn** is given, "help" prints only the rest of the current section without questions and then asks if the user wants to see the next section.

**search {STRs} {-top}, srh {STRs} {-top}**

skips to the next paragraph containing all the strings STRs. If **-top** or **-t** is given, searching starts at top of the information. If STRs are omitted, "help" uses the STRs from the previous search response or the **-search** control argument.

**section {STRs} {-top}, scn {STRs} {-top}**

skips to the next section whose title contains all the strings STRs. If **-top** or **-t** is given, title searching starts at the top of the information. If STRs are omitted, "help" uses the STRs from the previous section response or the **-section** control argument.

— help if —

**skip** {-scn|-seen}, s {-scn|-seen}  
skips to the next paragraph. If -section or -scn is given, skips all paragraphs of the current section. If -seen is given, skips to the next paragraph that the user has not seen. Only one control argument is allowed in each skip response.

**title** {-top}  
lists titles and line counts of the sections that follow; if -top or -t is given, "help" lists all section titles. "help" then repeats the previous question after titles are printed.

**top, t**  
skips to the beginning of the info seg, prints the heading line, and asks whether the user wants to see the first section.

**yes, y**  
prints the next paragraph of information on this topic.

#### NOTES

If given no topic names, the "help" request explains what requests are available to obtain information about Forum.

For a more complete description of the control arguments and responses accepted by this request, see the help command in the Commands manual.

---

**Name:** if

#### SYNTAX

if EXPR -then LINE1 {-else LINE2}

#### SYNTAX AS AN ACTIVE REQUEST

[if EXPR -then STR1 {-else STR2}]

#### FUNCTION

conditionally executes one of two request lines depending on the value of an active string. As an active request, returns one of two character strings to the Forum request processor depending on the value of an active string.

#### ARGUMENTS

##### EXPR

is the active string that must evaluate to either "true" or "false". The active string is constructed from Forum active requests and Multics active strings (using the Forum's execute active request).

—  
if  
—

—  
list  
—

#### LINE1

is the Forum request line to execute if EXPR evaluates to "true". If the request line contains any request processor characters, it must be enclosed in quotes.

#### STR1

is returned as the value of the if active request if the EXPR evaluates to "true".

#### LINE2

is the Forum request line to execute if EXPR evaluates to "false". If omitted and EXPR is "false", no additional request line is executed. If the request line contains any request processor characters, it must be enclosed in quotes.

#### STR2

is returned as the value of the if active request if the EXPR evaluates to "false". If omitted and the EXPR is "false", a null string is returned.

---

**Name:** list, ls

#### *SYNTAX*

ls {trans\_specs} {-control\_args}

#### *SYNTAX AS AN ACTIVE REQUEST*

[ls {trans\_specs} {-control\_args}]

#### *FUNCTION*

prints the transaction number, author, subject, and date/time of specified transactions on the user's terminal. As an active request, returns a list of numbers of selected transactions.

#### *ARGUMENTS*

##### trans\_specs

are transaction specifiers that determine the transactions to be listed. See "List of transaction specification control arguments" below. See Section 3 for complete information on transaction specifiers. If no transaction specifiers are supplied, all transactions are listed.

#### *CONTROL ARGUMENTS*

##### -brief, -bf

prints a brief summary line for each transaction selected.

##### -by\_chain

specifies that transactions are to be grouped by transaction chain.

—  
list  
—

—  
list  
—

- fill, -fi**  
fills listed transactions in order to obtain the line count. Not valid if invoked as an active request.
- header, -he**  
prints the header. (Default)
- include\_deleted, -idl**  
lists transactions even if they have been deleted. See "Notes" below. Default is **-only\_non\_deleted**.
- inhibit\_error, -ihe**  
does not print an error if no transactions are selected. Only valid if invoked as an active request.
- initial**  
lists only the transactions that are at the beginning of transaction chains.
- long, -lg**  
prints a complete summary of the transaction. (Default)
- long\_subject, -lgsj**  
inhibits truncation of summary lines. The subject of the transaction will extend to the next line if it is longer than the terminal width.
- meeting meeting\_name, -mtg meeting\_name**  
selects the specified transactions from the meeting\_name meeting. The default selects transactions from the current meeting.
- no\_fill, -nfi**  
suppresses filling of transactions in order to obtain the line count. Not valid if invoked as an active request. (Default)
- no\_header, -nhe**  
suppresses printing of the header. Not valid if invoked as an active request.
- no\_inhibit\_error, -nihe**  
prints an error if no transactions are selected. Only valid if invoked as an active request. (Default)
- no\_update, -nud**  
causes the list request to not update the current transaction index. Not valid if invoked as an active request.
- only\_deleted, -odl**  
lists only deleted transactions. See "Notes" below. Default is **-only\_non\_deleted**.
- only\_non\_deleted, -ondl**  
lists only non-deleted transactions. (Default)

—  
list  
—

—  
list  
—

- output\_file PATH, -of PATH  
directs the output of the list request to the file named by PATH. Not valid if invoked as an active request.
- reverse, -rv  
lists transactions in the reverse order of that specified.
- update, -ud  
sets the current transaction index to the index of the first transaction listed unless the current transaction is among those listed. Not valid if invoked as active request. (Default)

#### *LIST OF TRANSACTION SPECIFICATION CONTROL ARGUMENTS*

- after DT, -af DT  
selects transactions entered on or after the the date specified. The time of day is ignored.
- after\_time DT, -aft DT  
selects transactions entered after the date\_time specified.
- before DT, -be DT  
selects transactions entered before the date specified. The time of day is ignored.
- before\_time DT, -bet DT  
selects transactions entered before the date\_time specified.
- between DT1 DT2, -bt DT1 DT2  
selects transactions entered between the dates specified, inclusive. The times of day are ignored.
- between\_time DT1 DT2, -btt DT1 DT2  
selects transactions entered between the date\_times specified, inclusive.
- date DT, -dt DT  
selects transactions entered on the day specified.
- from Person\_id, -fm Person\_id  
selects transactions entered by the participant named Person\_id.
- subject /REGEXP/, -sj /REGEXP/  
selects transactions whose subject matches the given regular expression.
- text /REGEXP/, -tx /REGEXP/  
selects transactions whose text matches the given regular expression.

#### *NOTES*

In order to list a deleted transaction, the user must either be the chairman of the meeting or the author of the deleted transaction.

---

list\_help

---

---

list\_meetings

---

Name: list\_help, lh

*SYNTAX*

lh {topics}

*FUNCTION*

displays the names of all Forum info (help) segments pertaining to a given set of topics.

*ARGUMENTS*

topics

specifies the topics of interest. Any Forum info segment that contains one of these topics is listed.

*NOTES*

If no topics are given, all info segments available for Forum are listed.

When matching topics with info segment names, an info segment name is considered to match a topic only if that topic is at the beginning or end of a word within the segment name. Words in info segment names are bounded by the beginning and end of the segment name and by the characters period (.), hyphen (-), underscore (\_), and dollar sign (\$). The ".info" suffix is not considered when matching topics.

*EXAMPLES*

```
! list_help ex
```

matches info segments named expunge, execute, trans\_specs\_ex, and exec\_com but does not match an info segment named nextref.

---

Name: list\_meetings, lsm

*SYNTAX*

lsm {meeting\_names} {-control\_args}

*SYNTAX AS AN ACTIVE REQUEST*

[lsm {-control\_args}]

*FUNCTION*

prints a list of selected meetings on the user's terminal. For each meeting selected, information about the names of the meeting and per-user meeting attributes are listed.

---

list\_meetings

---

---

list\_meetings

---

### ARGUMENTS

#### meeting\_names

are optional meeting\_names. If any are supplied, information about only the specified meeting\_names is printed. The star convention is supported for meeting\_names. If no meeting\_names are given, information for all meetings found in the forum search path are printed.

### CONTROL ARGUMENTS

#### -absolute\_pathname, -absp

prints the absolute pathname of a meeting. The default lists the long and short meeting names only.

#### -adjourned, -adj

selects information about meetings that have been adjourned.

#### -all, -a

prints information about all meetings. The default prints information about the meetings in which the user is eligible to participate only.

#### -brief, -bf

suppresses the message "No meetings have changed", which is printed by default if the -changes control argument is used and no meetings have changed.

#### -chairman {Person\_id}, -cm {Person\_id}

prints information about meetings of which Person\_id is chairman. If Person\_id is not given, the user's Person\_id is used.

#### -changed, -chg

prints information about meetings in which the user is a participant and in which new transactions have been entered.

#### -count, -ct

prints out the number of new transactions for a meeting in which the user is participating. This control argument cannot be used if list\_meetings is invoked as an active request.

#### -eligible, -elig

prints information about all meetings in which the user is eligible to participate. (Default)

#### -exclude meeting\_names, -ex meeting\_names

excludes the meetings identified by meeting\_names from the output list. The meeting\_names argument can be a sturname. The default (-include) is to select all meetings that match the specified sturname.

#### -from DT, -fm DT

selects meetings that have changed since the specified time. DT is any string acceptable to the convert\_date\_to\_binary\_subroutine. The default is the current date-time.

---

list\_meetings

---

---

list\_meetings

---

- header, -he**  
prints the header. This is the default, unless the **-changes** control argument is given.
- include meeting\_names, -incl meeting\_names**  
includes the meetings identified by **meeting\_names** in the output list. The **meeting\_names** argument can be a sturname. (Default)
- inhibit\_error, -ihe**  
does not print warning messages for such things as bad meeting format and errors encountered while searching for meetings. (Default)
- long, -lg**  
prints the message "No meetings have changed" if the **-changes** control argument is used and no meetings in which the user is a participant have changed. (Default)
- no\_adjourned, -nadj**  
specifies that adjourned meetings are not to be listed.
- no\_changes, -nchg**  
does not list changed meetings.
- no\_header, -nhe**  
suppresses printing of the header.
- no\_inhibit\_error, -nihe**  
prints all warning messages.
- no\_notify, -nnt**  
does not list meetings in which the user has the notify flag set.
- no\_participating, -npart**  
does not list meetings in which the user is a participant.
- no\_read\_only, -nro**  
does not list meetings to which the user has only read access.
- notify, -nt**  
lists only meetings in which the user has the notify flag set.
- participating, -part**  
lists only meetings in which the user is participating. The default prints information about all meetings in which the user is eligible to participate.
- read\_only, -ro**  
lists just meetings to which the user has only read access.
- user User\_id**  
determines participation, changes, and eligibility attributes for the user specified by **User\_id**. **User\_id** is in the form **Person\_id.Project\_id.tag**, where any of the components can be the character "\*". If a component is omitted, it is assumed to be "\*".

---

list\_meetings

---

---

list\_requests

---

-verbose, -vb

prints the chairman's User\_id and current and last transactions for each meeting. Cannot be used with -changes or when lsm is being invoked as an active request.

#### NOTES ON FLAGS

The output from this command can include flags that have the following interpretation:

- a attending flag: Indicates that the user is currently attending the meeting.
- e eligible flag: indicates that the user can participate in the meeting.
- p participant flag: indicates that the user is a participant in the meeting (i.e., has "gone to" the meeting at least once).
- r removed flag: indicates that the user has removed himself from participation in the meeting.
- n notify flag: indicates that the user has turned on the notify flag in the meeting (i.e., that the user has requested online notification when new transactions are entered in the meeting).
- c change flag: indicates that new transactions have been entered in the proceedings of the meeting since the user last attended this meeting.
- o observer flag: indicates that the user has only read access to the meeting.
- j adjourned flag: indicates that the chairman has temporarily adjourned the meeting.

Note that the flags corresponding to the selection criteria are not shown (i.e., if the user is selecting meetings to which he or she is eligible, the "e" flag is not printed).

---

Name: list\_requests, lr

#### SYNTAX

lr {STRs} {-control\_args}

#### FUNCTION

prints a brief description of selected Forum requests.

---

list\_requests

---

---

list\_users

---

### *ARGUMENTS*

#### **STRs**

specifies the requests to be listed. Any request with a name containing one of these strings is listed unless `-exact` is used, in which case the request name must exactly match one of these strings.

### *CONTROL ARGUMENTS*

#### **-all, -a**

includes undocumented and unimplemented requests in the list of requests eligible for matching the STR arguments.

#### **-exact**

lists only those requests whose names exactly match one of the STR arguments.

### *NOTES*

If no STRs are given, all requests are listed.

When matching STRs with request names, a request name is considered to match a STR only if that STR is at the beginning or end of a word within the request name. Words in request names are bounded by the beginning and end of the request name and by the characters period (.), hyphen (-), underscore (\_), and dollar sign (\$).

### *EXAMPLES*

```
! list_requests ex
```

matches requests named `execute` and `exec_com` but does not match a request named `nextref`. You have to specify `-all` to get the `expunge` request listed, unless you are the chairman of the meeting you are currently attending.

---

Name: `list_users`, `lsu`

### *SYNTAX*

```
lsu {-control_args}
```

### *SYNTAX AS AN ACTIVE REQUEST*

```
[lsu {-control_args}]
```

### *FUNCTION*

prints a list of selected participants of a meeting. For each participant selected, the `Person_id`, `Project_id`, current transaction number (last one seen), the date/time last attended, and several flags are listed. The active request returns a list of `Person_ids`.

---

list\_users

---

---

list\_users

---

### CONTROL ARGUMENTS

- after TIME, -af TIME  
lists only those participants who have attended since the given time.
- all, -a  
lists all participants, including those who are not participating in the meeting.
- ascending, -asc  
sort in ascending order. This is the default for sorting by name. This may not be used if invoked as an active request.
- attending, -at  
lists only participants who are currently attending this meeting.
- before TIME, -be TIME  
lists only those participants who have not attended since the given time.
- brief, -bf  
suppresses the message "No participants were selected."
- descending, -dsc  
sort in descending order. This is the default for sorting by time last attended. This control argument cannot be used if list\_users is invoked as an active request.
- eligible, -elig  
prints a list of users and projects that are eligible to attend the meeting. Read-only eligibility is denoted by an asterisk (\*). This control argument cannot be used if list\_users is invoked as an active request. This control argument cannot be combined with any other control argument.
- header, -he  
prints the header. This control argument cannot be used if list\_users is invoked as an active request. (Default)
- long, -lg  
prints the message "No participants were selected." if this is the case. (Default)
- meeting meeting\_name, -mtg meeting\_name  
lists participants of the meeting\_name meeting. The default lists participants of the current meeting.
- names\_only  
only prints the names of the selected participants. This control argument is not valid if names\_only is invoked as an active request.
- no\_header, -nhe  
suppresses printing of the name\_list header.
- no\_participating, -npart  
lists only those users who are no longer participating.

---

list\_users

---

---

list\_users

---

- no\_read\_only, -nro  
does not list read-only participants.
- notify, -nt  
lists only participants who have the notify flag set.
- only\_deleted, -odl  
lists only information for participants who have been deleted by the chairman.
- only\_non\_deleted, -ondl  
lists only information for participants who have not been deleted by the chairman.  
(Default)
- participating, -part  
lists only users who are participating. (Default)
- project Project\_ids, -pj Project\_ids  
lists only information about participants on the specified project. All arguments following  
-project until the next control argument are taken as Project\_ids.
- read\_only, -ro  
lists just the read-only participants.
- seen transaction\_number  
lists only the participants who have read the specified transaction.
- sort TYPE  
sorts the output by TYPE. TYPE is either "name" for sorting by the Person\_id of  
participants, or "date\_time\_attended" (dta) for sorting by the time the participant last  
attended the meeting. This control argument cannot be used if list\_users is invoked as an  
active request.
- totals, -tt  
prints only the total number of participants selected.
- unseen transaction\_number  
lists only participants who have not read the specified transaction.
- user Person\_ids  
lists only information about the named participants. All arguments following -user until  
the next control argument are taken as Person\_ids.

#### NOTES

The displayed flags have the following meanings: "d" indicates that the chairman has deleted that participant, "r" indicates that the participant has been removed from the meeting and is therefore no longer a participant, "n" means that the user has the "notify flag" turned on, and "o" means that the user is an observer and cannot enter transactions.

mail

mail

**Name:** mail

### *SYNTAX*

mail {trans\_specs} {-control\_args}

### *FUNCTION*

sends a transaction or set of transactions to other users, mailing lists, or Forum meetings using the Multics mail system.

### *ARGUMENTS*

trans\_specs

are transaction specifiers which determine the transactions to be mailed. See Section 3 for more information on transaction specifiers. If no transaction specifiers are supplied, the unprocessed transaction is mailed if there is one, otherwise the current transaction is mailed. If more than one transaction is specified, each one is sent as a separate piece of mail.

### *CONTROL ARGUMENTS*

-acknowledge, -ack

requests an acknowledging message from the recipients when they read the mail.

-bcc addresses

specifies recipients who will receive blind carbon copies of the mail. Either -bcc addresses, -cc addresses, or -to addresses is required.

-brief, -bf

suppresses messages informing the user of successful mail delivery.

-cc addresses

specifies recipients who will receive carbon copies of the mail. Either -bcc addresses, -cc addresses, or -to addresses is required.

-fill, -fi

specifies that the transactions should be filled before being mailed.

-line\_length LEN, -ll LEN

specifies the line length to be used for filling. If this control argument is given, -fill need not be.

-long, -lg

prints messages informing the user of successful mail delivery. (Default)

-no\_acknowledge, -nack

does not request acknowledging messages from the recipients. (Default)

-no\_fill, -nfi

does not fill the transactions before mailing them. (Default)

mail

make\_public

**-reply\_to addresses**

specifies the return address which will appear in the Reply-To field of the mail. Either -bcc addresses, -cc addresses, or -to addresses is required.

**-subject STR, -sj STR**

sets the subject of the mail to be STR. The default subject is the subject of the transaction being mailed.

**-to addresses**

specifies the primary recipients of the mail. This control argument is required.

**NOTES**

The mail contains two header fields identifying it as having been sent by forum. These fields are:

Forum-Transaction: [NNNN] in the MEETING\_PATH meeting.  
Transaction-Entered-By: AUTHOR  
Transaction-Entered-Date: DATE\_TIME

See the *Multics Extended Mail System User's Guide*, Order No. CH23, for information on the valid syntax for mail addresses.

---

**Name: make\_public, mp**

**SYNTAX**

mp {-control\_args}

**FUNCTION**

opens the current meeting to public participation. You can use this request if you have either modify permission on the containing directory or chairman access to the meeting.

**CONTROL ARGUMENTS**

**-chairman, -cm**

gives access (c) to the added participant. This control argument is not valid for meetings created with pre-MR11 software.

**-read\_only, -ro**

allows the public to read transactions but not to enter them.

**NOTES**

The -read\_only and -chairman control arguments cannot both be specified. For information on converting a meeting, refer to "Duties of the Chairman" later in this manual.

---

next\_meeting

---

---

next\_meeting

---

**Name:** next\_meeting, nm

*SYNTAX*

nm {-control\_arg}

*SYNTAX AS AN ACTIVE REQUEST*

[nm {-control\_arg}]

*FUNCTION*

changes the current meeting to the next meeting in the list of changed meetings established by the check\_meetings request. As an active function, it returns the name of the next meeting on the list. In either case, that meeting is removed from the list.

*CONTROL ARGUMENTS*

-all, -a

prints or returns a list of all of the meetings in the list of changed meetings, including those already checked by this request. If this control argument is used, neither the current meeting nor the list will be changed.

-list, -ls

prints or returns a list of the remaining meetings in the list of changed meetings. If this control argument is used, neither the current meeting nor the list will be changed.

*NOTES*

The check\_meetings request must have already been used in this process. This request calls the request processor with the request line:

goto MEETING\_NAME

so a user-defined abbreviation for the goto request will be expanded.

When -all or -list is used, the count of new transactions displayed is the number of transactions that were new when the check\_meetings request was invoked.

—  
print  
—

—  
print  
—

**Name:** print, pr, p

### *SYNTAX*

p {trans\_specs} {-control\_args}

### *FUNCTION*

prints specified transactions on the terminal.

### *ARGUMENTS*

trans\_specs

are transaction specifiers that determine the transactions to be printed. See "List of transaction specification control arguments" below. See Section 3 for complete information on transaction specifiers. If no transaction specifiers are supplied, the unprocessed transaction is printed (if there is one), otherwise the current transaction is printed.

### *CONTROL ARGUMENTS*

-by\_chain

specifies that transactions are to be grouped by transaction chain.

-fill, -fi

fills transactions before printing them.

-include\_deleted, -idl

selects transactions even if they have been deleted. See "Notes" below. Default is -only\_non\_deleted.

-initial

selects only transactions that begin transaction chains.

-meeting meeting\_name, -mtg meeting\_name

selects the specified transactions from the meeting\_name meeting. The default selects transactions from the current meeting.

-no\_fill, -nfi

suppresses filling of transactions. (Default)

-only\_deleted, -odl

selects only deleted transactions. See "Notes" below. Default is -only\_non\_deleted.

-only\_non\_deleted, -ondl

selects only non-deleted transactions. (Default)

-reverse, -rv

prints transactions in the reverse order of that given in the transaction specifier.

—  
print  
—

—  
print  
—

### *LIST OF TRANSACTION SPECIFICATION CONTROL ARGUMENTS*

- after DT, -af DT  
selects transactions entered on or after the date specified. The time of day is ignored.
- after\_time DT, -aft DT  
selects transactions entered after the date\_time specified.
- before DT, -be DT  
selects transactions entered before the date specified. The time of day is ignored.
- before\_time DT, -bet DT  
selects transactions entered before the date\_time specified.
- between DT1 DT2, -bt DT1 DT2  
selects transactions entered between the dates specified, inclusive. The times of day are ignored.
- between\_time DT1 DT2, -btt DT1 DT2  
selects transactions entered between the date\_times specified, inclusive.
- date DT, -dt DT  
selects transactions entered on the day specified.
- from Person\_id, -fm Person\_id  
selects transactions entered by the participant named Person\_id.
- line\_length LENGTH, -ll LENGTH  
fills the transaction to the specified line length. The default is 72 columns unless a different value was given with the -output\_line\_length or -line\_length control argument to the forum command.
- subject /REGEXP/, -sj /REGEXP/  
selects transactions whose subject matches the given regular expression.
- text /REGEXP/, -tx /REGEXP/  
selects transactions whose text matches the given regular expression.

### *NOTES*

In order to print a deleted transaction, the user must be either the chairman of the meeting or the author of the deleted transaction.

—  
qedx  
—

—  
qedx  
—

**Name:** qedx, qx

### *SYNTAX*

qx {-control\_arg}

### *FUNCTION*

invokes the Qedx editor to edit the text of the unprocessed transaction or to build a new transaction. See the *Qedx Text Editor User's Guide*, Order No. CG40, for more information on the Qedx editor.

### *CONTROL ARGUMENTS*

-auto\_write  
specifies that the "w" request is not required in order to save editing changes. See "Notes".

-fill, -fi  
specifies that the transaction is to be refilled upon exit from the editor. This is the default unless the -no\_input\_fill control argument was given to the forum command or unless the -no\_fill control argument was given to the talk or reply request.

-no\_auto\_write  
specifies that the "w" request is required in order to save editing changes. (Default)

-no\_fill, -nfi  
specifies that the transaction is not to be refilled upon exit from the editor. (Default)

### *NOTES*

The transaction text is placed in a buffer. The write (w) request must be used to save any changes unless -auto\_write is given. If -auto\_write is given, the contents of the buffer always replaces the transaction when the editor is exited. The write request can be used as often as desired to checkpoint the editing process.

