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Computer Conferencing on CERNVM

Abstract

This writeup is an introduction to the concepts of computer conferencing and how these concepts have been applied to the use of the IBM GroupTalk system at CERN.

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1. What is Computer Conferencing?

A computer conferencing system allows a group of people to participate in an on-going discussion which is mediated and controlled by computer. The system collects, stores and distributes the written contributions of the discussion participants. The various participants do not have to be active in the discussion simultaneously. Each one is free to contribute to the discussion and view the contributions of the other participants at their own convenience.

A conferencing system differs from a mail system in that the originator of a topic in discussion need not be concerned about his audience (i.e., it is not the responsibility of the originator to maintain a "mailing list"). Also, each participant in a "mail conference" must maintain their own copy of the discussion (starting from the time they joined), and be responsible for their own filing and reference.

A conferencing system differs from most Bulletin Board systems in that it is the ultimate responsibility of a topic originator to deal with the disposition of his material (i.e., there is no approval process). Also, users may be more selective regarding the material seen.

2. IBM GroupTalk

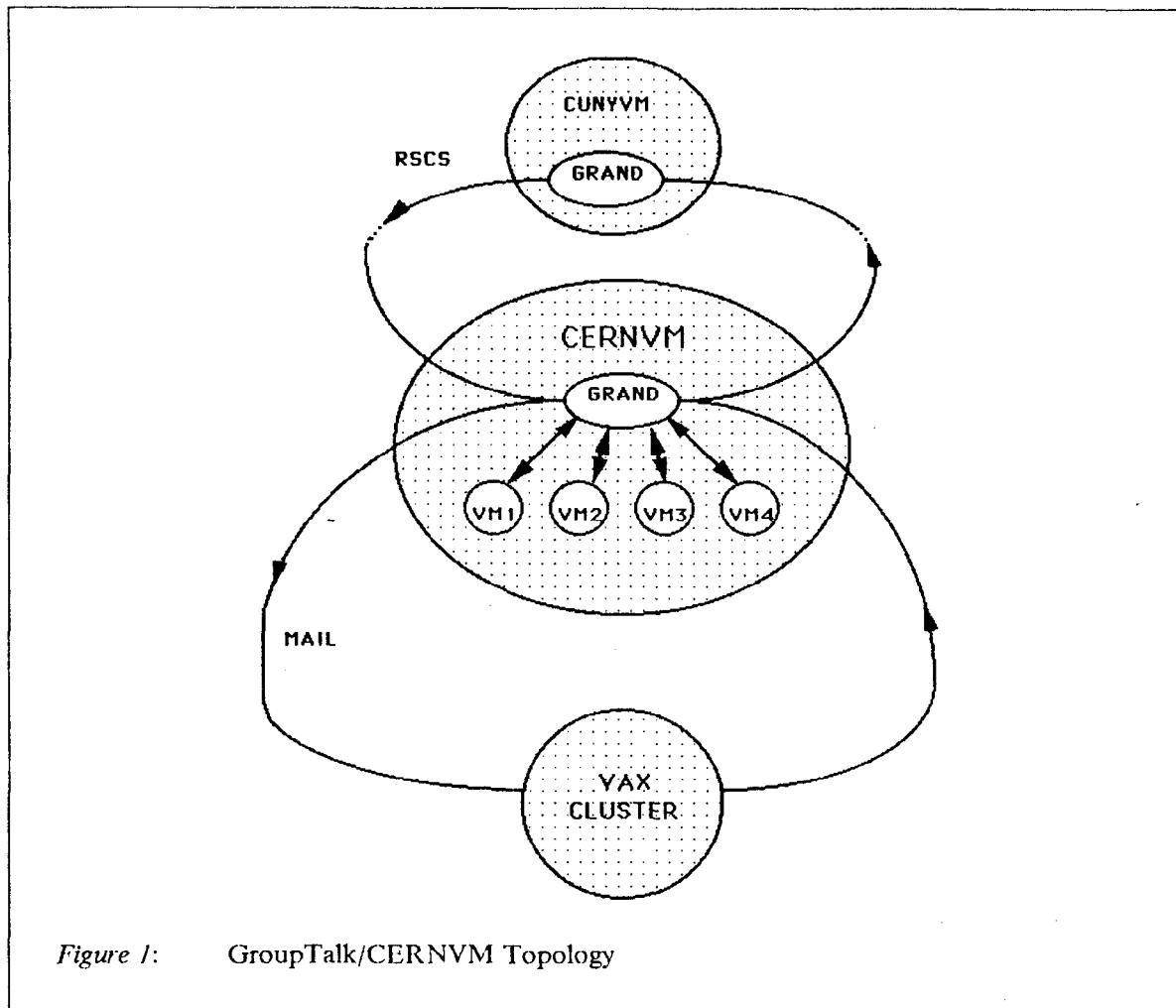
CERN has chosen GroupTalk to serve the functions of computer conferencing. IBM GroupTalk is a distributed (i.e., operational over a network) application system providing support for the creation, operation, administration, moderation and use of computer conferences and bulletin boards in the VM environment.

