BULLETIN
Installation and System Administrator's Guide
Release 1.1

January 1992

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Chapter 1. Overview

BULLETIN is a collection of programs that allows a site to distribute news and information to its employees in a timely and efficient manner. Using the site's VM services, information that was traditionally distributed by hardcopy postings on wall-mounted bulletin boards can now be immediately accessed by employees from host-connected terminals and displays in their work areas.

Who should read this document

- The technical person (hereafter referred to as the system administrator) who is responsible for the installation and maintenance of BULLETIN

- A BULLETIN publisher (hereafter referred to as a publisher), a person responsible for the day to day publication of notices in BULLETIN, who needs to or wants to understand the installation process.

- A "programmer-type" person who would like to know more about the architecture of BULLETIN.

Prerequisite Knowledge

The system administrator should have a thorough knowledge of the complete TOOLS package, including TOOLSRUN and TOOLCARE.

Related Publications

- BULLETIN User's Guide
- BULLETIN Publisher's Guide

Chapter 2. BULLETIN Architecture

Before you get started

In order to understand the architecture of BULLETIN, it is recommended that you begin by reviewing the BULLETIN User's Guide and BULLETIN Publisher's Guide. You will find it helpful to have a basic understanding of the BULLETIN programs before you begin the installation process.

What is BULLETIN?

A company's competitive edge can depend on getting correct information to the right people as quickly and efficiently as possible. And the more organized and easy to access that information is, the better the company's employees will be able to utilize it. BULLETIN offers a simple, effective way to disseminate information throughout an organization in a way that can be easily utilized by the company's employees.

BULLETIN is a set of programs that performs electronic bulletin board functions, distributing notices posted by corporate and local communications departments to employees who need the information. BULLETIN provides a Publishing Utility (described in the "BULLETIN Publisher's Guide") that simplifies the publication and correct distribution of information. The end-user portion of BULLETIN allows the employees to better utilize the published information and makes finding, viewing, and responding to notices simple and speedy.

In the past, the main way to communicate with employees was by hardcopy postings on the wall-mounted bulletin boards throughout their buildings. Notices were either typed directly onto official stationary or cut and pasted, sometimes with help from the artwork department. Sufficient copies to accommodate the entire site were printed (many times in the hundreds for large locations), and were then given to the mail room for posting on the boards.

Special mid-day announcements required additional trips for posting on the boards. There was also no guarantee that the employees were aware of these special postings.

BULLETIN provides a more efficient method of communication. While logged on to a VM system, employees can access notices published by their local or site organizations, as well as notices created by regional or national organizations.

The features provided by the BULLETIN end-user interface include:

- Display today's notices

- Read notices

- Search for past notices by date, category, or a word appearing in the title or text of the notice

- Send comments or questions to the owner of the notice

- Copy notices to a minidisk

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- Send notices to other end-users
- Print copies of notices

BULLETIN data structure

There are three basic types of files used in the BULLETIN application:

- Individual notices
- Files containing the names of the notices available (BB$$TABL NOTICES)
- Files containing additional data associated with the notices (BB$$TABL NOT$DATA)

Individual notices

Individual notice files contain the text of a notice which has already been formatted for viewing on a computer display. The file begins with the date of the notice and the title. The date consists of the day of the week, the month, the day, and the year (left justified). The title describes the subject matter of the notice, and is underlined. The words "End of Notice" appear at the bottom of the notice.

Those notices published using BULLETIN 1.1 will have the Category and Topic of the notice listed in parentheses after the date. Notices published with previous releases of BULLETIN will show only the date.

```
Monday, July 29, 1991    (CORP NEWS)



J. B. STONE NAMED TO NEW POST
_____



John B. Stone has been named director of quality, reporting to Tom
Goodyear, vice president.

Mr. Stone was director of operations, Computer Services.



End of Notice
```

Figure 1. Sample notice

Each notice is also given a two-level classification: **category** and **topic**. Category, the high level classification, is a one- to four-character name used to identify the site or organization that the notice pertains to or originated from. Categories are then subdivided into topics, which are also one- to four-character names. Topics

are used to group notices by subject matter within categories. This combination of categories and topics allows the publishers to target news to a specific segment of the population, and also allows end-users to quickly access the notices that interest them the most.