If the quit (q) request is issued, -auto\_write was not specified, and the transaction has been modified since it was last written, qedx will query for permission to exit. If permission is given, any changes made since the last write request (if any) will be lost. The quit-force (qf) request can be used to abort unwanted editing without being queried.

The read (r) and write (w) requests still accept pathnames and may be used to insert a segment into the transaction or make a copy in a segment for later use, respectively. However, when used with a pathname, these requests will not change the default pathname for the buffer (the transaction). Using either read or write without a pathname will always refer to forum's copy of the transaction.

---

qedx

---

---

remove\_meeting.

---

If issued before use of the write request, the request line:

! 1,\$dr

will restore the original transaction text to the buffer. If given after a write request, this request line will restore the transaction as saved by the last write request given in the buffer.

For information on converting a meeting, refer to "Duties of the Chairman" later in this manual.

---

Name: quit, q

*SYNTAX*

q {-control\_arg}

*FUNCTION*

exits the Forum subsystem.

*CONTROL ARGUMENTS*

-force, -fc

does not ask if the user really wants to quit if there is an unprocessed transaction.

---

Name: remove\_meeting, rm

*SYNTAX*

rm {meeting\_names} {-control\_args}

*FUNCTION*

removes meetings in the user's forum search list by deleting links to them from the directory >udd>Project>Person>meetings.

*ARGUMENTS*

meeting\_names

are names of forum meetings to be removed from the search list. The star convention is allowed.

---

remove\_meeting,

---

---

remove\_participant

---

### *CONTROL ARGUMENTS*

**-check, -ck**

lists all links to meeting in >udd>Project>Person>meetings that point to non-existent meetings. Incompatible with **-cleanup**.

**-cleanup**

removes all links to forum meetings from >udd>Project>Person>meetings that point to non-existent meetings. Incompatible with **-check**.

**-directory PATH, -dr PATH**

removes the links from the specified directory instead of the default directory of >udd>Project>Person>meetings.

### *NOTES*

If a meeting is found through some other entry in the forum search list, the site's central forum directory for instance, this command can not remove it.

---

**Name:** remove\_participant, rpt

### *SYNTAX*

rpt Person\_id

### *FUNCTION*

makes the person identified by Person\_id ineligible to participate in the current meeting. You can use this request if you have either modify permission on the containing directory or chairman access to the meeting.

### *ARGUMENTS*

**Person\_id**

is the Person\_id of the user to be removed from participation in the meeting.

### *NOTES*

For information on converting a meeting, refer to "Duties of the Chairman" later in this manual.

---

remove\_project

---

---

reply

---

**Name:** remove\_\_project, rpj

*SYNTAX*

rpj Project\_id

*FUNCTION*

makes all participants who are currently eligible because of their Project\_id, not because of their Person\_id, ineligible to attend the current meeting. You can use this request if you have either modify permission on the containing directory or chairman access to the meeting.

*ARGUMENTS*

Project\_id

is the Project\_id of the project whose members are to be removed from participation if they lack explicit Person\_id participation rights.

*NOTES*

For information on converting a meeting, refer to "Duties of the Chairman" later in this manual.

---

**Name:** reply, rp

*SYNTAX*

rp {transaction\_specifier} {-control!\_args}

*FUNCTION*

allows a participant to build, and optionally enter into the proceedings of a meeting, a transaction that is in reply to an earlier transaction and thus perpetuate a "chain" of transactions.

*ARGUMENTS*

transaction\_specifier

is the transaction specifier of the transaction to be replied to. If this argument is not given, the current transaction is replied to. Transaction specifier must name only one transaction and therefore cannot include a User\_id, regular expression, or range.

*CONTROL ARGUMENTS*

-auto\_write

does not require the "w" request to be given in the editor in order to save editing changes. This is only meaningful if the transaction is entered from the terminal and ended with \f.

—  
reply  
—

—  
reply  
—

- brief, -bf**  
suppresses printing of the message indicating that the transaction was successfully entered.
- fill, -fi**  
fills the transaction after the user exits input mode. This is the default unless either the `-line_length` control argument is used or the `-line_length` and `-input_line_length` (`-ill`) control arguments to the forum command are used.
- force, -fc**  
overwrites a previous unprocessed transaction without querying.
- input\_file pathname, -if pathname**  
enters the segment identified by `pathname` into the proceedings. The default takes the transaction as it is typed in from the terminal and enters the request loop upon termination of input.
- line\_length LENGTH, -ll LENGTH**  
fills the transaction to the specified line length. The default is 72 columns unless a different value was given with the `-output_line_length` or `-line_length` control arguments to the forum command.
- long, -lg**  
prints a message indicating that the transaction was successfully entered. (Default)
- meeting meeting\_name, -mtg meeting\_name**  
enters the transaction into the proceedings of the `meeting_name` meeting. The default enters the transaction into the proceedings of the meeting the user is currently attending. The `meeting_name` argument can be a meeting name or a pathname.
- no\_auto\_write**  
requires the "w" request to be given in the editor in order to save editing changes. This is only meaningful if the transaction is entered from the terminal and ended with `\f`. (Default)
- no\_fill, -nfi**  
does not fill the transaction to the default fill width when entered. The default fills the transaction, unless either the `-line_length` control argument is used or the `-line_length` and `-input_line_length` (`-ill`) control arguments to the forum command are used.
- no\_force, -nfc**  
query before overwriting a previous unprocessed transaction.
- no\_request\_loop, -nrql**  
enters the transaction into the meeting without first entering the forum request loop. (Default except when `-input_file` is used.)
- request\_loop, -rql**  
enters the forum request loop before the transaction is entered in the meeting. (Default except when `-input_file` is used.)

reply

reset

-subject subject\_string, -sj subject\_string

uses subject\_string as the subject, avoiding the prompt for subject. The default uses the subject of the transaction being replied to. If subject\_string contains spaces, it must be quoted.

-terminal\_input, -ti

inputs the transaction from the user's terminal. (Default)

### TERMINAL INPUT

Unless the user makes use of the -input\_file control argument, the transaction is built by taking lines from the user's terminal. There are three methods of exiting from terminal input mode:

- . Enters the transaction as is, returning to Forum request level.
- \f Exits terminal input mode and invokes the qedx editor on the transaction.
- \f or \qf Exits terminal input mode and enters the Forum request loop.

### NOTES

A transaction that was not entered via the period (.) to exit from terminal input mode can be entered from Forum request level via the "enter" request. See the description of the "enter" request for details.

---

Name: reset, rs

### SYNTAX

rs {trans\_specs} {-control\_arg}

### FUNCTION

The "highest transaction seen" is only maintained for pre-MR11 version meetings. For current version meetings, seen switches should be used. See the description of the switch\_on and switch\_off requests.

### ARGUMENTS

trans\_specs

is a transaction specifier that determines the value of the transaction number that the index is reset to. This can refer to only one transaction. If not specified, the default is the current transaction number. See Section 3 for complete information on transaction specifiers.

—  
reset  
—

—  
retrieve  
—

### *CONTROL ARGUMENTS*

-current

adjusts the "current" index. (Default)

-highest

adjusts the "highest transaction seen" index. This control argument only applies to pre-MR11 version meetings.

-new

makes the specified transaction the first "new" transaction. This is equivalent to "reset -highest trans\_num-1". This control argument applies to pre-MR11 version meetings.

-next

makes the specified transaction the "next" transaction. This is the same as "reset trans\_num-1".

### *NOTES*

The "current transaction index" is a logical pointer to a transaction in a meeting. Many Forum requests, including "print" and "write", use the value of this index if no transaction specifiers are supplied. It is initially set to the value of the "highest transaction seen" when the user enters a meeting. The "highest transaction seen" index is a logical pointer to the highest transaction that the user has printed or written to a segment. This index is used when determining which transactions are "new".

---

**Name:** retrieve, rt

### *SYNTAX*

rt trans\_specs

### *FUNCTION*

allows participants to retrieve specified transactions that were previously deleted with the 'delete' request. The chairman can retrieve any deleted transaction. Other participants can only retrieve transactions that they authored and subsequently deleted.

### *ARGUMENTS*

trans\_specs

are transaction specifiers that determine which transactions are retrieved (see below). See Section 3 for complete information on transaction specifiers. Regular expressions and Person\_ids cannot be used as transaction specifiers with this request.

---

retrieve

---

---

retrieve\_participant

---

*LIST OF TRANSACTION SPECIFICATION CONTROL ARGUMENTS*

- after DT, -af DT  
selects transactions entered on or after the the date specified. The time of day is ignored.
- after\_time DT, -aft DT  
selects transactions entered after the date\_time specified.
- before DT, -be DT  
selects transactions entered before the date specified. The time of day is ignored.
- before\_time DT, -bet DT  
selects transactions entered before the date\_time specified.
- between DT1 DT2, -bt DT1 DT2  
selects transactions entered between the dates specified, inclusive. The times of day are ignored.
- between\_time DT1 DT2, -btt DT1 DT2  
selects transactions entered between the date\_times specified, inclusive.
- date DT, -dt DT  
selects transactions entered on the day specified.
- from Person\_id, -fm Person\_id  
selects transactions entered by the participant named Person\_id.
- subject /REGEXP/, -sj /REGEXP/  
selects transactions whose subject matches the given regular expression.
- text /REGEXP/, -tx /REGEXP/  
selects transactions whose text matches the given regular expression.

---

**Name:** retrieve\_participant, rtpt

*SYNTAX*

rtpt Person\_ids {-control\_args}

*FUNCTION*

logically retrieves the record of participation (attendee record) of a participant in a meeting after it has been deleted with the "delete\_participant" request. Only the chairman of the meeting can issue this request.

---

retrieve\_participant

---

---

set\_message

---

### ARGUMENTS

#### Person\_ids

are the names of the participants whose records are to be retrieved.

### CONTROL ARGUMENTS

#### -brief, -bf

suppresses the message "Specified switch was not changed."

#### -long, -lg

prints the message "Specified switch was not changed." if the record for that participant has not been deleted. (Default)

---

Name: set\_message

### SYNTAX

set\_message {-control\_args}

### FUNCTION

allows the chairman to set a message that is to be printed the first time a user enters a transaction after entering a meeting. The message is also printed the first time a user goes to the meeting after the message has changed. The message has a maximum size of 256 characters.

### CONTROL ARGUMENTS

#### -fill, -fi

fills the message after the user exits input mode. This is the default unless the -no\_input\_fill (-nif) control argument was given with the invocation of forum. The default fill width is 72, but the user can specify the fill width via the -line\_length NN (-ll NN) control argument to the forum command.

#### -input\_file pathname, -if pathname

enters the segment identified by pathname into the proceedings. The default takes the message as it is typed in from the terminal and enters the request loop upon termination of input.

#### -no\_fill, -nfi

does not fill the message to the default fill width when entered. The default fills the transaction unless the -no\_input\_fill (-nif) control argument was specified when forum was invoked. The fill width defaults to 72, unless the -line\_length NN (-ll NN) control argument was specified when forum was invoked. (Default)

---

set\_message

---

---

subject

---

- no\_request\_loop, nrql  
enters the message into the meeting without first entering the forum request loop.  
(Default except when -input\_file is used.)
- request\_loop, -rql  
enters the forum request loop before entering the message in the meeting.
- terminal\_input, -ti  
inputs the message from the user's terminal. (Default)

#### *TERMINAL INPUT*

Unless the user makes use of the -input\_file control argument, the message is built by taking lines from the user's terminal. There are three methods of exiting from terminal input mode:

- . Enters the message as is, and returning to Forum request level.
- \f Exits terminal input mode and invokes the qedx editor on the message.
- \q Exits terminal input mode and enters the Forum request loop.

#### *NOTES*

To change a message, simply set the new message with "set\_message".

A message that was not entered via the period (.) exit from terminal input mode can be entered from Forum request level via the "enter" request. See the description of the "enter" request for details.

---

Name: subject, sj

#### *SYNTAX*

sj {new\_subject} {-control\_args}

#### *SYNTAX AS AN ACTIVE REQUEST*

[sj {new\_subject} {-control\_args}]

#### *FUNCTION*

changes the subject of the unprocessed transaction or prints/returns the subject of the unprocessed transaction.

---

subject

---

---

subsystem\_name

---

### ARGUMENTS

#### new\_subject

is a string formed by concatenating the non-control arguments with intervening spaces. It becomes the subject of the unprocessed transaction.

### CONTROL ARGUMENTS

#### -default

changes the subject to that of the transaction that the unprocessed transaction is in reply to. This control argument can only be used with replies and cannot be used if new\_subject is given.

#### -subject, -sj

begins the subject with the next argument. Useful if the first character of the subject is "-".

### NOTES

When given no arguments, the subject request prints or returns the current subject of the unprocessed transaction, if any. An unprocessed transaction is a transaction that has been "built" by the user, either by exiting the "talk" request with the "\q" request or by using the "qedx" or "ted" requests; but has not yet been entered into a meeting.

---

Name: subsystem\_name

### SYNTAX

subsystem\_name

### SYNTAX AS AN ACTIVE REQUEST

[subsystem\_name]

### FUNCTION

prints the name of the subsystem; as an active request, returns the name of the subsystem. This is useful in abbrevs that are used in more than one subsystem.

---

subsystem\_version

---

---

switch\_off

---

**Name:** subsystem\_version

*SYNTAX*

subsystem\_version

*SYNTAX AS AN ACTIVE REQUEST*

[subsystem\_version]

*FUNCTION*

prints the version number of the subsystem; as an active request, returns the version number of the subsystem.

---

**Name:** switch\_off, swf

*SYNTAX*

swf switch\_name {-control\_args}

*FUNCTION*

turns off various Forum switches.

*ARGUMENTS*

switch\_name

is the name of the switch to reset. See "List of Switches" below.

*CONTROL ARGUMENTS*

-brief, bf

suppresses the "Specified switch was not changed" error message which is printed when the user tries to set a switch that is already off.

-meeting meeting\_name, -mtg meeting\_name

sets the switch for the meeting identified by meeting\_name.

-user Person\_id

sets the switch for the user identified by Person\_id. Only the chairman can set another user's flag.

*LIST OF SWITCHES*

adjourned, adj

reconvenes the meeting and allows users to attend the meeting again.

---

switch\_off

---

---

switch\_on

---

meeting\_eligibility\_messages, mtg\_emsg

turns off the printing of eligibility messages for the meeting. This switch can only be reset by the chairman, and can only be reset if the site administrators allow it. (The default is site-dependent--see Appendix A.)

notify, nt

turns off the notify switch for the meeting. (This is the default.)

participating, part

turns off the participation switch for the meeting. (The default is on.)

safety

turns off the storage system safety switch for this meeting. The switch will cause the delete command to query the user before the meeting is deleted.

seen TRANS\_SPECS

marks the specified transactions as not having been seen.

---

Name: switch\_on, swn

*SYNTAX*

swn switch\_name {control\_args}

*FUNCTION*

turns on various Forum switches.

*ARGUMENTS*

switch\_name

is the name of the switch to set. See "List of Switches" below.

*CONTROL ARGUMENTS*

-brief, -bf

suppresses the "Specified switch was not changed" error message which is printed when the user tries to set a switch that is already on.

-meeting meeting\_name -mtg meeting\_name

sets the switch for the meeting identified by meeting\_name. This control argument cannot be used with the "seen" switch.

-user Person\_id

sets the switch for the user identified by Person\_id. Only the chairman can set another user's flag.

switch\_on

talk

### *LIST OF SWITCHES*

adjourned, adj

prevents users from entering the meeting. Only the chairman can set this switch.

meeting\_eligibility\_messages, mtg\_emsg

turns on the printing of eligibility messages for the meeting. This switch can only be set by the chairman. (The default is site dependent--see Appendix A.)

notify, nt

turns on the notify switch for the meeting. This means that an interactive message will be sent each time a transaction is entered if the user is logged in and has issued the forum\_accept\_notifications command (described in Section 8). (The default is off.)

participating, part

turns on the participation switch for the meeting. (This is the default.)

safety

turns on the storage system safety switch for this meeting. The switch will cause the delete command to query the user before the meeting is deleted.

seen TRANS\_SPECS

marks the specified transactions as not having been seen. This means that the transaction has been printed, written or explicitly marked as seen by the switch\_on request. Type "help trans\_specs" for information on transaction specifiers and for an explanation of the seen switch.

---

**Name:** talk, t

*SYNTAX*

t {-control\_args}

*FUNCTION*

allows a participant to build, and optionally enter into the proceedings of a meeting, a new transaction.

*CONTROL ARGUMENTS*

-auto\_write

does not require the "w" request to be given in the editor in order to save editing changes. This is only meaningful if the transaction is entered from the terminal and ended with \f.

-brief, -bf

suppresses the message that says that the transaction was successfully entered.

—  
talk  
—

—  
talk  
—

**-fill, -fi**

fills the transaction after the user exits input mode. This is the default unless either the **-line\_length** control argument is used or the **-line\_length** and **-input\_line\_length** (**-ill**) control arguments to the forum command are used.

**-force, -fc**

overwrites a previous unprocessed transaction without querying.

**-input\_file pathname, -if pathname**

enters the segment identified by **pathname** into the proceedings. The default takes the transaction as it is typed in from the terminal and enters the request loop upon termination of input.

**-line\_length LENGTH, -ll LENGTH**

fills the transaction to the specified line length. The default is 72 columns unless a different value was given with the **-output\_line\_length** or **-line\_length** control arguments to the forum command.

**-long, -lg**

prints a message indicating that the transaction was successfully entered. (Default).

**-meeting meeting\_name, -mtg meeting\_name**

enters the transaction into the proceedings of the **meeting\_name** meeting. The default enters the transaction into the proceedings of the meeting the user is currently attending. The **meeting\_name** argument can be a meeting name or a pathname.

**-no\_auto\_write**

require the "w" request to be given in the editor in order to save editing changes. This is only meaningful if the transaction is entered from the terminal and ended with **\f**.

**-no\_fill, -nfi**

does not fill the transaction to the default fill width when entered. The default fills the transaction unless the **-line\_length** control argument is used or the **-line\_length** and **-input\_line\_length** (**-ill**) control arguments to the forum command are used.

**-no\_force, -nfc**

query before overwriting a previous unprocessed transaction.

**-no\_request\_loop, -nrql**

enters the transaction into the meeting without first entering the forum request loop. (Default except when **-input\_file** is used.)

**-request\_loop, -rql**

enters the forum request loop before entering the transaction in the meeting.

**-subject subject\_string, -sj subject\_string**

uses **subject\_string** as the subject, avoiding the prompt for subject. The default prompts the user for the subject. If **subject\_string** contains spaces, it must be quoted.

**-terminal\_input, -ti**

inputs the transaction from the user's terminal. (Default)

—  
talk  
—

—  
ted  
—

### TERMINAL INPUT

Unless the user makes use of the `-input_file` control argument, the transaction is built by taking lines from the user's terminal. There are three methods of exiting from terminal input mode:

- . Enters the transaction as is, returning to Forum request level.
- \f Exits terminal input mode and invokes the `qedx` editor on the transaction.
- \q Exits terminal input mode and enters the Forum request loop.

### NOTES

A transaction that was not entered via the period (.) to exit from terminal input mode can be entered from Forum request level via the "enter" request. See the description of the "enter" request for details.

---

**Name:** ted

### SYNTAX

ted {-control\_arg}

### FUNCTION

invokes the "ted" editor to edit the text of the unprocessed transaction or to build a new transaction.

### CONTROL ARGUMENTS

- auto\_write  
specifies that the "w" request is not required to save editing changes. See "Notes".
- fill, -fi  
specifies that the transaction is to be refilled upon exit from the editor. This is the default unless the `-no_input_fill` control argument was given to the forum command or unless the `-no_fill` control argument was given to the talk or reply request.
- no\_fill, -nfi  
specifies that the transaction is not to be refilled upon exit from the editor. This is the default unless the `-no_input_fill` control argument was given to the forum command or unless the `-no_fill` control argument was given to the talk or reply request.
- no\_auto\_write  
specifies that the "w" request is required in order to save editing changes. See "Notes".  
(Default)

—  
ted  
—

\_\_\_\_\_ unmake\_public \_\_\_\_\_

### NOTES

If auto\_write is not specified, the write (w) request must be used to save any changes made to the transaction back to forum. The write request can be used as often as desired to checkpoint the editing process.

If the quit (q) request is issued and the transaction has been modified since it was last written, ted will query for permission to exit. If permission is given, any changes made since the last write request will be lost. The quit-force (qf) request can be used to abort unwanted editing of the transaction without being queried.

If issued before use of the write request, the request line:

! 1,\$dr

will restore the original transaction text to the buffer. If given after a write request, this request line will restore the transaction as saved by the last write request given in the buffer.

---

**Name:** unmake\_public, ump

### SYNTAX

ump

### FUNCTION

makes all users not explicitly eligible to participate in the current meeting ineligible. Users are made eligible to participate by using the add\_participant and add\_project requests. You can use this request if you have either modify permission on the containing directory or chairman access to the meeting.

### NOTES

For information on converting a meeting, refer to "Duties of the Chairman" later in this manual.

—  
write  
—

—  
write  
—

**Name:** write, w

### *SYNTAX*

w {trans\_specs} {-control\_args}

### *FUNCTION*

writes the selected transactions into a segment.

### *ARGUMENTS*

#### *trans\_specs*

are transaction specifiers that determine the transactions to be written. See "List of transaction specification control arguments" below. See Section 3 for complete information on transaction specifiers. If no transaction specifiers are supplied, the current transaction is written.

### *CONTROL ARGUMENTS*

#### *-brief, -bf*

suppresses the message about how many transactions were written.

#### *-by\_chain*

specifies that transactions are to be grouped by transaction chain.

#### *-extend*

writes the selected transactions to the end of the segment named either by the *-pathname* control argument or by default (see "Notes" below). (Default)

#### *-fill, -fi*

fills transactions before writing them to the file. The default is to fill transactions marked as unfilled when entered. The default line length is 72 unless another value is specified with the *-line\_length* control argument or with the *-line\_length* or *-output\_line\_length* control argument to the *forum* command.

#### *-format, -fmt*

specifies that transactions are to be written in a formatted fashion which includes page breaks. See "Notes on formatting" below.

#### *-include\_deleted, -idl*

selects transactions even if they have been deleted. See "Notes" below. Default is *-only\_non\_deleted*.

#### *-initial*

writes only transactions that are at the beginning of transaction chains.

#### *-line\_length LENGTH, -ll LENGTH*

fills transactions to LENGTH characters. (Default = 72)

—  
write  
—

—  
write  
—

- long, -lg**  
prints the message about how many transactions were written. (Default)
- meeting meeting\_name, -mtg meeting\_name**  
selects the specified transactions from the meeting\_name meeting. The default selects transactions from the current meeting.
- no\_fill, -nfi**  
does not fill transactions when written. The default fills only transactions that were marked as unfilled when entered.
- no\_format, -nfmt**  
specifies that transactions are to be written with no page breaks, headers, or footers. (Default)
- no\_separator, -nsep**  
writes out transactions with a single blank line between them.
- only\_deleted, -odl**  
selects only deleted transactions. See "Notes" below. Default is **-only\_non\_deleted**.
- only\_non\_deleted, -ondl**  
selects only non-deleted transactions. (Default)
- page\_length LENGTH, -pl LENGTH**  
specifies the number of lines to be printed on each page. LENGTH includes the page header and footer. This control argument is only applicable if **-format** is given. (Default = 60)
- pathname PATH, -pn PATH**  
writes the transactions selected to the segment identified by PATH. The ".trans" suffix is assumed.
- reverse, -rv**  
writes transactions in the reverse order of that given in the transaction specifier.
- separator STR, -sep STR**  
appends a separator string to each transaction written to the output segment. STR is an ioa\_control string of up to 256 characters. Default is a new page ("^|").
- truncate, -tc**  
truncates the segment before writing the transactions to it.