In addition to the server functions, IBM GroupTalk includes user interface programs for administration, operation, bulletin boards and the conferencing user interface program, CONVENE, for local access to conference and bulletin board information. However, other user interface facilities, such as MAIL, may be used.

IBM GroupTalk operates by means of a system of cooperating virtual service machines on various nodes throughout a VM network such as BitNet. GroupTalk activities are handled by the GroupTalk (GRAND) service machine at CERNVM. Figure 1 on page 2 illustrates the network topology of which GRAND at CERNVM is a part. GRAND at CUNYVM is responsible for BitNet GroupTalk support. VM1, VM2, VM3 and VM4 represent CERNVM users (virtual machines). A GroupTalk interface with the VAX Cluster is accomplished via MAIL.

2.1 Obtaining Information on GroupTalk

- FIND GROUPTALK
- TELL GRAND [at CERNVM] HELP
- From the VAX cluster, send mail to MINT::"GRAND@CERNVM" with HELP in the mail body



- IBM GroupTalk Documentation
 - Brochure (GH42-0001-01)
 - General Information (GH42-0002-00)
 - Installation Guide (GH42-0003-00)
 - User's Guide (GH42-0004-00)
 - Administrator's Guide (GH42-0005-00)
 - Operation and System Support Guide (GH42-006-00)
 - Command Reference (GH42-0007-00)
 - Programmer's Guide (GH42-0008-00)

2.2 Getting Started With GroupTalk

To use GroupTalk, it is necessary to perform the following actions, each of which is described in detail later:

1. Register as a user
2. Obtain access to the appropriate programs

2.3 Registering as a User on CERNVM

To register as a CERNVM GroupTalk user, it is necessary to send the GroupTalk service machine (GRAND at CERNVM) a SIGNUP request. To do this from CMS, use the TELL command as follows:

```
TELL GRAND [at CERNVM] SIGNUP name
```

AT CERNVM is optional if the request is originating from CERNVM. "name" is your first-name, optional middle initial, and lastname. The name should be specified exactly as you desire it to be seen by other GroupTalk users and in GroupTalk files, including the proper capitalization.

For example,

```
TELL GRAND AT CERNVM SIGNUP Jane Doe
TELL GRAND SIGNUP Jean Q. DuPont
```

The service machine responds with a message when a registration request is received. It also sends to the newly registered user a file named GRAND PROFILE, which contains their GroupTalk IDentification number ("GRID") and the network address of their local server. CMS users must use the CMS RECEIVE command to read this profile onto their disk.

2.4 Registering as a User on the VAX Cluster

User registration from the VAX Cluster is accomplished by enclosing a line of the form,

```
SIGNUP name
```

as the sole content of a MAIL file sent to MINT::"GRAND@CERNVM". As with the case of signup on CERNVM, the name should be specified exactly as you desire it to be seen by other GroupTalk users and in GroupTalk files, including the proper capitalization. GRAND will respond with a signup confirmation via MAIL.

2.5 Obtaining Access to Appropriate Interface Programs

There are two interface programs (execs) specifically for performing GroupTalk operations. These are the GRAND EXEC and the CONVENE EXEC.

The GRAND EXEC is typically used as a subprogram for other programs and for remote access. It can be used to send simple requests to a GroupTalk server or to send requests that the server will

accept but for which there is no user interface program. Information on the use of GRAND and commands which it will accept can be obtained by entering

GRAND ?

