

# **MUSIC/SP**

**Version 5**

**Release 1**

## **Campus-Wide Information Systems (CWIS) Guide**

**Fifth Edition (April 1996)**

This edition applies to Release 1 of Multi-User System for Interactive Computing / System Product (MUSIC/SP) Version 5, and to all releases of this product until otherwise indicated in new editions or Technical Newsletters. MUSIC/SP Version 5 is published and licensed by McGill Systems Inc.

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## About this Guide

This publication describes how to create and maintain a CWIS (Campus-Wide Information System) using facilities on MUSIC/SP (Multi-User System for Interactive Computing / System Product). The same methods are used to create Help facilities and Classified Ads facilities.

A CWIS can use central computing resources to provide online distribution of information. Staff, students, and colleagues from around the world can access this service to find out about your campus.

The goals of this guide are to:

- Describe CWIS, HELP, and ADS Facilities
- Demonstrate a CWIS.
  - how to plan ahead.
  - how to design and run a CWIS.
- Show you how to prepare information files.
- Show you how to prepare files for full-text searching.
- Show you how to produce usage statistics.
- Show you how to create a CWIS for Gopher access.

If you are not familiar with computers, you should refer to the *MUSIC/SP Guide for New Users* for step-by-step instructions on the basics of MUSIC/SP. More experienced computer users will find the online help, provided with each MUSIC/SP facility, is all that is needed to get started.

When the term *MUSIC* is used in this publication, it refers to MUSIC/SP.

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## Chapter Outlines

### Chapter 1 - Introduction to CWIS

This chapter discusses the issues that have to be considered before starting a CWIS.

### Chapter 2 - IDP

This chapter describes the IDP (Information Display Program) that is used to create and maintain a CWIS, Help, or Ads facility. Details about preparing data is included.

### Chapter 3 - Tutorial for Creating a BBS

This chapter gives a tutorial on how to generate a CWIS with all of its components.

## **Chapter 4 - Index Text Searching**

This chapter describes the facility for indexing large documents for full-text searching.

## **Chapter 5 - BBS Statistics Program**

This chapter describes the BBSTAT program for producing statistics about usage of your CWIS or Help facility.

## **Chapter 6 - Gopher Access**

This chapter describes how to tailor your CWIS for gopher access.

## **Appendix A - InfoMcGill**

This appendix provides instructions on how to connect to McGill University's CWIS called "infoMcGill".

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# **MUSIC/SP Publications**

The following is a list of all the current MUSIC/SP publications. These hardcopy publications can be ordered through the MUSIC Product Group. Online versions (softcopy) of the user publications can be accessed with the MUSIC/SP command called "MAN".

- *MUSIC/SP Administrator's Guide* (April 1996), describes how to install and operate MUSIC/SP.
- *MUSIC/SP Administrator's Reference* (April 1996), describes the internals of MUSIC/SP; utility programs and supervisory commands; gives detailed storage estimates; and documents console messages.
- *MUSIC/SP User's Reference Guide* (April 1996), describes how to use MUSIC/SP; its command language; terminal and batch set up; and job processing using the various language processors.
- *MUSIC/SP Guide for New Users* (April 1996), introduces new users to the use of MUSIC/SP via an IBM 3270-type workstation. It describes the FSI (Full Screen Interface) menu facility. New users learn how to use many programs on MUSIC/SP for such tasks as editing and running programs.
- *MUSIC/SP Office Applications Guide* (April 1996), describes the features of the TODO (Time, Office, and Documentation Organizer) facility. This includes the scheduling function, spell checking, and MUSIC/SCRIPT (text processing).
- *MUSIC/SP Mail and Conferencing Guide* (April 1996), describes electronic mail on MUSIC/SP. This includes Mail Profile, Mail Directory, using POP clients, and conferencing programs.
- *MUSIC/SP Internet Guide* (April 1996), describes the programs available on MUSIC/SP that provide communication between users through electronic conferencing and discussion lists. Emphasis is placed on access to the Internet with programs such as TELNET (logging on other computers), FTP (File Transfer Protocol), WEB (World-Wide Web), RN (Newsreader), and GOPHER (document search and retrieval protocol).
- *MUSIC/SP Campus-Wide Information Systems (CWIS) Guide* (April 1996), describes how to create and maintain a Campus-Wide Information System, Help facility, or Classified Ads facility; how to do full-text searching; and how to provide gopher access. MUSIC/SP's resources are used to provide online

distribution of information to a wide audience.

- *MUSIC/SP Teacher's Guide* (April 1996), describes various MUSIC/SP facilities related to the academic environment. Emphasis is placed on communication between teacher and student and easy methods for learning how to use MUSIC applications.
- *MUSIC/SP Client/Server (MCS) Booklet* (April 1996) provides an overview of MCS. Full documentation is available on the MCS diskette.
- *MUSIC/SP Personal Computer Workstation User's Guide* (May 1994), describes the components of the Personal Computer Workstation (PCWS). It is intended for the novice or experienced user of a personal computer, who wishes to connect to MUSIC/SP or another host system. Note that documentation for *PCWS for Windows* is available on the PCWS diskette.

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# **Chapter 1. Introduction to CWIS**

# Introduction to CWIS

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A CWIS (Campus-Wide Information System) provides online access to information of general interest to your campus community. It is sometimes referred to as an electronic bulletin board or BBS (Bulletin Board System). In addition to sharing valuable information with the campus community, it can also provide the outside world with a glance at your institution. A CWIS can include electronic forms for collecting information, access to other programs or computers, full-text searching for large documents, and can forward comments directly to the owners of the data through electronic mail.

## How does a CWIS work?

The concept of a CWIS is based on that of a traditional bulletin board. Some bulletin boards are glassed in and one person is in charge of maintaining the information. Other bulletin boards are available for anyone to post information.

Unlike a conventional bulletin board, a CWIS allows you to access information without leaving your desk or home. (Also, those who need to distribute information or notices do not have to go around campus finding all the bulletin boards, or mail the same notice to hundreds of people.)

A CWIS can display more information than a conventional bulletin board, and does it more conveniently for both the data provider and the viewer.

## Why have a CWIS?

For any organization, its most important commodity can be the collective knowledge that it owns. This knowledge is not just in the form of experience, but also in a variety of databases and internal and external documents.

Information is often varied and scattered throughout an organization. The traditional method of printing and distributing information has inherent and unexpected pitfalls. The usual scenario consists of document preparation, clogged printing shops, mass mailings, and one of the eventual destinations -- a filing cabinet, dusty shelf, or the trash can. Updating the material involves repeating the same process.

Decisions that depend upon referencing this knowledge are made daily by individuals, departments, and interest groups within an organization. Most data and information are managed by individual departments, and others may not even be aware of its existence.

The key to efficient use of this information is *availability and ease of access*. A CWIS tackles this challenge by providing a system for presenting a wide variety of information in what is typically a menu approach.

An interesting by-product of a CWIS is that individuals and departments will have a better handle on what others are doing. Decisions are more likely to take into account existing situations and policies. This will encourage a focus toward integrated policies and methods.

A CWIS has a very attractive cost-benefit component. Most organizations have already put a large investment of man-power and equipment into central computing and communications facilities. As with any investment, this resource should be used to its fullest potential. With a CWIS, an organization capitalizes on its current assets while increasing its efficiency and effectiveness. Add to this the substantial savings in paper distribution while increasing availability and freshness of the information, and you have an overwhelming argument for implementing a CWIS.



In summary, the following are some of the benefits of a CWIS.

- provides more access to up-to-date information
- cuts down on mass-mailing, while reaching a wide audience
- saves paper and printing delays
- can reduce telephone and mail inquiries
- provides a good vehicle to showcase your institution
- opens up lines of communication between departments
- has a positive impact on decision making
- makes efficient use of central computing facilities

## Considerations

There are many issues that need to be addressed when starting a CWIS. Each institution may choose to implement their CWIS differently. The following should be considered before beginning.

- Who is going to be responsible for maintaining the CWIS?

We suggest that one person be assigned the task of being the CWIS coordinator. This person would be responsible for organizing the data and act as a central resource for data providers. These responsibilities could take a couple of hours a week or become a full time job. This depends on how much information will be on the CWIS and how self-sufficient your data providers will be.

- Who will establish policies and procedures?

It is a good idea to set up a committee to make decisions on the many issues that will come up. For example: What topics should appear on the main menu? Should some topics have restricted access? Is anonymous access to be allowed?

You don't have to resolve all of these issues right away, but be prepared to make these decisions as they arise. The next section can help you plan and get started.

## Getting Started

Our best advice is, "Just Do It!" It is one of the best investments in organizational communication that you will ever make. Begin by setting up a small CWIS that has information of wide appeal. This will demonstrate its value. Get the backing of top management to ensure that the CWIS is accepted as one of your organization's priorities.

Initially, you may want to actively solicit data from various departments. You may have to demonstrate the usefulness and desirability of having their data posted. For example, a stationary price list could be included and it would save that department valuable time by decreasing telephone enquiries. Our experience shows that most data providers become very enthusiastic and cooperative.

## Technical Considerations

MUSIC's CWIS facility has been designed to handle information in many different ways, according to your needs. Here are some considerations that can help in the design and implementation of your CWIS:

1. Individual userids are not required to access a CWIS. However, restricted access can be enforced for all or part of a CWIS if these features are desired. (We recommend a policy where only public information

be included on the CWIS. Items that need restrictions are probably not suitable.)

2. Make sure that most of your existing workstations and terminals can access your CWIS, from campus and home.
3. Sequential searches of large documents are just too time consuming. Use MUSIC's full-text searching facility to provide quick searches of telephone books, policy manuals, course descriptions, etc..
4. Have a separate userid for the CWIS coordinator. All files associated with the CWIS would be stored under this userid. The coordinator will then have update privileges for all files, and can assign update privileges to each owner of data (data providers) on an individual file basis.
5. Help data providers (departments) learn how to update their information independently. This lets them be in control of their own data, and saves time for the coordinator. If the coordinator will be adding data, make sure that permission has been obtained from the owner of that data.
6. MUSIC's CWIS facility allows people to direct their comments back to the data providers through electronic mail. Encourage data providers to choose this option when supplying information to the CWIS. There is nothing more effective as direct feedback.
7. Maintain usage counts on what people are actually looking at to help you determine what people want to see (for example, what should be on the main menu). A logging feature is part of MUSIC's facility for creating and maintaining a CWIS.
8. Consider allowing some direct posting of items. For example, individuals can contribute to a "wants ads" section to dispose of surplus equipment.
9. Some topics may include "electronic forms" that can be used instead of paper forms. For example, a registration form could be provided along with a seminar description. The viewer can send in the form while viewing the topic.
10. Include an index of all topics on the main menu. This informs users of topic names so they can take short cuts and bypass menus.
11. Make sure that data is up-to-date. Your CWIS will not be popular if documents are inaccurate. Don't put on data unless someone is committed to keeping it fresh. For example, if new job positions are posted every Thursday morning, people will expect this service and will be disappointed or upset when the postings are late. However, if the information is timely and accurate then your CWIS will be successful.

## **Hints for Creating a CWIS**

Before creating a CWIS it is helpful to see one first. The MUSIC system comes with a sample CWIS called "CWIS.SAMP". (Also, you can try McGill University's CWIS to see one in operation. See Appendix A for instructions.)

The sample CWIS that is on MUSIC contains sample menus and data. By trying this facility you will be better prepared to create one of your own. Enter "CWIS.SAMP" in \*Go mode to access it. The following screen appears.

```

Help   End   Up     Down   Top     Bottom Main   Scan   Find   Topic  Quit
----- Campus-Wide Information System (SAMPLE) ----- Page 1/1
Command ==> _
Date: 14May93 12:51:11                                Updated: 06Apr92 08:04
Move your cursor to any topic name and press ENTER.

OVERVIEW      How to use CWIS.SAMP, how to post information
INDEX         Index of all CWIS.SAMP items & What's New

EVENTS        Upcoming University Events
ATHLETICS     Athletics Department Information
COMPUTING     Computing Resources
MANUALS       Online MUSIC Manuals
LIBRARY       Library Information
PHONE         Phone Directory
WEATHER       Today's weather and short-range forecast
PUBLIC        Access to Public Bulletin Boards

STUDENTS      Calendar, General Info, Regulations, Course Descriptions
STAFF         Administrative Policies, Benefits, Job Postings

F1=Help  F2=Ask F3=End F7=Up F8=Dn  F9=Find F10=Top F11=Bot F12=Cur PA1=Quit

```

Figure 1.1 - Sample CWIS called "CWIS.SAMP"

## Main Menu

The main menu consists of several highlighted topics, each with a short description. Since this CWIS has a hierarchal structure, most of these topics are sub-menus which lead to further topics. The main menu is very important as it is the first screen your audience will see. Topics that have wide appeal and will be used often are good choices for this screen.

In addition to "mainstream" topics, consider topics aimed at individual groups. Your audience can be made up of administrative staff, academics, students, and those outside of your institution. The main menu can include one topic for each group. Once this topic is chosen then a sub-menu can include relevant choices for that audience.

Try to leave room for future topics. You can have up to 50 screens for a menu but 1 screen is recommended for the main menu. The main menu can display multiple columns of topic names if more room is needed.

Full details about creating a main menu can be found in *Chapter 4 - Information Display Program (IDP)* in the section "Creating Menus".

## Topics

There are several different types of topics that can be included in a CWIS. A topic can execute another program on MUSIC, thereby leaving the CWIS environment temporarily. This program could run on MUSIC or access another operating system or another computer. (Below, Type 4 - ITS Topic is an example of a topic that executes a separate MUSIC program.)

Most often a topic displays text - printed documents that have been converted to display on the screen. The maximum line length of a file is 79 characters. If the files are being transferred to MUSIC from a PC, the PC

file should be in ASCII format. This guide concentrates on this type of topic. There are four methods to display topics on your CWIS.

Type 1      **text topic**

is an ordinary text file - viewers can page up and down and locate text. (Recommended for small documents.) These topics can be selected from a menu - see Type 3 below.

Type 2      **itemized menu**

is an ordinary text file broken up into numbered sections and preceded by a table of contents (menu). The menu and text are stored in one file (saves on topic names). The viewer accesses each section by typing a selection code on the menu. (Recommended for medium to large documents.)

Type 3      **highlighted menu**

is a menu consisting of a list of topic names. All the topics on the menu are related but stored in separate files. The viewer points to the highlighted topic name and presses ENTER to view. This selection method is called "point and shoot". Incidentally, these topic names could also appear on other menus, can be highlighted within text, or typed in the command area of any screen. (Recommended for a group of related files.)

This highlighted menu can call in any of the four types of topics listed here. The main menu in figure 1.1 earlier is an example of this kind of menu.

Type 4      **ITS topic**

The ITS (Index Text Searching) program is invoked to present a large data file which has been pre-processed for full-text searching. (Recommended for large documents.)

This type of topic calls in another MUSIC program.

Each of the four types of topics are shown in the diagrams below and are taken from the sample CWIS called "CWIS.SAMP" (figure 1.1). Details about how to create these topics and their associated files are included in Chapter 4.