#### *LIST OF TRANSACTION SPECIFICATION CONTROL ARGUMENTS*

- after DT, -af DT**  
selects transactions entered on or after the the date specified. The time of day is ignored.
- after\_time DT, -aft DT**  
selects transactions entered after the date\_time specified.

—  
write  
—

—  
write  
—

- before DT, -be DT  
selects transactions entered before the date specified. The time of day is ignored.
- before\_time DT, -bet DT  
selects transactions entered before the date\_time specified.
- between DT1 DT2, -bt DT1 DT2  
selects transactions entered between the dates specified, inclusive. The times of day are ignored.
- between\_time DT1 DT2, -btt DT1 DT2  
selects transactions entered between the date\_times specified, inclusive.
- date DT, -dt DT  
selects transactions entered on the day specified.
- from Person\_id, -fm Person\_id  
selects transactions entered by the participant named Person\_id.
- subject /REGEXP/, -sj /REGEXP/  
selects transactions whose subject matches the given regular expression.
- text /REGEXP/, -tx /REGEXP/  
selects transactions whose text matches the given regular expression.

#### *NOTES*

If no pathname is given, the selected transactions are written to a segment in the working directory with the entryname meeting\_name.trans. The user's current transaction index is set to the last transaction written.

In order to write a deleted transaction, the user must be either the chairman of the meeting or the author of the deleted transaction.

#### *NOTES ON FORMATTING*

Formatted output consists of a page header containing the current date and time, the name of the meeting, and the page number, plus a footer containing the subject of the first transaction on the page. The header and footer are separated from the text by a line of underscores and a blank line. Transactions are only split across pages if they are longer than one page. If a transaction does not fit on the remainder of the current page, a new page is always created. The -separator control argument cannot be used when formatting output.

## SECTION 8

# USER COMMANDS

This section contains descriptions of the Forum users' commands, presented in alphabetical order. These commands are for all Forum users, that is, for anyone who wants to find out about and attend meetings. Each description contains the name of the command (including the abbreviated form, if any), discusses the purpose of the command, and shows the correct usage. Notes and examples are included when deemed necessary for clarity.

The syntax line demonstrates the proper format to use when invoking the command. The following conventions apply in the usage line:

1. Optional arguments are enclosed in braces (e.g., {path}, {User\_ids}). All other arguments are required.
2. Control arguments are identified in the usage line with a leading hyphen (e.g., {-control\_args}) simply as a reminder that all control arguments must be preceded by a hyphen in the actual invocation of the command.
3. To indicate that a command accepts more than one of a specific argument, an "s" is added to the argument name (e.g., paths, {paths}, {-control\_args}).

forum

forum

**Name:** forum

*SYNTAX AS A COMMAND*

forum {meeting\_name} {-control\_args}

*FUNCTION*

The forum command enters the Forum interactive meeting system. Once the command is invoked, you are placed in the Forum subsystem, where you must use Forum requests. Forum requests are listed below under "List of Requests". (Forum requests are treated tutorially in Sections 2 through 5, and are fully described in Section 7.)

*ARGUMENTS*

meeting\_name

is the name or pathname of the meeting to be entered immediately upon invoking Forum. If a pathname is specified, it identifies the meeting to enter. Otherwise, Forum searches for meeting\_name by using the forum search list. See "Notes on Search List" below.

*CONTROL ARGUMENTS*

-abbrev, -ab

specifies that abbreviation processing should be done by the Forum request processor. If the -profile argument is not given, the user's default profile segment (>udd>Project\_id>Person\_id>Person\_id.profile) is used.

-brief, -bf

suppresses some messages from Forum and shortens others.

-input\_fill, -ifi

fills transactions before entering them into the proceedings of a meeting. See "Notes on Filling" below for a discussion of filling. (Default)

-input\_line\_length N, -ill N

causes input filling (fill request and default filling) to be done with line length N. (Default is 72)

-line\_length N, -ll N

causes both input and output filling (fill request and default filling) to be done with line length N. (Default is 72)

-list {trans\_spec}, -ls {trans\_spec}

lists the specified transactions before entering the request loop. If no transaction specifier is given, all the transactions in the meeting are listed.

-long, -lg

uses long messages from Forum. (Default)

forum

forum

- meeting meeting\_name, mtg meeting\_name  
enters the meeting whose entryname or pathname is meeting\_name. See the description of the meeting\_name argument above.
- no\_abbrev, -nab  
specifies that abbreviation processing is not to be done by the Forum request processor. (Default)
- no\_input\_fill, -nif  
does not fill transactions before entering them into the proceedings of a meeting. See "Notes on Filling" below for a discussion of filling.
- no\_output\_fill, -nof  
does not fill transactions before printing them on the user's terminal. See "Notes on Filling" below for a discussion of filling. (Default)
- no\_prompt  
does not prompt in the request loop.
- no\_start\_up, -nsu  
does not execute the start\_up exec\_com. See "Notes on start\_up" below.
- output\_fill, -ofi  
fills transactions before printing or writing. See "Notes on Filling" below for a discussion of filling.
- output\_line\_length N, -oll N  
causes output filling (fill request and default filling) to be done with line length N. (Default is 72)
- profile profile\_path, -pf profile\_path  
specifies that abbreviation processing is to be done using the profile named profile\_path. If this control argument is given, the -abbrev argument need not be given.
- prompt prompt\_string  
sets the request loop prompt to prompt\_string. (Default is "forum:")
- quit  
tells Forum to process the initial request line and then return without entering the request loop (even if the initial request line is aborted).
- request string, -rq string  
executes the requests in string before entering the request loop.
- start\_up, -su  
executes the start\_up exec\_com. See "Notes on start\_up" below. (Default)

#### NOTES ON REQUESTS

Request lines use () for iteration, "" for quoting, and [] to invoke Forum active requests (listed below under "List of Active Requests").

forum

forum

Any request line that begins with ".." is passed directly to the Multics command processor with the leading ".." stripped off. Consequently, any reference to an active function is evaluated by the Multics command processor. The "execute" (e) forum request can also make use of active strings via the square brackets ([]), but these are evaluated as active requests by Forum before the command line is passed to the Multics command processor.

#### *NOTES ON START\_UP*

If the `-no_start_up` control argument is not given, forum will search for and execute an `exec_com` file of forum requests. It will look for a segment named "start\_up.fmec" in the home directory, project directory, and >site in that order. The `start_up` will be executed before going to the initial meeting and before executing the initial request line.

#### *NOTES ON FILLING*

Transactions can be filled out to a given line length on both input and output. By default, all transactions input from the terminal are filled to a line length of 72 upon entry. The `-input_fill` (`-if`) and `-no_output_fill` (`-nof`) control arguments are the default. These control arguments specify a global attribute for the invocation of Forum, which can be overridden by control arguments associated with the various requests for inputting and outputting transactions (such as the `-no_fill` control argument to the "print" request). The `-input_fill` and `-no_input_fill` control arguments do not affect transactions entered using the `-input_file` control argument to the talk and reply requests. The fill width can be altered by control arguments to the forum command (`-line_length`, `-input_line_length`, and `-output_line_length`) and by the `-line_length` control argument to the forum requests that fill transactions.

#### *LIST OF REQUESTS*

Listed below are the available requests that you can use once you are in the Forum subsystem. These requests are described in detail in Section 7. Certain common requests are described tutorially in Sections 2 through 6 of this manual.

?

lists the available forum requests and active requests.

identifies Forum with version number; gives `meeting_name` if attending; gives count of new, total, last, and current transactions; and gives number of lines in the unprocessed transaction.

`abbrev {-control_args}, ab {-control_args}`

turns abbreviation processing on or off and changes profile segments.

`add_meeting`

adds a meeting to the list of meetings attended. Makes the user a participant of the meeting.

`add_participant NAME {-control_arg}, apt NAME {-control_args}`

allows a user to participate in the meeting. (A chairman request only).

forum

forum

add\_project NAME {-control\_arg}, apj NAME {-control\_args}

allows a project to participate in the meeting. (A chairman request only).

announce\_meeting

places an announcement of the current meeting in another meeting. This announcement can be used with the add\_meeting request by other users to add this meeting to their search list.

announcement\_info

extracts information from a meeting announcement produced by the announce\_meeting request.

answer STR {-control\_args} request\_line

supplies an answer to a question asked by a request. STR is the desired answer to the question and request\_line is the Forum request line.

apply command\_line, ap command\_line

places the unprocessed transaction into a temporary segment, concatenates command\_line with the pathname, and passes the result to the Multics command processor. The temporary segment is then read back in as the unprocessed transaction.

chairman {meeting\_name}, cm {meeting\_name}

prints the User\_id (Person\_id.Project\_id) of the meeting's chairman.

check\_meetings

establishes a list of meetings to be flagged when changed. The meeting can be successively viewed with the next\_meeting (nm) request.

current\_meeting {-control\_args}, cmtg {-control\_args}

prints the name of the current meeting.

delete trans\_specs, dl trans\_specs

allows the chairman to delete specified transactions from the proceedings.

do {request\_line} {args}, do {-control\_args}

substitutes args into the request\_line and passes the result to the Forum request processor. Control arguments can be -nogo to suppress execution or -long (-lg) to display expanded line before execution.

enter {-control\_args}, en {-control\_args}, send {-control\_args}

enters the unprocessed transaction into the proceedings of a meeting.

exec\_com PATH STRs, ec PATH STRs

executes an exec\_com segment containing forum requests where PATH is the pathname of the exec\_com segment (the ".fmec" suffix is assumed) and STRs are arguments to be passed to the program.

execute STRs, e STRs

executes STRs as a Multics command line after evaluating Forum active requests. As an active request, returns the result of evaluating strings as an Multics active string.

forum

forum

fill {-control\_args}, fi {-control\_args}  
reformats transaction text to fit in a given line length.

forum\_dir, fd  
prints the pathname of the central forum directory.

goto meeting\_name, g meeting\_name  
enters the user into the meeting\_name meeting.

help {STR}  
prints information about request names or topics. A list of available topics is produced by the list\_help request.

if EXPR -then LINE1 {-else LINE2}  
conditionally executes one of two request lines depending on the value of an active string. EXPR is the active string that must evaluate to either "true" or "false". LINE1 is the Forum request line to execute if EXPR evaluates to "true". LINE2 is the Forum request line to execute if EXPR evaluates to "false".

list {trans\_specs} {-control\_args}, ls {trans\_specs} {-control\_args}  
prints a summary of the specified transactions.

list\_help {topics}, lh {topics}  
prints a list of available info segments whose names include a topic string.

list\_meetings {meeting\_names} {-control\_args}, lsm {meeting\_names} {-control\_args}  
prints a list of selected meetings and information about them.

list\_requests {-control\_args}, lr {-control\_args}  
prints information about forum requests.

list\_users {-control\_args}, lsu {-control\_args}  
prints information about specified participants in a meeting.

mail  
sends a transaction or set of transactions to other users, mailing lists, or forum meetings using the Multics mail system.

make\_public, mp  
allows all users on the system access to the meeting. (A chairman request only.)

next\_meeting  
changes the current meeting to the next meeting in the list of changed meetings established by the check\_meetings request.

forum

forum

print {trans\_specs} {-control\_args}, pr {trans\_specs} {-control\_args}  
prints selected transactions from a meeting.

qedx, qx  
invokes the qedx editor on the unprocessed transaction.

quit {-control\_arg}, q {-control\_arg}  
exits Forum.

remove\_meeting  
removes meetings to the user's forum search list by deleting links to them from the directory >udd>Project>Person>meetings.

remove\_participant NAME, rpt NAME  
denies the user permission to participate in the meeting. (A chairman request only.)

remove\_project NAME, rpj NAME  
denies users on a project permission to participate in the meeting. (A chairman request only.)

reply {trans\_spec} {-control\_args}, rp {trans\_spec} {-control\_args}  
enters/builds a new transaction in a meeting that has as its subject a reference to some other transaction in the form "Re: <some other subject>", and which will be logically linked to the transaction specified by trans\_spec.

reset {trans\_spec} {-control\_args}, rs {trans\_spec} {-control\_args}  
resets the user's current or highest-seen transaction index to the specified transaction.

retrieve trans\_specs, rt trans\_specs  
retrieves specified transactions that were previously deleted with the "delete" request. Only the chairman or the author of the deleted transaction can use this request.

set\_message {-control\_args}  
sets a greeting message for the meeting. The default action puts the user into input mode to specify the message. (A chairman request only.)

subject {strings}, sj {strings}  
prints or modifies the subject of an unprocessed transaction. If strings are supplied, they are catenated together to become the new subject. If no strings are supplied, the current subject is printed.

subsystem\_name  
prints the name of the subsystem ("forum").

subsystem\_version  
prints the current version of Forum.

forum

forum

switch\_off switch {-control\_args}, swf switch {-control\_args}  
turns off various Forum switches. Switches are:

adjourned, adj  
meeting\_eligibility\_messages, mtg\_emsg  
notify, nt  
participating, part

switch\_on switch {-control\_args}, swn switch {-control\_args}  
turns on various Forum switches. Switches are:

adjourned, adj  
meeting\_eligibility\_messages, mtg\_emsg  
notify, nt  
participating, part

talk {-control\_args}  
enters/builds a new transaction in a meeting.

ted  
invokes the ted editor on the unprocessed transaction.

unmake\_public, ump  
allows only users granted explicit permission to participate in the meeting. (A chairman request only.)

write {trans\_specs} {-control\_args}, w {trans\_specs} {-control\_args}  
writes selected transactions to a segment.

#### *LIST OF ACTIVE REQUESTS*

[chairman {meeting\_name}], [cm {meeting\_name}]  
returns the Person\_id.Project\_id of meeting chairman.

[current\_meeting {-control\_args}], [cmtg {-control\_args}]  
returns the name of the current meeting.

[do {request\_string} {args}]  
returns expanded request string.

[exec\_com PATH STRs], [ec PATH STRs]  
executes an exec\_com segment containing forum requests.

[execute STRs], [e STRs]  
invokes Multics active function within forum request line.

[forum\_dir], [fd]  
returns absolute pathname of central forum directory.

[if *EXPR* -then *STR1* {-else *STR2*}]

returns one of two character strings to the Forum request processor depending on the value of *EXPR*. *EXPR* is the active string that must evaluate to either "true" or "false". *STR1* is returned if *EXPR* evaluates to "true". *STR2* is returned if *EXPR* evaluates to "false".

[*list\_meetings* {-control\_args}], [*lsm* {-control\_args}]

returns names of meetings that have new transactions.

[*list\_users* {-control\_args}], [*lsu* {-control\_args}]

return names of participants matching given conditions.

[*next\_meeting*]

returns the name of the next meeting in the list of changed meetings established by the *check\_meetings* request.

[*subject*], [*sj*]

returns the subject of an unprocessed transaction.

[*subsystem\_name*]

returns the name of the subsystem ("forum").

[*subsystem\_version*]

returns the current version of Forum.

### *TRANSACTION SPECIFIERS*

Transaction specifiers identify transactions. They are used as arguments to the forum requests that act on transactions. In addition, there are several requests and active requests that return information about transaction numbers. See Section 3 for complete information about transaction specifiers.

### *NOTES ON SEARCH LIST*

The *forum* command uses the "forum" search path. For more information about search paths, see the descriptions of the search facility commands in the Commands manual. For details on the *forum* search path, see Section 2.

---

forum\_accept\_notifications

---

---

forum\_accept\_notifications

---

**Name:** forum\_accept\_notifications, fant

*SYNTAX AS A COMMAND*

fant

*FUNCTION*

enables reception of interactive messages notifying the user of new transactions being entered in meetings for the duration of this login session. Notifications are enabled for all meetings for which the user has set the notify flag. See the description of the switch\_on request in Section 7 to find out how to set the notify flag.

---

forum\_add\_meeting

---

---

forum\_add\_meeting

---

**Name:** forum\_add\_meeting, fam

*SYNTAX*

fam {trans\_specs} {meeting\_names} {-control\_args}

*FUNCTION*

adds meetings to the user's forum search list by placing links to them in the directory >udd>Project>Person>meetings, and makes the user a participant in the meeting.

*ARGUMENTS*

*trans\_specs*

are transaction specifiers identifying transactions created by the announce\_meeting request. If any trans\_specs are given, they must precede all meeting\_names. At least one trans\_spec or meeting\_name must be given. See Section 3 for more information on transaction specifiers.

*meeting\_names*

are pathnames of forum meetings to be added to the search list.

*CONTROL ARGUMENTS*

*-current\_meeting, -cmtg*

adds the current meeting to the search list.

*-directory PATH, -dr PATH*

places the links in the specified directory instead of the default directory of >udd>Project>Person>meetings.

*-force, -fc*

adds the link even if the user is not eligible to participate in the meeting.

*-no\_force, -nfc*

does not add the link if the user is not eligible to participate in the meeting. (Default)

*-update, -ud*

changes all links to pre-MR11 meetings into links to a current version meeting if that meeting exists in the directory that the link points to. For more information on converting a meeting, refer to "Duties of the Chairman" later in this manual.

*NOTES*

If the directory >udd>Project>Person>meetings does not exist, and the -directory control argument is not given, a link with that name pointing to >udd>Project>Person is created in >udd>Project>Person.

---

forum\_delete

---

---

forum\_delete

---

**Name:** forum\_delete, fdl

*SYNTAX AS A COMMAND*

fdl meeting\_name

*FUNCTION*

deletes the specified meeting.

*ARGUMENTS*

meeting\_name

is the pathname or entryname of the meeting to be deleted. Pathnames contain greater-than (>) or less-than (<) characters. If a pathname is specified, it identifies the meeting to be deleted. Otherwise, fdl searches for the meeting\_name by using the forum search path.

*ACCESS REQUIRED*

The user must have "m" access to the directory containing the meeting to delete the meeting.

*NOTES*

If you are using this command to delete a pre-MR11 version meeting that has been converted to a current version meeting, you must use the suffix ".control" after the meeting name. The syntax is:

fdl meetingname.control

For information on converting a meeting, refer to "Duties of the Chairman" later in this manual.

forum\_dir

forum\_dir

**Name:** forum\_dir, fd

*SYNTAX AS A COMMAND*

fd

*SYNTAX AS AN ACTIVE FUNCTION*

[fd]

*FUNCTION*

prints/returns the absolute pathname of the central meeting directory.

*NOTES*

The central forum directory is the location for site-approved public meetings. This directory is included in the default forum search path.

---

forum\_list\_meetings

---

---

forum\_list\_meetings

---

**Name:** forum\_list\_meetings, flsm

*SYNTAX AS A COMMAND*

flsm {meeting\_names} {-control\_args}

*SYNTAX AS AN ACTIVE FUNCTION*

[flsm {-control\_args}]

*FUNCTION*

prints a list of selected meetings on the user's terminal. For each meeting selected, information about the names of the meeting and per-user meeting attributes are listed.

*ARGUMENTS*

**meeting\_names**

are optional meeting\_names. If any are supplied, information about only the specified meeting\_names is printed. The star convention is supported for meeting\_names. If no meeting\_names are given, information for all meetings found in the forum search path is printed.

*CONTROL ARGUMENTS*

**-absolute\_pathname, -absp**

prints the absolute pathname of a meeting. The default lists the long and short meeting names only.

**-adjourned, -adj**

selects information about meetings that have been adjourned.

**-all, -a**

prints information about all meetings. The default prints information about the meetings in which the user is eligible to participate only.

**-brief, -bf**

suppresses the message "No meetings have changed" which is printed by default if the -changes control argument is used and no meetings have changed.

- chairman {Person\_id}, -cm {Person\_id}**  
prints information about meetings of which Person\_id is chairman. If Person\_id is not given, the user's Person\_id is used.
- changed, -chg**  
prints information about meetings in which the user is a participant and new transactions have been entered.
- count, -ct**  
prints out the number of new transactions for a meeting in which the user is participating. This control argument cannot be used if forum\_list is invoked as an active function.
- eligible, -elig**  
prints information about all meetings in which the user is eligible to participate. (Default)
- exclude meeting\_names, -ex meeting\_names**  
excludes the meetings identified by meeting\_names from the output list. This control argument is designed to be used when a starname has been supplied as meeting\_names in order to exclude the specified meetings from being selected. The default (-include) is to select all meetings that match the specified starname.
- from DT, -fm DT**  
selects meetings which have changed since the specified time. DT is any string acceptable to the convert\_date\_to\_binary\_ subroutine. The default is the current time.
- header, -he**  
prints the meeting header. This is the default, unless the -changes control argument was supplied.
- include meeting\_names, -incl meeting\_names**  
includes the meetings identified by meeting\_names in the output list. This control argument is intended to be used when a starname has been specified for selecting meetings. (Default)
- inhibit\_error, -ihe**  
does not print warning messages for such as things as bad meeting format and errors encountered while searching for meetings. (Default)
- long, -lg**  
prints the message "No meetings have changed" if the -changes control argument is used and no meetings in which the user is a participant have changed. (Default)

---

forum\_list\_meetings

---

---

forum\_list\_meetings

---

- no\_changes, -nchg  
does not list changed meetings.
- no\_adjourned, -nadj  
does not list adjourned meetings.
- no\_header, -nhe  
suppresses printing of the meeting header.
- no\_inhibit\_error, -nihe  
prints all warning messages.
- no\_notify, -nnt  
does not list meetings in which the user has the notify flag set.
- no\_participating, -npart  
does not list meetings in which the user is a participant.
- no\_read\_only, -nro  
does not list meetings to which the user has only read access.
- notify, -nt  
lists only meetings in which the user has the notify flag set.
- participating, -part  
lists only meetings in which the user is participating. The default prints information about all meetings that the user is eligible to participate in.
- read\_only, -ro  
lists just the meetings to which the user has only read access.
- user User\_id  
determines participation, eligibility, and changes attributes for the user specified by User\_id. User\_id is in the form Person\_id.Project\_id.tag, where any of the components can be the character "\*". If a component is omitted, it is assumed to be "\*".
- verbose, -vb  
prints the chairman's User\_id and current and last transactions for each meeting. This control argument cannot be used with the -changes control argument or when invoking flsm as an active function.

*NOTES ON FLAGS*

The output from this command may include flags that have the following interpretation:

- a attending flag  
the user is currently attending the meeting
- c change flag  
new transactions have been entered in the proceedings of the meeting since the user last attended this meeting.
- e eligible flag  
the user can participate in the meeting.
- j adjourned flag  
the chairman has temporarily adjourned the meeting.
- n notify flag  
the user has turned on the notify flag in the meeting (i.e., the user has requested online notification when new transactions are entered in the meeting).
- o observer flag  
the user has only read access to the meeting.
- p participant flag  
the user is a participant in meeting (i.e., has gone to the meeting at least once).
- r removed flag  
the user has removed himself from participation in the meeting.

The flags corresponding to the selection criteria are not shown (i.e., if the user is selecting meetings to which he is eligible, the "e" flag is not printed, it is assumed).

---

forum\_list\_users

---

---

forum\_list\_users

---

**Name:** forum\_list\_users, flsu

*SYNTAX AS A COMMAND*

flsu {meeting\_name} {-control\_args}

*SYNTAX AS AN ACTIVE FUNCTION*

[flsu {meeting\_name} {-control\_args}]

*FUNCTION*

prints a list of selected participants of a meeting. For each participant selected, the Person\_id, Project\_id, current transaction number (last one seen), the date/time last attended, and several flags are listed. As an active function it returns a list of Person\_ids.