The CONVENE EXEC is a separately licensed IBM product which offers considerable functionality when used in conjunction with GroupTalk. It is a full-screen menu and PFkey-driven user interface program (UIP). CONVENE can be used to:

- see new information entries created by others,
- create a new information entry for others to see,
- create a new discussion topic, or
- review parts of a computer conference exchange.

For information on the use of CONVENE and a brief tutorial enter

CONVENE HELP

or press the "Help" function key from within CONVENE for context sensitive help on using CONVENE. Also, from within CONVENE, use "H command" for detailed information about using the "command" function from within CONVENE (e.g., try "H SUBSCRIBE" from within CONVENE to learn about using the "SUBSCRIBE" function).

2.5.1 For CERNVM Users

It is recommended that CERNVM GroupTalk users use the CONVENE program for interactive computer conferencing. On CERNVM CONVENE is made available to all users automatically. It is not necessary to be a registered GroupTalk user in order to use CONVENE for the browsing and/or reading of conferences. It is, however, necessary to register if you want to use the full functionality of CONVENE and GroupTalk (i.e., subscription and contribution to conferences, etc.)

2.5.2 For CERN VAX Cluster Users

CONVENE is not available for VAX Cluster users. All communications between GroupTalk and these users are conducted via MAIL. This is accomplished by including GRAND commands (not CONVENE commands) within the body of MAIL files sent to GRAND at CERNVM. The signup operation discussed earlier is an example of such operation. The allowable GRAND EXEC commands are described in the IBM GroupTalk Command Reference manual. They may also be obtained by sending the message GRAND COMMANDS (in MAIL as described above) to GRAND at CERNVM. All of the subscription and contribution facilities of CONVENE are available using the GRAND EXEC.

Since all communication with VAX Cluster users is conducted with MAIL, these users do not have the full functionality of the CONVENE EXEC. These users should take advantage of the file management features of the VAX MAIL system in order to keep track of GroupTalk activities.

2.5.3 For Remote Users

VM/CMS users at remote sites connected to CERNVM via BitNet have a number of options available to them regarding use of GroupTalk.

If a GroupTalk Server has been installed at the remote site and the CONVENE package is available, then it may be possible for CERNVM conferences to be available at that site. The GroupTalk administrator at that site should be contacted in order to do this.

Even if a GroupTalk server is not available on the remote system, it is possible that the CONVENE software has been installed on a disk that can be linked and accessed. This would still provide access to CERNVM conferences with full CONVENE functionality but with some degradation in performance.

If neither GroupTalk nor CONVENE is available at the remote site (IBM and non-IBM sites), conferencing with CERNVM may only be accomplished via GRAND commands and MAIL, as described earlier in this document. Information on obtaining GroupTalk and/or CONVENE may be obtained by contacting the GroupTalk System Support group of your server network. This is done by sending

TELL GRAND at CUNYVM Help

GRAND at CUNYVM "serves" the BitNet network. Information specifically on accessing GroupTalk at CERNVM can be obtained by sending a message of the form

TELL GRAND at CERNVM ? messagetext

where "messagetext" is the text of the question. This message is automatically routed to the CERNVM GroupTalk Administrator.

2.6 Some Definitions

Before beginning a discussion of specific GroupTalk features, the following definitions will help to understand how GroupTalk organizes computer conferences:

Topic The basic unit of information; A topic is the transcript of an on-going discussion on a particular subject. Each topic has a description (abstract) which is the 0th entry in the topic.

Conference Topics are organized into conferences, where each conference is a collection of topics that discuss a common broad subject under a common set of ground rules.