Examples of category and topic names are:

```
Category Topic Description
-------- ----- -------------------------------------------------------
  CORP   NEWS  General news from Corporate Headquarters
  CORP   PERS  Personnel announcements from Corporate Headquarters
  NE     QC    Quality Control information for the Northeast Region
  NYC    EDUC  Education classes offered in New York City
  NYC    TECH  Technical news in New York City
  WACO   CAFE  Weekly cafeteria menu for the Waco, Texas facility
```

Notices are stored on the system using the following naming convention:

FILENAME: Consists of the year, month, day, and a sequence number. The sequence number pertains to the number of that category/topic combination published for that date.

FILETYPE: The first four characters are the category, and the last four characters are the topic. The character '$' is used as a fill character for categories and topics less than four characters long.

For example, the name 92031804 NE$$QC$$ would be for the fourth notice (04) published on March 18, 1992 (920318) for the 'QC' topic (QC$$) in the 'NE' category (NE$$). Remember that '$' is used as a fill character as described above.

BB$$TABL NOTICES

The collection of notices at each site makes up the BULLETIN database. As will be described later, these notices are grouped on different minidisks, all under TOOLS control. The file BB$$TABL NOTICES exists on each of these minidisks, and contains the list of all the notices on that particular disk. The file attributes are LRECL 17, RECFM F. The format of the BB$$TABL NOTICES file is:

```
COLUMN  DATA
------  ---------------------------------------------------------------
 1-8    Notice filename
 9-16   Notice filetype
  17    Duplicate notice indicator.  The use of this field will be
        discussed in "Publishing" on page 9.
```

The file begins with a header that helps identifies the columns and guarantees that the file is never empty. The header statement is:

```
99123199CAT$TOP$
```

```
99123199CAT$TOP$
91080103NYC$PEOP
91080102US$$PEOP
91073101WACOCAFE
91073002US$$PEOP
91073001CORPNEWS*
91073002US$$NEWS*
```

Figure 2. Sample BB$$TABL NOTICES file

BB$$TABL NOT$DATA

This file also exists on every minidisk that makes up the BULLETIN database. Each line of this file contains additional information regarding the notices on those disks. The file attributes are LRECL 94, RECFM F.

As mentioned in "Individual notices" on page 4, each notice contains a title which describes the contents of that notice. These titles are stored in this file, and are used whenever BULLETIN presents end-users with a list of notices to work with. This way the titles are readily available without having to open each notice to obtain them.

However, since some of the titles could be longer than the space available on the screen, an abbreviated version for those must be stored. In those cases, words are dropped from the end of the title until the total length is less than 54 characters. A continuation indicator ("...") is added before storing in the BB$$TABL NOT$DATA file. Remember, though, that the actual title within the notice itself is not affected.

An expiration date is given to each notice that determines how long it remains in the database. Default expiration dates are assigned to each category/topic combination by the system administrator, but may be overridden for specific notices during the publishing process. Every day the expired notices are automatically erased from all of the disks in the database.

Each notice also has a contact person assigned to it. BULLETIN contains a feedback facility that allows end-users to ask questions and make comments about individual notices. The feedback is then sent electronically to the designated contact for handling.