## Type 1 - Text Topic

The first diagram shows the display for an ordinary text file. This topic is called WEATHER from the main menu of CWIS.SAMP (figure 1.1). This particular example takes up only one screen, but 50 screens are allowed (limits can be changed by the CWIS coordinator). Viewers can page through the text and use the LOCATE command to find information.

```
Help   End   Up     Down   Top    Bottom Main   Scan   Find   Topic  Quit
----- Weather Forecast ----- Page 1/1
Command ==> _
Date: 14May93 12:51:11                      Updated: 07Apr92 14:19
TODAY'S WEATHER

    Mainly cloudy
    High of 8
    Low of 1

SHORT TERM FORECAST

    Saturday:  a few clouds, high 4, low -6
    Sunday:    Sunny, high 7, low -2

F1=Help  F2=Ask  F3=End  F7=Up  F8=Dn  F9=Find  F10=Top  F11=Bot  F12=Cur  PA1=Quit
```

Figure 1.2 - Ordinary Text File (Type 1)

## Type 2 - Itemized Menu

Figure 1.3 below shows the topic ATHLETICS after it was selected from the main menu of CWIS.SAMP. Instead of displaying all the text sequentially (type 1) the viewer is shown the sections of a document and can make selections. (The actual file contains a numbered menu and all the corresponding text. Codes are placed in the sequential file to mark each section.)

```
Help   End   Up     Down   Top     Bottom Main   Scan   Find   Topic   Quit
-----
----- ATHLETICS 1989-1990 ----- Page 1/1
Command ==>
Date: 14May93 12:51:12                                Updated: 07Apr92 14:29
Select _  1  General Information and Building Hours
          2  Facilities
          3  Athletics 1989-90 Membership Fees
          4  Athletic Department Directory
          5  Recreational Activity Schedule
          6  Instructional Athletics Program
          7  Intramural Sports Program
          8  Sports Clubs

F1=Help  F2=Ask F3=End F7=Up F8=Dn  F9=Find  F10=Top  F11=Bot F12=Cur PA1=Quit
```

Figure 1.3 - Menu and Text File in one (Type 2)

### Type 3 - Highlighted Menu

The diagram below shows the topic STAFF after it was selected from the main menu of CWIS.SAMP. The topic names on this menu are highlighted to indicate the choices on the screen. Viewers can move the cursor to a highlighted topic name and press ENTER to access it (point and shoot).

```
Help   End   Up    Down  Top    Bottom Main   Scan   Find   Topic  Quit
----- Information for Staff ----- Page 1/1
Command ==>
Date: 14May93 12:51:13                      Updated: 07APR92 14:36

Place your cursor on a topic and press ENTER:

ADMIN          - Administrative policies
BENEFITS       - Employee Benefits
POSTAD         - Job Positions (administrative)
POSTAC         - Job Positions (academic)

F1=Help  F2=Ask F3=End F7=Up F8=Dn  F9=Find  F10=Top  F11=Bot F12=Cur PA1=Quit
```

Figure 1.4 - Highlighted Menu (Type 3)

#### Type 4 - ITS Topic

The next diagram shows a document that has been pre-processed through the Index Text Searching (ITS) program. From CWIS.SAMP the topic MANUALS is chosen and then GNU is selected to view the *MUSIC/SP Guide for New Users*. The viewer can now enter a keyword(s) to search for information. Figure 1.5 shows the screen display for an ITS topic.

```
MUSIC/SP V2.4 Guide for New Users - 13MAY93
-----
MUSIC/SP Indexed Text Searching Facility

Sample search patterns:
    super          Look for only the word "super"
    super*         Look for words starting with "super" such as "supervisor"
    mail super     Look for entries that contain both words
    mail or super  Look for entries that contain either word

Table of contents
    =cs           Use this search word to show summary of contents
    =c            Use this search word to show full contents

-----
Enter search pattern below:

=> _
-----
F1:Help  F3:Quit search facility  F6:New search  ENTER:Begin search
```

Figure 1.5 - Index-Text Searching (Type 4)

Because the document has been pre-processed, response is instantaneous. There are no delays required to find the target text.

*Note:* The ITS program is separate from CWIS.SAMP. Pressing F3 when viewing this ITS topic returns you to CWIS.SAMP. Other programs on MUSIC can be invoked like this.

Full details about creating CWIS topics can be found in *Chapter 4 - Information Display Program (IDP)*.



## Data Providers

It is a good idea to provide online help for *Data Providers*. The topic "OVERVIEW" from the main menu of CWIS.SAMP (figure 1.1) can be used as a model. (The text for this topic can be found in the file \$ADZ:@CW.OVERVIEW.) The diagram below shows one of the screens (page 3/9) for this topic.

```
Help   End   Up    Down  Top    Bottom Main   Scan   Find   Topic  Quit
----- Overview of CWIS.SAMP ----- Page 3/9
Command ==> _
Date: 14May93 12:51:14                                Updated: 06APR92 14:32
      GUIDELINES FOR POSTING DATA ON CWIS.SAMP

WHO CAN POST DATA ON CWIS.SAMP

CWIS.SAMP is a vehicle for disseminating information of general
interest to the ____ community. The information is provided by
authorized ____ staff or student organizations.

POSTING STYLE PREFERENCES

Different information lends itself to different ways of
presenting it to viewers. Whereas a short announcement of an
upcoming event may be best presented as a simple screen-full of
text, another, perhaps larger document may be best broken up into
sections of text that a reader can access through a series of
subtitles or menu items. Still other types of data, for example
a very large file, may be best offered to a viewer through
a keyword search (full-text searching).

F1=Help  F2=Ask F3=End F7=Up F8=Dn  F9=Find F10=Top F11=Bot F12=Cur PA1=Quit
```

*Figure 1.6 - Help text for Data Providers*

More information about creating files suitable for display in a CWIS is included in Chapter 4.

## Help Facilities

A Help facility is really a form of a BBS. However, a help facility is usually smaller than a BBS and has a narrower audience. For example, MUSIC's help facility is aimed at those interested in learning about MUSIC. A Help facility shares the same hierarchical structure as a BBS but the information is usually in the form of short text files only. To try MUSIC's general help facility enter "HELP" in \*Go mode or press F1. The following figure shows the main menu for HELP:

```
Help   End   Up    Down   Top    Bottom Main   Scan   Find   Topic  Quit
-----
MUSIC HELP FACILITY ----- Page 1/1

Command ==>
Date: 02Mar93 12:09:39                                Updated: 11Feb92 16:31
Select _  1  New User      -what a new user should know
          2  Commands   -MUSIC command language from *Go
          3  Editor     -using the MUSIC editor
          4  Messages   -system messages and their meanings
          5  Programming -Compilers, Loaders, Interpreters, Processors
          6  Script     -SCRIPT and other utilities for word processing
          7  Terminals  -descriptions and how to use terminals and PCs
          8  Utilities  -MUSIC utility programs
          9  Batch      -how to submit a job to MUSIC batch (background job)
         10 Subroutines -MUSIC subroutines
         11 Tutorials  -on programming languages (Rexx, VS Fortran, ...)
         12 Internet  -programs that access the Internet
          T  Topics    -list of help topics available
          H  Help      -how to use this help facility
          N  Whatsnew  -What is new with MUSIC

F1=Help  F2=Ask F3=End F7=Up F8=Dn F9=Find F10=Top F11=Bot F12=Cur PA1=Quit
```

Figure 1.7 - MUSIC's General Help Facility

## Ads Facilities

For the most part, an Ads facility works the same way as a BBS or help facility. One major difference is that anonymous access is not permitted - everyone needs a separate userid. Another difference is that viewers are allowed to add topics without permission. One person may be responsible for the main menu, but after that it is the viewers who build up the information. A sample ads facility is provided for you to try. Enter "ADS.SAMP" to view it. The following screen appears:

```
Help   End   Up    Down  Top    Bottom Main  Scan  Find  Topic  Quit
-----
----- Classified Ads ----- Page 1/1
Command ==>
Date: 02Mar93 12:17:16                      Updated: 21Apr92 08:32
To select a specific ADS section place the cursor on the desired item
and press the ENTER key.

Help Wanted
Job Wanted
Typing Services
Tutoring Services
Lodgings for Rent or Sale
Furniture for Sale
Personal Ads
Moving Services
Baby Sitting Services
Computers for Sale or Wanted
Articles for Sale or Wanted
Services

F1=Help  F2=Ask F3=End F7=Up F8=Dn  F9=Find  F10=Top  F11=Bot F12=Cur PA1=Quit
```

Figure 1.8 - Sample Ads Facility

The main menu for this ads facility is just like a BBS and can be referred to as *BBS mode*. The items from the main menu (figure 1.8) access other menus that are in *ads mode*.

The following diagram shows the screen display for the item "Help Wanted" from the main menu.

```
Help   End   Up     Down   Top    Bottom Main   Scan   Find   Topic  Quit
----- Help Wanted ----- Page 1/1
Command ==>
Date: 02Mar93 12:17:47                               Updated: 21Apr92 15:14
Move the cursor to the desired item and press the ENTER key to
view the entire entry.  To add your own entry press F4 .

FARM WORK! Looking for a student to work on _21Apr92_09:47:53
Packers needed to help with home move. Two p_21Apr92_15:14:03
Person required to teach seminar on MAIL. Mu/10Jul91/10:35:21
Teaching assistants for statistics course ne/10Jul91/08:54:00
Tutor needed to teach math to grade 4 studen/27Jun91/09:53:22

F1=Help  F2=Ask  F3=End  F7=Up  F8=Dn  F9=Find  F10=Top  F11=Bot  F12=Cur  PA1=Quit
```

*Figure 1.9 - Creating or Updating an Ad*

Each of these menu items list topic names consisting of the first line of each ad.

From this menu (ads mode) users can automatically view or add topics. They can also edit or delete their own existing topics.

The above diagram shows items that have been added by different users. If you point your cursor on the first item and press enter you can view that topic. Figure 1.10 shows the screen display for the first item on the "Help Wanted" menu.

```
Help   End   Up     Down   Top     Bottom Main   Scan   Find   Topic  Quit
-----FARM WORK! Looking for a student to work on----- Page 1/1
Command ==>
Date: 02Mar93 12:18:01                                Updated: 21Apr92 09:47

To make inquiries about this item to its author, press F2 to send
electronic mail with your comments and questions.

Added on 21 Apr 1992 at 09:47:53
=====
FARM WORK! Looking for a student to work on our farm in the
eastern townships. All summer long. Fresh air. Good food.
For more info call: Marc (514) 466-2246

F1=Help  F2=Ask F3=End F7=Up F8=Dn  F9=Find  F10=Top  F11=Bot F12=Cur PA1=Quit
```

*Figure 1.10 - Viewing an Ad*

## Summary

All campuses would benefit from a CWIS. It can become a popular and valuable information resource. It is an inexpensive and efficient option for handling the enormous amounts of information that any organization generates on a daily basis. And it saves trees!



## **Chapter 2. Information Display Program (IDP)**

## Overview of IDP

---

The IDP (Information Display Program) facility is used to create and run bulletin boards, help facilities, and ads facilities.

**BBS** A BBS (bulletin board system or CWIS) presents a variety of documents, text, information and other services, to a wide audience. Through a series of hierarchical menus viewers are able to retrieve this information. The coordinator of the facility can add topics and assign update privileges to data providers on a per topic basis. A sample BBS facility is provided for you to try. Enter "CWIS.SAMP" to view it.

**help** A Help facility is really a form of a BBS. IDP treats both types of facilities the same way except the default help text is different. However, a help facility is usually smaller than a BBS and has a narrower audience. For example, MUSIC's help facility is aimed at those interested in learning about MUSIC. A Help facility shares the same hierarchical structure as a BBS but the information is usually in the form of short text files only. To try MUSIC's general help facility enter "HELP" in \*Go mode.

**ads** For the most part, IDP handles an Ads facility in the same way as a BBS or help facility. One major difference is that anonymous access is not permitted - everyone needs a separate userid. Another difference is that viewers are allowed to add topics without permission. One person may be responsible for the main menu, but after that it is the viewers who build up the information. A sample ads facility is provided for you to try. Enter "ADS.SAMP" to view it.

**To simplify the information presented in this chapter, the term BBS refers to all three types of facilities (BBS, help, and ads facilities). Where appropriate, any distinctions or differences for each type of facility will be mentioned.**

A BBS facility created with IDP is SAA compatible, with great emphasis placed on first-time users and users from non-mainframe backgrounds. Bulletin boards that have SAA standards are designed to work with function keys, an action bar, a command area, a menu selection area, mouse support, and pull-down windows.

The selection of actions and menu items is based on a "point and shoot" mechanism. All the viewer has to do is point to a topic name or an action and press the enter key. In this way a mouse can be used to click on actions, topic names, menu items, and even function key definitions on the screen. The design has been made as intuitive as possible. MUSIC, in this way, provides a centralized, easily accessible, and maintainable information base.

The facility itself is based on "flat" files. These are files that contain only standard printable characters and can be prepared by any user on the system who has been authorized to modify the files. A modest mark up language is used to set titles, page skips, flag menu and topic names, highlight text, authorize or deny access to the topic, and set a mailing address to handle inquiries. See "IDP Statements and Syntax Symbols" later in this chapter.

The IDP facility responds to the viewer's request by listing or executing a specific file. The viewer can select the file from a topic on a menu or by typing the topic name in the command area of any BBS screen. Each file can have one or more topic names that refer to it. For example, to see a bulletin board topic on Athletics, a viewer can specify "ATHLETICS" or "SPORTS". The actual name of the file might be "ATH.DEPT". The file can contain one topic description or can be a menu of topics. The file can also be another MUSIC program.

Viewers can request several topics once inside the BBS and IDP keeps track of the path a viewer takes. Each time the F3 (End) key is pressed the viewer returns to the previous screen. The PA1 key can be used to exit



from the BBS and control returns to the host program or MUSIC command mode.

Viewed topic names can be recorded in a log for later inspection by the BBS coordinator. (See the IDP control statement "LOGGING" described in the section "User Access Control Statements"). The BBSTAT program can be used to produce statistics. See *Chapter 5 - Usage Statistics Program (BBSTAT)* for more information.

Large documents such as telephone books and administrative handbooks can be pre-processed for full-text searching and presented within the BBS. Refer to *Chapter 4 - Index Text Searching* for more information.

### **Example of Invoking a BBS**

The sample bulletin board called CWIS.SAMP can be accessed in command mode by entering the following:

```
        CWIS.SAMP
or      CWIS.SAMP topicname
or      CWIS.SAMP topicname xx
```

"CWIS.SAMP" is an executor file produced by the IDP program when the BBS was created. *Topicname* is a parameter passed to the IDP program which refers to a particular file. The *xx* indicates a menu selection code to specify a particular menu item (or subtopic), for itemized menus.

## **Creating and Maintaining a BBS**

All bulletin boards and help facilities can be created and maintained through the IDP program. (Little maintenance is required of the BBS coordinator for an ads facility as the viewers maintain their contributions.) IDP ensures that each facility you create has all the necessary components, as follows:

- An executor file
- a master TOPICS file for storing topic names, aliases, and corresponding file names.
- main menu file
- information files (topics) with correct file attributes
- a log file recording the number of times the facility and/or the topics are selected. This feature is optional.

From IDP you can create, delete part or all of a BBS, rename, update the facility's parameters, or edit individual BBS files. Menus step you through each procedure. This simple approach is supplemented with explicit help text available through the F1 key at all stages. The help text also includes sample BBS files to illustrate how menus and other features are used.

IDP is invoked by entering "IDP" in MUSIC command mode, as illustrated in the figure below.

```

*Go

-----T-----T-----+-----+
idp
Reading

```

*Figure 2.1 - Invoking IDP*

The following figure is a display of the IDP main screen, from which you can select an appropriate function.

```

----- Information Display Program (IDP) Utility -----

Place one of the selection codes, from the list below, in the field labelled
"Option". Then fill in the name of a BBS, ADS, or HELP facility to be
processed. When you have made your choices press the ENTER key.

C -create      U -update    D -delete    R -rename    V -view    E -edit topic files

Option  ==> _ (use one of the options from above)

Name     ==>                               (name of the BBS, ADS, or HELP facility)

-----

F1=Help    F3=End

```

*Figure 2.2 - IDP Main Screen*

## IDP Options

Below is a brief description of the options on the IDP main screen. The rest of the chapter explains these functions in detail.

When you chose "C", "U", or "V" the same screen is presented. For create and update you can modify the parameter fields and in this way define your facility. The view function does not allow modification of the fields.

- C-Create        goes to the next IDP screen for defining a new BBS facility. IDP parameters must be specified in the appropriate fields.
- U-Update       goes to the next IDP screen for changing the parameters of an existing BBS facility.
- V-View        goes to the next IDP screen for viewing the parameters for a BBS facility.

D-Delete        deletes an entire BBS facility and all of the files associated with it, including the executor file, main menu, master TOPICS file, and all text files.

R-Rename        renames an entire BBS facility and all of the files associated with it.

E-Edit topic files  
                 goes to an IDP edit session of the master TOPICS file. From here you can add, delete, and modify topic names and all the files associated with a BBS.

*Note:*    You could edit this file outside of the IDP facility, but you would need to remember the naming convention for the files and set the right file attributes. By calling the editor from within IDP these important details are taken care of.

## IDP Create, Update, & View Options

Figure 2.3 shows how to update a BBS facility. In the example below all the components of the sample BBS called CWIS.SAMP are stored under the \$ADZ000 userid. In order to access your BBS you must be signed on with the userid of your BBS. If not, your userid must have FILES privileges.

To update CWIS.SAMP the following fields are filled in on the IDP main screen.