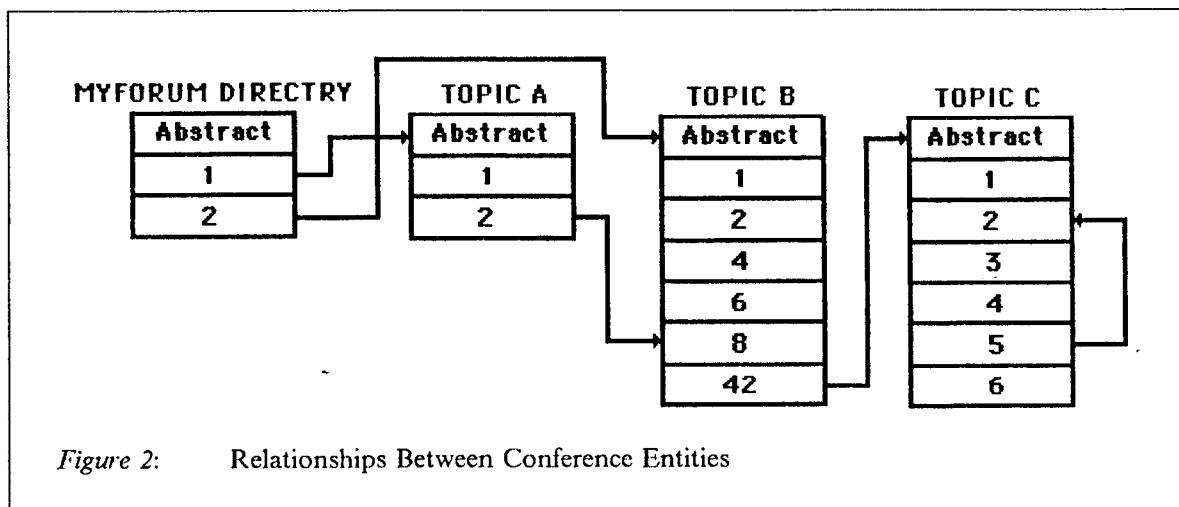
Entry An entry is someone's contribution to a discussion.

Reference Pointer

A reference pointer is a mechanism by which entries may be related to one another.

Figure 2 on page 6 illustrates the relationships between these entities. In this illustration MYFORUM DIRECTORY is the directory of a conference consisting of the topics TOPIC A and TOPIC B. The entries in MYFORUM DIRECTORY point to these topics. TOPIC A consists of 2 entries (append), the last one of which (#2) contains a reference pointer to entry number 8 of TOPIC

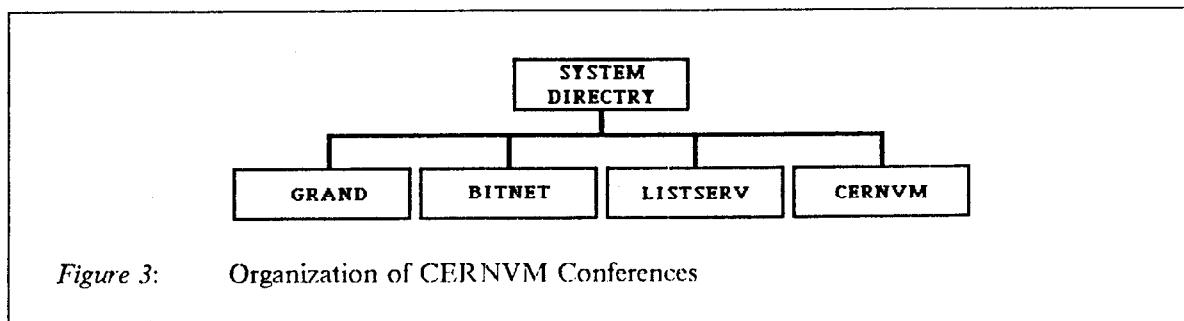
B. TOPIC B consists of 6 entries. The sequence numbers of these entries may not be sequential (but are ascending) due to the deletion of entries. Entry #42 of TOPIC B is a directory to TOPIC C. TOPIC C contains 6 entries with a reference pointer between entries #5 and #2.



2.7 Organization of CERNVM Conferences

In GroupTalk conferences are managed and used by means of an hierarchical tree structures. The root nodes of these trees are the "conferences" which may be, in reality, directories to lower level structures. These lower level structures may themselves be directories or "topic" files. Once a Topic has been defined as part of a particular conference (i.e., the conference directory file contains a reference to that topic) all participants in the conference (including the "owner" of the topic) can append comments to it.

Figure 3 illustrates the top level conference configuration available to CERNVM GroupTalk users. These conferences serve as root nodes to distinct hierarchical trees of directories ("logical conferences") and topics. The CERNVM conference is the local CERN conference. This top level configuration is defined within the default system directory (SYSTEM DIRECTORY). This is the default conference entry point upon using CONVENE. PF10 (DIR) from the CONVENE main menu (Figure 5 on page 8) enters at this level. Figure 4 on page 7 shows the resulting menu screen and how it illustrates the information graphically represented in Figure 3.