*ARGUMENTS*

*meeting\_name*

is the name or pathname of the meeting for which participants are to be listed. Either this argument or the -meeting control argument (but not both) must be given.

*CONTROL ARGUMENTS*

*-after TIME, -af TIME*

lists only those participants who have attended since the given time.

*-all, -a*

lists all participants, including those who are not participating in the meeting.

*-ascending, -asc*

sort in ascending order. This is the default for sorting by name. This may not be used if invoked as an active request.

*-attending, -at*

lists only participants who are currently attending this meeting.

*-before TIME, -ne TIME*

lists only those participants who have not attended since the given time.

*-brief, -bf*

suppresses the message "No participants were selected."

*-descending, -dsc*

sort in descending order. This is the default for sorting by time last attended. This control argument cannot be used if list\_users is invoked as an active request.

---

forum\_list\_users

---

---

forum\_list\_users

---

**-eligible, -elig**

prints a list of users and projects that are eligible to attend the meeting. Read-only eligibility is denoted by an asterisk (\*). This control argument cannot be used if list\_users is invoked as an active request. This control argument cannot be combined with any other control argument.

**-header, -he**

prints the header. prints the header. This control argument cannot be used if list\_users is invoked as an active request. (Default)

**-long, -lg**

prints the "No participants were selected." message if this is the case. (Default)

**-meeting meeting\_name, -mtg meeting\_name**

lists participants of the meeting\_name meeting. The meeting\_name argument can be either a name or a pathname of a meeting. The default lists participants of the current meeting.

**-names\_only**

only prints the names of the selected participants. This control argument is not valid if names\_only is invoked as an active request.

**-no\_header, -nhe**

suppresses printing of the name\_list header.

**-no\_participating, -npart**

lists only those users who are no longer participating.

**-no\_read\_only, -nro**

does not list read-only participants.

**-notify, -nt**

lists only participants with the notify flag on.

**-only\_deleted, -odl**

lists only information for participants who have been deleted by the chairman. (Default)

**-only\_non\_deleted, -ondl**

lists only information for participants who have not been deleted by the chairman. (Default)

**-participating, -part**

lists only users who are participating. (Default)

**-project Project\_ids, -pj Project\_ids**

lists only information about participants on the specified project. All arguments following -project until the next control argument are taken as Project\_ids.

---

forum\_list\_users

---

---

forum\_list\_users

---

- read\_only, -ro  
lists just read-only participants.
- seen transaction\_number  
lists only participants who have read the specified transaction.
- sort TYPE  
sorts the output by TYPE. TYPE is either "name" for sorting by the Person\_id of participants, or "date\_time\_attended" (dta) for sorting by the time the participant last attended the meeting. This control argument can not be used for the active function.
- totals, -tt  
prints only the total number of participants selected.
- unseen transaction\_number  
lists only participants who have not read the specified transaction.
- user Person\_ids  
prints only information about the named participants. All arguments following -user until the next control argument are taken as Person\_ids.

*NOTES*

The displayed flags have the following meanings:

- r the participant has been removed from the meeting and is therefore no longer a participant.
- n the user has the notify flag turned on.
- o the user is an observer and cannot enter transactions.

---

forum\_refuse\_notifications

---

---

forum\_refuse\_notifications

---

**Name:** forum\_refuse\_notifications, frnt

*SYNTAX AS A COMMAND*

frnt

*FUNCTION*

disables reception of interactive messages notifying the user of new transactions being entered in meetings.

**Name:** forum\_remove\_meeting, frm

*SYNTAX AS A COMMAND*

frm

*FUNCTION*

removes meetings in the user's "forum" search list by deleting links to them from the directory >udd>Project>Person>meetings.

*ARGUMENTS*

meeting\_names

are names of forum meetings to be removed from the search list. The star convention is allowed.

*CONTROL ARGUMENTS*

-check, -ck

lists all links to meeting in >udd>Project>Person>meetings that point to non-existent meetings. Incompatible with -cleanup.

-cleanup

removes all links to forum meetings from >udd>Project>Person>meetings that point to non-existent meetings. Incompatible with -check.

-directory PATH, -dr PATH

removes the links from the specified directory instead of the default directory of >udd>Project>Person>meetings.

*NOTES*

If a meeting is found through some other entry in the "forum" search list, the site's central forum directory for instance, this command cannot remove it.

## SECTION 9

# DUTIES OF THE CHAIRMAN

This section shows how to create and maintain meetings. For detailed descriptions of the chairman's commands referred to here, see Section 10.

### CREATING A MEETING

To create a meeting, use the `forum_create` (`for`) command. Forum asks you for all the necessary information, step by step. In the following example, assume that the user named Fox on the ProjA project wants to create a meeting in her working directory and that she wants it to be a public meeting.

```
! for

Enter pathname of meeting directory (carriage return for
working_dir):      ! <CR>

Please enter long meeting name (<20 characters):      ! home_computers

Now enter abbreviated meeting name:      ! hc

Should the meeting be public?      ! yes

Do you want to enter a chairman message (? for explanation)? ! yes
Message:
! Welcome to the home_computers meeting.
! .

The home_computers meeting has been established in >udd>ProjA>Fox.
You must now enter the first transaction in the home_computers meeting,
which will act as as an introduction.
The meeting is public. Welcome to the home_computers meeting.
Transaction:
! This meeting is designed to allow anyone interested in personal
! computing to discuss any issues related to such. Participants are
! asked to indicate which home computer they have.
! .
Transaction [0001] entered in >udd>ProjA>Fox>home_computers meeting.
Do you want to announce this meeting? !yes
Enter the name of the meeting where the announcement should be made.
Enter carriage return for >site>forum_dir>Meetings_Directory
! <CR>
Please enter a short description of the access to the meeting.
! This meeting is open to the public.
r 10:30 2.096 87
```

Now, if you reenter Forum and go to the home\_computers meeting, Forum tells you that you are the chairman. The subject is automatically added to the first transaction since the first transaction is always the introduction.

```
! forum hc
home_computers meeting:  0 new, 1 last (You are the chairman) .
forum:  ! p !
[0001] (4 lines) Fox.ProjA 04/28/82 1030.2 est Wed eve
Subject: Reason for this meeting
<same text as shown in above example>
---[0001]---
```

If you decide that you want to invite private participation only, you can specify exactly who can attend. When Forum asks whether the meeting should be public, simply reply no. Forum then offers to let you name individuals and/or whole projects as eligible participants. Individuals are specified by their Person\_ids, and projects are specified by their Project\_ids. The example below illustrates the questions asked by Forum. This sample meeting is created by Fox and is named basic\_problems (basprob).

```
.
.
.
Should the meeting be public?      ! no

Should specified individuals be allowed to participate?      ! yes

Now please type Person_ids of attendees when prompted.
Signal the end of the list by typing a period only.

Person_id:      ! Montgomery
Person_id:      ! Manselle
Person_id:      ! .

Should specified projects be allowed to participate?      ! yes

Now please type Project_ids when prompted.
Signal the end of the list by typing a period only.

Project_id:      ! ProjA
Project_id:      ! ProjB
Project_id:      ! .
```

Person\_ids and Project\_ids are entered in a list, each followed by a carriage return (RETURN). When your list is complete, type a "." on a line by itself.

Now that you have selected the possible eligible participants, you are prompted for the chairman's message, and the meeting is established. After you enter the first transaction, you are asked if you want to announce this meeting and you enter the name of the meeting where the announcement should be made. You are then asked to enter a short description of the access to the meeting.

```

Do you want to enter a chairman message (? for explanation)? ! yes
Message:
! This is a developmental meeting
! open to engineers only.
! .
The basic_problems meeting has been established in >udd>ProjA>Fox.
You must now enter the first transaction in the basic_problems
meeting, which will act as an introduction
This is a developmental meeting open to engineers only.
Transaction:
! <transaction text>
! .
Transaction [0001] entered in >udd>ProjA>Fox>basic_problems meeting.
Do you want to announce this meeting? ! yes
Enter the name of the meeting where the announcement should be made.
Enter carriage return for >site>forum_dir>Meetings_Directory
! <CR>
Please enter a short description of the access to the meeting.
! This meeting is open to the public.
r 10:30 2.096 87

```

## MAINTAINING A MEETING

As chairman, you can adjust the list of users who are eligible to participate in your meeting, adding and deleting users and projects as necessary at any time. The `-read_only` control argument to the `forum_add_participant` and `forum_add_project` commands (described below) lets you specify that certain users and/or groups of users be allowed only to read transactions, not to enter them.

You also have the right to use certain Forum requests to delete offensive or irrelevant transactions, giving proper notice to the participants, and to retrieve transactions.

As chairman, whether you created the meeting or inherited the chairmanship, you alone have the right to alter any aspects of the meeting.

### Adding a Participant

It is simple to add a participant to the list of users who are eligible to attend your meeting. The `forum_add_participant` (`fapt`) command adds users to the list, one at a time. To add the user `White` to the list of participants for the `home_computer` meeting that has been added to your search rules, type:

```

! fapt home_computer White
White added to the home_computer meeting.
r 08:42 0.247 66

```

To change the access of a participant to read only, use the `forum_add_participant (fapj)` command with the `-read_only (ro)` control argument to add the participant again. This changes the original access of the participant to read only. (See the `forum_add_participant` command later in the manual.)

### Adding a Project

Adding a project name to your list of eligible participants is done the same way as adding a user, only with the `forum_add_project (fapj)` command. (You can only add one project at a time.) The example below shows two projects being added to the list of eligible participants.

```
! fapj home_computer ProjB
ProjB added to the home_computer meeting.
r 08:53 0.290 66
! fapj home_computer Engr
Engr added to the home_computer meeting.
r 08:54 0.187 66
```

To change the access of a project to read only, use the `forum_add_project (fapj)` command with the `-read_only (ro)` control argument to add the project again. This changes the original access to allow users on the project to read transactions but not enter them. (See the `forum_add_project (fapj)` command later in this manual.)

### Making a Meeting Public

The `forum_make_public (fmp)` command opens a meeting to public participation, thereby overriding any explicit eligibility requirements that may have previously been set. You can, however, remove participants and projects from a public meeting with the `forum_remove_participant` and `forum_remove_project` commands (described below).

```
! fmp home_computer
Meeting home_computer is now public.
r 08:57 0.319 1
```

### Making a Meeting Private

Suppose you want to make a previously public meeting private and deny participation rights to an individual or a project.

The `forum_unmake_public` (`fump`) command makes a formerly public meeting into a private one.

```
! fump home_computer
Meeting home_computer is no longer public.
r 08:06 0.215 63
```

Now that the meeting is private, you must explicitly make users eligible to attend, or no one will be able to. Use the `forum_add_participant` and `forum_add_project` commands as shown above.

### Removing a Participant

Three levels of removal (access denial, logical removal, and physical removal) allow you to bar participants in degrees of permanency.

On the top level, you can deny access to a meeting for a participant with the `forum_remove_participant` (`frpt`) command. This command removes the user's record of participation or attendee record (showing `User_id`, last time attended, and last transaction seen) from the list of participants that the "list\_users" request normally displays. Any user can, however, see the names of removed participants by using the "list\_users -all" request, which includes in its display removed participants (indicated by the "r" flag).

To remove a participant from the list of eligible participants, use the `forum_remove_participant` (`frpt`) command:

```
! frpt home_computer White
White has been removed from the home_computer meeting.
r 08:10 0.347 86
```

You can go one step further and logically remove (i.e., conceal from public view) that user's record of participation in your meeting with the "delete\_participant" request.

```
forum: ! dlpt White
```

```
forum:
```

When you issue this request, Forum does not print an acknowledgment--the participant is simply removed. Now the user's record of participation is invisible to everyone but the chairman. You can still change your mind and retrieve the record with "retrieve\_participant", which replaces that user's record in the list of users.

To physically (and finally) remove a participant's record, use the "expunge" request which physically removes all deleted participants from a meeting. Note that participants to be expunged must first be deleted with the `delete_participant` request.

```
forum: ! expunge -participants
forum (expunge): Expunging the meeting will destroy all records
of deleted participants. Do you really want to expunge the
home_computer meeting? ! yes
4 participants expunged.
```

forum:

This request allows you to reclaim space and save your quota. This is necessary if your meeting is too big and in danger of running out of storage space (approaching the limit of 500 attendees.) The "expunge" request also validates the internal structure of the meeting and deletes damaged items, but it is time-consuming and generally only done to save a meeting.

### Removing a Project

To remove a Project\_id from the eligible list, use the forum\_remove\_project (frpj) command:

```
! frpj home_computer ProjB
Project ProjB removed from home_computer meeting.
r 08:14 0.421 86
```

### Maintaining Meeting Access

If a meeting was created with the MR11 (or later) version of forum, you can use the standard access control list (ACL) commands (list\_acl, set\_acl, and delete\_acl). You can use these commands to add participants or projects to the list of users who are eligible to attend your meeting. You can also use these commands to deny members rights to a meeting or to limit participants to read only status. Additionally, you can use these commands to remove a project from the eligible list.

If you are not in the directory containing the meeting, you must include the full pathname of the meeting including the ".forum" suffix. If you are in the meeting directory containing the meeting, you only need to include the name of the meeting and the ".forum" suffix.

To add a participant to the list of users who are eligible to attend your meeting, you can use the set\_acl command. This command is equivalent to the forum\_add\_participant command and adds users to the list one at a time. If you are in the directory containing the accounting meeting and you want to allow the user McElvenny to attend the accounting meeting, type:

```
! set_acl accounting.forum rw McElvenny
r 0.8:42 0.246 66
```

To allow the public read transactions in a meeting but not enter them, you can use the `set_acl` command with `r.*` status. This command line is equivalent to the `forum_make public` command used with the `-read_only` control argument. If you are in the directory containing the accounting meeting and want to allow the public to read transactions in the accounting meeting, but not enter them, type:

```
! set_acl accounting .forum r.*
```

To remove a `Project_id` from the eligible list, you can use the `set_acl` command with `null` status. This command line is equivalent to the `forum_remove_project (frpj)` command. If you are in the directory containing the budget meeting and want to remove the Marketing project from the budget meeting, type:

```
! set_acl budget.forum null *.Marketing
```

```
r 0:42 0246 66
```

## Deleting Transactions

Occasionally you will need to delete transactions. As chairman, you have the power to remove offensive or irrelevant transactions. Two levels of deletion (logical removal and physical removal) allow you to remove transactions in degrees of permanency. First, the Forum "delete" (`dl`) request logically removes specified transactions from a meeting. You can delete a range of transactions, if necessary. In the example below, the chairman deletes the transaction while attending the meeting:

```
forum: ! dl 7
```

```
forum:
```

After Forum deletes the transaction, it puts you back into the request loop. Thereafter, when any attendee attempts to specify the deleted transaction, Forum answers that the transaction has been deleted.

```
forum: ! ls 7
```

```
forum (list): The specified transaction has been deleted. Transaction 7.
```

```
forum (list): No transactions were selected.
```

```
forum:
```

The first Forum message in the above example explains that transaction 7 has been deleted and will therefore not be found by the "list" request. Since no transactions other than transaction 7 were specified in the request line, the "list" request has not selected any transactions and therefore printed the second message. If the request had specified two transactions (e.g., "ls 7:8"), Forum would have listed only transaction 8.

Remember that position 7 in the proceedings is permanently filled, even though the transaction has been deleted. The next transaction entered is numbered 8, and transaction 7, although it no longer appears in the proceedings, is saved elsewhere and can be retrieved at any time with the "retrieve" request (see below).

```

forum: ! ls 1:8
Trans# Lines Date Time Author Subject
[0001] (5) 05/18/81 03:20 Brooks.ProjA Reason for this meeting
[0002] (3) 05/20/81 03:46 Davis.YAK Fortran for a Begi<More>
[0003] (3) 05/21/81 06:49 Smith.ProjB Other Meetings
[0004] .
[0005] .
[0006] .
[0008] .

```

forum:

Notice that there is no transaction [0007] listed. As chairman, you usually enter another transaction yourself to explain the disappearance of other transactions, explaining why the deletion was necessary.

Second, to physically (and finally) remove deleted transactions from the meeting, use the "expunge" request:

```

forum: ! expunge -transactions
forum (expunge: Expunging the meeting will destroy all records
of deleted transactions. Do you really want to expunge the
home_computer meeting? ! yes
6 transactions expunged.

```

forum:

Note again that only deleted transactions can be expunged.

### Retrieving Participants and Transactions

The "retrieve\_participant" (rtpt) request retrieves a user's record of participation after you have deleted that record with the "delete\_participant" request. The user's record of participation is restored to the list of the meeting's participants.

```
forum: ! rtpt Black
```

forum:

The "retrieve" (rt) request retrieves transactions that you have previously removed from the proceedings. You can retrieve a range of transactions, if necessary, but regular expressions and Person\_ids can not be used as transaction specifiers with this request. To print a list of the deleted transactions in the current meeting, type "list -only\_deleted". To retrieve transaction [0007], type:

```
forum: ! rt 7
```

forum:

Now when you list the proceedings of the meeting, transaction [0007] appears in its original slot in the list and has been restored in its entirety to the meeting.

## Setting a Message

The "set\_message" request allows you to enter a message that is printed each time a user enters the meeting or enters a transaction from elsewhere within Forum. You can also use this request to change the message that you have previously set. Some messages set by chairmen are greetings ("Welcome to the Television meeting") while other messages describe restrictions or warnings ("This is a developmental meeting open to Honeywell employees only"). The message has a maximum allowable size of 256 characters.

Enter the meeting that you want to set a message in. If you have already entered the message into a segment, use the "--input\_file pathname" control argument with "set\_message" to set the message that is contained in that segment. Otherwise, type only "set\_message", and Forum prompts you for the message, which you must end in one of the ways described for exiting from terminal input mode.

If you have written your message into a segment named "greeting" you would set the message this way (assume that you are already attending the Television meeting):

```
forum: ! set_message -if greeting
Use the "enter" request to enter the message.
```

```
forum: ! enter
```

```
forum:
```

The message has been set.

Suppose you want to build the message from within Forum:

```
forum: ! set_message
Message:
! Welcome to the Television meeting.
! This meeting is for discussing and rating
! television shows shown at prime-time.
! Please try to be as brief as possible.
! .
```

```
forum:
```

Again, the message has been set.

## Printing Eligibility Messages

The eligibility message for a meeting, as shown in Section 2, greets the user upon entrance to the meeting. Site administrators decide whether or not these messages are globally printed for all meetings on the system. If site administration turns them on globally, you (the chairman) can then either go along with the system-wide printing of these messages or turn printing off for the meeting that you chair.

The "switch\_on" (swn) and "switch\_off" (swf) requests accept the switchname "meeting\_eligibility\_messages" (mtg\_emsg). To turn off printing of the message (only if your site administration has turned printing on), type:

```
forum: ! swf mtg_emsg
```

To turn printing back on, type:

```
forum: ! swn mtg_emsg
```

## | NAMING A NEW CHAIRMAN

The chairman-of-record is the person who originally created the meeting. If you are the current chairman, you can use the "chairman" (cm) request with the -set control argument to change the chairman of the current meeting. Only the current chairman is allowed to pass on the chairmanship of the meeting to someone else. The new chairman must be specified by his/her Person\_id.Project\_id. To change the chairman of the Accounting meeting (the current meeting) type:

```
| forum: ! cm -set BMcElvenny.ProjA
```

```
| forum (chairman): Do you really want to change the chairman of the  
| Accounting meeting to BMcElvenny.ProjA ! yes
```

```
| forum:
```

## | ADDING A CHAIRMAN

Meetings created with the MR11 (or later) version of forum can have more than one chairman. The chairman-of-record is the person who originally created the meeting and the one whose name is returned by the chairman request.

To add an additional chairman to a meeting, use the forum\_add\_participnt (fapt) command with the -chairman control argument. This allows the added participant to have chairman access to the meeting. To add the participant McElvenny and give him chairman access to the Accounting meeting, type:

```
| forum: ! fapt Accounting McElvenny -chairman  
| McElvenny added to the Accounting meeting with chairman access
```

```
| r 08:42 0.247 66
```

You can also use the `set_acl` command to add an additional chairman to a meeting:

```
forum: ! set_acl Accounting.forum rwc McElvenny
```

Additionally, you can use the `fapt` or the `set_acl` command to give a whole project chairman access.

## DELETING A MEETING

If the reason for your meeting was a question that has been resolved, or was to discuss and prepare for an event that is now over, or in any event is no longer valid, you will want to delete your meeting. Of course you will want to give reasonable notification to the participants of the meeting, perhaps through a transaction or by setting a message. The `forum_delete` (`fdl`) command deletes a meeting:

```
! fdl home_computers  
r 08:23 0.307 2
```

## PRE-MR11 FORUM MEETINGS AND CURRENT VERSION FORUM MEETINGS

A forum meeting created with pre-MR11 software consists of two storage system segments which contain records of the participants in the meeting and what has been said. These meetings contain the suffixes `".control"` or `".proceedings"`. A current version forum meeting (MR11 or later) is created as a single segment with the suffix `".forum"`. The current version forum software supports both pre-MR11 forum meetings and current version forum meetings.

The meetings created with current version forum software are treated as entries within the Multics storage system. Since current version forum meetings are treated as such, you can use the standard file system commands such as `copy`, `delete`, `list_acl`, and `set_acl`. This support also alleviates limitations on the number of meeting attendees and transactions. Current version meetings have no easily relizable limit on the amount of information which they can contain.

The current version forum also incorporates a new search strategy for locating forum meetings by looking in the forum list to find the meetings. Additionally, the current version forum meetings provide a "seen" flag for each transaction (in contrast with a pre-MR11 meeting which only sets a single flag for the most recent transaction seen).

## CONVERTING A MEETING

Although the current version (MR11 or later) of forum supports meetings created with pre-MR11 software, there are several advantages to current version meetings (as described previously).

Each site has been supplied with tools which will convert all pre-MR11 meetings to current version meetings. If your site decides not to use these tools, each individual chairman can convert the pre-MR11 meetings to current version meetings. The `convert_forum` command (described in Section 10) converts a pre-MR11 meeting into a current version forum meeting. Only the chairman of the meeting can use this command.

To ensure a smooth transition for meeting users, the chairman should perform the following actions before using the `convert_forum` command:

1. Enter a transaction for meeting users explaining that the meeting will be converted to a current version meeting and all participants should use the "add\_meeting\_update" request (described in Section 7) to update their forum search list.
2. To prevent participants from entering any more transactions in the old meeting, you should use the `add_participant`, `add_project` or `make_public` request with the `read_only` control argument.
3. Once you have created the current version meeting with the `convert_forum` command, you should delete the old meeting using the `forum_delete` command described in Section 8. To avoid deleting the current version meeting you must use the suffix ".control" after the meeting name.

## SECTION 10

# CHAIRMAN COMMANDS

The commands in this section are intended to be used only by the chairman, or maintainer, of the meeting. (For a step-by-step breakdown of the duties of a chairman, see Section 9.)

The descriptions of the Forum administrative commands are presented here in alphabetical order. Each description contains the name of the command (including the abbreviated form, if any), discusses the purpose of the command, and shows the correct usage. Notes and examples are included when deemed necessary for clarity.

---

forum\_add\_participant

---

---

forum\_add\_participant

---

**Name:** forum\_add\_participant, fapt

*SYNTAX AS A COMMAND*

fapt meeting\_name Person\_id {-control\_args}

*FUNCTION*

makes the person identified by Person\_id eligible to attend the meeting\_name meeting. You can use this request if you have either modify permission on the containing directory or chairman access to the meeting.