The format of the BB$$TABL NOT$DATA file is:

```
COLUMN  DATA
------  -----------------------------
 1-8    Expiration date (mm/dd/yy)
 9-16   Notice filename
17-24   Notice filetype
25-32   Contact Person's node
33-40   Contact Person's userid
41-94   Notice title
```

The file also begins with a header that helps identifies the columns and guarantees that the file is never empty. The header statement is:

```
12/31/9999123199CAT$TOP$FEEDNODEFEEDUSERSTART OF TITLE
```

```
 12/31/9999123199CAT$TOP$FEEDNODEFEEDUSERSTART OF TITLE
 10/30/9191080103NYC$PEOPNYCVM01 COMMUNICJ. A. Erickerson Named Business Director ...
 10/30/9191080102US$$PEOPCHQVM07 USNEWS  Promotions
 10/30/9191073101WACOCAFETEXVM02 JOEDOE  Cafeteria Menu for Wednesday, July 31
 10/30/9191073002US$$PEOPCHQVM07 USNEWS  New Assignments in US Sales Staffs
 10/30/9191073001CORPNEWSCHQVM01 HQSTAFF J. B. Stone Named to New Post
 10/30/9191073002US$$NEWSCHQVM07 USNEWS  J. B. Stone Named to New Post
```

Figure 3. Sample BB$$TABL NOT$DATA file

How notices are distributed

There are four possible classes of notices that could appear on any one node:

- Local notices that are common to an entire site.

- Local notices that apply only to an individual node.

- Notices that are regional in nature and are distributed to several locations.

- National and international notices that apply to all locations.

For example, a site might decide that its cafeteria menu is an item that would appear on all nodes at that location. On the other hand, notices advising of computer availability schedules might appear only on the nodes affected.

TOOLS is used to accomplish all of these distribution tasks. TOOLS must be installed on every system that will contain a BULLETIN publishing service machine. These service machines consist of dedicated userids which run the TOOLS and BULLETIN publishing software.

In the BULLETIN architecture, one disk is dedicated to the national notices that will be distributed to all sites. This disk is given the TOOLS identification of NATIONAL. Another disk, named SINGLSYS, is dedicated to the local notices which are unique to each node and are not intended for an entire site. If implemented in your installation, these disks *must* be called NATIONAL and SINGLSYS. The rest of the database is made up of one or more disks containing news that is common to a site and/or shared with other sites. In the manual we will refer to these as local disks.

One node at each site is designated as the gateway or hub, through which all notices (except those for SINGLSYS) will flow in to and out of a site. This node will be called the hub node, and the service machine there called the hub machine.

Keep in mind that the existence of the SINGLSYS disk does not mean that certain category/topic combinations are restricted to that disk. Rather it is for notices that you need to target to specific nodes. For example, NYC/SYS might be a category/topic that appears on all of the New York City site nodes (via a local disk) to inform of various computer system activities. However, a specific notice affecting only one node, say NYCVM1, could still be published as a NYC/SYS notice. The only difference would be that it would be directed to the SINGLSYS disk.

Assigning TOOLS disks names and directing notices to specific disks is covered in Chapter 5, "Installation Procedure for BULLETIN" on page 19.

Required notices

BULLETIN allows end-users to select or subscribe to the categories and topics that interest them the most. Because they could possibly miss important news this way, special reserved names for categories and topics are available. When news is posted in these special areas, the notices will always be listed. End-users are not forced to read these notices; they will just be listed along with all the other notices in the categories and topics that are subscribed to or selected.

For important company-wide news that will appear on the NATIONAL disk, the category/topic REQD READ is used. For any of the local categories, the important news is posted in a topic named REQD. Because your local news can be shadowed to other sites that may not desire to force their end-users to read your required notices, you can enable and disable this feature for specific local categories. This will be illustrated in the Installation Procedure.

Publishing

The authority to publish notices is given to a select few at each site. Those people will create the notices and determine the titles, contacts, expiration dates, and where the notices will appear.

Normally, only one userid will be publishing notices in any given category/topic. However, BULLETIN 1.1 now also provides the capability for multiple users to also publish in the same category/topic. A userid can be also authorized for several category/topic combinations. For example, the userid JOEDOE may be authorized to publish under the categories/topics NYC$CAFE (NYC/CAFE), NYC$IS$$ (NYC/IS), and NYC$TECH (NYC/TECH). JOEDOE can thus publish under three possible category/topic combinations.