C -create	U -update	D -delete	R -rename	V -view	E -edit topic files
Option	==> u (use one of the options from above)				
Name	==> \$ADZ:CWIS.SAMP (name of the BBS, ADS, or HELP facility)				

*Figure 2.3 - Updating an existing facility called CWIS.SAMP*

Once the update function is requested the next IDP screen is displayed. Here, the parameters that define a BBS facility are shown on the screen. The figure below illustrates the first screen of fields for Create, Update, and View. In this sample the fields on the screen have been filled in.

```

----- Information Display Program (IDP) Utility -----

Fill in the appropriate fields and press PF12 to process or PF3 to cancel.

*** Update screen 1 of 2 for $ADZ:CWIS.SAMP
Userid      ==> $ADZ              (1 to 16 character userid for owner of files)
Prefix      ==> CW   (1-3 character file prefix composed of a-z, 1-9 and #$_)
Comment     ==> Campus-Wide Information System (SAMPLE)
Access type ==> PUBL             (PUBL, SHR, PRIV, COM: exec file access setting)
Queries to  ==> $000             (mail queries to "user@node")

Counter     ==> N (y/n, keep count of times this BBS, ADS or HELP is used)
Extended    ==> Y (y/n, use extended colors and reverse video if available)

IDP type    ==> B (Facility type: h=help facility, b=BBS, a=classified ads)
FS help     ==> $BBS:BBS.FS   (1-12 character name of the full screen help file)
TTY help    ==> $BBS:BBS.TTY (1-12 character name for TTY support help file)

Created by  CCKW000              on 28MAY92              Last read   05MAY93
Updated by  CCKW000              on 28MAY92   at 10:47:30   Usage count 0
-----
F1=Help  F3=End  F7=Prev scr  F8=Next scr  F12=Process  Enter:Verify entries

```

Figure 2.4 - IDP Screen for Create, Update, and View

When creating a new facility you will have to supply the information for the parameter fields above. (*Chapter 3 - Tutorial for Creating a BBS* gives the steps necessary to create a CWIS.) Once you have entered your chosen parameters you can press:

- ENTER      to validate the chosen values and options
- F12        to actually perform the create or update operation
- F3        to abandon the operation completely and return to the IDP main screen.

When F12 (process) is pressed for a new BBS facility three files are created, if they do not already exist:

- an executor file for the facility
- a master TOPICS file by the name of userid:@prefix.TOPICS
- a main menu for the facility by the name of userid:@prefix.MAIN.MENU

*Note:*    userid and prefix are those specified on the respective "Userid ==>" and "Prefix ==>" fields (figure 2.4).

Using CWIS.SAMP as an example, the three files created by IDP are:

\$ADZ:CWIS.SAMP	executor file (viewers enter "CWIS.SAMP")
\$ADZ:@CW.TOPICS	master file for topic names
\$ADZ:@CW.MAIN.MENU	main menu file (shell) for CWIS.SAMP

## IDP Parameters for Screen 1 of 2

Userid	<i>userid</i> is the userid for storing the topic files. (The userid does not include the subcode, if any.) It must be the userid that you are currently signed on with. If your userid has privileges (system administrator userid) then the BBS userid can differ from your sign-on userid.								
Prefix	Each file associated with a BBS facility shares a common userid/prefix combination in the form of "userid:@ppp". Where <i>userid</i> is the userid (owner of the files), @ is inserted by the IDP program, and <i>ppp</i> is any valid combination of the characters a-z, 0-9 and the characters "@#\$. For example, the file name for the ATHLETICS topic in CWIS.SAMP is "\$ADZ:@CW.ATHLETICS". "CW" is the prefix in this example.								
Comment	This is a descriptive field associated with the facility. It is also used as a tentative title for the main menu of the facility.								
Access Type	<p>You can set a system wide access type for the facility's exec file name (CWIS.SAMP is an example of an exec file). An exec file can have one of the four access types listed below:</p> <table><tr><td>publ</td><td>the facility is public to all users and accessed by its UNQUALIFIED name. For example, \$ADZ:CWIS.SAMP is accessed as "CWIS.SAMP"</td></tr><tr><td>shr</td><td>the facility is public to all users and accessed by its QUALIFIED name. For example, \$ADZ:CWIS.SAMP is accessed as "\$ADZ:CWIS.SAMP"</td></tr><tr><td>priv</td><td>the facility is private and accessible only to privileged users (system administrator). For example, a userid with the FILES privilege can access \$ADZ:CWIS.SAMP by specifying "\$ADZ:CWIS.SAMP".</td></tr><tr><td>com</td><td>the facility is public but accessible only to privileged users (system administrator). For example, \$ADZ:CWIS.SAMP is accessed as "CWIS.SAMP".</td></tr></table> <p><i>Note:</i> a qualified file name is one that is prefixed by the owner's userid. For example, \$ADZ is the owner's userid and CWIS.SAMP is the file name.</p>	publ	the facility is public to all users and accessed by its UNQUALIFIED name. For example, \$ADZ:CWIS.SAMP is accessed as "CWIS.SAMP"	shr	the facility is public to all users and accessed by its QUALIFIED name. For example, \$ADZ:CWIS.SAMP is accessed as "\$ADZ:CWIS.SAMP"	priv	the facility is private and accessible only to privileged users (system administrator). For example, a userid with the FILES privilege can access \$ADZ:CWIS.SAMP by specifying "\$ADZ:CWIS.SAMP".	com	the facility is public but accessible only to privileged users (system administrator). For example, \$ADZ:CWIS.SAMP is accessed as "CWIS.SAMP".
publ	the facility is public to all users and accessed by its UNQUALIFIED name. For example, \$ADZ:CWIS.SAMP is accessed as "CWIS.SAMP"								
shr	the facility is public to all users and accessed by its QUALIFIED name. For example, \$ADZ:CWIS.SAMP is accessed as "\$ADZ:CWIS.SAMP"								
priv	the facility is private and accessible only to privileged users (system administrator). For example, a userid with the FILES privilege can access \$ADZ:CWIS.SAMP by specifying "\$ADZ:CWIS.SAMP".								
com	the facility is public but accessible only to privileged users (system administrator). For example, \$ADZ:CWIS.SAMP is accessed as "CWIS.SAMP".								
Queries to	This is a 1-64 character mail address of the coordinator of the BBS facility. This address is used to send email to the coordinator when the viewer either presses F2 or issues the ASK, INQUIRE, OR SUGGEST commands. Each topic file can have its own ")ANSWER" statement to override the "Queries to" address. When, however, a topic does not have an )ANSWER statement in it the "Queries to" address is used. It can be any valid address, including a remote userid. The format of the address is the standard userid@node. If "Queries to" is set to "-" (a single minus sign) all queries are disallowed for the entire facility regardless of )ANSWER statements in individual topic files.								
Counter	You can specify here whether a usage counter for the facility is to be maintained by entering a "y" or an "n". The default is "y". The BBSTAT program requires that the counter be set to "y".								
Extended	You can specify here whether extended color and other features are to be used, when available on a workstation. The default is "y".								
IDP type	"IDP type" is used to specify the facility type you want. A "B" specifies a BBS (CWIS) facility, a "H" specifies a help facility, and an "A" a classified ads facility. The default is "B".								
FS help	This parameter specifies the name of the help file to be used by the facility when a viewer asks for help. The file \$BBS:BBS.FS is designed for a BBS facility, \$BBS:HLP.FS for a help facility, and \$BBS:ADS.FS for a classified ads facility. If you leave this field blank IDP will set the help file according to the selection you made in the field 'IDP type'. Any file specified here must have been created as PUBL or SHR.								

TTY help      This parameter specifies the name of the help file to be used by the facility when a viewer asks for help. This help text is invoked when a viewer is using a TTY (line) type terminal. The file \$BBS:BBS.TTY is designed for a BBS facility, \$BBS:HLP.TTY for a help facility and \$BBS:ADS.TTY for a classified ads facility. If you leave this field blank IDP will set the help file according to the selection you made in the field 'IDP type'. Any file specified here must have been created as PUBL or SHR.

The figure below illustrates the second screen of parameters for Create, Update, and View.

```

----- Information Display Program (IDP) Utility -----

Fill in the appropriate fields and press PF12 to process or PF3 to cancel.

*** Update screen 2 of 2 for $ADZ:CWIS.SAMP

# of Topics ==> 5000      (maximum # of topics, minimum=100, 12 bytes each)
# of EXECs  ==> 200      (maximum of executable programs, 80bytes/exec)
Names list  ==> 64000    (Size of buffer to hold topic names, minimum is 120)
QFREAD buf  ==> 10240    (buffer size to be used by QFREAD, minimum is 5120)
Memory req. ==> 600      (k bytes, minimum estimated from selections above)
Pages/topic ==> 131      (estimated from memory requested and other resources)

First Cmd   ==>
Thread      ==>          (1-8 character thread name)

Created by CCFP000          on 03FEB94          Last read   15OCT95
Updated by CCFP000          on 03FEB94   at 17:02:40   Usage count 0
-----
F1=Help  F3=End  F7=Prev scr  F8=Next scr  F12=Process  Enter:Verify entries

```

Figure 2.5 - 2nd Screen for Create, Update, and View

## Controlling Memory Resources (Screen 2 of 2)

The following describes the fields that are used to control and manage memory resource usage. IDP assumes reasonable defaults, but you can modify these fields to suit your needs. Below, each of these is described in greater detail.

- # of Topics      This value refers to the number of topics that you can have in the topics file. You would normally make this number much larger than the number of topics you currently expect to have. Memory required is 12 bytes per topic. The maximum is 5000 and the the minimum is 100. The default is 100.
- # of EXECs      This value refers to the number of executable programs you can have in the topics file. Memory required is 80 bytes per EXEC. The maximum can not exceed "# of Topics" the minimum is 60. The default is 60.
- Names list      This value refers to the number of bytes you wish to allocate to topic names. Topics can have names from 1 to 64 characters. Most topics have rather short names. The minimum value allowed is 120. The default is 1000 bytes.

QFREAD buf	This value refers to the amount of memory that is to be used for file I/O buffering. A value between 5120 and 10240 is adequate. The minimum and default value is 5120 bytes.
Memory req.	This is the total amount of memory to be allocated for running your application. If you leave it blank IDP will calculate the minimum value for this field. IDP also allocates out of this a minimum number of pages (screens) of a topic that can be displayed. See "Pages/topic" By changing this value you also change the "Pages/topic" field, as it will be recomputed.
Pages/topic	This value is the number of pages (screens) of a topic that are displayable. This field is not modifiable directly. To increase or decrease it you must change any of the fields described above.
First cmd	This field allows you to specify a MUSIC command string to be executed before the presentation of the main menu or other topic files. This can be very useful for pre-authorizing or general announcements and disclaimers.
Thread	This allows you to specify a predetermined thread through a topic. You can have conditional sections in a topic file marked by names. The name you specify here will be used as the criteria for displaying the topic. See the topic "IDP Statements and Syntax Symbols (Markup Language)" for more details.

## Using IDP to Edit the TOPICS File

Each BBS facility has a master file containing all the topic names and associated file names. This is referred to as the TOPICS file. (For CWIS.SAMP this file is called \$ADZ:@CW.TOPICS.)

To edit the TOPICS file select "e" from the IDP main screen and type in the name of the BBS you want to work with. Figure 2.6 shows how the CWIS.SAMP facility is edited.

```

C -create      U -update    D -delete    R -rename    V -view    E -edit topic files

Option  ==> e (use one of the options from above)

Name    ==> $ADZ:CWIS.SAMP      (name of the BBS, ADS, or HELP facility)

```

*Figure 2.6 - Editing a BBS*

After selecting "e" and typing in the name of the BBS, IDP places you in a MUSIC Editor session of the TOPICS file (userid:@prefix.TOPICS).

Figure 2.7 is a sample edit session of the TOPICS file for CWIS.SAMP.

```

$ADZ:@CW.TOPICS: topics file for $ADZ:CWIS.SAMP                                c 1 / 58
+-----+
| You are presently in the editor. You may issue editor |
| commands. The current line is always posted at the center |
| of the screen. The line is broken into fields to aid you |
| in entering your topic definitions. |
+-----+
===== Current line (expanded)
> 0001  Abbr: 9  (minimum abbreviation allowed for the topic name)
      Name: main.menu
      File: main.menu          (1-12 character file name of the topic)
      Exec:
=====
0002 ***** main menu topics
0003 4 overview
0004 2 index
0005 5 events
0006 3 athletics
0007 4 computing
      -+---1---+---2---+---3---+---4---+---5---+---6---+---7---
Command: _

Reading
F1=Help  F2=Toggle to editor  F3=Quit    F5=Edit/create topic  F6=Delete
F7=Up    F8:Down    F9:Locate  F10=Insert  F12=Cursor command/item

```

Figure 2.7 - Editing a Topics File

From here you can add topic names and aliases. The current line is expanded to help you fill in the necessary information for each topic. If you wish, press F2 to use the standard editor screen. You have the full editor command set at your disposal. You can enter editor commands in the field labelled "Command:".

*Note:* The above figure shows a BBS that already has many topics. A newly created facility would only show one topic - MAIN.MENU. You will need to edit this and add your own topics to the TOPICS file.

## How does the TOPICS file Work?

The TOPICS file is the master file for a BBS facility. It is used by the IDP program to provide a list of all the topic names, aliases for topic names, and the corresponding file names. These topic names can be the same name as a file name or be an alias for a file name. (One file name can have several topic names (aliases) that refer to it.) The file name can also be the name for another MUSIC program.

Figure 2.8 below illustrates the topic definition fields. These show on the expanded current line of the IDP edit screen.

```

===== Current line (expanded)
> 0006  Abbr: 3  (minimum abbreviation allowed for the topic name)
      Name: athletics
      File: athletics          (1-12 character file name of the topic)
      Exec:
=====

```

Figure 2.8 - Topic Definition Fields



The following describes the topic definition fields on the expanded line.

**Abbr:** In the above figure the number stands for the minimum number of characters that is needed to specify the topic name. For example, the "3" is specified for the topic ATHLETICS, meaning that ATH, ATHL, ATHLE, etc. is valid. A length of 0 or 99 means that no abbreviation is accepted.

**Name:** The topic name can be up to 64 characters long. For example:

```
Athletics
or
Schedule for Athletics Department
```

are both valid topic names for the file called ATHLETICS.

**Hint:** Topic names can be entered in the command area of any screen of a BBS facility. A single word for a topic name is easier to remember. If you would like viewers to be able to bypass menus to go directly to a specific topic, keep topic names simple.

**File:** This field can be left blank if the topic name and the file name are the same.

**Exec:** You can also run other MUSIC programs and facilities. For example, if you had an entry in the TOPICS file like this.

```
Abbr: 4
Name: edit the hello file
File:
Exec:%edit hello
```

Selecting the topic "edit" (or any substring of "edit the hello file" will edit a file called hello. Once the viewer is finished with the editor they are returned to the BBS. A "%" means that when the program is started the user can return to the BBS only after it has completed or been cancelled. A "|" will allow users to alternate between the BBS and the program. An "=" will terminate the current BBS and execute the program specified.

*Notes:*

1. Only one of the fields "File" or "Exec" can be specified.
2. If you leave "Abbr" blank, it will automatically be computed for you.
3. In the example topic called ATHLETICS the actual qualified file name that IDP assigns is \$ADZ:@CW.ATHLETICS.

## Editing and Updating Individual Topics

Once a topic is included in the TOPICS file, you can use the cursor to point to that line and press F5 to edit the file associated with that topic name. You will leave the TOPICS file temporarily and be placed in a second edit session, ready to modify the topic file.

While editing the file, you can, at any time press F5 again to get a preview of how the topic would look to the viewer.

The full editor command set is at your disposal. You can abandon any changes by quitting the editor. The

FILE command will make the changes to the production copy of the topic file. Immediately after filing it, the changes will be available to all viewers who have access to the facility you are modifying.

## Creating New Topics

To create a new topic, you must first insert a new line in the TOPICS file. This line will contain three items. The first item is the minimum abbreviation that the topic name can be referenced by. Be sure that other topics do not have the same minimum abbreviation. The second is the 1 to 64 character topic name by which viewers are to reference it. The third is the 1 to 12 character name to be used internally by the system. See the previous section "How does the TOPICS File Work?" for more details.

```
Examples 1)  4 athletics sports
          2)  4 sports    sports
          3)  0 clubs and activities clubs
          4)  2 bible %bi
```

The first example defines the topic athletics with a minimum of 4 characters as an abbreviation. Users can reference it as "athl". The actual file containing the text is in userid:@prefix.sports.

The second example, is really an alias of the first. Here viewers will be able to select the topic "sport" and get the same text as if they had selected "athletics."

Example three shows a multi-word topic name of "clubs and activities". "clubs" is the actual topic file name. For this topic no abbreviation is allowed.

The last example shows a topic called "bible" with an allowed abbreviation of 2 characters and the program called "BI" is to be executed when the topic "bible" is selected.

By pointing at a topic name on the screen and pressing F5 you will automatically begin an edit session with the topic file as its target. If the file did not exist IDP creates a template with some suggested entries for you to fill in.

For details about what text to include in a file see the section "IDP Files" later in this chapter.

## Editing Topics while Viewing the BBS

It is also possible to edit topics directly while viewing the BBS under one of the following conditions:

1. You are using the userid where the BBS is stored.
2. Your userid has FILES privileges (the MUSIC system administrator has this privilege).
3. The BBS coordinator has authorized your userid via an ")UPDATE" statement in the topic file.
3. For an ads facility all userids can create topics (ads) and, therefore, can edit or delete their own topic files.

## Controlling Access to the Facility

The main menu file is automatically generated for you. With the main menu file you can control who has view and update access for the entire facility. See the section on "User Access Control Statements" for specific details.