*ARGUMENTS*

meeting\_name

is the pathname or entryname of the meeting to be adjusted. Pathnames contain greater-than (>) or less-than (<) characters. If a pathname is specified, it identifies the meeting to be adjusted. Otherwise, fapt searches for the meeting\_name by using the forum search list.

Person\_id

is the Person\_id of the participant to be added.

*CONTROL ARGUMENTS*

-chairman, -cm

gives chairman access to the added participant. This control argument is not valid for meetings created with pre-MR11 software.

-read\_only, -ro

allows the added participant to read transactions but not enter them.

*NOTES*

The -read\_only and -chairman control arguments cannot both be specified.

To change the access of a participant to read only, use the fapt command with the -read\_only control argument to add the participant again. This will change the original access of the participant to read only.

The meeting chairman can use the convert\_forum command (described in "Chairman Commands" in this manual) to convert meetings created with pre-MR11 software to current version meetings. The old version meeting is left untouched and should be deleted using the forum\_delete command (described in "User Commands" in this manual). To avoid deleting the current version meeting, you must include the ".control" suffix at the end of the meeting\_name.

---

forum\_add\_project

---

---

forum\_add\_project

---

**Name:** forum\_add\_project, fapj

*SYNTAX AS A COMMAND*

fapj meeting\_name Project\_id {-control\_args}

*FUNCTION*

makes users from the project identified by Project\_id eligible to attend the meeting\_name meeting.

*ARGUMENTS*

meeting\_name

is the pathname or entryname of the meeting to be adjusted. Pathnames contain greater-than (>) or less-than (<) characters. If a pathname is specified, it identifies the meeting to be adjusted. Otherwise, fapj searches for the meeting\_name by using the forum search list.

Project\_id

is the Project\_id for the project to be admitted to the meeting.

*CONTROL ARGUMENTS*

-chairman, -cm

gives chairman access to the added participant. This control argument is not valid for meetings created with pre-MR11 software.

-read\_only, -ro

allows users on the added project to read transactions but not enter them.

*ACCESS REQUIRED*

You can use this request if you have either modify permission on the containing directory or chairman access to the meeting.

*NOTES*

The -read\_only and -chairman control arguments cannot both be specified.

To change the access of a project to read only, use the fapj command with the -read\_only control argument to add the project again. This changes the original access to allow users on the project to read transactions but not enter them.

---

forum\_create

---

---

forum\_create

---

**Name:** forum\_create, fcr

*SYNTAX AS A COMMAND*

fcr

*FUNCTION*

creates a new meeting with the user as chairman. It engages the user in a dialogue, prompting for all information necessary for the creation of a new meeting including long and short meeting names, participant information, and the first transaction in the meeting.

\*

*NOTES*

| See "Duties of the Chairman" in this manual for a detailed discussion, including a complete example showing the creation of a meeting with this command.

---

forum\_make\_public

---

---

forum\_make\_public

---

**Name:** forum\_make\_public, fmp

*SYNTAX AS A COMMAND*

fmp meeting\_name {control\_args}

*FUNCTION*

opens the meeting\_name meeting to public participation.

*ARGUMENTS*

meeting\_name

is the pathname or entryname of the meeting to be made public. Pathnames contain greater-than (>) or less-than (<) characters. If a pathname is specified, it identifies the meeting to be made public. Otherwise, fmp searches for the meeting\_name by using the forum search list.

*CONTROL ARGUMENTS*

-chairman, -cm

gives chairman access to the added participant. This control argument is not valid for meetings created with pre-MR11 software.

-read\_only, -ro

allows the public to read transactions but not enter them.

*ACCESS REQUIRED*

You can use this request if you have either modify permission on the containing directory or chairman access to the meeting.

*NOTES*

The -read\_only and -chairman control arguments cannot both be specified.

---

forum\_remove\_participant

---

---

forum\_remove\_participant

---

**Name:** forum\_remove\_participant, frpt

*SYNTAX AS A COMMAND*

frpt meeting\_name Person\_id

*FUNCTION*

makes the person identified by Person\_id ineligible to attend the meeting\_name meeting.

*ARGUMENTS*

meeting\_name

is the pathname or entryname of the meeting to be adjusted. Pathnames contain greater-than (>) or less-than (<) characters. If a pathname is specified, it identifies the meeting to be adjusted. Otherwise, frpt searches for the meeting\_name by using the forum search list.

Person\_id

is the Person\_id of the user to be removed from participation in the meeting.

*ACCESS REQUIRED*

You can use this request if you have either modify permission on the containing directory or chairman access to the meeting.

*NOTES*

The -read\_only and -chairman control arguments cannot both be specified.

---

forum\_remove\_project

---

---

forum\_remove\_project

---

**Name:** forum\_remove\_project, frpj

*SYNTAX AS A COMMAND*

frpj meeting\_name Project\_id

*FUNCTION*

denies eligibility to all participants who are currently eligible to attend by virtue of their project participation alone (not by virtue of their Person\_id) from the meeting\_name meeting.

*ARGUMENTS*

meeting\_name

is the pathname or entryname of the meeting to be adjusted. Pathnames contain greater-than (>) or less-than (<) characters. If a pathname is specified, it identifies the meeting to be adjusted. Otherwise, frpj searches for the meeting\_name by using the forum search list.

Project\_id

is the Project\_id of the project whose members are to be denied participation rights if they lack explicit Person\_id participation rights.

*ACCESS REQUIRED*

You can use this request if you have either modify permission on the containing directory or chairman access to the meeting.

---

forum\_unmake\_public

---

---

forum\_unmake\_public

---

**Name:** forum\_unmake\_public, fump

*SYNTAX AS A COMMAND*

fump meeting\_name

*FUNCTION*

removes all participants from the meeting\_name meeting who are participating by virtue of the public attribute. All users who are not participating because of Project\_id or Person\_id rights are removed.

*ARGUMENTS*

meeting\_name

is the pathname or entryname of the meeting to be adjusted. Pathnames contain greater-than (>) or less-than (<) characters. If a pathname is specified, it identifies the meeting to be adjusted. Otherwise, fump searches for the meeting\_name by using the forum search list.

*ACCESS REQUIRED*

You can use this request if you have either modify permission on the containing directory or chairman access to the meeting.

---

convert\_forum

---

---

convert\_forum

---

**Name:** convert\_forum

*SYNTAX AS A COMMAND*

convert\_forum meeting\_name

*FUNCTION*

converts a pre-MR11 forum meeting to a current version forum meeting. The current version meeting is created in the same directory as the original meeting. All addnames and the access control list are copied. The convert\_forum command does not delete the pre-MR11 meeting.

*ARGUMENTS*

-meeting\_name

is the pathname or entryname of the meeting to be converted. Pathnames contain greater-than (>), or less-than (<) characters. If a pathname is specified, it identifies the meeting to be converted. Otherwise, the convert\_forum searches for the meeting\_name by using the forum search list.

*ACCESS REQUIRED*

Only the chairman of the meeting can use this command.

# APPENDIX A

## ADMINISTRATIVE INFORMATION

System administrators can change the attributes of any meeting by the use of the `forum_admin` command. The `forum_admin` command provides the necessary administrative backup in the event a chairman is no longer able to function in that capacity, as well as the ability to determine system-wide policies regarding optional Forum features.

In order to use Forum at a site, you must do a few things other than install the software and associated info segments. The central meeting directory and notifications database must be created, and there are several "customizing" features regarding access control that a site may want to change.

### INSTALLATION INSTRUCTIONS

#### The Central Forum Directory

This directory is the repository for public site-approved meetings. It is known to the forum software and is in the default "forum" search path. The pathname of the directory is `>site>forum_dir`. This directory should be created and given an ACL term of "s \*.\*" along with the "sma" ACL terms given to administrators entrusted with creating meetings there.

If for some reason, a site wishes to use some other directory as the central directory, the following steps should be taken:

1. Change the assignment of `forum_external_data.central_directory` in the segment `forum_data_cds` to the desired path and recompile it.
2. Initiate the new copy of `forum_data_` and recompile the segment `forum_search_list_default_cds` in `bound_forum_.s.archive`
3. Update `forum_search_list_default_` in `bound_forum_.archive` and rebind `bound_forum_`.
4. Install the new source/object/executable versions of `bound_forum_` and `forum_data_`.

## The Site Meeting Directory

This directory is a public meeting where users can place announcements about meetings of general interest. It is located in the central forum directory and the pathname is >site>forum\_dir>Meetings\_Directory (this is the default and other pathnames are possible). The forum\_create command and announce\_meeting request both place meeting announcements in this meeting by default.

Forum looks for a pre-MR11 version meeting named Meetings\_Directory.control. If your site has a public meeting of this type, but the meeting has a different name, you must update the forum\_data\_cds segment by changing the assignment of the variable forum\_external\_data.meetings\_directory. You can then recompile and install the new forum\_data\_ with the correct suffix (.control for a pre-MR11 version meeting and .forum for a current version meeting). You must also follow the above steps if you convert your public meeting from a pre-MR11 version meeting to a current version meeting or if you are a new site creating the meeting for the first time.

## The Notifications Database

The Forum subsystem maintains a database of users who are currently accepting notifications of new transactions (see Section 4 for an explanation of notifications). This segment resides in the central forum directory and must be created before notifications can be used. An administrator who has access to the forum\_admin\_ gate should create this segment with the command:

```
! forum_admin init_notifications
```

(See the "Gate Access" below for information on the forum\_admin\_ gate.)

## Gate Access

The Forum subsystem has two gates: forum\_ and forum\_admin\_. The forum\_ gate is essential to use the subsystem and should have its access set to "re \*.\*.\*".

The forum\_admin\_ gate is used to perform administrative functions for Forum and to perform chairman functions on meetings (such as changing access and changing the chairman) by users other than the chairman of those meetings. This is a highly-privileged gate. The default access to this gate is "re \*.SysMaint.\* null \*.\*.\*".

## Eligibility Messages

In order to keep participants informed of the audience of a particular meeting, Forum provides an optional facility that tells participants how many projects and users may read a meeting, and warns the participant each time the access to the meeting changes. The chairman of the meeting normally invokes this facility, but it can be manipulated by users with access to the forum\_admin\_ gate as follows. The command:

```
! forum_admin switch_on print_eligibility_messages
```

will cause Forum to print eligibility messages for every meeting on the system unless specifically exempted by the following two switches.

The command:

```
! forum_admin switch_on chairman_set_eligibility_msgs
```

allows the chairman to turn eligibility messages off even if the print\_eligibility\_messages switch is on, and the command:

```
! forum_admin switch_(on off) meeting_eligibility_messages PATH
```

will turn eligibility messages for the meeting identified by PATH on or off regardless of the setting of the system-wide switches.

## AIM

Forum is a single-class AIM facility. Meetings are single-class storage system objects. All participants must be logged in at the same authorization, which must be the access class of the meeting. Different meetings, however, may be at different access classes. The access class of a meeting is the authorization of the chairman at the time the meeting was created.

---

forum\_admin

---

---

forum\_admin

---

**Name:** forum\_admin

*SYNTAX AS A COMMAND*

forum\_admin key {arguments}

*FUNCTION*

allows system administrators to change attributes of meetings that they do not chair. This command is also used to perform certain administrative functions such as initializing the forum notifications database.

*ARGUMENTS*

key

is any key described below in "List of Keys."

arguments

are the arguments for individual keys described below.

*LIST OF KEYS*

\*

change\_chairman path new\_chairman

displays the User\_id of the current chairman of the meeting whose pathname is "path" and then shifts the chairmanship to new\_chairman. new\_chairman must be of the form Person\_id.Project\_id.

convert path

converts the meeting whose pathname is "path" from a pre-MR11 version meeting to a current version meeting.

delete path

deletes the meeting whose pathname is "path".

init\_notifications

creates an empty notifications database segment in the central forum directory.

\*

switch\_off switchname, swf switchname

turns the specified switch off. See "List of Switches" below.

switch\_on switchname, swn switchname

turns the specified switch on. See "List of Switches" below.

---

forum\_admin

---

---

forum\_admin

---

### *LIST OF SWITCHES*

adjourned path, adj path

temporarily adjourns the meeting specified by path. When this switch is on, no users may enter the meeting.

chairman\_set\_eligibility\_msg, cm\_set\_emsg

allows the chairman to override the print\_eligibility\_messages switch.

meeting\_eligibility\_messages path, mtg\_emsg path

turns on eligibility messages for the meeting named by "path".

print\_eligibility\_messages, pemsg

turns on eligibility messages for all meetings on the system.

### *ACCESS REQUIRED*

This command requires access to the forum\_admin\_gate. In addition, the convert, delete, and access-changing keys require at least "m" access to the directory containing the meeting, as does setting a switch on a meeting if access must be forced. Setting global switches requires "rw" access to forum\_data\_, and the init\_notifications key requires "sma" access to the central forum directory.

**APPENDIX B**  
**SUBROUTINE DESCRIPTIONS**

forum\_

forum\_

**Name:** forum\_

The forum\_ subroutine provides a subroutine interface to the Forum interactive meeting system.

**Entry:** forum\_\$accept\_notifications

This entry turns on reception of forum notifications by the calling process.

*USAGE*

```
declare forum_$accept_notifications entry (fixed bin(35));
call forum_$accept_notifications (status);
```

*ARGUMENTS*

**status**

is a standard status code. (Output) It can have the following value:

forum\_error\_table\_\$no\_notify\_seg

The notifications database could not be initiated.

**Entry:** forum\_\$change\_chairman

This entry is used to change the chairman of a Forum meeting.

*USAGE*

```
declare forum_$change_chairman entry (char(*), char(*), char(*), fixed
    bin(35));
call forum_$change_chairman (dirname, entryname, chairman, status);
```

*ARGUMENTS*

**dirname**

is the pathname of the directory containing the meeting. (Input)

**entryname**

is the name of the meeting. The ".forum" suffix is required. (Input)

**chairman**

is the name of the new chairman of the meeting, in the form Person.Project. The new chairman must already be a participant. (Input)

forum\_

forum\_

status

is a standard status code. (Output) It can have one of the following values:

forum\_error\_table\_\$chairman\_only

The caller is not the current chairman.

forum\_error\_table\_\$no\_such\_user

The supplied new chairman is not a participant.

**Entry: forum\_\$change\_chairman\_idx**

This entry changes the chairman of a Forum meeting. It is the same as the change\_chairman entry point except that a forum\_idx is used to identify the meeting instead of a pathname.

*USAGE*

```
declare forum_$change_chairman_idx entry (fixed bin, char (*),
      fixed bin(35));
```

```
call forum_$change_chairman_idx (forum_idx, chairman, status);
```

*ARGUMENTS*

forum\_idx

identifies a meeting opened by forum\_\$open\_forum. (Input)

chairman

is the name of the new chairman of the meeting, in the form Person.Project. The new chairman must already be a participant. (Input)

status

is a standard status code. (Output) It can have one of the following values:

forum\_error\_table\_\$chairman\_only

The caller is not the current chairman.

forum\_error\_table\_\$no\_such\_user

The supplied new chairman is not a participant.

forum\_

forum\_

**Entry: forum\_\$chname\_forum**

This entry is used to change the names of Forum meetings.

*USAGE*

```
declare forum_$chname_forum entry (char(*), char(*), char(*), char(*), fixed
    bin(35));
```

```
call forum_$chname_forum (dirname, entryname, old_name, new_name, status);
```

*ARGUMENTS*

**dirname**

is the pathname of the directory containing the meeting. (Input)

**entryname**

is the name of the meeting. The ".forum" suffix is required. (Input)

forum\_

forum\_

old\_name

is a name to be removed from the meeting, or blank if no name is to be removed. If non-blank, ".forum" suffix is required. (Input)

new\_name

is a name to be added to the meeting, or blank if no name is to be added. If non-blank, the ".forum" suffix is required. (Input)

status

is a standard status code. (Output)

**Entry: forum\_\$chname\_forum\_idx**

This entry is used to change the names of Forum meetings. It is the same as the chname\_forum entry point except that a forum\_idx is used to identify the meeting instead of a pathname.

*USAGE*

```
declare forum_$chname_forum_idx entry (fixed bin, char(*), char(*), fixed
    bin(35));
```

```
call forum_$chname_forum_idx (forum_idx, old_name, new_name, status);
```

*ARGUMENTS*

forum\_idx

identifies a meeting opened by forum\_\$open\_forum. (Input)

old\_name

is a name to be removed from the meeting, or blank if no name is to be removed. If non-blank, the ".forum" suffix is required. (Input)

new\_name

is a name to be added to the meeting, or blank if no name is to be added. If non-blank, the ".forum" suffix is required. (Input)

status

is a standard status code. (Output)

forum\_

forum\_

**Entry: forum\_\$create\_forum**

Creates a Forum meeting with the user as chairman.

*USAGE*

```
declare forum_$create_forum entry (char(*), char(*), fixed bin(35));
call forum_$create_forum (dirname, entryname, status);
```

*ARGUMENTS*

dirname

is the pathname of the directory containing the meeting. (Input)

entryname

is the name of the meeting. The ".forum" suffix is required. (Input)

status

is a standard status code.

*ACCESS REQUIRED*

The caller must have modify permission on the containing directory.

**Entry: forum\_\$set\_v1\_forum\_acl**

This entry is valid only for meetings created with pre-MR11 software. This entry is used to add or change an ACL term. ACL terms can only be specified for Person\_id.\* or \*.Project\_id, terms of the form Person\_id.Project\_id are not allowed.

*USAGE*

```
declare forum_$set_v1_forum_acl entry (fixed bin, char(*), bit(1) aligned,
    bit(1) aligned, bit(1) aligned, fixed bin(35));
call forum_$set_v1_forum_acl (forum_idx, access_name, user_sw, set_sw,
    write_sw, status);
```

*ARGUMENTS*

forum\_idx

identifies a meeting opened by forum\_\$open\_forum. (Input)

access\_name

The Person\_id or Project\_id whose ACL is to be added or deleted. Access\_name can not contain a ".". (Input)

forum\_

forum\_

user\_sw

This switch should be on if access\_name is a Person\_id, and off if it is a Project\_id. (Input)

set\_sw

This switch should on if access is to be added, and off if it is to be deleted. (Input)

write\_sw

This switch should on if write access is to be added, and off if only read access is to be added. This switch is ignored if set\_sw is off. (Input)

status

is a standard status code. (Output)

#### *ACCESS REQUIRED*

The caller must have modify permission on the containing directory.

**Entry:** forum\_\$(v1)\_expunge

This entry is used to physically remove deleted participant records and deleted transactions from a Forum meeting. This results in reclaimed storage space.

#### *USAGE*

```
declare forum_$(v1)_expunge entry (fixed bin, bit (36) aligned, fixed bin, fixed bin, fixed bin, fixed bin, fixed bin(35));
```

```
call forum_$(v1)_expunge (forum_idx, switches, users_deleted, trans_deleted, users_damaged, trans_damaged, status);
```

#### *ARGUMENTS*

forum\_idx

identifies a meeting opened by forum\_\$(open\_forum). (Input)

switches

is a word of switches as follows: (Input)

transactions

if set, deleted transactions should be expunged.

users

if set, deleted participant records should be expunged.

users\_deleted

is the number of participant records which were expunged. (Output)

forum\_

forum\_

trans\_deleted

is the number of transactions which were expunged. (Output)

users\_damaged

is the number of participant records which were expunged because they were inconsistent. (Output)

trans\_damaged

is the number of transactions which were expunged because they were inconsistent. (Output)

status

is a standard status code. (Output)

Entry: forum\_\$check\_user

This entry is used to determine if a user is a participant in a Forum meeting.

*USAGE*

```
declare forum_$check_user entry (fixed bin, char(*), fixed bin, fixed
    bin(35));
```

```
call forum_$check_user (forum_idx, user_name, last_entered, status);
```

*ARGUMENTS*

forum\_idx

identifies a meeting opened by forum\_\$open\_forum. (Input)

user\_name

The Person\_id of the user to be checked. (Input)

last\_entered

is the index of the most recent transaction entered by this user, or 0 if this user has never entered a transaction. (Output)

status

is a standard status code. (Output)

forum\_

forum\_

**Entry: forum\_\$close\_forum**

This entry closes a meeting opened by forum\_\$open\_forum.

*USAGE*

```
declare forum_$close_forum entry (fixed bin, fixed bin(35));
```

```
call forum_$close_forum (forum_idx, status);
```

*ARGUMENTS*

forum\_idx

identifies a meeting opened by forum\_\$open\_forum. This argument will be set to zero if the meeting is successfully closed. (Input/Output)

status

is a standard status code. It can have the following value:

forum\_error\_table\_\$invalid\_forum\_idx

forum\_idx does not identify an open meeting.

**Entry: forum\_\$convert**

This entry converts a meeting created with pre-MR11 software into a current version meeting.

*USAGE*

```
declare forum_$convert entry (char (*), char (*), fixed bin (35));
```

```
call forum_$convert (dirname, entryname, status);
```

*ARGUMENTS*

dirname

is the name of the directory containing the meeting. (Input)

entryname

is the name of the meeting. (Input) The ".control" suffix is required.

status

is a standard status code.

*ACCESS REQUIRED*

The caller must have modify permission on the containing directory and chairman access to the meeting.

forum\_

forum\_

**Entry: forum\_\$convert\_attendee\_idx**

This entry is used to convert an attendee\_idx into a user name.

**USAGE**

```
declare forum_$convert_attendee_idx entry (fixed bin, fixed bin, char(*),
      fixed bin(35));

call forum_$convert_attendee_idx (forum_idx, attendee_idx, user_name, status);
```

**ARGUMENTS**

forum\_idx

identifies a meeting opened by forum\_\$open\_forum. (Input)

attendee\_idx

is the index of a participant in a meeting, as placed in Forum interprocess messages. (Input)

user\_name

is the name of the user with the specified attendee\_idx, in the form Person\_id.Project\_id. (Output)

status

is a standard status code. (Output) It can have the following value:

forum\_error\_table\_\$invalid\_attendee\_idx

The supplied attendee index does not correspond to a valid participant record in this meeting.

**Entry: forum\_\$delete\_forum**

Deletes a Forum meeting.

**USAGE**

```
declare forum_$delete_forum entry (char(*), char(*), fixed bin(35));

call forum_$delete_forum (dirname, entryname, status);
```

**ARGUMENTS**

dirname

is the pathname of the directory containing the meeting. (Input)

entryname

is the name of the meeting. The ".forum" suffix is required. (Input)

forum\_

forum\_

status

is a standard status code. (Output)

#### *ACCESS REQUIRED*

The user must have modify permission on the containing directory.

#### **Entry: forum\_\$delete\_forum\_acl**

This entry deletes specified entries from an access control list (ACL). This entry cannot be used on meetings created with pre-MR11 software.

#### *USAGE*

```
declare forum_$delete_forum_acl entry (char(*), char(*), ptr, fixed bin, fixed bin(35));
```

```
call forum_$delete_forum_acl (dirname, entryname, acl_ptr, acl_count, code);
```

#### *ARGUMENTS*

dirname

is the pathname of the directory containing the meeting. (Input)

entryname

is the name of the meeting. The ".forum" suffix is required. (Input)

acl\_ptr

points to a user-filled delete\_acl structure (see "Notes" below). (Input)

acl\_count

is the number of ACL entries in the delete\_acl structure (see "Notes" below). (Input)

code

is a storage system status code. (Output)

The following is the delete\_acl structure:

```
dc1 1 delete_acl (acl_count) aligned based (acl_ptr),
      2 access_name      char(32),
      2 status_code      fixed bin(35);
```

#### *STRUCTURE ELEMENTS*

access\_name

is the access name (in the form of Person\_id.Project\_id.tag) that identifies the ACL entry to be deleted.

forum\_

forum\_

**status\_code**

is a storage system status code for this ACL entry only.