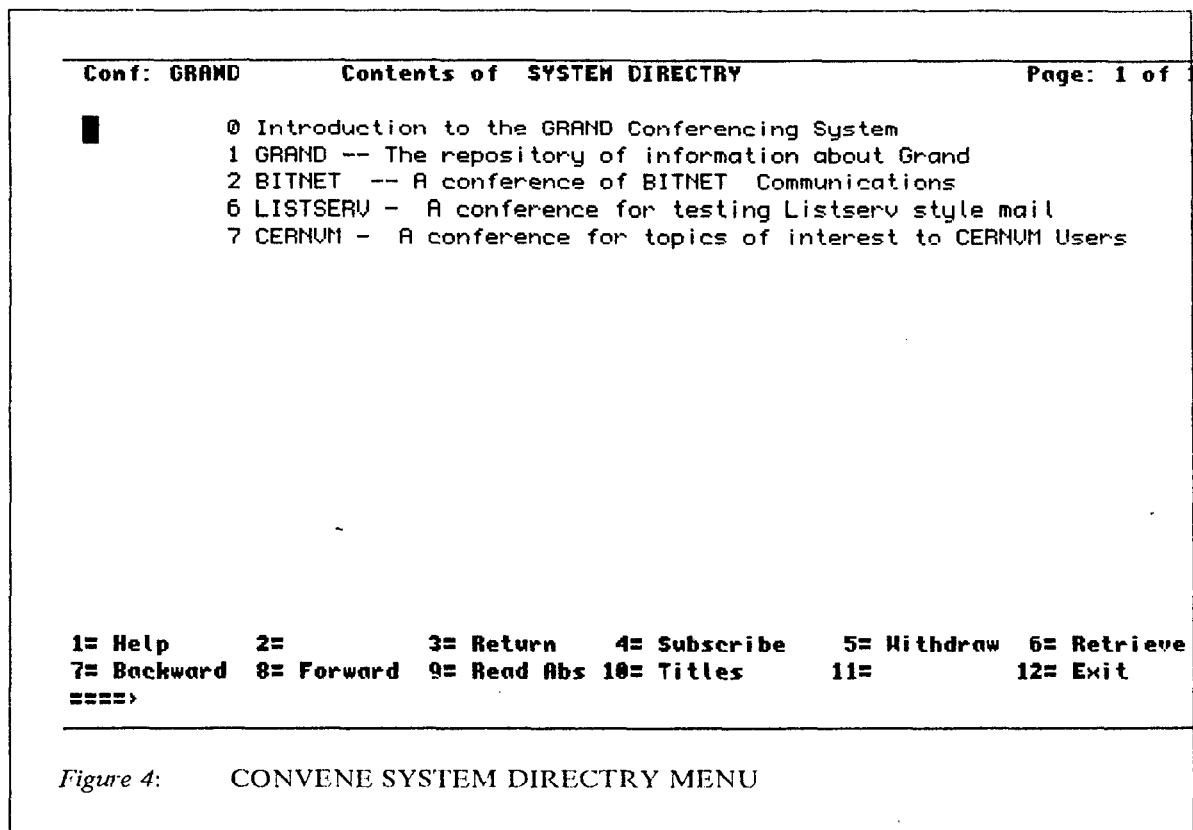


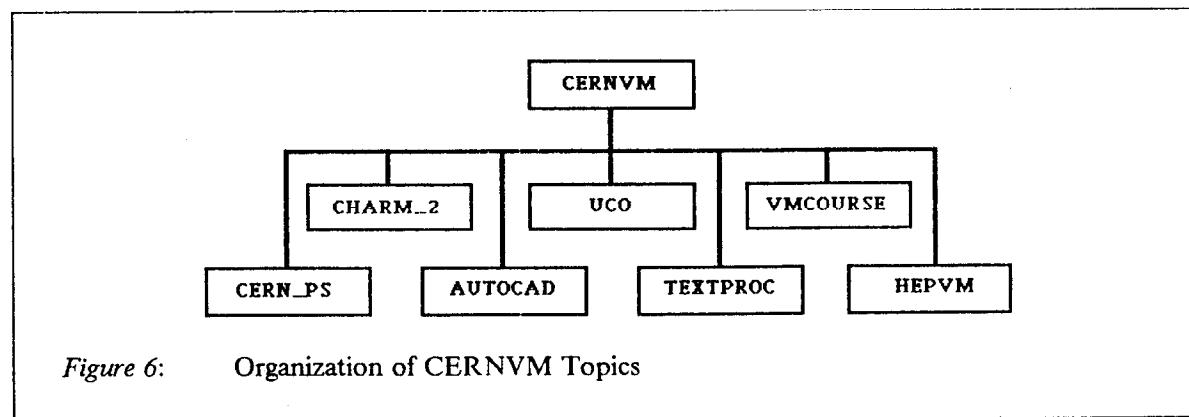
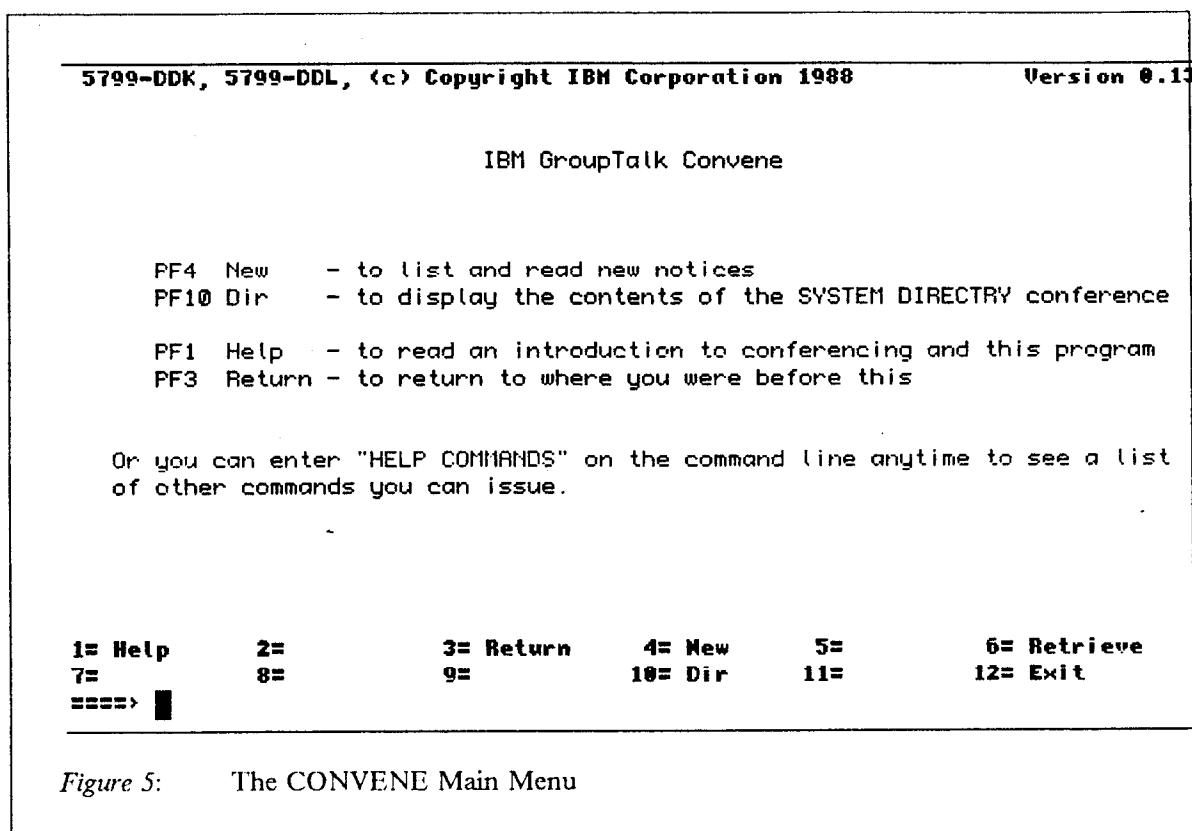
Figure 4: CONVENE SYSTEM DIRECTORY MENU

The CONF variable in the GRAND PROFILE defines the default conference to be used upon invoking CONVENE. This provides a "short cut" to specific conferences of interest. A discussion of tailoring the GRAND PROFILE is included later in this writeup. Otherwise, the CONVENE SET CONFERENCE command allows a user to select between these conferences.