You can also define a padded cell by disallowing MUSIC commands from the command area (NOCOMS), you can disallow the PA2 key for spawning multi-sessions (NOESCAPE), and finally you can automatically logoff viewers rather than returning them to \*Go. For example, suppose that the userid CW99 is set up as having the autoprog "info", and the main menu for the facility called info contained the following:

```
)logoff cw99* T=1  
)nocoms cw99*  
)noescape cw99*
```

Any one signing on to CW99 will be allowed to view the menus and text files but the viewer will not be allowed to issue MUSIC commands, multi-session, and after exiting, the viewer will be logged off MUSIC.

*Note:* Any number of userid string patterns can be entered and as many )LOGOFF, )ACCESS, etc.. statements can be used to define the set of users to be restricted or granted update privileges. See "Viewer Access Control Statements" for more information.

## Sharing Maintenance with Data Providers

In many cases you will want the owners of the data (data providers) to maintain their own files. You can grant them update privileges with the )UPDATE statement placed at the top of their file. Any system administrator, whose userid has the FILES privilege, will also be able to update the BBS files. Users who "own" the files can press F5 when ever they are viewing their topic in the BBS, to begin an edit session. The BBS coordinator can do the same or use IDP to update files. Either method allows for a controlled and safe update of the files, since all files are enqueued and update access is granted to one individual userid at a time. The appropriate messages are provided when files are already being edited or updated.

A very useful hint, that you may give your "data providers" is that while editing a topic or menu file they can press F5 to preview the file as the viewer will see it. This can be very useful in avoiding formatting errors. Immediately after a file is "filed", the new text is available to any one who has access to the topic.

Never give users update privileges to the main menu.

## Getting Feedback from Viewers

You can specify a global email address to which all inquiries and comments will go to. See the section "Creating and Maintaining a BBS" on how to define the global email address for the facility coordinator.

Viewers initiate such inquiries via the F2 key or ASK command. Some topic files belong to specific "data providers". In some cases, you will have set them up as the recipient of email inquiries. This is done through the )ANSWER statement placed at the top of their file. See the section "User Access Control Statements" for more detail.

When a local email address is available it is used instead of the one defined via IDP (create or update functions). You can, however, halt all inquiries by setting a mail address to '-' (a single minus sign) in the IDP create or update screen. If a local file has ")ANSWER -", the inquire feature is made unavailable for that topic only, regardless of what the global email address is.

## Deleting Topic Names and their Aliases

If you simply mean to delete a topic's alias, you should simply delete the line from the TOPICS file. If you really mean to remove the topic name and the topic text file, it is not enough to simply delete the line with the topic definition from this edit session. This is because, the aliases of that topic and the topic file itself will be left around.

The command DELTOPIC can be used to remove a topic name, its aliases, and the text file from the facility. You can type "DELTOPIC topicname", where topicname is the name of the topic to be removed. If you issue deltopic without a topic name, it will remove (delete, kill, zap) the topic defined by the current line of the editor.

## Renaming an Entire BBS Facility

The rename screen gives you the ability to rename the executor file (the name of the BBS, help, or ads facility) or its associated files or both.

The figure below shows the rename screen.

```

----- Information Display Program (IDP) Utility -----

+-----+
|
|                               R E N A M E
|
| Enter the new userid prefix in the appropriate field and hit ENTER to
| verify that it is correctly specified.
|
| Current name   : $ADZ:CWIS.SAMP           New name ==> $ADZ:CWIS.SAMP
| Current userid: $ADZ                     New userid ==> $ADZ
| Current prefix: CW                       New prefix ==> CW
|
|
|
+-----+

-----
F1=Help   F3=End

```

Figure 2.9 - IDP Rename Screen

### Rename Screen Description:

New name	If you specify a new name, the current name will be renamed to the new name. The new name must be a valid MUSIC file name.
----------	--

Userid and Prefix



All files associated with the facility will also be DELETED. These include the data files, main menu, the log file, and the TOPICS file itself.

To cancel the delete, enter 'n' for no at the delete prompt or press F3.

The figure below shows the pop-up window for verifying the delete of the CWIS.SAMP facility.

[illegible]

*Figure 2.11 - Deleting a BBS*

## IDP Files

The IDP program needs to know the name of the BBS and each file associated with it. Therefore, the file names have two parts. The first part is the *root prefix*, to identify which BBS the files belong to. The second part is the *topicname* which identifies a particular file.

For each BBS, the following files must exist and are generated by IDP:

<u>Type of File</u>	<u>Name Format</u>	<u>Example - CWIS.SAMP BBS</u>
Executor File	userid:facilityname	\$ADZ:CWIS.SAMP
TOPICS File	userid:prefix.TOPICS	\$ADZ:@CW.TOPICS
Log File (optional)	userid:prefix.@LOG.mmmmyy	\$ADZ:@CW.@LOG.JUN92
Main Menu File	userid:prefix.MAIN.MENU	\$ADZ:@CW.MAIN.MENU
BBS Files	userid:prefix.filenames	\$ADZ:@CW.xxxxxxxxxx

The root prefix must be the first part of the file name, except for the executor file. Each of the five types of files are described in detail below.

## Executor File

The *executor* file is used to invoke the BBS. It identifies the root prefix for a set of BBS files. In order to have different BBS's, separate from one another, you need to have different executor files. The executor file is a valid MUSIC file name that you enter on the first IDP menu.

## TOPICS File

The TOPICS file is used by the BBS program to provide a list of all the topic names, aliases for topic names, and the corresponding file names. These topic names can be the same name as the file or be an alias for a file. One file name can have several topic names, aliases, that refer to it. The file can also be the name for another MUSIC program (if preceded with a "%").

You can use IDP to edit (add, delete, modify) the list of topics. You do this by selecting the Edit function of IDP. You are placed in a tailored editor, especially design for this purpose. Help is available throughout IDP.

The TOPICS file is in free format. The list below shows the contents of the TOPICS file for CWIS.SAMP (\$ADZ:@CW.TOPICS):

```
9 main.menu
***** main menu topics
4 overview
2 index
5 events
3 athletics
4 computing
8 whatsnew
3 manuals %man          <--- invokes text searching
3 Library               program for online manuals
5 phone
9 telephone phone
3 weather
8 forecast weather      <--- forecast is alias for weather
3 public
4 students
4 staff
***** sub-menu computing
7 compfac
9 compguide
7 compsem
8 compserv
***** sub-menu students
6 calendar
3 general
4 course
***** sub-menu staff
5 admin
3 benefits
6 POSTAD
9 administrative positions available POSTAD
6 POSTAC
3 academic positions available POSTAC
3 jobs POSTAD
***** sub-menu GENERAL (under STUDENTS)
```

```

4 university
3 admissions
9 undergrads
4 grads
6 conted
6 summer
3 facilities
4 rules
3 regulations rules
5 transfer
3 fees
3 residence
4 services
5 awards
***** sub-menu COURSE
3 arts
7 dentistry
4 education
10 engineering
3 law
6 management
3 medicine
5 music
3 science
11 Help Wanted %help.want

```

Details about how to add topics can be found earlier in the section "Using IDP to Edit the TOPICS File".

*Note:* If the topic name is a phrase, then the maximum length is 64 and the file name must be included as the last word on the line.

## Log File

If the main menu has the )LOGGING ON statement at the top of the file, then access to all topics noted in the log file. Each topic file can turn off logging of itself by inserting the )LOGGING OFF statement. If the main menu has logging turned off, each topic can still turn it on for itself by the )LOGGING ON statement.

## Creating Menus

Menu files contain a menu for selecting specific topics. They can be used when BBS text needs to be subdivided because of its large size. The viewer can select all menu items or just the items needed. Also, menu items (topics) that relate to each other can be grouped together so that viewers can see other pertinent information. For example, if a viewer asks for the topic on admission requirements they receive a menu of all the faculties involved.

There are two types of Menu files: menus that include topic names (like the main menu) or menus with numbered selections called "itemized" menus.

### Menus with Topic Names

Menus are text files with highlighted topic names listed in columns or interspersed through the text (usually the topics are listed in columns).



Figure 2.12 below shows the main menu that the viewer sees for CWIS.SAMP.

```

Help   End   Up     Down   Top     Bottom Main   Scan   Find   Topic  Quit
----- Campus-Wide Information System (SAMPLE) ----- Page 1/1
Command ==>

Updated: 06APR92 08:04

Move your cursor to any topic name and press ENTER.

OVERVIEW      How to use CWIS.SAMP, how to post information
INDEX         Index of all CWIS.SAMP items & What's New

EVENTS        Upcoming University Events
ATHLETICS     Athletics Department Information
COMPUTING     Computing Resources
MANUALS       Online MUSIC Manuals
LIBRARY       Library Information
PHONE         Phone Directory
WEATHER       Today's weather and short-range forecast
PUBLIC        Access to Public Bulletin Boards

STUDENTS      Calendar, General Info, Regulations, Course Descriptions
STAFF         Administrative Policies, Benefits, Job Postings

F1=Help  F2=Ask F3=End F7=Up F8=Dn  F9=Find  F10=Top  F11=Bot F12=Cur PA1=Quit

```

Figure 2.12 - Menu with Topic Names

## Main Menu File

Each BBS must include a MAIN.MENU file. The MAIN.MENU file contains a menu of topic name selections. The MAIN.MENU file is where you specify the global and default controls for viewer access. See the sections "User Access Control Statements" and "Controlling access to the facility" for more detail.

Figure 2.13 below illustrates the MAIN.MENU file for the sample CWIS.SAMP facility.

```

$ADZ:@CW.MAIN.MENU                                L 80   W 1 72   Re
--> *Top of file
    )* main menu file for $ADZ:CWIS.SAMP
    )access
    )noaccess
    )update
    )logging off
    )title Campus-Wide Information System (SAMPLE)
    Move your cursor to any topic name and press ENTER.

    +?OVERVIEW -?   How to use CWIS.SAMP, how to post information
    +?INDEX      -?   Index of all CWIS.SAMP items & What's New

    +?EVENTS     -?   Upcoming University Events
    +?ATHLETICS  -?   Athletics Department Information
    +?COMPUTING  -?   Computing Resources
    +?MANUALS    -?   Online MUSIC Manuals
-----T--1-----2-----3-----4-----5-----6-----7--
Command:
Reading
All editor functions are available.  F1 will provide help on the mark up
language, sample files and editor command descriptions.
F1=Help    F2=Split    F3=Quit    F4=Mark    F5=Test topic  F6=Del
F7=Up      F8=Down     F9=Locate F10=Ins    F11=Hi-light  F12=Command

```

*Figure 2.13 - @CW.MAIN.MENU for Sample Bulletin Board*

The topic names are flagged through the use of special symbols. In the figure above is an example of the input file for this type of menu. These special symbols begin with a ")" and are described later under the heading "IDP Statements and Syntax Symbols (Markup Language)".

The topic names are shown with "+" in front and "-" in back. When the menu is displayed, these topics are highlighted and can be selected by placing the cursor on the line and pressing the ENTER key.

## Itemized Menus

Itemized menus are menus that display a list of numbered items. The viewer selects items by entering the number in the selection area.

Figure 2.14 shows the layout for a menu file and illustrates the use of syntax symbols. See "IDP Statements and Syntax Symbols (Markup Language)" below for information.

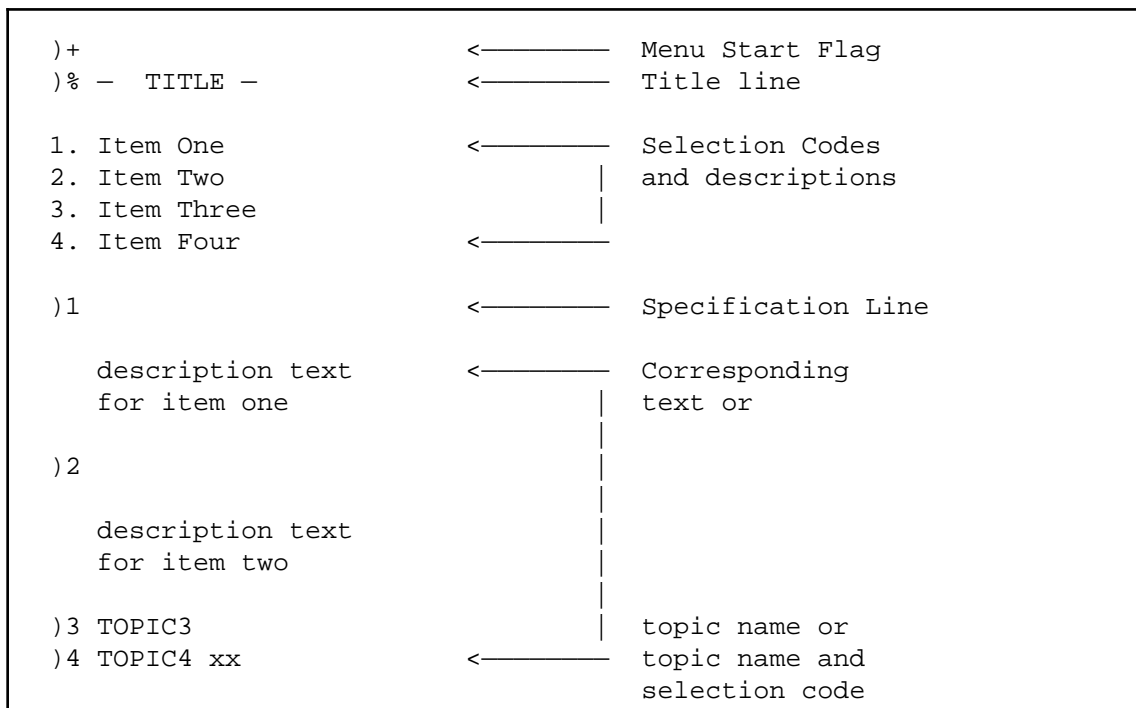


Figure 2.14 - Itemized Menu (Input File)

In the figure above, the lines that begin with a syntax symbol ")" (closing bracket) are flags for the BBS program. The lines that begin with a number are selection codes. For every selection code there must be a corresponding specification line. To create a menu file, you need to include these lines in the order they are presented in figure 2.14. If you wish, introductory text can be included before the menu is displayed. This text is inserted before the menu start flag ")+".

Figure 2.15 shows an example of what the viewer sees for a itemized menu.

```

Help   End   Up   Down Top   Bottom Main   Scan Find   Topic Quit
----- TITLE -----Page 1/1
Command ==>

Select _   1  Item One
           2  Item Two
           3  Item Three
           4  Item Four

F1=Help  F2=Ask  F3=End  F7=Up  F8=Dn  F9=Find  F10=Top  F11=Bot  F12=Cur  PA1=Quit

```

Figure 2.15 - Itemized menu (User's View)

## BBS Files

For each BBS there can be up to 5000 files. The maximum line length of a file is 79 characters. If the files are being transferred to MUSIC from a PC, the PC file should be in ASCII format.

There are three types of files: text file, a menu file, or a MUSIC program. A "text" file may be short or may consist of a great deal of text. For the sake of readability, large amounts of text should be divided into menu selections. The viewer can then select from a "menu" file, the items of interest. In other words, BBS files can be one topic or a menu of topics. Each file can be up to 52 screens in length (approximately 900 lines). If the file contains a menu, each menu item can be up to 52 screens (increased or decreased by the BBS coordinator). If the file is a program then control is temporarily given to that program. When finished, the viewer is returned to the BBS facility.

The following is an example of a file called "weather" (\$ADZ:@CW.WEATHER):

```
)TITLE - Weather Forecast -  
TODAY'S WEATHER  
  
Mainly cloudy  
High of 8  
Low of 1  
  
SHORT TERM FORECAST  
  
Saturday:  a few clouds, high 4, low -6  
Sunday:    Sunny, high 7, low -2
```

*Figure 2.16 - Text File*

The first line in the file is the title line. Any line in a file that begins with a closing bracket ")" indicates a special syntax symbol for the BBS program.

## IDP Statements and Syntax Symbols (Markup Language)

IDP control statements or syntax symbols are used by you to format the screen display and to set certain viewer access controls for a text or menu file. These statements or symbols are added to the file, similar to a mark up language.

)BAR on/off Controls the display of the action bar. If )BAR is found in the main menu, it becomes the default setting for all subsequent topics. Any topic can have a )BAR statement to define the desired setting different from the default.

)CALENDAR mon day year

)CAL Displays a popup calendar for the date specified. Specifying no day will display the current date. Examples,

```
)cal sep 1 94  
)cal sep 94  
)cal sep 1 1994
```

)COMMENT

)\* You can have comments imbedded throughout the topic using the comment statement.

Example,

```
)com this is a comment  
)* this is also a comment
```

)GETMAIL      This statement is used to get the number of new mail items and part of the message area.

)RENAME       This statement is used to rename a BBS command to some other name.