If code is returned as `error_table_$argerr`, then the erroneous ACL entries in the `delete_acl` structure have `status_code` set to an appropriate error code. No processing is performed.

If an access name cannot be matched to a name already on the ACL of the segment, then the `status_code` for that ACL entry in the `delete_acl` structure is set to `error_table_$user_not_found`. Processing continues to the end of the `delete_acl` structure and code is returned as 0.

**Entry: forum\_\$enter\_trans**

This entry is used to enter a transaction into a Forum meeting.

**USAGE**

```
declare forum_$enter_trans entry (fixed bin, char(*), fixed bin, char(*),  
    bit(1) aligned, fixed bin, fixed bin(35));
```

```
call forum_$enter_trans (forum_idx, text, previous_trans, subject, filled_sw,  
    trans_idx, status);
```

**ARGUMENTS**

**forum\_idx**

identifies a meeting opened by `forum_$open_forum`. (Input)

**text**

is the text of the transaction to be entered. (Input)

**previous\_trans**

is the index of the transaction that this transaction is in reply to, or 0 if it is the start of a new chain. (Input)

**subject**

is the subject of the transaction to be entered. (Input)

**filled\_sw**

is set if the transaction should not be filled on output. (Input)

**trans\_idx**

is the index of the transaction entered. (Output)

**status**

is a standard status code. (Output) It can have the following value:

**forum\_error\_table\_\$read\_only**

The caller does not have access to enter transactions in the meeting.

forum\_

forum\_

**Entry: forum\_\$expunge**

This entry is used to physically remove deleted participant records and deleted transactions from a Forum meeting. This results in reclaimed storage space.

*USAGE*

```
declare forum_$expunge entry (fixed bin, bit (36) aligned, fixed bin, fixed
    bin);
```

```
call forum_$expunge (forum_idx, switches, users_deleted, trans_deleted);
```

*ARGUMENTS*

**forum\_idx**  
identifies a meeting opened by forum\_\$open\_forum. (Input)

**switches**  
is a word of switches as follows: (Input)  
transactions if set, deleted transactions should be expunged.  
users if set, deleted participant records should be expunged.

**users\_deleted**  
is the number of participant records which were expunged. (Output)

**trans\_deleted**  
is the number of transactions which were expunged. (Output)

**status**  
is a standard status code. (Output)

**Entry: forum\_\$forum\_info**

This entry is used to obtain information about a Forum meeting.

*USAGE*

```
declare forum_$forum_info entry (char (*), char (*), char (*), fixed bin(71),
    ptr, fixed bin(35));
```

```
call forum_$forum_info (dirname, entryname, access_name, access_time,
    forum_info_ptr, status);
```

*ARGUMENTS*

**dirname**  
is the pathname of the directory containing the meeting. (Input)

**entryname**  
is the name of the meeting. The ".forum" suffix is required. (Input)

forum\_

forum\_

**access\_name**

is the Person\_id.Project\_id.tag for which access is to be calculated. If blank, the access\_name of the caller is used. The per-user information returned is for the Person\_id portion of access\_name. (Input)

**access\_time**

changed information is calculated from the specified date-time. Usually, "clock ()" should be passed. (Input)

**forum\_info\_ptr**

is a pointer to a copy of the forum\_info structure described below. (Input)

**status**

is a standard status code. (Output) It can have the following value:

**forum\_error\_table\_\$not\_eligible**

The user does not have access to obtain information about transaction counts and changes, but the chairman name is still valid in this case.

**NOTES**

The forum\_info structure is declared in the include file forum\_info.incl.pl1 and has the following structure:

```
dcl 1 forum_info                aligned based (forum_info_ptr),
  2 version                    fixed bin,
  2 forum_uid                  bit(36),
  2 chairman                   unaligned,
  3 username                   char(20),
  3 project                    char(9),
  3 pad                        char(3),
  2 attendee_count            fixed bin,
  2 removal_count             fixed bin,
  2 transaction_count         fixed bin,
  2 deletion_count            fixed bin,
  2 last_seen_trans_idx       fixed bin,
  2 last_time_changed         fixed bin(71),
  2 last_time_attended        fixed bin(71),
  2 changes_count             fixed bin,
  2 flags                      unaligned,
  3 eligible                   bit(1),
  3 mbz1                       bit(1),
  3 removed                    bit(1),
  3 notify                     bit(1),
  3 attending                  bit(1),
  3 mbz2                       bit(2),
  3 read_only                  bit(1),
  3 adjourned                  bit(1),
  3 mbz3                       bit(27);
```

forum\_

forum\_

### *STRUCTURE ELEMENTS*

**version**

is the version number of this structure. This must be set to the constant `forum_info_version_1`, which is declared in the include file.

**forum\_uid**

is the unique identifier of the meeting.

**username**

is the `Person_id` of the chairman of the meeting.

**project**

is the `Project_id` of the chairman of the meeting.

**pad**

is unused.

**attendee\_count**

is the total number of participants in the meeting.

**removal\_count**

is the number of participant records marked as deleted.

**transaction\_count**

is the total number of transactions entered before `access_time`.

**deletion\_count**

is the number of those transactions that have been deleted.

**last\_seen\_trans\_idx**

is the number of the most recently entered transaction that has been read by this user.

**last\_time\_changed**

is the time the most recent transaction was entered.

**last\_time\_attended**

is the time that the user last attended the meeting.

**changes\_count**

is the number of transactions entered since `access_time` that the user has not seen.

**eligible**

is set if the user is eligible to attend the meeting.

**mbz1**

is unused.

**removed**

is set if the user has turned off the participating switch.

forum\_

forum\_

notify

is set if the user has turned on the notify.

attending

is set if the user is currently attending the meeting.

mbz2

is unused.

read\_only

is set if the user may not enter transactions in the meeting.

adjourned

is set if the chairman has adjourned the meeting.

mbz3

is unused.

#### Entry: forum\_\$forum\_info\_idx

This entry is used to obtain information about a Forum meeting. It is the same as the forum\_info entry point except that a forum\_idx is used to identify the meeting instead of a pathname.

#### USAGE

```
declare forum_$forum_info_idx entry (fixed bin, char(*), fixed bin(71), ptr,  
    fixed bin(35));
```

```
call forum_$forum_info_idx (forum_idx, access_name, access_time,  
    forum_info_ptr, status);
```

#### ARGUMENTS

forum\_idx

identifies a meeting opened by forum\_\$open\_forum. (Input)

access\_name

is the Person\_id.Project\_id.tag for which access is to be calculated. If blank, the access\_name of the caller is used. The per-user information returned is for the Person\_id portion of access\_name. (Input)

access\_time

changed information is calculated from the specified date-time. Usually, "clock 0" should be passed. (Input)

forum\_info\_ptr

is a pointer to a copy of the forum\_info structure described under the forum\_\$forum\_info entry point. (Input)

forum\_

forum\_

status

is a standard status code. (Output) It can have the following value:

forum\_error\_table\_\$not\_eligible

The user does not have access to obtain information about transaction counts and changes, but the chairman name is still valid in this case.

**Entry: forum\_\$forum\_limits**

This entry is used to obtain various pieces of information about an open Forum meeting. This entry point is obsolete. The forum\_\$real\_forum\_limits entry point should be used instead.

*USAGE*

```
declare forum_$forum_limits entry (fixed bin, fixed bin, fixed bin, fixed bin,  
    fixed bin, bit(36) aligned, fixed bin(35));
```

```
call forum_$forum_limits (forum_idx, last_seen, first_trans, last_trans,  
    new_trans_count, flags, status);
```

*ARGUMENTS*

forum\_idx

identifies a meeting opened by forum\_\$open\_forum. (Input)

last\_seen

is the index of the most-recently entered transaction that the user has seen, as set by forum\_\$set\_last\_seen\_idx. (Output)

first\_trans

is the index of the oldest transaction in the meeting. (Output)

last\_trans

is the index of the most recent transaction in the meeting. (Output)

new\_trans\_count

is the number of transactions entered since last\_seen by users other than the caller. (Output)

flags

is a collection of switches as described below. (Output)

status

is a standard status code. (Output)

forum\_

forum\_

## NOTES

The flags argument is declared in forum\_flags.incl.pl1 and has the following structure:

```
dcl 1 forum_flags          aligned based (addr (forum_flags_word)),
    2 chairman             bit(1) unaligned,
    2 read_only            bit(1) unaligned,
    2 print_cm_message     bit(1) unaligned,
    2 print_acl_message    bit(1) unaligned,
    2 acl_has_changed      bit(1) unaligned,
    2 adjourned            bit(1) unaligned,
    2 mbz                  bit(30) unaligned;
```

## STRUCTURE ELEMENTS

### chairman

is set if the user is the chairman of the meeting.

### read\_only

is set if the user may not enter transactions in the meeting.

### print\_cm\_message

is set if the chairman message has changed since the last time the user saw it.

### print\_acl\_message

is set if the access eligibility message should be printed.

### acl\_has\_changed

is set if the access to the meeting has changed since the last time the user was informed that it had changed.

### adjourned

is set if the chairman has adjourned the meeting.

### mbz

is not used.

## Entry: forum\_\$get\_forum\_path

This entry is used to determine the actual name of the meeting instead of the name of the link used to access it.

## USAGE

```
declare forum_$get_forum_path entry (char (*), char (*), char (*), char (*),
    fixed bin(35));

call forum_$get_forum_path (dirname, entryname, forum_dirname,
    forum_entryname, status);
```

forum\_

forum\_

### ARGUMENTS

dirname

is the pathname of the directory containing the meeting. (Input)

entryname

is the name of the meeting. The ".forum" suffix is required. (Input)

forum\_dirname

is the pathname of the directory where the meeting actually resides. (Output)

forum\_entryname

is the primary name of the meeting. (Output)

status

is a standard status code. (Output)

Entry: forum\_\$get\_forum\_path\_idx

This entry is used to determine the actual name of the meeting instead of the name of the link used to access it. It is the same as the get\_forum\_path entry point except that a forum\_idx is used to identify the meeting instead of a pathname.

### USAGE

```
declare forum_$get_forum_path_idx entry (fixed bin, char(*), char(*),  
    fixed bin(35));
```

```
call forum_$get_forum_path_idx (forum_idx, forum_dirname, forum_entryname,  
    status);
```

### ARGUMENTS

forum\_idx

identifies a meeting opened by forum\_\$open\_forum. (Input)

forum\_dirname

is the pathname of the directory where the meeting actually resides. (Output)

forum\_entryname

is the primary name of the meeting. (Output)

status

is a standard status code. (Output)

forum\_

forum\_

**Entry: forum\_\$get\_message**

This entry is used to read out the greeting message set by the chairman using the forum\_\$set\_message entry.

*USAGE*

```
declare forum_$get_message entry (fixed bin, char (*), fixed bin(35));
call forum_$get_message (forum_idx, message, status);
```

*ARGUMENTS*

**forum\_idx**  
identifies a meeting opened by forum\_\$open\_forum. (Input)

**message**  
is the text of the message, this can contain at most 256 characters. (Output)

**status**  
is a standard status code. (Output) It can have the following value:

**forum\_error\_table\_\$no\_message**  
There is no chairman greeting message for this meeting.

**Entry: forum\_\$get\_switch**

This entry is used to return the value of several switches associated with a Forum meeting or its participants.

*USAGE*

```
declare forum_$get_switch entry (char (*), char (*), char (*), char (*), bit
(1) aligned, fixed bin (35));
call forum_$get_switch (dirname, entryname, person_id, switch_name,
switch_setting, status);
```

*ARGUMENTS*

**dirname**  
is the name of the directory containing the meeting. (Input)

**entryname**  
is the name of the meeting. The ".forum" suffix is required. (Input)

**person\_id**  
the user name of the user whose per-user switch value is desired. (Input) The project\_id should not be given. Starnames are not permitted. If this is blank, the current user is assumed.

forum\_

forum\_

**switch\_name**

is the name of the switch to retrieve. (Input) See "List of Switches" below.

**switch\_setting**

is the returned switch setting. (Output)

**status**

is a standard status code. It may have the following value:

forum\_error\_table\_\$(invalid\_switch\_name

the switch\_name is not one of the valid switches.

#### *LIST OF SWITCHES*

**adjourned, adj**

prevents users from entering the meeting.

**meeting\_eligibility\_messages, mtg\_emsg**

turns on printing of eligibility messages for this meeting.

**notify, nt**

turns on the notify switch for the meeting. This means that an interactive message will be sent each time a transaction is entered if the user is logged in and has issued the forum\_accept\_notifications command.

**participating, part**

turns on the participation switch for the meeting.

**safety**

changes the storage system safety switch for the meeting. The meeting cannot be deleted if this switch is on.

#### **Entry: forum\_\$(get\_transaction\_map**

This entry is used to retrieve a bit map representing the transactions that a given participant has seen. This entrypoint cannot be used with meetings created with pre-MR11 software.

#### *USAGE*

```
declare forum_$(get_transaction_map entry (char (*), char (*), char (*), bit
    (*), fixed bin (35));

call forum_$(get_transaction_map (dirname, entryname, person_id, seen_map,
    status);
```

forum\_

forum\_

### ARGUMENTS

dirname

is the name of the directory containing the meeting. (Input)

entryname

is the name of the meeting. (Input) The ".forum" suffix is required.

person\_id

The username of the user whose transaction seen map is desired. (Input) Starnames are not permitted. If this is blank, the current user is assumed.

seen\_map

is a bit map indicating which transactions the user has seen. If the n'th bit in this map is a "1", then the user has seen transaction "n". This variable must be large enough to hold one bit for each transaction in the meeting.

status

is a standard status code.

**Entry: forum\_\$get\_uid\_file**

This entry returns the file system unique identifier of a meeting.

### USAGE

```
declare forum_$get_uid_file entry (char (*), char (*), bit (36) aligned, fixed  
    bin (35));
```

```
call forum_$get_uid_file (dir_name, entryname, uid, code);
```

### ARGUMENTS

dirname

is the pathname of the directory containing the meeting. (Input)

entryname

is the name of the meeting. (Input) The meeting suffix is required.

uid

is the unique identifier of the meeting. (Output)

code

is a standard status code.

forum\_

forum\_

**Entry: forum\_\$list\_forum\_acl**

This entry is used either to list the entire access control list (ACL) meeting or to return the access modes of specified ACL entries. This entry cannot be used with meetings created with pre-MR11 software.

*USAGE*

```
declare forum_$list_forum_acl entry (char (*), char (*), ptr, ptr, ptr, fixed
    bin, fixed bin(35));
```

```
call forum_$list_forum_acl (dir_name, entryname, area_ptr, area_ret_ptr,
    acl_ptr, acl_count, code);
```

*ARGUMENTS*

**dirname**

is the pathname of the directory containing the meeting. (Input)

**entryname**

is the name of the meeting. (Input) The ".forum" suffix is required.

**area\_ptr**

points to an area in which the list of ACL entries, which make up the entire ACL of the segment, is allocated. (Input) If area\_ptr is null, then the user wants access modes for certain ACL entries; these will be specified by the structure pointed to by acl\_ptr.

**area\_ret\_ptr**

points to the start of the allocated list of ACL entries. (Output)

**acl\_ptr**

if area\_ptr is null, then acl\_ptr points to an ACL structure, segment\_acl, into which mode information is placed for the access names specified in that same structure. (Input) The segment\_acl structure is described in the forum\_\$set\_forum\_acl entry point.

**acl\_count**

is the number of entries in the ACL structure. (Input or Output) Input is the number of entries in the ACL structure identified by acl\_ptr.

Output is the number of entries in the segment\_acl structure allocated in the area pointed to by area\_ptr, if area\_ptr is not null.

**code**

is a storage system status code. (Output)

*NOTES*

If acl\_ptr is used to obtain modes for specified access names (rather than for all access names on a segment), then each ACL entry in the segment\_acl structure either has status\_code set to 0 and contains the segment's mode or has status\_code set to error\_table\_\$user\_not\_found and contains a mode of 0.

forum\_

forum\_

**Entry: forum\_\$list\_v1\_forum\_acl**

This entry is used to list the ACL of a Forum meeting.

*USAGE*

```
declare forum_$list_v1_forum_acl entry (char(*), char(*), ptr, ptr, fixed bin,
    fixed bin(35));
```

```
call forum_$list_v1_forum_acl (dirname, pathname, area_ptr, acl_ptr,
    acl_count, status);
```

*ARGUMENTS*

dirname

is the pathname of the directory containing the meeting. (Input)

entryname

is the name of the meeting. The ".forum" suffix is required. (Input)

area\_ptr

points to an area where the segment\_acl structure is to be allocated. (Input) It can not be null.

acl\_ptr

points to the allocated segment\_acl structure. This structure is described in the hcs\_\$add\_acl\_entries subroutine. (Output)

acl\_count

is the number of ACL entries in the segment\_acl structure. (Output)

status

is a standard status code. (Output)

**Entry: forum\_\$list\_users**

This entry is used to extract information about the participants in a Forum meeting.

*USAGE*

```
declare forum_$list_users entry (char(*), char(*), ptr, ptr, fixed bin(35));
```

```
call forum_$list_users (dirname, entryname, area_ptr, user_list_ptr, status);
```

*ARGUMENTS*

dirname

is the pathname of the directory containing the meeting. (Input)

forum\_

forum\_

**entryname**

is the name of the meeting. The ".forum" suffix is required. (Input)

**area\_ptr**

is a pointer to an area where the user\_list structure is to be allocated. (Input) It can not be null.

**user\_list\_ptr**

is a pointer to the user\_list structure described below. (Output)

**status**

is a standard status code. (Output)

**NOTES**

The user\_list structure is declared in the include file forum\_user\_list.incl.pl1 and has the following structure:

```
dcl 1 user_list          based (user_list_ptr) aligned,
  2 version             fixed bin,
  2 chairman            aligned,
    3 person_id         char(22) unaligned,
    3 project_id        char(9) unaligned,
  2 transaction_count   fixed bin,
  2 no_attendees        fixed bin,
  2 attendee            (user_list_no_attendees
    refer (user_list.no_attendees)),
    3 person_id         char(22) unaligned,
    3 project_id        char(11) unaligned,
    3 attending          bit(1) unaligned,
    3 mbz1              bit(2) unaligned,
    3 notify            bit(1) unaligned,
    3 removed           bit(1) unaligned,
    3 read_only         bit(1) unaligned,
    3 mbz2              bit(3) unaligned,
    3 last_time_attended fixed bin(71),
    3 highest_trans_seen fixed bin;
```

**STRUCTURE ELEMENTS**

**version**

is the version number of this structure. Currently, this is set to the constant user\_list\_version\_1 which is also declared in the include file.

**person\_id**

is the Person\_id of the chairman of the meeting.

**project\_id**

is the Project\_id of the chairman of the meeting.

forum\_

forum\_

transaction\_count

is the total number of transactions in the meeting.

no\_attendees

is the total number of non-deleted participants in the meeting.

person\_id

is the Person\_id of this participant.

project\_id

is the Project\_id of this participant.

attending

is set if this participant is currently attending the meeting.

mbz1

is not used.

notify

is set if this participant has requested notifications.

removed

is set if this participant has turned off the participating switch.

read\_only

is set if this user may not enter transactions in the meeting.

mbz2

is not used.

last\_time\_attended

is the time the participant last attended the meeting.

highest\_trans\_seen

is the index of the most-recently entered transaction that the user has read.

**Entry: forum\_\$list\_users\_idx**

This entry is used to extract information about the participants in a Forum meeting. It is the same as the list\_users entry point except that a forum\_idx is used to identify the meeting instead of a pathname.

*USAGE*

```
declare forum_$list_users_idx entry (fixed bin, ptr, ptr, fixed bin(35));
```

```
call forum_$list_users_idx (forum_idx, area_ptr, user_list_ptr, status);
```

forum\_

forum\_

### ARGUMENTS

forum\_idx

identifies a meeting opened by forum\_\$open\_forum. (Input)

area\_ptr

is a pointer to an area where the user\_list structure is to be allocated. (Input) It can not be null.

user\_list\_ptr

is a pointer to the user\_list structure described under the forum\_\$list\_users entry point. (Output).

status

is a standard status code. (Output)

### Entry: forum\_\$open\_forum

This entry opens a meeting and returns the forum\_idx used in many of the other calls to forum\_.

### USAGE

```
declare forum_$open_forum entry (char(*), char(*), fixed bin, fixed bin(35));
```

```
call forum_$open_forum (dirname, entryname, forum_idx, status);
```

### ARGUMENTS

dirname

is the pathname of the directory containing the meeting. (Input)

entryname

is the name of the meeting. The ".forum" suffix is required. (Input)

forum\_idx

is the index number used in subsequent calls to forum\_ that take a forum index. All coexistent openings of the same meeting in the same process will return the same number. (Output)

status

is a standard status code. If this is non-zero the meeting could not be opened. (Output) It can have one of the following values:

forum\_error\_table\_\$meeting\_adjourned

The chairman has adjourned the meeting. Only the chairman can attend.

forum\_error\_table\_\$no\_such\_forum

The dirname-entryname pair does not exist.

forum\_

forum\_

forum\_error\_table\_\$not\_a\_forum

The segment named by dirname and entryname is not a Forum meeting.

forum\_error\_table\_\$not\_eligible

The caller has insufficient access to participate in the meeting.

**Entry: forum\_\$read\_trans**

This entry is used to read a transaction from a Forum meeting.

*USAGE*

```
declare forum_$read_trans entry (fixed bin, fixed bin, ptr, ptr,  
    fixed bin(35));
```

```
call forum_$read_trans (forum_idx, trans_idx, area_ptr, forum_user_trans_ptr,  
    status);
```

*ARGUMENTS*

forum\_idx

identifies a meeting opened by forum\_\$open\_forum. (Input)

trans\_idx

is the index of the transaction to be read. (Input)

area\_ptr

is a pointer to an area where the forum\_user\_trans structure is to be allocated. (Input)

forum\_user\_trans\_ptr

is a pointer to the forum\_user\_trans structure described below. (Output)

status

is a standard status code. (Output) It can have the following values:

forum\_error\_table\_\$invalid\_trans\_idx

There is no transaction corresponding to the supplied index.

forum\_error\_table\_\$trans\_deleted

The deleted switch is set for this transaction and the caller is neither the chairman nor the author.

forum\_error\_table\_\$trans\_reaped

The transaction has been physically removed from the meeting.

forum\_

forum\_

### NOTES

The forum\_user\_trans structure is declared in forum\_user\_trans.incl.pl1 and has the following structure:

```
dcl 1 forum_user_trans      based (forum_user_trans_ptr) aligned,
  2 type                    fixed bin,
  2 person_id               char (22),
  2 project_id              char (9),
  2 time                    fixed bin(71),
  2 trans_no                fixed bin,
  2 next_trans_ptr          ptr,
  2 prev_trans_ptr          ptr,
  2 subject_length          fixed bin,
  2 text_length             fixed bin,
  2 unfilled                bit(1) aligned,
  2 subject                 unaligned char (0 refer
                             forum_user_trans.subject_length)
  2 text                    unaligned char (0 refer
                             forum_user_trans.text_length);
```

### STRUCTURE ELEMENTS

type

Currently, this field is unused.

person\_id

is the Person\_id of the author of this transaction.

project\_id

is the Project\_id of the author of this transaction.

time

is the clock reading of the time the transaction was entered.

trans\_no

is the index of this transaction.

next\_trans\_ptr

is intended to be used to thread transactions together. It is set to null.

prev\_trans\_ptr

is intended to be used to thread transactions together. It is set to null.

subject\_length

is the length, in characters, of the subject of the transaction.

text\_length

is the length, in characters, of the text of the transaction.

forum\_

forum\_

unfilled

is set if the transaction should not be filled on output.

subject

is the subject of the transaction.

text

is the text of the transaction.