The GRAND, BITNET and LISTSERV conferences contain entries which may originate and be accessed by any GroupTalk user on the BitNet network. The service machine which "owns" these conferences is at CUNYVM in the United States. Some of the topics within these conferences are "shadowed" at CERNVM. Topics which are not shadowed should be accessed sparingly in that their use contributes directly to BitNet traffic/congestion. If you feel that non-shadowed topics should become shadowed (i.e., stored on the CERNVM server), contact the CERNVM GroupTalk Administrator.

The CERNVM conference is the local CERN conference containing entries which originate at CERN. These entries may be accessed generally only by those GroupTalk users who are registered on the CERNVM GRAND service machine. CERNVM DIRECTORY is the directory file for this conference. Figure 6 on page 8 illustrates the current (June 1, 1989) graphical configuration of this conference. The corresponding CONVENE menu representation. is obtained by entering the CONVENE DIR CERNVM DIRECTORY command or by moving the cursor to the CERNVM entry in the menu shown in Figure 4 and pressing PF10 (TITLES).

Each topic file, which constitutes a "logical conference," starts with a description of the topic under discussion, followed by a series of entries (appends) added to the file by the people taking part in a discussion. The GroupTalk CONTRIBUTE command (available using either GRAND or CONVENE) allows any registered user to append to non-closed (i.e., not private) topics. The



SUBSCRIBE command indicates that a user desires to be informed by GroupTalk whenever an append has been made to a particular topic.

2.8 Tailoring the GRAND PROFILE

Registered GroupTalk users receive from their assigned server a file named GRAND PROFILE. Like all Profiles in the CMS sense, this file allows that user to tailor their GroupTalk environment. Editing the GRAND PROFILE can be done using XEDIT. Variables identified in the GRAND PROFILE are used to set some of the global variables used in GRAND/CONVENE operations. The values of these variables must not be modified.

The following are some of the variables of particular interest in the CERN GroupTalk environment:

1. *GRID GRID*

The variable GRID identifies the GroupTalk Identifier (GRID) of the owner of the GRAND PROFILE. *This value must not be modified.*

2. *SERVER SVR_NID SVR_UID*

"svr_nid" and "svr_uid" are the nodeid and userid of the appropriate GRAND service machine (i.e., the service machine to which this user is registered). The appropriate values should be *CERNVM* and *GRAND* and *should not be modified*.

3. *CONF CONFNAME*

"confname" is the name of the GroupTalk conference to be entered by default (i.e., the conference which is active when CONVENE is invoked). If no value of "confname" is specified or this variable is omitted, the GRAND conference will be used. *"confname" CERNVM is recommended.*

4. *ROOT FN FT*

"fn ft" contains the CMS file name of the file within the default conference which is desired as the default main directory. SYSTEM DIRECTORY is the default directory for the GRAND conference and would be displayed in response to the Convene command if no other value is specified. *"fn ft" CERNVM DIRECTORY is the recommended value.*

5. *PRTENTRY PART1 / PART2*

defines the printer interface between GroupTalk/CONVENE and CERNVM. *The recommended entry is XPRINT /.* In this way, print operations will use the user-defined XPRINT defaults (printername, destination, etc.)

Other variables are available for LINKing and ACCESSing disks which contain specific files (DISK) and for setting display characteristics on IBM 327X terminals (COLOR). The GroupTalk documentation should be consulted for further information regarding the use of these variables.

The following is an example of a modified GRAND PROFILE. With the exception of the unique GRID, it contains the recommended default variables.

```
GRID 104804
SERVER CERNVM GRAND
CONF CERNVM
ROOT CERNVM DIRECTRY
PRTRY XPRINT /
```

2.9 Creating New Conferences and Topics

GroupTalk is a system that is designed to change and grow. It is fully expected that requirements for new conferences and topics will arise while others will become obsolete.

The creation of new conferences is a controlled activity which can be performed only by the CERNVM GroupTalk Administrator and/or Operator. The following steps should be followed by persons interested in the creation of new conferences and topics:

1. determine the specific conferencing needs (i.e., the subjects addressed, the audience served)
2. define the necessary hierarchical structure of directories, sub-directories, topics, etc. to satisfy those needs; this will facilitate the audience's access to the information in the conference
3. assign the task of conference administrator (i.e., someone who will be responsible for the administration of the conference or topic)
4. consult the CERN GroupTalk administrator

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