)SOURCE       This statement defines a 1-64 character text string that will be post for users when they issue the SOURCE command. If it is not specified then the string "Not available." is posted.

```
)source Computing Centre
```

)TITLE

)%              This is used to set a title for the display screen. This is a "running title". It will be used for all the pages (screens) displayed for the topic until a new ")title" line is encountered. If this statement is not found in a topic file the name of the topic is automatically used as the title. If more than one title line is found within a display page (screen full) the last statement will be used. The title will be centered automatically. The standard to be followed is to place a dash (-) before and after the title separated by one or two blanks. Example,

```
)title - This is a Title -
```

The title will be centered and padded by dashes.

)PAGE

)EJECT

)&

The page eject or skip can be imbedded in the text to force a new page. This means that the text following will be posted on the next screen-full of displayed text. You are currently limited to 52 screens of 19 lines for an individual topic. A message is displayed informing you when the limit is exceeded and text at the end is ignored.

)MENU

)+

The menu start flag indicates that this topic is an itemized (numbered) menu. See "Itemized Menu Control Statements" below for more information.

## Viewer Access Control Statements

For the purpose of specifying users on the access control statement, you can either use userids or user types, or combinations of both. The userid can be specified as a single user or many users by the use of patterns. Examples:

```
cc*      ab??      *x
```

The first example refers to any userid that begins with "cc". The second refers to any 4 character userid that begins with "ab". The third example refers to any userid that ends in "x".

User types are set at the time the userid is allocated or via the CODUPD program. (See your systems administrator or refer to the *MUSIC/SP Administrator's Guide*.) You can set any number between 0 and 256. The following shows how to specify user types:

```
T=1      T=12-24
```

The first example specifies all users who are of type 1 and the second example specifies any user who has a

user type of 12 to 24 inclusive. When specifying a range, no blanks are allowed.

*Note:* )LOGOFF, )NOESCAPE, )NOCOMS, )NOCOPY, and )NOSEND are usually used to produce a padded cell from which users can not escape to the \*Go prompt, issue MUSIC commands, copy topics to files nor send copies of the topic to an email address, and are logged off after exiting the facility.

)ACCESS This statement defines the list of authorized userids that can view the topic. If a userid is not specified here, it will not be allowed to view the topic. If no )ACCESS line is found then all userids will be allowed to view the topic. As many )ACCESS lines as you require are allowed in the topic file. Example,

```
)access cc* adxx??? ??00*
```

Allows access to any userid that starts with a "cc", any 7 character userid that begins with "adxx", and any userid whose third and fourth character of the userid is "0".

)NOACCESS This statement defines the list of userids that are not allowed to view the topic. ")NOACCESS" is particularly useful if you had not defined )ACCESS or if you want to bar a specific userid only.

```
)access cc*  
)noaccess abcd*
```

This example only allows all userids beginning with "cc" but bars the userids beginning with "abcd".

```
)noaccess abcd*
```

This example allows all userids but bars the userids beginning with "abcd".

)INETACC on/off

This statement enables or disables access to particular topic files when GOPHER is being used. The default is "on".

)INSERT

)ADD

This statement defines the userids that can contribute to an ads facility. In other words, they can add topics to the TOPICS file. This can be used so that viewers can contribute to the ADS. For example, if the "ski equipment for sale" topic has a list of items each of which is a topic describing the item in more detail, this feature will allow viewers to insert new items with the accompanying topic file. The userids are specified in the same way as for )ACCESS and )NOACCESS. Example,

```
)insert cc* adxx000
```

)COPY

This statement defines the list of authorized userids that can copy the topic to a file. If a userid is not specified here, it will not be allowed to copy the topic. If no ")copy" line is found then all userids will be allowed to copy the topic. As many )copy lines as you require are allowed in the topic file. Example,

```
)copy cc* adxx??? ??00*
```

Allows copying by any userid that starts with a "cc", any 7 character userid that begins with "adxx", and any userid whose third and fourth character of the userid is "0".

)NOCOPY This statement defines the list of userids that are not allowed to copy the topic. ")nocopy" is

particularly useful if you had not defined )copy or if you want to bar a specific userid only.

```
)copy cc*  
)nocopy ccfp*
```

This example only allows all userids beginning with "cc" to copy, but bars the userid beginning with "ccfp".

```
)nocopy ccfp*
```

This example allows all userids, but bars the userid beginning with "ccfp".

**)PCCOPY** This statement allows users to copy or print topics to a PC file or printer. Users that have NET3270 or PCWS software on their PC can use the COPY or PRINT commands.

**)NOPCOPY** This statement disallows copying or printing to a PC file or printer.

**)DELETE**  
**)PURGE** This statement allows you to define a list of userids that can delete the topic. The userids are specified in the same way as for )ACCESS and )NOACCESS. Example:

```
)delete cc* adxx000
```

**)UPDATE**  
**)EDIT** This statement allows you to define a list of userids that can modify the topic. The userids are specified in the same way as for )ACCESS and )NOACCESS. Example:

```
)update cc* adxx000
```

**)ANSWER** This statement allows you to define one electronic mail address to be used as the recipient of inquiries about the topic by viewers. This address can be 64 characters long and consists of a typical userid/system combination. The BBS facility can have a global address for inquiries, this will override that address for this topic only. To turn off the feature for this topic only, specify ")ANSWER -". Example:

```
)answer abcd@mcgillm
```

**)CENSOR ON/OFF** Default is off. When CENSOR is set to on, viewers will not be allowed to submit classified ads with certain expletives present in text. The system administrator will have defined the list of objectionable expletives. The feature can be deactivated by )CENSOR OFF.

**)LOGOFF** )LOGOFF is used to mark the specified userids to be logged off the system after using the facility. Once this feature has been activated it can not be deactivated. This feature is usually used along with )NOESCAPE and )NOCOMS to produce a padded cell from which viewers can not escape to the \*Go prompt or issue MUSIC commands. These statements are normally placed in the main menu only. For example:

```
)logoff cwis*
```

logs off any userid that begins with cwis.

**)LOGGING ON/OFF** Default is off. When LOGGING is set to on, viewer's requests and activities within the facility are recorded in the log file. The log file is always defined as userid:@prefix.@LOG.mmmmyy, where userid is the owner of the BBS files and prefix is the

1-3 character prefix, and mmmmy is the current month and year. Both userid and prefix were defined using IDP when the facility was created or after it was updated or renamed.

**)NOCOMS** Userids defined by )NOCOMS, will not be allowed to issue MUSIC COMMANDS from the command area. )NOCOMS can not be deactivated after it is encountered. It should be placed in the main menu only. )NOCOMS on is usually used along with )NOESCAPE and )LOGOFF to produce a padded cell from which users can not escape to the \*Go prompt or issue MUSIC commands and the user is logged off after using the facility. For example:

```
)NOCOMS cwis*
```

Userids beginning with CWIS will not be allowed to issue MUSIC commands from the command area.

**)NOESCAPE** Userids defined by )NOESCAPE will not be allowed to spawn new MUSIC sessions via the PA2/F4 keys. )NOESCAPE can not be deactivated after it is encountered. It should be placed in the main menu only. )NOESCAPE is usually used along with )LOGOFF and )NOCOMS to produce a padded cell from which users can not escape to the \*Go prompt or issue MUSIC commands, start new MUSIC sessions, and are logged off after using the facility. For example:

```
)noescape cwis*
```

Disallows all userids beginning with CWIS to spawn new MUSIC sessions using the PA2 key.

**)MAIL** This statement defines the list of authorized userids that can use the inquire or suggest feature and send email to the mail address specified in )answer or the global address you specified using IDP. If a userid is not specified here, it will not be allowed to inquire about the topic. If no ")mail" line is found then all userids will be allowed to inquire via email about the topic. As many )mail lines as you require are allowed in the topic file. Example,

```
)mail cc* adxx??? ??00*
```

Allows inquiries by any userid that starts with a "cc", any 7 character userid that begins with "adxx", and any userid whose third and fourth character of the userid is "0".

**)NOMAIL** This statement defines the list of userids that are not allowed to inquire about the topic. ")nomail" is particularly useful if you had not defined )mail or if you want to bar a specific userid only.

```
)mail cc*  
)nosend ccfp*
```

This example only allows all userids beginning with "cc" to inquire, but bars the userid beginning with "ccfp".

```
)nosend ccfp*
```

This example allows all userids, but bars the userid beginning with "ccfp".

**)MYNAME** This statement defines a name for the current facility. When a user drops to \*Go mode (MUSIC command prompt), the user is provided with a message as to how to return to the facility. This statement is valid only in the main menu.

**)SEND** This statement defines the list of authorized userids that can send the topic to an email



address. If a userid is not specified here, it will not be allowed to send the topic. If no ")send" line is found then all userids will be allowed to send the topic. As many )send lines as you require are allowed in the topic file. Example,

```
)send cc* adxx??? ??00*
```

Allows sending by any userid that starts with a "cc", any 7 character userid that begins with "adxx", and any userid whose third and fourth character of the userid is "0".

**)NOSEND** This statement defines the list of userids that are not allowed to send the topic. ")nosend" is particularly useful if you had not defined )send or if you want to bar a specific userid only.

```
)send cc*
)nosend ccfp*
```

This example only allows all userids beginning with "cc" to send, but bars the userid beginning with "ccfp".

```
)nosend ccfp*
```

This example allows all userids, but bars the userid beginning with "ccfp".

**)SLASH on/off** Removes the requirement for "/" when entering MUSIC commands in the command area. The process order will test the string as a BBS command, test as a topic, and then attempt as a MUSIC command string. The default is )SLASH off. The )SLASH statement found in the main menu will be used as a default for all topics. Each topic can redefine )SLASH.

**)VEROFF** This statement causes a popup window to verify that the user wants to logoff the session.

**)VERQuit** This statement causes a popup window to verify that the user wants to QUIT (END) the session.

## Itemized Menu Control Statements

**)MENU**

**)+** The menu start flag indicates that this topic is an itemized (numbered) menu.

**)TEXT string** This statement is meaningful only for itemized menus. When ")TEXT string" appears among menu item definitions the text defined by string is displayed on the screen. This allows you to place blanks or text between menu items. The "string" can have highlight markers in them. See the section on highlighting text below.

**xx.** The Selection Code is the one or two character combination that the user will know the item by. This is the code that the user types in the command area on the screen.

The selection code character(s) must be directly followed by a period and a blank.

**)xx** The Specification Line begins with a 1-2 character selection code corresponding to the selection code of menu items. There should be as many of these lines as there are selection code lines. When a topic name is not specified the help text for the item should follow immediately below this control line.

## Function Key Control Statements

Optionally, the function key definitions can be changed for a topic by using the following control statements at the beginning of the topic.

)PFn cmd      You may change the definitions of a program function key by including this statement. Make sure that you include a valid command for IDP. Example:

```
)PF4 FIND Seminar
```

The statement above defines F4 to be the command: "FIND Seminar". Caution: You can redefine keys with this statement. If F1 were used instead of F4 in the above example, then the old definition "HELP" will no longer be available.

)KEYS text      This statement replaces the description of program function keys listed at the bottom of the screen for the current topic. Example:

```
)keys F1=Help F2=Ask F3=Exit F4=Find ** F5=Find --
```

It is important to make sure that the description corresponds with the actual function of the key.

## Highlighting Topic Names and other Text

For full screen workstations, highlighting can emphasize important text on the screen. (Note that title lines are automatically highlighted.)

Another type of highlighting (shown in red or green) can be used to indicate a topic name. When topic names are highlighted, the user can place the cursor on the name and press enter to go directly to that topic (point and shoot). Once the topic is viewed, control is returned to the original spot with the cursor still remaining on the highlighted topic. When you are using IDP and editing a topic, IDP provides samples to aid you in using highlighting.

To assist you in defining highlighted text F11, in the IDP editor, has been defined to rotate through the 8 different highlighting types. If you point to a string with the cursor that is bracketed by highlight characters, you can automatically rotate the highlight types. As a convenience you can bracket text with "(" and ")" and point to it with the cursor and press F11. Each time you press F11 the string is bracketed by different highlight markers. The type of highlighting is echoed in the message area of the editor as the markers around the text change. For example, if you have the following in your text:

```
(*topic name*)
```

Place your cursor inside the brackets and press F11. It will become:

```
+?topic name-?
```

*Notes:*

1. If the users workstation does not support color, both types of highlighting appear the same. The TAB key can be used to find the selectable topic names.
2. It is recommended that highlighting be restricted to topic names so that users know what is selectable and what is not.

### Non-Selectable Highlighting

The following describes the syntax symbols for highlighting. The text highlighted with the following symbols: !, \, <, and > do not point to valid topic names and are not selectable by the user via the cursor or mouse.

+! -!	Start and end highlighted, white. On a color workstation this text appears white.
+\ -\	Start and end highlighted, white, reverse video.
+< -<	Start and end lowlighted, dark blue
+> ->	Start and end lowlighted, dark blue, reverse video.
+% -%	Start and end highlighted, high pink
+  -	Start and end highlighted, high pink, reverse video.
+# -#	Start and end highlighted, high yellow
+& -&	Start and end highlighted, high yellow, reverse video.

### Selectable Highlighting (point and shoot with cursor)

+? -?	Start and end highlighted red.
+/-/-	Start and end highlighted, red, reverse video.
+' -'	Start and end lowlighted, green.
+" -"	Start and end lowlighted, green, reverse video.

*Note:* The highlight characters ?, /, ', and " are used to indicate selectable topics (point and shoot via the cursor or mouse).

Figure 2.17 below illustrates highlighting for topic names in an input file and the corresponding view that the user sees.

Input File	<pre> )% - MUSIC Commands - The following commands are available on MUSIC.  Place your cursor on a topic name and press enter.  +?RENAME-? - change the name of a save library file +?STATUS-? - obtain information about the MUSIC system </pre>
Screen Display	<pre> ----- MUSIC Commands -----PAGE 1/1  The following commands are available on MUSIC.  Place your cursor on a topic name and press enter.    <b>RENAME</b> - change the name of a save library file   <b>STATUS</b> - obtain information about the MUSIC system  ----- Last Page ----- F1:Help F3:End F7:Up F8:Down F10:Top F11:Bot PA1:Terminate </pre>

Figure 2.17 - Highlighting Topic Names

## Pop Up Text Window

You can pop up a window of information for any topic or menu item. The pop up window disappears after the first user interaction. This can be used to make announcements or to point out some important information. Another use for the pop up window is to customize help for the topic.

```

)pop This is a line of text
)pop second a line of text
)pop 4th is a line of text
)pop 5th is a line of text
)pop 6th is a line of text
)pop 7th is a line of text

```

## Statements for Pop Up Windows

)POPPROC progname parms

Where *progname* is the name of a MUSIC program or facility and *parms* is text to be passed to the program (optional). Example:

```

)popproc edit new
edit @pop.0000 new

```

The ")popproc..." statement executes the "edit @pop.0000..." statement. @pop.0000 is a file name created by BBS into which *prog* is to place the pop text. The contents of @pop.0000 will be displayed in the pop window.

)POPPOCA progname parms

Identical to )POPPROC except that )POPPOCA appends to what was already in the pop up window.

)POPFILE filename

Where *filename* is the name of a MUSIC file, the contents of which is to be placed in the pop window.

)POPFILEA filename

Identical to )POPFILE except that )POPFILEA appends to what was already in the pop up window.

*Notes:*

1. The pop up window is always posted at the right top part of the screen.
2. The screen grows wider and longer to fit the text defined by the )pop statements.
3. The maximum width of the text is 53 characters and the maximum number of lines is 16.
4. While the pop up window is displayed, topics and menu items can not be selected via the cursor.
5. The window disappears after any interaction by the user.
6. The command POP will repost the window.
7. The commands popfile, popfilea, popproc and popproca that correspond to the respective syntax statement allow you to either enter them as commands or define function keys to perform them.

To use the pop up window as help text you can use the statement

```
)pfl popfile filename
```

If the user hits pfl the contents of *filename* will pop up.

## Using the Message Area

The following are syntax statements you can use to post text in the message area of the display. The message area is directly below the the line on the screen labelled "command".

)MSG text      This places the text specified in the message area.

)MSGFILE filename

This will fetch the first line on filename and place it in the message area. This is similar to )POPFILE.

)MSGPROC progname parms

This will launch the program specified by *progname* with the parameters specified by *parms*. A command string is issued as follows:

```
prog @POP.0000 parms
```

@POP.0000 is a file name created by BBS into which *prog* is to place the message text. This is similar to )POPFILE.

Commands MSG, MSGFILE, and MSGPROC are available to allow you to define function keys to perform the respective message statement.

## Using and Defining Forms

There often occurs the need to have users enter information into a screen and have some action or process use that information. BBS allows you to define areas on the screen as "input fields". Through the use of a simple set of commands and syntax you can easily set up a forms screen (electronic forms).

To indicate that a topic file is to be treated as a "form" you must include the BBS keyword )FORMA or )FORMB in the file. Through these you can specify the name of the program to be called (launched) to treat or process the data that the user may type into the fields you made available on the screen.