\*

**Entry: forum\_\$refuse\_notifications**

This entry turns off reception of forum notifications by the calling process.

*USAGE*

```
declare forum_$refuse_notifications entry (fixed bin(35));
```

```
call forum_$refuse_notifications (status);
```

*ARGUMENTS*

status

is a standard status code. (Output) It can have the following value:

forum\_error\_table\_\$no\_notify\_seg

The notifications database could not be initiated.

**Entry: forum\_\$replace\_forum\_acl**

This entry replaces an entire access control list (ACL) for a meeting with a user-provided ACL, and can optionally add an entry for \*.SysDaemon.\* with mode rw to the new ACL. This entry cannot be used on meetings created with pre-MR11 software.

*USAGE*

```
declare forum_$replace_forum_acl entry (char(*), char(*), ptr, fixed bin,  
bit(1), fixed bin(35));
```

```
call forum_$replace_forum_acl (dirname, entryname, acl_ptr, acl_count,  
no_sysdaemon_sw, code);
```

*ARGUMENTS*

dirname

is the pathname of the directory containing the meeting. (Input)

forum\_

forum\_

entryname

is the entryname of the meeting. (Input) The ".forum" suffix is required.

acl\_ptr

points to the user supplied segment\_acl structure that is to replace the current ACL. (Input) The segment\_acl structure is described in the forum\_\$set\_forum\_acl entry point.

acl\_count

is the number of entries in the segment\_acl structure. (Input)

no\_sysdaemon\_sw

is a switch that indicates whether an rw \*.SysDaemon.\* entry is to be put on the ACL of the meeting after the existing ACL has been deleted and before the user-supplied segment\_acl entries are added.

(Input)

"0"b adds rw \*.SysDaemon.\* entry

"1"b replaces the existing ACL with only the user-supplied segment\_acl

code

is a storage system status code. (Output)

#### NOTES

If acl\_count is zero, then the existing ACL is deleted and only the action indicated (if any) by the no\_sysdaemon\_sw switch is performed. If acl\_count is greater than zero, processing of the segment\_acl entries is performed top to bottom, allowing later entries to overwrite previous ones if the access\_name in the segment\_acl structure is identical.

Entry: forum\_\$set\_delete\_sw

This entry is used to delete or retrieve a transaction.

#### USAGE

```
declare forum_$set_delete_sw entry (fixed bin, fixed bin, bit(1) aligned,  
    fixed bin(35));
```

```
call forum_$set_delete_sw (forum_idx, trans_idx, delete_sw, status);
```

#### ARGUMENTS

forum\_idx

identifies a meeting opened by forum\_\$open\_forum. (Input)

trans\_idx

is the index of the transaction whose delete switch is to be changed. (Input)

forum\_

forum\_

**delete\_sw**

should be on to delete the transaction, or off to retrieve it.

**status**

is a standard status code. (Output) It can have one of the following values:

**forum\_error\_table\_\$chairman\_only**

The caller is neither the author of the transaction nor the chairman of the meeting.

**forum\_error\_table\_\$invalid\_trans\_idx**

There is no transaction corresponding to the supplied index.

**Entry: forum\_\$set\_event\_channel**

This entry is used to set the event channel used to send wakeups when interesting forum events occur.

#### *USAGE*

```
declare forum_$set_event_channel entry (char (*), char (*), fixed bin(71),
    fixed bin(35));
```

```
call forum_$set_event_channel entry (dirname, entryname, event_channel,
    status);
```

#### *ARGUMENTS*

**dirname**

is the pathname of the directory containing the meeting. (Input)

**entryname**

is the name of the meeting. The ".forum" suffix is required. (Input)

**event\_channel**

is the event channel which should receive wakeups from other users attending the same meeting. (Input)

**status**

is a standard status code. (Output)

#### *NOTES*

Currently, the only wakeup sent by Forum occurs when a transaction is entered while you are attending the meeting. The message passed with this wakeup is:

```
dcl 1 forum_message,
    2 uid          bit(36) aligned,
    2 attendee_idx fixed bin;
```

forum\_

forum\_

### *STRUCTURE ELEMENTS*

#### **uid**

is the unique identifier of the meeting. It should be passed to forum\_\$validate\_uid to ensure that the user is still attending that meeting.

#### **attendee\_idx**

identifies the user who entered the transaction. A character string containing the name of that user can be obtained by passing this to forum\_\$convert\_attendee\_idx.

#### **Entry: forum\_\$set\_event\_channel\_idx**

This entry is used to set the event channel used to send wakeups when interesting forum events occur.

#### *USAGE*

```
declare forum_$set_event_channel_idx entry (fixed bin, fixed bin(71),
      fixed bin(35));
```

```
call forum_$set_event_channel_idx entry (forum_idx, event_channel, status);
```

#### *ARGUMENTS*

#### **forum\_idx**

identifies a meeting opened by forum\_\$open\_forum. (Input)

#### **event\_channel**

is the event channel which should receive wakeups from other users attending the same meeting. (Input)

#### **status**

is a standard status code. (Output)

#### *NOTES*

See the forum\_\$set\_event\_channel entry point for a description of interprocess messages used by Forum.

\*

forum\_

forum\_

**Entry: forum\_\$set\_forum\_acl**

This entry adds specified access modes to the access control list (ACL) of a meeting. If an access name already appears on the ACL of the segment, its mode is changed to the one specified by the call. This entry cannot be used on meetings created with pre-MR11 software.

**USAGE**

```
declare forum_$set_forum_acl entry (char (*), char (*), ptr, fixed bin, fixed
    bin (35));
```

```
call forum_$set_forum_acl (dirname, entryname, acl_ptr, acl_count, code);
```

**ARGUMENTS**

**dirname**

is the name of the directory containing the meeting. (Input)

**entryname**

is the name of the meeting. (Input) The meeting suffix is required.

**acl\_ptr**

points to a user-filled segment\_acl\_array structure (see "Notes" below). (Input)

**acl\_count**

contains the number of ACL entries in the segment\_acl\_array structure (see "Notes" below). (Input)

**code**

is a storage system status code. (Output)

**NOTES**

The segment\_acl\_array structure should be declared in the following way:

```
dcl segment_acl_array (acl_count) aligned like segment_acl_entry;
```

The segment\_acl\_entry structure (declared in the include file acl\_structures.incl.pl1) is as follows:

```
dcl 1 segment_acl_entry          aligned based,
    2 access_name                char(32) unaligned,
    2 mode                       bit(36) aligned,
    2 extended_mode              bit(36) aligned,
    2 status_code                fixed bin(35);
```

forum\_

forum\_

### STRUCTURE ELEMENTS

#### access\_name

is the access name (in the form Person\_id.Project\_id.tag) that identifies the processes to which this ACL entry applies.

#### mode

contains the modes for this access name. This must be set to the constant RW\_ACCESS declared in the include file access\_mode\_values.incl.pl1.

#### extended\_mode

is the extended access mode for this access mode. It must be set to one of the constants declared in forum\_access\_modes.incl.pl1.

#### status\_code

is a storage system status code for this ACL entry only. If code is returned as error\_table\_\$argerr, then the erroneous ACL entries in the segment\_acl structure have status\_code set to an appropriate error code. No processing is performed.

#### Entry: forum\_\$set\_message

This entry is used to set a chairman's greeting message for a Forum meeting.

#### USAGE

```
declare forum_$set_message entry (fixed bin, char(*), fixed bin(35));  
call forum_$set_message (forum_idx, message, status);
```

#### ARGUMENTS

##### forum\_idx

identifies a meeting opened by forum\_\$open\_forum. (Input)

##### message

is the text message, this can contain at most 256 characters. (Input)

##### status

is a standard status code. (Output) It can have one of the following values:

##### forum\_error\_table\_\$chairman\_only

The caller is not the chairman of the meeting.

##### forum\_error\_table\_\$message\_too\_long

The message exceeds the 256 character limit.

forum\_

forum\_

**Entry: forum\_\$set\_seen\_switch**

This entry marks a transaction as having been seen by a participant. This entry cannot be used on meetings created with pre-MR11 software.

*USAGE*

```
declare forum_$set_seen_switch entry (fixed bin, char (*), fixed bin, bit (1)
    aligned, fixed bin (35));
```

```
call forum_$set_seen_switch (forum_idx, person_id, trans_idx, value, status);
```

*ARGUMENTS*

forum\_idx

identifies a meeting opened by forum\_\$open\_forum. (Input)

person\_id

is the user name of the participant for whom the transaction is to be marked as seen. (Input) If this is blank, the person\_id of the caller is assumed. Chairman access is required to change a seen switch for another participant.

trans\_idx

is the number of the transaction to be marked. (Input)

value

is on if the transaction is to be marked as seen, and off otherwise. (Input)

status

is a standard status code. (Output)

**Entry: forum\_\$set\_switch**

This entry is used to change several switches associated with a Forum meeting or its participants.

*USAGE*

```
declare forum_$set_switch entry (char (*), char (*), char (*), char (*), bit(1)
    aligned, fixed bin(35));
```

```
call forum_$set_switch (dirname, entryname, person_id, switch_name,
    switch_setting, status);
```

*ARGUMENTS*

dirname

is the pathname of the directory containing the meeting. (Input)

forum\_

forum\_

entryname

is the name of the meeting. The ".forum" suffix is required. (Input)

person\_id

is the Person\_id of the user on whose behalf you are setting the switch. The Project\_id should not be given. Starnames are not permitted. If this is blank, the current user is assumed. Only the chairman of a forum can set switches for persons other than herself. (Input)

switch\_name

is the name of the switch to set. See "List of Switches" below. (Input)

switch\_setting

is the new switch setting. (Input)

status

is a standard status code. It can have one of the following values:

forum\_error\_table\_\$chairman\_only

Person\_id does not identify the caller and the caller is not the chairman.

forum\_error\_table\_\$invalid\_switch\_name

The switch\_name is not one of the valid switches.

forum\_error\_table\_\$switch\_not\_changed

The old setting was the same as the new setting.

#### *LIST OF SWITCHES*

adjourned, adj

Prevents users from entering the meeting. Only the chairman can set this switch.

meeting\_eligibility\_messages, mtg\_emsg

Turns on printing of eligibility messages for this meeting. This switch can only be set by the chairman.

notify, nt

Turns on the notify switch for the meeting. This means that an interactive message will be sent each time a transaction is entered if the user is logged in and has issued the forum\_accept\_notifications command.

participating, part

Turns on the participation switch for the meeting.

safety

Changes the storage system safety switch for the meeting. The meeting cannot be deleted if this switch is on.

forum\_

forum\_

**Entry: forum\_\$set\_switch\_idx**

This entry is used to change several switches associated with a Forum meeting or its participants. It is the same as the set\_switch entry point except that a forum\_idx is used to identify the meeting instead of a pathname.

**USAGE**

```
declare forum_$set_switch_idx entry (fixed bin, char (*), char (*),
    bit(1) aligned, fixed bin(35));
```

```
call forum_$set_switch_idx (forum_idx, person_id, switch_name, switch_setting,
    status);
```

**ARGUMENTS**

**forum\_idx**  
identifies a meeting opened by forum\_\$open\_forum. (Input)

**person\_id**  
is the Person\_id of the user on whose behalf you are setting the switch. The Project\_id should not be given. Starnames are not permitted. If this is blank, the current user is assumed. Only the chairman of a forum can set switches for persons other than herself. (Input)

**switch\_name**  
is the name of the switch to set. See "List of Switches" below. (Input)

**switch\_setting**  
is the new switch setting. (Input)

**status**  
is a standard status code. It can have one of the following values:

**forum\_error\_table\_\$chairman\_only**  
Person\_id does not identify the caller and the caller is not the chairman.

**forum\_error\_table\_\$invalid\_switch\_name**  
The switch\_name is not one of the valid switches.

**forum\_error\_table\_\$switch\_not\_changed**  
The old setting was the same as the new setting.

**LIST OF SWITCHES**

**access\_changed**  
Specifies that the ACL on the meeting has changed. This switch is set by the forum\_chairman\_\$set\_forum\_acl entry point, and should normally only be turned off by this subroutine.

forum\_

forum\_

adjourned, adj

Prevents users from entering the meeting. Only the chairman can set this switch.

deleted

Specifies that the attendee record for this user should be marked as deleted.

meeting\_eligibility\_messages, mtg\_emsg

Turns on printing of eligibilty messages for this meeting. This switch can only be set by the chairman.

message\_seen

Specifies that the chairman message on the meeting has changed. This switch is set by the forum\_\$set\_message entry point, and should normally only be turned off by this subroutine.

notify, nt

Turns on the notify switch for the meeting. This means that an interactive message will be sent each time a transaction is entered if the user is logged in and has issued the forum\_accept\_notifications command.

participating, part

Turns on the participation switch for the meeting.

safety

Changes the storage system safety switch for the meeting. The meeting cannot be deleted if this switch is on.

**Entry: forum\_\$trans\_ref\_info**

This entry is used to obtain information about an individual transaction. This entry is obsolete. The forum\_\$real\_trans\_ref\_info entry should be used instead.

*USAGE*

```
declare forum_$trans_ref_info entry (fixed bin, fixed bin, fixed bin,  
    fixed bin, bit(1) aligned, fixed bin(35));
```

```
call forum_$trans_ref_info (forum_idx, trans_idx, prev_ref, next_ref,  
    deleted_sw, status);
```

*ARGUMENTS*

forum\_idx

identifies a meeting opened by forum\_\$open\_forum. (Input)

trans\_idx

is the index of the transaction for which information is desired. (Input)

forum\_

forum\_

prev\_ref

is the index of the preceding transaction in the same transaction chain. This is zero if the transaction is the first in a chain. (Output)

next\_ref

is the index of the next transaction in the same transaction chain. This is zero if the transaction is the last in a chain. (Output)

deleted\_sw

is set if the transaction has been marked as deleted. (Output)

status

is a standard status code. (Output) It can have one of the following values:

forum\_error\_table\_\$invalid\_trans\_idx

There is no transaction corresponding to the supplied index.

forum\_error\_table\_\$trans\_reaped

The transaction has been physically removed from the meeting.

**Entry: forum\_\$trans\_time\_info**

This entry returns the indexes of transactions entered during a given time span.

*USAGE*

```
declare forum_$trans_time_info entry (fixed bin, fixed bin(71), fixed bin(71),  
    fixed bin, fixed bin, fixed bin(35));
```

```
call forum_$trans_time_info (forum_idx, low_time, high_time, low_trans,  
    high_trans, status);
```

*ARGUMENTS*

forum\_idx

identifies a meeting opened by forum\_\$open\_forum. (Input)

low\_time

is the timestamp of the low end of the time span. (Input)

high\_time

is the timestamp of the high end of the time span. (Input)

low\_trans

is the index of the first transaction entered after low\_time. If there are no transactions that new, than the index of the highest transaction in the meeting is returned. (Output)

forum\_

forum\_

high\_trans

is the index of the transaction entered immediately before high\_time. If no transactions were entered before then, zero is returned. (Output)

status

is a standard status code. (Output).

**Entry: forum\_\$validate\_uid**

This entry is used to determine if a given meeting unique identifier (uid) corresponds to a given meeting.

*USAGE*

```
declare forum_$validate_uid entry (fixed bin, bit(36) aligned, fixed bin(35));  
call forum_$validate_uid (forum_idx, forum_uid, status);
```

*ARGUMENTS*

forum\_idx

identifies a meeting opened by forum\_\$open\_forum. (Input)

forum\_uid

is the uid of the meeting. Normally this is obtained from Forum interprocess messages. (Input)

status

is a standard status code. (Output) It can have the following value:

forum\_error\_table\_\$incorrect\_uid

The supplied uid is not the unique identifier of the meeting identified by forum\_idx.

---

forum\_admin\_

---

---

forum\_admin\_

---

**Name: forum\_admin\_**

The forum\_admin\_ subroutine provides a site administrative interface to the Forum Interactive Meeting System.

**Entry: forum\_admin\_\$change\_chairman**

This entry is used to change the chairman of a Forum meeting by a system administrator who is not the current chairman of the meeting.

*USAGE*

```
declare forum_admin_$change_chairman entry (char (*), char (*), char (*),
      fixed bin(35));
call forum_admin_$change_chairman (dirname, entryname, chairman, status);
```

*ARGUMENTS*

**dirname**

is the pathname of the directory containing the meeting. (Input)

**entryname**

is the entryname of the meeting. (Input) The ".forum" suffix is required.

**chairman**

is the name of the new chairman of the meeting, in the form Person\_id.Project\_id. The new chairman must already be a participant. (Input)

**status**

is a standard status code. (Output) It can have one of the following values:

forum\_error\_table\_\$no\_such\_user

The supplied new chairman is not a participant.

*ACCESS REQUIRED*

The caller must have modify permission on the containing directory.

**Entry: forum\_admin\_\$convert**

This entry is used to convert a meeting created with pre-MR11 software into a current version meeting without requiring the user to be the chairman.

*USAGE*

```
declare forum_admin_$convert entry (char (*), char (*), fixed bin (35));
call forum_admin_$convert (dirname, entryname, status);
```

\_\_\_\_\_

forum\_admin\_

\_\_\_\_\_

\_\_\_\_\_

forum\_admin\_

\_\_\_\_\_

*ARGUMENTS*

**dirname**

is the name of the directory containing the meeting. (Input)

**entryname**

is the name of the meeting. (Input) The ".forum" suffix is required.

**status**

is a standard status code.

*ACCESS REQUIRED*

The caller must have modify permission on the containing directory.

**Entry: forum\_admin\_\$delete\_forum**

This entry is used to delete a meeting by a system administrator who is not the current chairman of the meeting.

*USAGE*

```
declare forum_admin_$delete_forum entry (char (*), char (*), fixed bin(35));
```

```
call forum_admin_$delete_forum (dirname, entryname, status);
```

*ARGUMENTS*

**dirname**

is the pathname of the directory containing the meeting. (Input)

**entryname**

is the entryname of the meeting. The ".forum" suffix is required. (Input)

**status**

is a standard status code. (Output)

*ACCESS REQUIRED*

The caller must have modify permission on the containing directory.

---

forum\_admin\_

---

---

forum\_admin\_

---

**Entry: forum\_admin\_\$init\_notifications**

This entry is used to create the notifications database.

*USAGE*

```
declare forum_admin_$init_notifications entry (fixed bin(35));
call forum_admin_$init_notifications (status);
```

*ARGUMENTS*

status  
is a standard status code. (Output)

*ACCESS REQUIRED*

The caller must have "sma" access to the central forum directory.

**Entry: forum\_admin\_\$set\_forum\_acl**

This entry is used to add or change an ACL term on a meeting. ACL terms can only be specified for Person\_id.\* or \*.Project\_id, terms of the form Person\_id.Project\_id are not allowed. The caller need not be the chairman of the meeting.

*USAGE*

```
declare forum_admin_$set_forum_acl entry (char(*), char(*), char(*), bit(1)
    aligned, bit(1) aligned, bit(1) aligned, fixed bin(35));
call forum_admin_$set_forum_acl (dirname, entryname, access_name, user_sw,
    set_sw, write_sw, status);
```

*ARGUMENTS*

dirname  
is the pathname of the directory containing the meeting. (Input)

entryname  
is the entryname of the meeting. The ".forum" suffix is required. (Input)

access\_name  
is the Person\_id or Project\_id whose ACL is to be added or deleted. Access\_name can not contain a ".". (Input)

user\_sw  
This switch should be on if access\_name is a Person\_id, and off if it is a Project\_id. (Input)

\_\_\_\_\_

forum\_admin\_

\_\_\_\_\_

\_\_\_\_\_

forum\_admin\_

\_\_\_\_\_

set\_sw

This switch should be on if access is to be added, and off if it is to be deleted. (Input)

write\_sw

This switch should on if write access is to be added, and off if only read access is to be added. This switch is ignored if set\_sw is off. (Input)

status

is a standard status code. (Output)

#### *ACCESS REQUIRED*

The caller must have modify permission on the containing directory.

**Entry:** forum\_admin\_\$set\_global\_switch

This entry is used to set switches associated with the forum environment for an entire site.

#### *USAGE*

```
declare forum_admin_$set_global_switch entry (char(*), bit(1) aligned, fixed
    bin(35));
```

```
call forum_admin_$set_global_switch (switch_name, value, status);
```

#### *ARGUMENTS*

switch\_name

is the name of the switch to be set. It can be one of "print\_eligibility\_messages", "pmsg", "chairman\_set\_eligibility\_msg", or "cm\_set\_emsg". (Input)

value

is the value to be assigned to the switch. (Input)

status

is a standard status code. (Output) It can have the following value:

forum\_error\_table\_\$invalid\_switch\_name

The switch\_name given was not one of those listed above.

#### *ACCESS REQUIRED*

The user must have "rw" access to forum\_data\_.

---

forum\_admin\_

---

---

forum\_admin\_

---

**Entry: forum\_admin\_\$set\_switch**

This entry is used to change several switches associated with a Forum meeting or its participants. The caller need not be the chairman of the meeting in order to set any of the switches.

*USAGE*

```
declare forum_admin_$set_switch entry (char(*), char(*), char(*), char(*),
    bit(1) aligned, fixed bin(35));
```

```
call forum_admin_$set_switch (dirname, entryname, person_id, switch_name,
    switch_setting, status);
```

*ARGUMENTS*

**dirname**

is the pathname of the directory containing the meeting. (Input)

**entryname**

is the name of the meeting. The ".forum" suffix is required. (Input)

**person\_id**

is the Person\_id of the user on whose behalf you are setting the switch. The Project\_id should not be given. Starnames are not permitted. If this is blank, the caller's Person\_id is used. (Input)

**switch\_name**

is the name of the switch to set. See "List of Switches" below. (Input)

**switch\_setting**

is the new switch setting. (Input)

**status**

is a standard status code. It can have one of the following values:

**forum\_error\_table\_\$invalid\_switch\_name**  
the switch\_name is not one of the valid switches.

**forum\_error\_table\_\$switch\_not\_changed**  
the old setting was the same as the new setting.

\_\_\_\_\_  
forum\_admin\_  
\_\_\_\_\_

\_\_\_\_\_  
forum\_admin\_  
\_\_\_\_\_

### *LIST OF SWITCHES*

#### **access\_changed**

Specifies that the ACL on the meeting has changed. This switch is set by the forum\_chairman\_\$set\_forum\_acl entrypoint, and should normally only be turned off by this subroutine.

#### **adjourned, adj**

Prevents users from entering the meeting.

#### **deleted**

Specifies that the attendee record for this user should be marked as deleted.

#### **meeting\_eligibility\_messages, mtg\_emsg**

Turns on printing of eligibilty messages for this meeting.

#### **message\_seen**

Specifies that the chairman message on the meeting has changed. This switch is set by the forum\_\$set\_message entrypoint, and should normally only be turned off by this subroutine.

#### **notify, nt**

Turns on the notify switch for the meeting. This means that an interactive message will be sent each time a transaction is entered if the user is logged in and has issued the forum\_accept\_notifications command.

#### **participating, part**

Turns on the participation switch for the meeting.

### *ACCESS REQUIRED*

The caller must have either modify permission on the containing directory or write access to the ".forum" segment.