Fields are created in the same way that topic names are high lighted and flagged. The distinguishing feature between a topic pointer and an input field is that the first character of the text contains an "\_" (underscore).

For example +?some topic-? will create a hot area on the screen that is cursor selectable. +?\_abc -? will create an input field that is eight characters wide and "abc" will appear as a default in the field.

Topic files can have a mix of input fields and selectable topic names displayed. But files that are to be treated as forms as defined by )FORMA and )FORMB must also include )GMENU at the top of the file. Only text menu files can be form files, text menu files are identified by the )GMENU statement.

### )FORMA progname keyname

This tells BBS that this topic is to be treated as a type "A" form. *progname* specifies the name of the program to be launched. *keyname* specifies the function key (F1-24 and enter) to be used as a trigger for launching *progname*. If no *keyname* is specified ENTER is assumed.

After the user has filled in the fields on the screen and pressed the appropriate key, progname will be launched with the content of the fields as parameters. For example:

```
)forma edit enter
Edit+!==>+?_ -?
```

will produce a screen similar to

```
Edit ==> myfile
```

after the user fills in the field next to "==>", the editor is launched as if the user had typed "edit my\_file" as a command.

### )FORMB progname keyname

This tells BBS that this topic is to be treated as a type "B" form. *progname* and *keyname* are identical in function to )FORMA. The difference, however, is that the parameters are passed as in stream input to *progname*. For example:

```
)formb some_program enter
xxx+!==>+?_ -?
```

will produce a screen similar to

```
xxx ==> some_data
```

after the user fills in the field next to "==>", the *some\_program* is launched as if the user had executed a file with the following contents:

```
/inc some_program
some_data
```

)FORMFILE filename

This is used to pass to BBS the name of the file that contains the users defaults for the screen fields. Each line can be mapped to a particular field on the screen. At the first display of a form data if required will be fetched from this file and placed in the appropriate field. See )FORMGET.

)FORMDEF filename

This is used to provide an alternate defaults file if the file specified on )FORMFILE does not exist. The data is extracted and mapped to the screen fields similarly.

)FORMGET r1 r2 .... r20

This lets you map the lines of the defaults file specified in )formfile and )formdef to particular fields on the screen for the current topic.

For example )FORMGET 31 0 10-12 will place into the first screen field the contents of lines 31, field two will not be mapped to any data in the file and fields three to five are mapped to lines 10 to 12.

)FORMPUT on/off

When "on" this will cause any field that was mapped to the file named in )FORMFILE to be updated. If the file did not exist, it will be created.

)FORMPRE text

This will prefix *text* to the fields passed to the program named in )FORMA or )FORMB.

)FORMPOST text

This will append *text* to the fields passed to the program named in )FORMA or )FORMB.

*Note:* )FORMFILE, )FORMDEF and )FORMPUT should appear only once in the BBS facility that you created. What is specified by these is available to any form within the current BBS facility.

## BBS Set Symbols (Predefined Keywords)

BBS provides for several keywords to assist you in gathering useful information for presenting on the screen. All keywords must be prefixed with '&&'. When these keywords are encountered they are automatically replaced with the current value or setting for that symbol or keyword.

### Symbols for Date and Time

&&time	time of day format: hh:mm:ss
&&date1	date in format: WED MAR 06, 1985
&&date2	USA date format: mm/dd/yy
&&date3	date format: 06MAR85
&&date4	European date format: dd/mm/yy
&&dayi	day of the month as an integer
&&daya	name of the day of the week
&&monthi	month of the year as an integer
&&montha	name of the month
&&year	year

## Symbols for File Information

&&curdir	current directory
&&count	number of times the file has been read, the file has to have the CNT (count option) set for the file.
&&created	file creation date in format: WED MAR 06, 1985
&&read	file last read date in format: WED MAR 06, 1985
&&updated	file last update in format: WED MAR 06, 1985

## Symbols for User Specifics

&&route	current printer destination
&&userid	the userid of current user
&&name	user's name fetched from mail box or code record

## Symbols for Mail Information

&&m1	new mail
&&m2	old mail
&&m3	acknowledgements waiting
&&m4	unreceived outgoing mail

# BBS Commands

The following is a list of commands that viewers can enter in the COMMAND AREA (COMMAND ==> ) of a BBS, help, or ads screen. The aliases (alternate names) of commands are provided. Most commands can be invoked by using the action bar, a mouse (point and shoot), or by pressing a function key. Exceptions are: COPY, SEND, and SOURCE.

VIEW topicname  
=topicname  
topicname

Displays the topic you request directly, bypassing menus. If no topic is supplied with the command a "dialog box" is popped up to allow you to enter a topic name. The topic must be one that is defined and known by the facility. Other names for this command are: DISPlay, Get, TOPic and SHow.

ASK  
ANSWER  
SUGGEST

This is used to send mail to the owner or maintainer of a topic. In this way you can make suggestions or inquiries about the material that is presented. Other names for this command are: COMment, MESsage, INQuire, QUERy, REPlY, and RESpond.

BOTTOM  
LAST

Takes you to the bottom of the displayed topic.

CALENDAR date

displays a popup calendar for the date specified. Specifying no day will display the current date. Examples:

CAL sep 1 94, CAL sep 94, CAL sep 1 1994

COPY filename

copy makes a copy of the currently displayed topic to the file you specify. "filename" must be a valid MUSIC file name. If the file already exists, it will



replace it with the new information. If you are attached via NET3270 or PCWS you can specify a valid PC file name that must be prefixed by a valid drive letter. For example, c:\abc\test.doc, is a correct PC file name.

DOWN  
FORWARD  
+

Displays the next page.

END

Leaves the current topic and drops you back to the previous display.

FIND text  
LOCATE

Finds the character string defined by "text" in the currently displayed topic. If no text is supplied with the command a "dialog box" is popped up to allow you to enter text. To repeat a locate command you simply press F9 as often as required. When text is found the cursor will point to it.

HELP

Displays help text. You are now reading this help text.

LANGUage lang

is used to set the current working language. When a file of the selected language is available it is used rather than the default language version of the file. Your site may not have installed some or all of the language support. In this case the default language version is always selected. *lang* can be one of the following:

ENGLISH, FRENCH, KANJI, PORTUGUESE SPANISH, GERMAN, DEFAULT, ANGLAIS AMERICAN, AMENGLISH, FRANCAIS, JAPANESE, ESPANOL, DEUTSCHE

**Notes:**

A warning is issued if the language is not installed or not supported by the terminal or work station.

To reset the language to the site default, use:

LANGUAGE default

MAIN  
RESTART  
START

regardless of how many menus and topics you have selected it will place you at the main menu

PAn

issue PA1 and PA2 keys via the command area. This is useful when your keyboard does not support these keys.

PAGE n

go to the page specified by *n*.

PFn

issue function keys 1-24 via the command area. This is useful when your keyboard does not support these keys.

POPPROC progname parms

execute a program and pass parameters. See the topic "Pop Up Text Window" earlier for more information.

POPPROCA progname parms

same as POPPROC except program is appended to what is already in the pop up window.

POPFILE filename

displays a file in the pop up window.

POPFILEA filename	Same as POPFILE except that the file is appended to what is already in the pop up window.
PRINT destination	sends the currently displayed topic to the printer of your choice. <i>destination</i> must be a valid printer name. If you are attached via NET3270 or PCWS you can specify a valid PC printer destination. For example, "PC1".
QUIT QQUIT CANCEL EXIT	Exits the Help facility
SEND address EMAIL	Sends a copy of the currently displayed topic to the email address you specify. "address" must be a valid email address. examples:  <pre> send to abcd                (a local userid) send abcd                  (a local userid) send to abcd at mcgillm    (a remote userid) send to abcd@someplace    (a remote userid) </pre>
SCAN text	This command displays a list of topic names that contain the character string defined by text. If no text is supplied with the command a "dialog box" is popped up to allow you to enter text.
SELECT n1 n2 n3 ...	This command is valid only on screens that have numbered (itemized) menus. n1 n2... represent the selection codes. For example:  <pre> Command ==&gt; sel 1 2 3  Select ==&gt; ____    1    item one                    2    item two                    3    item three                    4    item four </pre> <p>will display items 1, 2, and 3. The word "all" is allowed both in the command area and selection area.</p>
SOURCE	Posts in the message area the source of the topic. If the owner of the topic did not define one, "Not available." will be posted.
TOP FIRST	Takes you to the top of the displayed topic.
UP BACKWARD -	Displays the previous page.

## **Chapter 3. Tutorial for Creating a BBS**

# Overview of BBS Tutorial

---

All BBS, help and ads facilities are created and maintained via the IDP program. This chapter gives a tutorial on how to generate a BBS with all of its components. Each step will be described with illustrations of the actual screen images.

## Steps to Creating a CWIS

### Step 1

The first step is to invoke IDP. Type IDP when at the \*Go prompt and press the ENTER key.

```
*Go

-----1-----2-----3-----4-----5-----6-----7-----8
idp                                                     Reading
```

## Step 2

You are now on the main screen of IDP. From here you can select the various tasks to be performed as the owner and maintainer (coordinator) of the BBS. In the field "Option ==>" type "c" for create and in the field "Name ==>" type "testBBS", and press ENTER.

```
----- Information Display Program (IDP) Utility -----

Place one of the selection codes, from the list below, in the field labelled
"Option". Then fill in the name of a BBS, ADS, or HELP facility to be
processed. When you have made your choices press the ENTER key.

C -create      U -update    D -delete    R -rename    V -view    E -edit topic files

Option ==> c (use one of the options from above)

Name    ==> testBBS_                (name of BBS, ADS or HELP facility)

-----
F1=Help  F3=End
```

### Step 3

Now you are on the next IDP screen for creating a BBS. Leave the field "Userid ==>" as is, it should contain your sign-on userid. In the field "Prefix ==>" type "xxx". In the field "Comment ==>" type "- test BBS -"; this will become the temporary title for the main menu. Enter a "b" in the field "IDP Type ==>" to define this facility as a BBS.

```
----- Information Display Program (IDP) Utility -----

Fill in the appropriate fields and press PF12 to process or PF3 to cancel.

*** Create screen 1 of 2 for TESTBBS
Userid      ==> CCKW              (1 to 16 character userid for owner of files)
Prefix      ==> xxx (1-3 character file prefix composed of a-z, 1-9 and #$_)
Comment     ==> - test BBS -
Access type ==> PRIV             (PUBL, SHR, PRIV, COM: exec file access setting)
Queries to  ==>                  (mail queries to "user@node")

Counter     ==> n (y/n, keep count of times this BBS, ADS or HELP is used)
Extended    ==> y (y/n, use extended colors and reverse video if available)

IDP type    ==> b_(Facility type: h=help facility, b=BBS, a=classified ads)
FS help     ==>                  (1-12 character name of the full screen help file)
TTY help    ==>                  (1-12 character name for TTY support help file)

Created by *                on *                Last read  *
Updated by *                on *                at *                Usage count *
-----
F1=Help  F3=End  F7=Prev scr  F8=Next scr  F12=Process  Enter=Verify entries
```

When you have filled in the fields like the screen above press ENTER to verify the fields that you entered. After pressing the ENTER key IDP will verify each field and fill in defaults where appropriate. The next screen shows how the fields look now.

```

----- Information Display Program (IDP) Utility -----

Fill in the appropriate fields and press PF12 to process or PF3 to cancel.

*** Create screen 1 of 2 for TESTBBS
Userid      ==> CCKW          (1 to 16 character userid for owner of files)
Prefix      ==> XXX (1-3 character file prefix composed of a-z, 1-9 and #$_)
Comment     ==> - test BBS -
Access type ==> PRIV          (PUBL, SHR, PRIV, COM: exec file access setting)
Queries to  ==>                (mail queries to "user@node")

Counter     ==> N (y/n, keep count of times this BBS, ADS or HELP is used)
Extended    ==> Y (y/n, use extended colors and reverse video if available)

IDP type    ==> B (Facility type: h=help facility, b=BBS, a=classified ads)
FS help     ==> $BBS:BBS.FS (1-12 character name of the full screen help file)
TTY help    ==> $BBS:BBS.TTY (1-12 character name for TTY support help file)

Created by *                on *                Last read  *
Updated by *                on *                at *                Usage count *
-----
F1=Help  F3=End  F7=Prev scr  F8=Next scr  F12=Process  Enter=Verify entries

```

If no errors are reported by IDP, press F12 to actually create the basic components of the BBS.

## Step 4

You are now back in the entry screen of IDP. The next step is to customize the main menu for global user access control and to define the menu. In the field "Option ==>" type "e" for edit. Press the ENTER key to proceed to the TOPICS file editor session. You will be placed in a tailored editor session.

```
----- Information Display Program (IDP) Utility -----  
TESTBBS created.  
  
Place one of the selection codes, from the list below, in the field labelled  
"Option". Then fill in the name of a BBS, ADS, or HELP facility to be  
processed. When you have made your choices press the ENTER key.  
  
C -create      U -update    D -delete    R -rename    V -view    E -edit topic files  
  
Option  ==> e (use one of the options from above)  
  
Name    ==> TESTBBS          (name of the BBS, ADS, or HELP facility)  
  
-----  
F1=Help  F3=End
```



## Step 5

From the screen shown below you can add, delete and modify the TOPICS file. No topic is accessible unless it is defined in the TOPICS file. The topic "main.menu" was automatically placed here when you create the BBS. You are in the editor and all editor commands are at your disposal. The current line is always placed in the center of the screen. The current line is broken into fields to aid in your entry of topic definitions and in error detection and recovery. To edit the main menu place the cursor on main.menu topic (it should be there already) and press F5.

```
CCKW:@XXX.TOPICS: topics file for TESTBBS                               Rec 1 / 1
+-----+
| You are presently in the editor. You may issue editor |
| commands. The current line is always posted at the center |
| of the screen. The line is broken into fields to aid you |
| in entering your topic definitions.                    |
+-----+
===== Current line (expanded)
> 0001  Abbr: 9  (minimum abbreviation allowed for the topic name)
        Name: main.menu
        File: main.menu          (1-12 character file name of the topic)
        Exec:
=====
0002  *** Bottom of File ***

-----1-----2-----3-----4-----5-----6-----7--
Command:

                                           Reading
F1=Help  F2=Toggle to editor  F3=Quit      F5=Edit/create topic  F6=Delete
F7=Up    F8=Down  F9=Locate  F10=Insert F12=Cursor command/item
```

## Step 6

The screen below shows that you are now editing the main menu. The contents you see were automatically generated by IDP. These are to be used as a guide or template. At the bottom of the file insert a line with the text:

```
(*topic1*) test topic number 1
```

```
CCKW:@XXX.MAIN.MENU                                L 80   W 1 72   Rec 8/8
*Top of file
)* main menu file for CCKW:TESTBBS
)access
)noaccess
)update
)logging off
)title - test BBS -

--> (*topic1*) test topic number 1
*End of file

-----T--1-----2-----3-----4-----5-----6-----7--
Command:

Reading
All editor functions are available.  F1 will provide help on the mark up
language, sample files and editor command descriptions.
F1=Help    F2=Split    F3=Quit    F4=Mark    F5=Test topic  F6=Del
F7=Up      F8=Down    F9=Locate F10=Ins    F11=Hi-light  F12=Command
```

Now place the cursor on "topic1" and press F11. You have now defined the text "topic1" as a selectable item on the menu screen via the cursor. See the next screen.

Note the message area, it has the text "\*\*\* High, red topic pointer." , which indicates the effect of F11. Also note that the string "topic1" is now bracketed by +? and -?, these are syntax that change the color of the text string when displayed for the viewer. There are eight different color and intensity combinations; see the section "Highlighting Topics Names and other Text" in *Chapter 2 - Information Display Program (IDP)*.

```

CCKW:@XXX.MAIN.MENU                                L 80   W 1 72   Rec 8/8
  *Top of file
  ) * main menu file for CCKW:TESTBBS
  )access
  )noaccess
  )update
  )logging off
  )title - test BBS -

--> +?topic1-? test topic number 1
  *End of file

-----T--1-----2-----3-----4-----5-----6-----7--
Command:
** High, red topic pointer.                                Reading
All editor functions are available.  F1 will provide help on the mark up
language, sample files and editor command descriptions.
  F1=Help    F2=Split    F3=Quit    F4=Mark    F5=Test topic  F6=Del
  F7=Up      F8=Down    F9=Locate  F10=Ins   F11=Hi-light  F12=Command

```

## Step 7

Repeat step 6 for topic2 and topic3 so that it looks like the figure below. After you have completed this, type "file" in the command area and press ENTER to save the changes to the main menu.

```
CCKW:@XXX.MAIN.MENU                                L 80   W 1 72   Rec 10/10
*Top of file
)* main menu file for CCKW:TESTBBS
)access
)noaccess
)update
)logging off
)title - test BBS -

+?topic1-? test topic number 1
+?topic2-? test topic number 2
--> +?topic3-? test topic number 3
*End of file

-----T--1-----2-----3-----4-----5-----6-----7--
Command: file

Reading
All editor functions are available. F1 will provide help on the mark up
language, sample files and editor command descriptions.
F1=Help    F2=Split    F3=Quit    F4=Mark    F5=Test topic  F6=Del
F7=Up      F8=Down      F9=Locate  F10=Ins    F11=Hi-light  F12=Command
```

## Step 8

The screen below shows that you have returned to the editor session of the TOPICS file. Place your cursor on main.menu (if it is not already there) and press F10. A new blank line will appear as the current line.

Fill in the fields as shown in the figure below and press F5 to edit the topic called "TOPIC1".

```
CCKW:@XXX.TOPICS: topics file for TESTBBS                               Rec 2 / 2

0000  *** Top of File ***
0001  9 main.menu
===== Current line (expanded)
> 0002  Abbr: 6  (minimum abbreviation allowed for the topic name)
        Name: topic1
        File: topic1          (1-12 character file name of the topic)
        Exec:
=====
0003  *** Bottom of File ***

-----1-----2-----3-----4-----5-----6-----7--
Command:

Reading
F1=Help  F2=Toggle to editor  F3=Quit    F5=Edit/create topic  F6=Delete
F7=Up    F8=Down    F9=Locate  F10=Insert F12=Cursor command/item
```

## Step 9

You are placed in an editor session for the file TOPIC1. The IDP parameters are automatically placed there by IDP.

```
CCKW:@XXX.TOPIC1                                L 80   W 1 72       Rec 9/9
  *Top of file
  )source
  )access
  )noaccess
  )update
  )answer
  )* ... )MENU here for itemized menu .....
  )* ... )GMENU here for high lighted text menu or a GOPHER menu .....
  )comment ... F11 hi-light: delimit with (* and *) and point at text
  )title - place your title here -
--> )comment ... enter your text below ...
  *End of file

-----T--1-----2-----3-----4-----5-----6-----7--
Command:

Reading
All editor functions are available.  F1 will provide help on the mark up
language, sample files and editor command descriptions.
F1=Help    F2=Split    F3=Quit    F4=Mark    F5=Test topic  F6=Del
F7=Up      F8=Down      F9=Locate  F10=Ins    F11=Hi-light  F12=Command
```

Please make the file appear as it does in the figure below. We are creating an itemized menu file. Note that items 1 and 3 have the display text within this file while the text for item 2 is in the topic "topic3".

```

CCKW:@XXX.TOPIC1                      L 80   W 1 72       Rec 20/20
)* ... )GMENU  here for high lighted text menu or a GOPHER menu .....
)comment ... F11 hi-light: delimit with (* and *) and point at text
)title - place your title here -
)comment ... enter your text below ...
)+
1. item number 1
2. item number 2
3. item number 3
)1
)title item number 1
This is a sample item 1
)2 topic3
)3
)Title item number 3
--> This is a sample item 3
*End of file
-----T--1-----2-----3-----4-----5-----6-----7--
Command:
Reading
All editor functions are available.  F1 will provide help on the mark up
language, sample files and editor command descriptions.
F1=Help    F2=Split    F3=Quit    F4=Mark    F5=Test topic  F6=Del
F7=Up      F8=Down      F9=Locate  F10=Ins    F11=Hi-light  F12=Command

```

After you have made the necessary changes press F5 to view the topic as it will be seen by users.

Below is the file as it will be seen by viewers after you have filed it.

```

Help   End   Up    Down  Top    Bottom Main   Scan   Find   Topic  Quit
----- place your title here ----- Page 1/1
Command ==>
Updated: 22MAY92 16:19
Select _  1  item number 1
          2  item number 2
          3  item number 3

F1=Help F2=Ask F3=End F7=Up F8=Dn F9=Find F10=Top F11=Bot F12=Cur PA1=Quit

```

Since this is only a temporary mockup of the file, not all BBS features are available. Press F3 to return to the editor session of TOPIC1.

## Step 10

The next step is to finish with TOPIC1 by typing "file" in the command area and pressing ENTER to save the changes.

```
CCKW:@XXX.TOPIC1                      L 80   W 1 72      Rec 20/20
)* ... )GMENU  here for high lighted text menu or a GOPHER menu .....
)comment ... F11 hi-light: delimit with (* and *) and point at text
)title - place your title here -
)comment ... enter your text below ...
)+
1. item number 1
2. item number 2
3. item number 3
)1
)title item number 1
This is a sample item 1
)2 topic3
)3
)Title item number 3
--> This is a sample item 3
*End of file
-----T--1-----2-----3-----4-----5-----6-----7--
Command: file

Reading
All editor functions are available.  F1 will provide help on the mark up
language, sample files and editor command descriptions.
F1=Help    F2=Split    F3=Quit    F4=Mark    F5=Test topic  F6=Del
F7=Up      F8=Down      F9=Locate  F10=Ins    F11=Hi-light  F12=Command
```



## Step 11

The screen below shows adding another topic to the TOPICS file. Place your cursor on topic1 and press F10. Fill in the fields as shown in the figure below and press F5 to edit the topic called "TOPIC2".

```
CCKW:@XXX.TOPICS: topics file for TESTBBS                               Rec 3 / 3

0000  *** Top of File ***
0001  9 main.menu
0002  6 topic1 topic1
===== Current line (expanded)
> 0003  Abbr: 6  (minimum abbreviation allowed for the topic name)
        Name: topic2
        File: topic2          (1-12 character file name of the topic)
        Exec:
=====
0004  *** Bottom of File ***

-----1-----2-----3-----4-----5-----6-----7--
Command:

Reading
F1=Help  F2=Toggle to editor  F3=Quit    F5=Edit/create topic  F6=Delete
F7=Up    F8=Down    F9=Locate  F10=Insert  F12=Cursor command/item
```

## Step 12

This step is to add text to the TOPIC2 file. Insert the line

```
This is topic2 of my test BBS
```

as shown in the figure below. Next, type "file" in the command area and press ENTER to save the changes to TOPIC2.

```
CCKW:@XXX.TOPIC2                                L 80   W 1 72   Rec 11/11
  *Top of file
  )source
  )access
  )noaccess
  )update
  )answer
  )* ... )MENU here for itemized menu .....
  )* ... )GMENU here for high lighted text menu or a GOPHER menu .....
  )comment ... F11 hi-light: delimit with (* and *) and point at text
  )title - place your title here -
  )comment ... enter your text below ...
  )title topic2
--> This is topic2 of my test BBS.
  *End of file

-----T--1-----2-----3-----4-----5-----6-----7--
Command: file

Reading
All editor functions are available.  F1 will provide help on the mark up
language, sample files and editor command descriptions.
F1=Help    F2=Split    F3=Quit    F4=Mark    F5=Test topic  F6=Del
F7=Up      F8=Down      F9=Locate  F10=Ins    F11=Hi-light  F12=Command
```

## Step 13

The screen below shows adding TOPIC2 to the TOPICS file. Place your cursor on TOPIC2 and press F10. Fill in the fields as shown in the figure below. TOPIC3 when chosen will invoke the program for viewing online MUSIC manuals. Type "file" in the command area and press ENTER to save the changes to the TOPICS file.

```
CCKW:@XXX.TOPICS: topics file for TESTBBS                               Rec 4 / 4

0000  *** Top of File ***
0001  9 main.menu
0002  6 topic1 topic1
0003  6 topic2 topic2
===== Current line (expanded)
> 0004  Abbr: 6  (minimum abbreviation allowed for the topic name)
        Name: topic3
        File:                                     (1-12 character file name of the topic)
        Exec: %man
=====
0005  *** Bottom of File ***

-----1-----2-----3-----4-----5-----6-----7--
Command: file

Reading
F1=Help  F2=Toggle to editor  F3=Quit    F5=Edit/create topic  F6=Delete
F7=Up    F8=Down    F9=Locate  F10=Insert F12=Cursor command/item
```

## Step 14

The screen below shows that you have returned to the entry screen for IDP. Press F3 to exit to the \*Go prompt.

```
----- Information Display Program (IDP) Utility -----  
Edit function completed  
  
Place one of the selection codes, from the list below, in the field labelled  
"Option". Then fill in the name of a BBS, ADS, or HELP facility to be  
processed. When you have made your choices press the ENTER key.  
  
C -create      U -update    D -delete    R -rename    V -view    E -edit topic files  
  
Option  ==> E (use one of the options from above)  
  
Name    ==> TESTBBS          (name of the BBS, ADS, or HELP facility)  
  
-----  
F1=Help    F3=End
```

## Step 15

To run your test BBS type

testBBS

from the \*Go prompt as shown below.

```
*Go  
  
-----T-----T  
testBBS  
  
Reading
```

## Step 16

The figure below shows the main menu of testBBS. It is fully functional. You should try selecting topics and items. You may also want to try adding new topics and modifying the main menu using IDP again.

```
Help   End   Up    Down   Top    Bottom Main   Scan   Find   Topic  Quit
----- test BBS ----- Page 1/1
Command ==>

                                             Updated: 22MAY92 16:15

topic1  test topic number 1
topic2  test topic number 2
topic3  test topic number 3

F1=Help F2=Ask F3=End F7=Up F8=Dn  F9=Find F10=Top F11=Bot F12=Cur PA1=Quit
```



## **Chapter 4. Indexed Text Searching**

# Overview of Indexed Text Searching

---

Indexed text searching allows users to quickly search large documents for text that contains specific word or words. Its speed comes from the existence of a index that has pointers to the location of the words in the text.

Even large documents have relatively few unique words in them. For example the King James Bible has about 12,000 unique words. The Bible itself takes close to 5 Megabytes to store on disk. Searching a sorted list of 12,000 words is an easy and quick operation for a computer to do. Reading the entire text looking for specific words is a lengthy process.

## Creating the Index

The index to a document is created by the ITSBLD utility. It reads through the document once and builds a list of unique words together with the pointers to where in the text they occur.

Many of the common words such as "the", "to", "and" are usually not put in the index. Doing this significantly reduces the size of the index. The words that are not indexed are called "stop" words.

## Sections

Almost every document can be divided into sections. For example, books are divided into chapters. Chapters may be further subdivided into smaller parts.

For retrieval purposes, it is convenient to divide a document into sections that are no longer than a few screen pages. This allows the retrieval program to tell you what section the text was found. Suppose you were searching through your company's administration policy handbook for the policy on number of paid vacation days. You might search for the word "vacation". That could give you the following section names:

- >C-25 Holidays with pay
- >C-28 Hours of work
- >C-30 Incidental illness
- >C-34 Parental leaves policy
- >C-42 Personal leave policy
- >C-43 Probationary period
- >C-72 Termination of employment

Now you can view the sections you think are most likely to contain the text you want.

## Searching for Similar Words

Computers see words differently to humans. Humans will easily recognize the similarity between the words "vacation" and "vacations". One is simply the plural form of the other. The computer sees these as two different words. In the previous example we were looking for occurrences of the word "vacation". We might also have wanted to look for the word "vacations". This can be done by using the special character "\*". To lookup words that start with the letters "vacation", you simply use the search word of "vacation\*". That would also pick up words such as "vacationing".



## What is a word?

Most of the time it is clear what a word is. But when you start mixing in special characters it is not so clear. For example what are the words in the following sentence?

Jane's PS/2 must dial 555-1212 to access TCP/IP.

Is "Jane's" one word or should it be the word be "Jane" with the "'s" discarded? How about "PS/2" and "TCP/IP"? Is it one word or two? How about the telephone number? Is it two words "555" followed by "1212" or is it one word "555-1212"?

By default, MUSIC's text indexing programs will use the following rules:

- A word is a string of characters that start with a letter (A to Z) or a digit (0 to 9).
- A word ends when a character is found that is not a letter (A to Z) or a digit (0 to 9) or the special characters hyphen (-), slash (/) or period(.).
- A period (.) that ends a word is removed from the word. This means that valid words can be "123.45" but the last word in a sentence does not have its period considered as part of the word.

The above rules should work in most cases. The table of characters that start a word or end a word can be changed when the index is built.

## Lower/Upper Case Letters

The indexed text searching routines make no distinction between upper and lower case letters. For example, a search for 'McGill' can be done by entering "mcgill", "MCGILL" or 'McGill'. It will find all references to that string of letters in any combination of upper and lower case.

## Word Weights

When searching a document for a specific word it is useful to find those sections that contain the word more often than other sections. If the word was in the section heading then it is even more likely to be the one you want. ITS permits users to do a search with or without the weights.

By default, ITS will associate a word weight equal to the number of occurrences of each word in a section plus 10 times each occurrence of the word in a heading. These defaults can be changed in the ITSBLD2 utility.

Normally, the actual value of the weights are not displayed by the search utility ITSRET. You can display them by entering the command "SHOW WT" when the matches screen is displayed. This option will stay in effect until the "SHOW NOWT" option is entered.

## Indexing a Document

This section describes how to index a document for use with MUSIC's Indexed Text Searching Facility.

First decide on how to identify your sections. The size of the sections should be at most only a few display screens long. (This is for the convenience of your users and is not a requirement of the program.) By default, MUSIC will look for a ">" symbol in the first position of the line as an indication that the line

contains the heading line for the following section. Other symbols or sequence of characters are possible for the section (heading) identifier. The sequence must start at the beginning of the line and be no more than 8 characters long. ("`<H`" is a good choice for documents containing HTML tags.) The first line of the document should start with the section identifier.

The document should be formatted to fit on a screen. This means that the line lengths of each line cannot exceed 79 characters. Do not use any hyphenation in the document. This would result in the system being unable to find the hyphenated words. Remove any page titles and footings such as those containing page numbers. They could be left in but your document will look messy with lots of blank space at the end of many pages. One way to accomplish this is to set a page length to a very large number. These tasks should be easy to accomplish with most word processing programs.

The next step is to get the document online on MUSIC if it not already there. For example, if the document is on a PC, you must transfer it to MUSIC. Instruct your PC word processing program to output the document in ASCII format. That will remove any of the special internal special characters that might be mixed in with your text.

## **Accented Characters**

Text that contain accented characters need special handling. One way to handle them is to place the internal codes for these characters in the tables used by the indexing program to define what are valid characters in a word. The users will have to know to use them in the search words as they will look like different letters to the unaccented version.

Another technique is to change these characters into the unaccented equivalent of the character.

## **Synonyms**

You can optionally have the indexing facility help with synonyms. Suppose you were indexing a telephone book. Users may search for the name "Bob" but in your telephone book the name is listed under "Robert". To help resolve these cases you can create records at the beginning of your document that say "Bob see also Robert". This will cause a search for "Bob" to find the text that instructs the user to try "Robert". These text lines should be placed at the beginning of the document so that they are found first. They should all be stored as separate section headings so that they appear on the selection summary screen.

## **Running the ITSIDX and ITSBLD2 Utilities**

Your document should be saved with the SHR option to allow any user to read the document. This can be done by using the MUSIC MAKSHR utility.

Type ITSIDX to begin the process of creating a word index for your document. It will ask for the file name of your document and the file name for the word index file it will create for you. It will also give you a few choices on how the index is to be built. For example, you are prompted to enter a section identifier symbol. Based on your answers, it will create a file with the options you specified. Running this new file will actually produce the word index file using the ITSBLD2 utility.

This file must be rerun whenever the document is changed. The utility reads through the document and produces the word index file. This utility can take several minutes to run. For very large documents it can take 30 minutes or longer elapsed time to run. For that reason, you may choose to index large documents during off-peak times or submit it to batch to be run overnight. (Note that once the index has been built, the

access to any word in the document is almost instantaneous even for large documents.)

The file that was run to produce the index can be customized to handle special indexing applications. For example, you can edit the file if you want to change the definitions of what characters start and stop a word then you must change a few statements in the subroutine. Refer to the comments in the file for notes on how to change it.

## Customizing the Retrieval Utility (ITSRET)

The utility ITSRET is used by your end users to search the document that you have prepared.

The first step is to create a file based on the contents of the file "ITSRET.SAMPLE". This could be done by issuing the command:

```
COPY ITSRET.SAMPLE MINE
```

In this example, "MINE" is your copy of the file. You should choose a name that has more meaning.

The file that you just created has sample control statements that are used to access the document.

A number of control statements in the file has fields with question mark characters in them. These fields must be filled in to tailor this file to your document.