# APPENDIX C

## GLOSSARY

Like every system, Forum has some terms that have special meaning. This section will attempt to make some of them clear.

### **attending, attendee**

A user is attending a meeting if he or she is currently using the Forum system and has entered that meeting (using the forum "goto" request). Attending is analogous to being inside the room where the meeting is being held, as opposed to participating, which is like having been there and gone out for coffee.

### **chairman**

The chairman of a meeting is the user who controls the activities in the meeting. Usually it is the user who created or convened the meeting in the first place, but since the chairmanship can be passed on to another user, this is not always the case. It is the chairman who can adjourn meetings and controls such things as who is eligible to participate in the meeting. He can also delete and retrieve transactions.

### **control arguments**

Forum commands and requests all perform a specific function, and most have special options that modify the default action or tell Forum exactly which transactions or meetings to operate on. Control arguments always start with the "-" character.

### **current meeting**

The current meeting is the one you are currently attending, and remains so until you explicitly attend a different meeting (using the "goto" request) or exit Forum (using the "quit" request).

### **current transaction**

The current transaction is the one that the user has just listed, printed, entered, or otherwise referred to. Since Forum keeps track of the current transaction, it performs requests that are issued with no transaction specifier on the current transaction (this is the default).

### **eligible**

A user is eligible to participate in a meeting if the chairman of the meeting has set the access on the meeting in such a way as to allow that user to participate in the meeting. A user must be eligible to participate before he or she can attend.

**flag**

Flags are printed when you list either meetings or participants in a meeting. Flags consist of one letter and indicate the user's state with respect to that meeting (e.g., "a" means that you are currently attending that meeting, "e" means eligible to participate and "p" means you are already a participant).

**Forum**

Forum is the system itself and the programs or software that comprise it. Forum enables eligible users to create, enter, participate in, and manage meetings.

**forum**

When you type "forum" at command level, you are typing the forum command, which enters you into the Forum subsystem (see also Forum).

**keyword**

A keyword is a transaction specifier consisting of a generic term that describes one or more transactions (e.g., "first" and "all").

**meeting**

A meeting consists of a chairman, a list of participants, and the proceedings or minutes. Meetings are Forum's reason for existence. There will likely be many meetings on a system, each created to discuss some specific or general topic or issue. Each meeting is identified by a long, descriptive name (such as Everybody's\_Meeting), and at least one short, easy-to-use name (such as eve).

**participate, participant**

A user is considered to be participating in a meeting if he or she has entered that meeting at least once. The first time a user goes to a meeting, a record of that user's participation in that meeting is created, making the user an official participant.

**proceedings**

The proceedings of a meeting are the record maintained by Forum of what exactly has been said during the life of the meeting, and by whom. This record of what took place can be examined in a flexible fashion by participants of the meeting.

**regular expression**

Regular expressions are transaction specifiers used with Forum requests. They consist of character strings (letters, numbers, words, or phrases) enclosed in slashes (/) to be matched against the text of transactions. Certain special characters can be used for fancier matching techniques. See Section 4.

**request**

A request is how a participant tells Forum to perform some action, such as entering a meeting, printing out transactions, or finding out the names of the other participants in a meeting. Forum requests are very similar in syntax to Multics commands.

**request line**

A request line is a Forum request, optionally followed by arguments, control arguments, and transaction specifiers.

**request loop**

The request loop is the part of Forum that reads the request you type, performs the specified operation, and finishes with a prompt to you (forum:) for another request. This is a repeating cycle until you exit Forum.

**search list**

The forum search list is a list of pathnames of directories that contain meetings which you want to attend. It is manipulated via the `add_search_paths` and `delete_search_paths` commands, and printed with the `print_search_paths` command (all described in the Commands manual).

**search path**

A search path is a pathname of a directory in your search list.

**transaction**

A transaction is a statement made by an attendee in a meeting. Entering a transaction is Forum's equivalent of speaking at a real meeting. The text of the transaction, its subject, the date and time it was entered, and the name of the participant who entered it are placed in the proceedings of a meeting. Other participants can then use Forum requests to manipulate the transactions of the meeting, such as "print" and "list" to look at the transaction.

**transaction chain**

A transaction chain is a series of transactions that are related in that they all refer to one previous transaction. In other words, it is a discussion centered on the transaction of one user, linked together by a common subject (see "Transaction Chains" above).

**transaction specifier**

A transaction specifier is a way of choosing a transaction or a group of transactions for Forum to list, print, write, or otherwise refer to. Transaction specifiers come in many forms: transaction numbers, keywords, control arguments, and regular expressions.

**unprocessed transaction**

An unprocessed transaction is a transaction whose text you have prepared either in response to another transaction, or to start a new discussion in a meeting, but have not yet entered it into the proceedings of the meeting. It can be manipulated in a number of ways (see Section 4).

## INDEX

### MISCELLANEOUS

. (current) request 4-7, 5-3,  
7-3

..COMMAND\_LINE escape 5-2,  
6-2, 7-3

? request 2-2, 5-1  
see also help

### A

abbrev (ab) request 6-6, 7-4

abbreviations 6-5  
abbrev request 6-6

active requests 3-6, 6-1

add\_meeting (am) request 7-5

add\_participant (apt) request  
7-7

add\_project (apj) request 7-7

administrative information  
A-1  
forum\_admin command A-4

advanced requests 6-1

allref (aref) keyword 3-4

announcement\_info (ai) request  
7-9

announce\_meeting (am) request  
7-8

answer request 7-10

apply (ap) request 4-6, 7-12

attendee C-1  
record 9-5

### C

central forum directory 2-2

chain-tracing keywords 3-4  
as active requests 3-6  
as requests 3-6

chairman C-1  
changing A-1

chairman (cm) request 2-5,  
7-14

chairman's commands  
   convert\_forum 10-9  
   forum\_add\_participant (fapt)  
     10-2  
   forum\_add\_project (fapj)  
     10-3  
   forum\_create (fcr) 10-4  
   forum\_delete (fdl) 8-12  
   forum\_make\_public (fmp)  
     command 10-5  
   forum\_remove\_participant  
     (frpt) command 10-6  
   forum\_remove\_project (frpj)  
     10-7  
   forum\_unmake\_public (fump)  
     10-8

chairman's duties  
   creating a meeting 9-1  
   deleting a meeting 9-11  
   maintaining a meeting 9-2  
     adding a participant 9-3  
     adding a project 9-4  
     deleting transactions 9-7  
     making a meeting private  
       9-4  
     making a meeting public  
       9-4  
     printing eligibility  
       messages 9-9  
     removing a participant  
       9-5  
     removing a project 9-6  
     retrieving participants  
       and transactions 9-8  
     setting a message 9-9

chairman's message 4-1  
   setting 9-9

chairman\_message (cmsg)  
   keyword 3-6

character string matching  
   regular expressions 3-8

check\_meetings (ckm) request  
   7-15

command processor escape 5-2,  
   6-2, 7-3

commands  
   administrative A-4  
   chairman commands 10-1  
   user commands 8-1

conditional execution  
   if request 6-3

control arguments C-1  
   and requests 6-1  
   as transaction specifiers  
     3-6

convert\_forum 10-9

creating a meeting 9-1  
   specifying participants 9-2

current (.) request 4-7, 5-3,  
   7-3

current meeting C-1

current transaction 3-3, C-1

current\_meeting (cmtg) request  
   7-16

D

date and time control  
   arguments 3-7

delete (dl) request 4-9, 7-16,  
   9-7

delete\_participant (dlpt)  
   request 7-18, 9-5

deleting a meeting 9-11

do request 7-18

## E

editors  
  emacs 4-6  
  qedx 4-3  
  ted 4-3

eligibility message 2-5, A-3

eligible C-1

enter (en, send) request 7-20

execute (e) request 6-3, 7-22

exec\_com (ec) request 6-6,  
  7-21

exec\_coms 6-6  
  start\_up.ec 6-8  
  start\_up.fmec 6-7

exiting forum 2-7

expunge request 7-22, 9-5,  
  9-8

## F

fant  
  see forum\_accept\_notifications

fapj  
  see forum\_add\_project

fapt  
  see forum\_add\_participant

fcf  
  see forum\_create

fd  
  see forum\_dir

fdl  
  see forum\_delete

fill (fi) request 4-8, 7-23

firstref (fref) keyword 3-4

flags 2-2, 7-34, 8-17, 8-20,  
  C-2  
  notify 3-12

flsm  
  see forum\_list\_meetings

flsu  
  see forum\_list\_users

fmp  
  see forum\_make\_public

formatting saved transactions  
  3-3

Forum 1-1, C-2  
  abbreviations 6-5  
  advanced requests 6-1  
  benefits and typical uses  
    1-1  
  central directory 2-2  
  control arguments 6-4  
  entering 2-1  
  exec\_coms 6-6  
  exiting 2-7  
  getting help 2-2  
  on-line help 5-1  
  prompt 6-5  
  request loop 2-1  
  search list 2-3  
  search paths 2-2  
  start\_up 6-7  
  version number 5-3

forum command 6-4, 8-2, C-2  
  control arguments 6-4

Forum installation  
  instructions A-1

forum\_subroutine B-2

|                                      |  |
|--------------------------------------|--|
| forum_\$accept_notifications<br>B-2  | forum_\$list_forum_acl B-23                                |
| forum_\$change_chairman B-2          | forum_\$list_users B-24                                    |
| forum_\$change_chairman_idx<br>B-3   | forum_\$list_users_idx B-26                                |
| forum_\$check_user B-8               | forum_\$list_v1_forum_acl B-24                             |
| forum_\$cname_forum B-4              | forum_\$open_forum B-27                                    |
| forum_\$cname_forum_idx B-5          | forum_\$read_trans B-28                                    |
| forum_\$close_forum B-9              | forum_\$refuse_notifications<br>B-30                       |
| forum_\$convert B-9                  | forum_\$replace_forum_acl B-30                             |
| forum_\$convert_attendee_idx<br>B-10 | forum_\$set_delete_sw B-31                                 |
| forum_\$create_forum B-6             | forum_\$set_event_channel B-32                             |
| forum_\$delete_forum B-10            | forum_\$set_event_channel_idx<br>B-33                      |
| forum_\$delete_forum_acl B-11        | forum_\$set_forum_acl B-34                                 |
| forum_\$enter_trans B-12             | forum_\$set_message B-35                                   |
| forum_\$expunge B-13                 | forum_\$set_seen_switch B-36                               |
| forum_\$forum_info_idx B-16          | forum_\$set_switch B-36                                    |
| forum_\$forum_limits B-17            | forum_\$set_switch_idx B-38                                |
| forum_\$get_forum_path B-18          | forum_\$set_v1_forum_acl B-6                               |
| forum_\$get_forum_path_idx<br>B-19   | forum_\$trans_ref_info B-39                                |
| forum_\$get_message B-20             | forum_\$trans_time_info B-40                               |
| forum_\$get_transaction_map<br>B-21  | forum_\$v1_expunge B-7                                     |
| forum_\$get_uid_file B-22            | forum_\$validate_uid B-41                                  |
| forum_\$info B-13                    | forum_accept_notifications<br>(fant) command 3-12,<br>8-10 |

|   |  |
|---|--|
| forum_add_meeting (fam)<br>request 8-11           | forum_make_public (fmp)<br>command 9-4, 10-5               |
| forum_add_participant (fapt)<br>command 9-3, 10-2 | forum_refuse_notifications<br>(frnt) command 3-13,<br>8-21 |
| forum_add_project (fapj)<br>command 9-4, 10-3     | forum_remove_meeting request<br>8-22                       |
| forum_admin command A-4                           | forum_remove_participant<br>(frpt) command 9-5, 10-6       |
| forum_admin_subroutine B-42                       | forum_remove_project (frpj)<br>command 9-6, 10-7           |
| forum_admin_\$change_chairman<br>B-42             | forum_unmake_public (fump)<br>command 9-4, 10-8            |
| forum_admin_\$convert B-42                        | frnt<br>see<br>forum_refuse_notifications                  |
| forum_admin_\$delete_forum<br>B-43                | frpj<br>see forum_remove_project                           |
| forum_admin_\$init_notifications<br>ions B-44     | frpt<br>see forum_remove_participant                       |
| forum_admin_\$set_forum_acl<br>B-44               | fump<br>see forum_unmake_public                            |
| forum_admin_\$set_global_switch<br>B-45           |  |
| forum_admin_\$set_switch B-46                     |  |
| forum_create (fcr) command<br>9-1, 10-4           |  |
| forum_delete (fdl) command<br>8-12, 9-11          |  |
| forum_dir (fd) command 2-2,<br>8-13               |  |
| forum_dir (fd) request 7-24                       |  |
| forum_list_meetings (flsm)<br>command 8-14        |  |
| forum_list_users (flsu)<br>command 8-18           |  |

G

gates A-2

glossary C-1

goto (go, g) request 2-5,  
7-24

greeting message  
chairman\_message 3-6

## H

help 2-2, 5-1  
? request 5-1  
help request 5-3  
list\_help (lh) request 5-2  
list\_requests (lr) request  
5-2

help request 5-3, 7-25

## I

if request 6-3, 7-27

installation instructions  
AIM A-3  
central forum directory A-1  
gate access A-2  
notifications database A-2

interrupting lengthy output  
3-13

## K

keywords 3-2, C-2  
all, a 3-4  
as active requests 3-6  
as requests 3-6  
as transaction specifiers  
3-4  
chain-tracing 3-4  
allref, aref 3-4  
firstref, fref 3-4  
lastref, lref 3-4  
nextref, nref 3-5  
priorref, pref 3-5  
restref, rref 3-5  
chairman\_message 3-6  
current, c 3-4  
first, f 3-4  
highest, last\_seen 3-4  
last, l 3-4

## keywords (cont)

new 3-4  
next, n 3-4  
previous, p 3-4  
unprocessed, u 3-4

## L

lastref (lref) keyword 3-4

list (ls) request 3-1, 7-28

list\_help (lh) request 5-2,  
7-31  
see also help

list\_meetings (lsm) request  
2-1, 7-31

list\_requests (lr) request  
5-2, 7-34  
see also help

list\_users (lsu) request 2-5,  
6-1, 7-35

locating meetings  
search paths 2-2

## M

mail request 7-38

maintaining a meeting 9-2  
adding a participant 9-3  
adding a project 9-4  
deleting transactions 9-7  
making a meeting private  
9-4  
making a meeting public 9-4  
printing eligibility  
messages 9-9  
removing a participant 9-5  
removing a project 9-6

maintaining a meeting (cont)  
retrieving participants and  
transactions 9-8  
setting a message 9-9

make\_public request 7-39

meetings 1-2, C-2  
attending 2-4  
chairman 2-5  
current C-1  
eligibility message 2-5  
eligible participants 2-6  
flags 2-2  
listing 2-1  
locating 2-2  
moving A-1  
participants 2-5  
private 2-3  
speaking 4-1  
reply (r) request 4-2  
talk (t) request 4-1

Multics command processor  
escape 5-2, 6-2, 7-3

## N

nextref (nref) keyword 3-5

next\_meeting (nm) request  
7-40

notifications  
cancelling 3-13  
receiving 3-12

notifications database  
creating A-1, A-2

notify switch 3-12

numbers  
as transaction specifiers  
3-3

## O

on-line help 5-1

output  
interrupting 3-13

## P

participant  
expunging 9-5

participants C-2  
eligible 2-6  
listing 2-5  
private meetings 2-6  
removing 9-5  
retrieving 9-8

personalizing your Forum  
environment  
abbreviations 6-6  
exec\_coms 6-6  
forum control arguments 6-4  
forum start\_up 6-7

Person\_ids  
as transaction specifiers  
3-7

print (p) request 4-8

print (pr, p) request 3-2,  
7-41

printing transactions 4-8

priorref (pref) keyword 3-5

private meetings 2-3, 2-6  
forum\_unmake\_public command  
9-4

proceedings C-2  
listing 3-1  
printing 3-2

proceedings (cont)  
  saving 3-2

prompt  
  setting 6-5

public meetings  
  central forum directory 2-2  
  eligibility message 2-5  
  forum\_make\_public command  
    9-4

Q

qedx  
  request 7-43

qedx (qx) request 4-3  
  simple editor requests 4-4

qedx regular expression C-2

qedx regular expressions 3-8

quit (q) request 2-7, 7-44

R

ranges of transactions 3-3

regular expression C-2

regular expressions 3-8  
  matching subject 3-8  
  matching text 3-8  
  special characters 3-9

remove\_meeting (rm) request  
  7-44

remove\_participant (rpt)  
  request 7-45

remove\_project (rpj) request  
  7-46

reply (rp) request 4-2, 7-46

request line C-3  
  abbreviations 6-6

request loop 2-1, C-3

requests C-3  
  . (current) 7-3  
  ..command\_line 7-3  
  ? 5-1  
  abbrev 6-6, 7-4  
  add\_meeting 7-5  
  add\_participant 7-7  
  add\_project 7-7  
  announcement\_info 7-9  
  announce\_meeting 7-8  
  answer 7-10  
  apply 4-6, 7-12  
  chairman 7-14  
  check\_meetings 7-15  
  current\_meeting 7-16  
  delete 4-9, 7-16  
  delete\_participant 7-18  
  do 7-18  
  enter 7-20  
  execute 7-22  
  exec\_com 6-6, 7-21  
  expunge 7-22  
  fill 4-8, 7-23  
  forum\_add\_meeting 8-11  
  forum\_dir 7-24  
  forum\_remove\_meeting 8-22  
  goto 7-24  
  help 5-3, 7-25  
  if 6-3, 7-27  
  list 7-28  
  list\_help 5-2, 7-31  
  list\_meetings 7-31  
  list\_requests 5-2, 7-34  
  list\_users 7-35  
  mail 7-38  
  make\_public 7-39  
  next\_meeting 7-40  
  print 4-8, 7-41  
  qedx 4-3, 7-43  
  quit 7-44  
  remove\_meeting 7-44  
  remove\_participant 7-45

requests (cont)  
   remove\_project 7-46  
   reply 4-2, 7-46  
   reset 7-48  
   retrieve 4-9, 7-49  
   retrieve\_participant 7-50  
   send 7-20  
   set\_message 7-51, 9-9  
   subject 4-9, 7-52  
   subsystem\_name 7-53  
   subsystem\_version 7-54  
   switch\_off 7-54  
   switch\_on 7-55  
   talk 4-1, 7-56  
   ted 4-3, 7-58  
   unmake\_public 7-59  
   write 7-60

reset (r) request 7-48

restref (rref) keyword 3-5

retrieve (rt) request 4-9,  
   7-49, 9-8

retrieve\_participant (rtpt)  
   request 7-50, 9-8

start\_up.ec 6-8  
   accepting notifications  
     3-13  
   search paths 2-4

start\_up.fmec 6-7

subject (sj) request 4-9,  
   7-52

subroutine descriptions  
   forum\_ B-2  
   forum\_admin\_ B-42

subsystem\_name request 7-53

subsystem\_version request  
   7-54

switches 2-2  
   notify 3-12

switch\_off (swf) request 3-13,  
   7-54, 9-10

switch\_on (swn) request 3-12,  
   7-55, 9-10

S

search list C-3

search paths 2-2, 2-3, C-3  
   in your start\_up.ec 2-4  
   printing 2-3  
   setting 2-3

send (enter, en) request 7-20

set\_message request 7-51, 9-9

sorting by chain 3-8

speaking  
   reply (rp) request 4-2  
   talk (t) request 4-1

T

talk (t) request 4-1, 7-56

ted request 4-3, 7-58

text editors  
   emacs 4-6  
   qedx 4-3  
   ted 4-3

transaction 1-2  
   chain 1-3  
   current C-1  
   initial 1-2

transaction chain 1-3, 4-3,  
   C-3  
   keywords 3-4

transaction chain (cont)  
  sorting by 3-8

transaction numbers 3-3

transaction specifiers 3-1,  
  3-3, C-3  
  by date and time 3-7  
  by subject 3-8  
  by text 3-8  
  chairman\_message (cmsg) 3-6  
  control arguments 3-6  
  examples 3-9  
  keywords 3-4  
    chain-tracing 3-4  
  numbers 3-3  
  Person\_ids 3-7  
  ranges of numbers 3-3  
  regular expressions 3-8  
  simple operators 3-3  
  sorting by chain 3-8

transactions C-3  
  current 3-3  
  deleting 4-9, 9-7  
  editing  
    emacs 4-6  
    qedx 4-3  
    ted 4-3  
  expunging 9-8  
  filling 4-8  
  listing 3-1  
  new 3-11  
    receiving notification  
      3-12  
  pre-written 4-6  
  printing 3-2, 4-8  
  ranges of 3-3  
  retrieving 4-9, 9-8  
  saving 3-2  
    delimiters 3-3  
    formatted output 3-3  
    naming the segment 3-2  
  unprocessed 4-5

## U

unmake\_public (ump) request  
  7-59

unprocessed transaction 3-4,  
  4-5, C-3

users' commands  
  forum 8-2  
  forum\_accept\_notifications  
    (fant) 8-10  
  forum\_dir (fd) 8-13  
  forum\_list\_meetings (flsm)  
    8-14  
  forum\_list\_users (flsu)  
    8-18  
  forum\_refuse\_notifications  
    (frnt) 8-21

## V

version number 5-3

## W

write (w) request 3-2, 7-60  
  delimiters 3-3  
  formatted output 3-3  
  naming the segment 3-2

**HONEYWELL INFORMATION SYSTEMS**  
Technical Publications Remarks Form

CUT ALONG LINE

TITLE

MULTICS FORUM  
INTERACTIVE MEETING SYSTEM  
USER'S GUIDE

ORDER NO.

CY74-02

DATED

FEBRUARY 1985

**ERRORS IN PUBLICATION**

[Empty box for reporting errors in publication]

**SUGGESTIONS FOR IMPROVEMENT TO PUBLICATION**

[Empty box for providing suggestions for improvement to publication]



Your comments will be investigated by appropriate technical personnel and action will be taken as required. Receipt of all forms will be acknowledged; however, if you require a detailed reply, check here.

FROM: NAME \_\_\_\_\_

DATE \_\_\_\_\_

TITLE \_\_\_\_\_

COMPANY \_\_\_\_\_

ADDRESS \_\_\_\_\_

\_\_\_\_\_

PLEASE FOLD AND TAPE—  
NOTE: U. S. Postal Service will not deliver stapled forms



NO POSTAGE  
NECESSARY  
IF MAILED  
IN THE  
UNITED STATES

**BUSINESS REPLY MAIL**  
FIRST CLASS PERMIT NO. 39531 WALTHAM, MA02154

POSTAGE WILL BE PAID BY ADDRESSEE

HONEYWELL INFORMATION SYSTEMS  
200 SMITH STREET  
WALTHAM, MA 02154



ATTN: PUBLICATIONS, MS486

FOLD ALONG LINE

**Honeywell**

**Together, we can find the answers.**

**Honeywell**

**Honeywell Information Systems**

**U.S.A.:** 200 Smith St., MS 486, Waltham, MA 02154

**Canada:** 155 Gordon Baker Rd., Willowdale, ON M2H 3N7

**U.K.:** Great West Rd., Brentford, Middlesex TW8 9DH **Italy:** 32 Via Pirelli, 20124 Milano

**Mexico:** Avenida Nuevo Leon 250, Mexico 11, D.F. **Japan:** 2-2 Kanda Jimbo-cho, Chiyoda-ku, Tokyo

**Australia:** 124 Walker St., North Sydney, N.S.W. 2060 **S.E. Asia:** Mandarin Plaza, Tsimshatsui East, H.K.

42606, 5C485, Printed in U.S.A.

CY74-02