The following items describe the changes you can make to this file:

- Fill in the name of your word index file on the `IDX=` statement. Specify the `userid` as well. For example:  

```
IDX=userid:doc.idx
```
- Specify the name of the document in the `TXT=` statement using the same format as the `IDX=` statement.
- The `RDCONT` statement allows the user to read past the end of the entry found. This is useful when the document is a book and reading beyond the section found is a useful option to give users. Remove this option when you do not want users to be able to read past the end of the entry found. This is useful when the order of the entries have no significance as in the case of a video tape library.
- The `LOG` statement is used to log usage of this program. If there is no `LOG` statement then no logging will be done. The name of the log file is given on the `NAM=userid:xxxxx` parameter. The file should have the attributes of `SHR` and `APPEND-ONLY`. This can be done by using the `MAKAPPO` command on a file once it has been created. The `USAGE` keyword will add a record to the log file anytime anyone uses this program. The `COPY` keyword will log copies done. The `FOUND` will log the match strings that resulted in something being found. The `NFOUND` keyword will log match strings that did not result in any found information.
- The `"NOCOMS userid"` statement stops specified `userid`s from executing commands from the command lines.
- The `COPYHDR=` statement specifies the name of a file that contains text that will be written as a header at the start of extracts made from this document. This can be used to put information such as copyright statements in the front of extracted text. If this option is omitted then no header text will be used. The file name provided should specify a `userid` as in the example `"COPYHDR=$ITS:STDHDR"`. This file should be saved with the `SHR` option so that the file can be read when the program is running under another `userid`.

- The COPYNAM= statement is used to specify the default name for the copy function.
- The "COPY userid" statement allows specified userids to copy or print extracts of the information to MUSIC files or printers.
- The "NOCOPY userid" statement stops userids from copying the text to MUSIC.
- The "PCCOPY userid" statement allows specified userids to copy or print extracts of information to files or printers on PCs connected to MUSIC via PCWS or NET3270.
- The "NOPCOPY userid" statement stops specified userids from copying text to PCs.
- The "SEND userid" statement allows specified userids to send extracts of information via e-mail.
- The "NOSEND userid" statement stops specified userids from sending the information by e-mail.
- The "NOACCESS userid" statement stops specified userids from viewing the document.
- The ORDER statement is used to specify the order the matches are to be displayed. By default, the order display is the same as the order found in the document. Specify "ORDER WEIGHT" to display the items in weighted order. The parameter RWEIGHT shows the reverse weighted order. The parameter REV shows the matches in the reverse document order. When displaying a table of contents, the order options are not used.
- Specify a title of your document in the S1T= statement. This title will appear at the top of the first screen the user will see.
- The lines between the "s1m" and the '====' lines appear on the first screen. These are used to remind the users of the options they have. Change these lines as you wish. You have a limit of 10 lines of text in this area.
- The HELPSS= can be used to override the default help for the search screen. The search screen is the first screen the user will see.
- The HELPSE= can be used to override the default help for the selection summary screen. This is the screen that shows the section names that contain the requested information.
- The HELPVU= can be used to override the default help for the viewing screen. This is the screen that the users will see when they view the requested information.

## **Notes on Using Retrieval Utility**

The following are some notes on how to use the indexed text retrieval utility.

- No distinction is made between capital letters and lowercase letters. So "bird" and "Bird" are searched for in the same way.
- You might see the connection between words "bird" and "birds" but the computer treats them as entirely different words.
- You can search for words starting with the letters "bird" by specifying the "\*" character which means match anything. So "bird\*" will find "bird", "birds" and "birdwatching". The "\*" character can be placed inside the word as in the example "cl\*se".

- The "?" character can be used to say match any character. So the search word "b?rd" will match "bird", "byrd", etc. It would not match "board" since the "oa" is two characters.
- Common words like "the" and "so" are used so often that they are not good words to search by. Often these words are removed from index to save space and so cannot be found even if you try to search for them.
- You can search for an entry that contains several words by specifying them on in the search pattern. For example, "bird tree red" would find an entries that contain all those words. The order that the words are specified are not important.
- You can search for entries that contain one of the search words. for example, "bond or 007" will find an entry that contains either the word "bond" or "007" or perhaps contains both words.
- A search string such as "bond not human" will find entries containing the word "bond" which do not contain the word "human".
- Search words start with a letter or number and continue through until a blank or special character is found other than "/" or "-". So for example, you cannot search for a word "/FILE" but you can search for "MUSIC/SP".

# ITS and the World-Wide Web

---

WEB pages for Index Text Search (ITS) applications can be easily created using the information from an ITS MUSIC application. For example, the file \$MAN:MAN.GNU contains all the information necessary to provide indexed text searching for the *MUSIC/SP Guide for New Users*. When \$MAN:MAN.GNU is invoked on MUSIC native mode, a screen with input fields is presented allowing a user to enter text for searching.

You can set up a WEB version of the indexed text by using the format below.

```
TYPE text_type
INDEX index_file_name
TEXTFILE text_file_name
TITLE title
HTML
... appropriate html text providing description and instruction
```

## INDEX

IDX Specifies the name of the MUSIC file that contains the index data for the text file.

## TEXTFILE

TXT Specifies the name of the MUSIC file that contains the actual text.

TITLE This is a title to be used in the HTML file.

TYPE Specifies the data type of the actual data. It usually is in plain text. Currently the data types can be either html or text.

HTML This is used as a marker. Any text after this is treated as html for the purpose of describing the ITS application and for providing instructions.

## Example of an ITS document for Web (TYPE text)

The following is the contents of the file \$MAN:MAN.GNU (used to provide indexed text searching for the MUSIC/SP Guide for New Users online manual).

```
/inc itsret
IDX=$MAN:GNU.WIDX
TXT=$MAN:GNU.TOTAL
COPYOK HDR=$MAN:HDRTXT
ORDER WEIGHT
SEND *
COPY *
PCCOPY *
RDCONT
SLT=MUSIC/SP V5.1 Guide for New Users - 24JUN96
slm:
Sample search patterns:
    manage          Look for only the word "manage"
    manage*         Look for words starting with "manage" such as "management"
    mail email      Look for entries that contain both words
    mail or email   Look for entries that contain either word
```

```

Table of contents
    =cs          Use this search word to show summary of contents
    =c           Use this search word to show full contents
====
end

```

The above example was edited to include html tags and saved as \$MAN:HTTP\GNU.ITS. The contents of this file provides index text search for the GNU manual via an html WEB page. The example below is the complete information required for a WEB version (TYPE text) of the GNU manual as an ITS application.

*Note:* This WEB version of GNU displays a mono-spaced text file. No changes were made to the original file (\$MAN:GNU.TOTAL).

```

TYPE TEXT
INDEX $MAN:GNU.WIDX
TEXTFILE $MAN:GNU.TOTAL
TITLE Guide for New Users
HTML
<H6>MUSIC/SP V5.1 Guide for New Users - 24APR96
</H6>
<P>
<EM>Sample search patterns:</EM><BR>

<STRONG>manage</STRONG>
Look for only the word "manage"<BR>
<STRONG>manage*</STRONG>
Look for words starting with "manage" such as "management"<BR>
<STRONG>mail email</STRONG>
Look for entries that contain both words<BR>
<STRONG>mail or email</STRONG>
Look for entries that contain either word<BR>
<p>
<DL>
<DT><em>Table of contents</em><dd>
<strong>=cs </strong> Use this search word to show contents summary<BR>
<strong>=c </strong> Use this search word to show full contents
</DL>

```

### Example of an ITS Document for Web (TYPE html)

The following shows the contents of the file \$MAN:HTTP\SAMP.HTML.ITS. It is very similar to the previous example except the first line is changed to "TEXT HTML".

```

TYPE HTML
INDEX $MAN:HTTP\SAMP.HTML.WIDX
TEXTFILE $MAN:HTTP\SAMP.HTML
TITLE MUSIC/SP Sample Guide (test)
HTML
<H6>MUSIC/SP Sample Guide
</H6>
<P>
<EM>Sample search patterns:</EM><BR>

<STRONG>world</STRONG>

```

```

Look for only the word "world"<BR>
<STRONG>world*</STRONG>
Look for words starting with "world" such as "World-Wide Web"<BR>
<STRONG>ftp telnet</STRONG>
Look for entries that contain both words<BR>
<STRONG>ftp or telnet</STRONG>
Look for entries that contain either word<BR>
<p>
<DL>
<DT><em>Table of contents</em><dd>
<strong>=cs </strong> Use this search word to show contents summary<BR>
<strong>=c </strong> Use this search word to show full contents
</DL>

```

*Note:* The file containing the actual manual (\$MAN:HTTP\SAMP.HTML) is quite different from \$MAN:GNU.TOTAL as it includes HTML tags.



## **Chapter 5. BBS Statistics Program**

## Overview - BBSTAT

BBSTAT is used to perform basic usage analysis of HELP and BBS facilities. To start BBSTAT, simply type BBSTAT at the \*Go prompt. A screen will appear to assist you in customizing the report you want to generate on the usage patterns for a particular BBS or HELP.

```
----- BBS Report Generator -----
Command ==>

Fill in the appropriate values in the fields below and press Enter to v alidate
the values entered. Press F12 to produce the desired report. Use F3 t o exit
without producing a report.

BBS Name ==> _
Rep type ==> 1 (statistics: 1=usage, 2=invalid requests, 3=updated topi cs)
Format ==> M (D=daily, W=weekly, M=monthly, Y=yearly, default is Mont hly)
Output ==> @REPORT

Selected Days of the Week: (y to select, and n to exclude from processi ng)
Sun ==> Y Mon ==> Y Tue ==> Y Wed ==> Y Thu ==> Y Fri ==> Y Sat = ==> Y

Selected Months of the Year: (y=select, n=exclude)
Jan ==> Y Feb ==> Y Mar ==> Y Apr ==> Y May ==> Y Jun ==> Y
Jul ==> Y Aug ==> Y Sep ==> Y Oct ==> Y Nov ==> Y Dec ==> Y

Selected Range of Years:
From year ==> 1992 (eg. 1999)
To year ==> 1993 (this should be a year greater than or equal to "Fro m year")
-----
F1=help F3=Exit F12=Process
```

Below is a description of the items on the screen.

- |           |  |
|-----------|--|
| BBS name  | You enter here the name of the BBS that is to be analyzed. BBSTAT will automatically generate the log file names based on the BBS name.  |
| Rep type  | This is used to request one of 3 report types.<br>1 a detailed account of usage frequencies by hour of day and topics.<br>2 a list of topic names and commands that the BBS did not recognize or know about.<br>3 the list of the number of times topics were updated.   |
| Format    | This allows you to define the time units to be used in producing the usage by hour statistics. For example if you choose M (monthly), BBSTAT will produce a page of hourly usage frequencies for each month. The options are D=daily, W=weekly, M=monthly, and Y=yearly. |
| week days | You can include or exclude any day of the week in your report. 'Y' includes a week day, while 'n' excludes it. This allows you to produce statistics for weekends only or any other combinations.  |
| Months    | Similar to week days, you can include or exclude particular months by the use of 'Y' or 'N'.   |

From year      This allows you to set the starting year for the report to be generated.

TO year        This allows you to set the ending year for the report to be generated. The 'to year' must not be less than the 'From year'.

*Notes:*

You can produce very specific reports about any week day (Mon, Tues...), any month(s), or year. For example, if you want to know the usage statistics for Mondays in the month of January for 1992, you simply select (using 'y') Mon, Jan and set 'From year' and 'To year' as 1992.

## Sample Report - BBSTAT

In the example report below the following were specified: Type=1, format=M, selected Month DEC and year 1992 for \$PGM:HELP (this is MUSIC's standard help).

1 Month of DEC, 1992

```

Invoked:                33
Total time spent:        2 hrs,  7 mins,  23 secs.
Average duration:        0 hrs,  3 mins,  51 secs.
Total topics seen:       59
Average topics seen:     1.79
Total wrong selected:    0
Average wrong selected:  0.00

```

---

Hour of day	Logins	topics viewed
0:00 - 0:59	0	0
1:00 - 1:59	2	4
2:00 - 2:59	0	0
3:00 - 3:59	0	0
4:00 - 4:59	0	0
5:00 - 5:59	0	0
6:00 - 6:59	0	0
7:00 - 7:59	0	0
8:00 - 8:59	0	0
9:00 - 9:59	2	9
10:00 -10:59	3	5
11:00 -11:59	2	8
12:00 -12:59	0	0
13:00 -13:59	4	8
14:00 -14:59	4	13
15:00 -15:59	6	15
16:00 -16:59	4	10
17:00 -17:59	1	5
18:00 -18:59	0	0
19:00 -19:59	0	0
20:00 -20:59	0	0
21:00 -21:59	2	4
22:00 -22:59	2	8
23:00 -23:59	1	3



## **Chapter 6. Gopher Access to BBS Facilities**

# Overview of GOPHER

---

GOPHERD is the name of MUSIC/SP's Gopher server. A gopher server provides access to documents residing on a host or server to a gopher client running on another computer. The gopher client may be running on a wide variety of platforms and operating systems.

To point to a BBS for gopher clients you simply point to the main menu of the BBS. For example McGill's BBS (Campus-Wide Information System) called infoMcGill can be defined as follows:

```
linfoMcGill|-BBS/CW99:@inf.main.menu|musica.mcgill.ca|70
```

where:

l                      item-type directory (menu)

infoMcGill            is the caption seen by the user of the gopher client

-BBS/                tells MUSIC's gopher server to treat the item as a BBS. Remember that this string is sent to the server by the client in order to request the item.

cw99:@inf.main.menu   is the name of the MUSIC file where the main menu for infoMcGill resides.

musica.mcgill.ca       address of McGill Universities MUSIC system.

70                    port number

This is all that is required to establish access to the entire BBS. From this point on the directories and item-types will be automatically generated by the MUSIC gopher server. This includes automatically linking to other BBS and ITS applications if they occur as topics in the BBS.

## Making Files Accessible via Gopher

The Systems Administrator can define a MASK for non BBS files allowed to be accessed via GOPHERD. For example to allow the subdirectory GOPHERD on userids that begin with dollar to be accessible you specify `$*:gopher\*`

The default is `"$pub:*"`. The following is an example of the parameter that is placed in the `$TCP:TCPIP.CONFIG` file.

```
GOPHERD_ALLOWED_FILES $PUB:*
```

## Special File Flags for BBS Support

The gopher server uses several flags and clues in the content of the BBS files. Most of these flags are already used in the normal definition of BBS files. These are:

)menu                the file is an itemized menu file

)Gmenu               the file is a text menu file. These are menus that have highlighted text pointing to BBS topic

files (see notes below).

)Gopher the file is a gopher directory (not often used) If "-GOP" flag is not used in the item definition example:

```
1More documents|-GOP/$ABC:GOPHER.MENU2|site_name|70
```

then you must place ")gopher" as the first line of the file.

)TEXTFILE the file is a straight text file. As with )gopher you can either specify the item as a text file via the "-TXT" flag or you must place ")textfile" in the document to correctly identify the item-type.

)INETACC on/off

This statement enables or disables access to particular topic files when GOPHER is being used. The default is "on".

### Notes:

Most BBS facilities do not have )gmenu specified in the text menu files as this is not required to run BBS as an executable program on MUSIC. However, it is required when the BBS is accessed via gopher. You should place a )gmenu line in all text menu files of a BBS before making it available on gopher.

A text menu file is a BBS topic file with one or more columns of topic names and a companion descriptive text.

Example:

```
Place the cursor on the topic of your choice and press enter

+?library hours -? schedule for campus libraries
+?library loans -? how to take out a library book
+?library tours -? tours of the library facilities
```

should be modified as follows:

```
)gmenu
Place the cursor on the topic of your choice and press enter

+?library hours -? schedule for campus libraries
+?library loans -? how to take out a library book
+?library tours -? tours of the library facilities
```

)gmenu does not affect the BBS's operation as an executable program on MUSIC but is used as an aid in auto detecting the file types.

A simple method to retro-fitting )gmenu into the files that are text menus is to use FLIB to bring up a list of topic files for a given BBS. For example, infoMcGill's topic files (see above) can be accessed by typing the following "flib cw99:@inf.\*".

## Appendix A. infoMcGill

---

### Accessing infoMcGill

You can access McGill University's CWIS system called *infoMcGill*. It can be used to demonstrate the kind of information that can be on a CWIS, as well as demonstrate how a CWIS operates. Follow the steps below to connect.

#### Internet Access:

1. Use a TELNET command that can handle 3270 data streams. (In VM, just use the TELNET command. In other systems it may be called TN3270.)
2. Use Internet address of "VM1.MCGILL.CA" (The numeric address is 132.206.27.2)
3. Press ENTER to clear the VM/ESA logo screen
4. Press F3 (or type "INFO") as the screen will prompt you.

#### Dial in Access:

1. Best to use PCWS or VT100 emulator. (PCWS is the terminal emulator included with MUSIC/SP.)
2. Set modem to 2400 (or 1200 baud)
3. Dial (514) 398-8111
4. Press ENTER. That will give you the "Enter class" message.
5. Type in MUSIC and hit ENTER.
6. Press ENTER again to get the "Enter terminal type" message
7. Select terminal type of VT100P if using PCWS, or select VT100 otherwise.
8. You should then get VM logo screen
9. Press F3 (or type "INFO") as the screen will prompt you.



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**MUSIC/SP Campus-Wide Information Sytems (CWIS) Guide (April '96)**

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