Those persons authorized to publish notices will be given access to the publishing files of BULLETIN. Using these files, they create special publishing requests that are sent to the appropriate service machines. The name and text of the notice, the contact person, the expiration date, and the publishing command (new notice, replace notice, or delete notice) is generated by the publishing programs and contained in a file with the filetype P$NOTICE or D$NOTICE.

These requests are not sent to every node at your location. For the news that is shared throughout the site, only one request is sent to the hub node. After BULLETIN confirms that it is a valid request from a valid publisher, it is converted into the appropriate TOOLS commands, and TOOLS will perform the necessary distribution. For notices that are to be published on specific individual nodes, separate requests will be sent to each of those specified nodes and will target the SINGLSYS disk.

Often times information published in the National categories (meaning all sites would receive it) could also apply to more than one category/topic. For example, a

promotion announcement could be posted for both the organization the person will be going into and for the area he or she is leaving. When a notice is intended for more than one category/topic, the publisher(s) will use the same text and exact same title when publishing. A special flag will also be set in the database to indicate that these are duplicate notices (see "BB$$TABL NOTICES" on page 6). The "BULLETIN User's Guide" describes how users can choose to see either one or all of the duplicate notices in the database.

Chapter 3. BULLETIN Files

We will now describe how the files are used by the various BULLETIN functions. Some files may appear in more than one list, as they are used by more than one function.

End-user files

These files are required for the end-user portion of BULLETIN.

BB$$COLR EXEC	Allows end-users to redefine their screen colors.
BB$$COPY EXEC	Copies a notice to an end-user's minidisk.
BB$$FEED EXEC	Allows end-users to make comments about individual notices or general comments about the BULLETIN facility.
BB$$HELP EXEC	Displays help information panels.
BB$$MSG EXEC	Displays error and information messages on screen.
BB$$PFK EXEC	Allows end-users to redefine their PF Key assignments.
BB$$POPS EXEC	Creates the pop-up panels used in BULLETIN.
BB$$SEND EXEC	Sends a copy of a notice to other end-users.
BB$$WARN EXEC	Warns users when Stored Notices are close to expiring.
BULLETIN EXEC	The starting EXEC for the end-user portion of the BULLETIN program.
BB$$BODY XEDIT	Searches a notice for occurrences of an end-user-specified string.
BB$$NEW XEDIT	Identifies when new categories and topics have been added to your BULLETIN installation.
BB$$NOTE XEDIT	XEDIT session for creating notes for Feedbacks and when Sending notices to other users.
BB$$PROG XEDIT	The main program of the end-user portion of the BULLETIN program.
BB$$SUB XEDIT	Allows end-users to modify subscriptions to individual categories and topics.
BB$$UPDT XEDIT	Updates user's subscriptions and Stored Notices if Category/Topics are renamed or deleted by system administrators.
BB$$SBLST XEDIT	Creates a subscription list of categories and topics on your BULLETIN installation.
BB$$HELP BULLETIN	The text for all of the help panels in the end-user portion of BULLETIN.
BULLETIN NL$TABLE	Contains text and messages.

BB$$PDWN VALUES	Data to generate pull-down panels.
BB$PDWN1 VALUES	Data to generate pull-down panels.
BB$PDWN2 VALUES	Data to generate pull-down panels.
CONFIG SAMPLE	Sample configuration table.

Service machine files

These files are installed on the BULLETIN service machines located on each system that receives and/or publishes notices.

BUL$$CLN EXEC	Part of the daily cleanup of expired notices.
BUL$DAY EXEC	Performs daily BULLETIN maintenance.
BUL$DISK EXEC	Cleans a disk when it reaches 85% full.
BUL$EXIT EXEC	Processes publishing requests and any non-TOOLS files that hit the reader.
BUL$$CLN XEDIT	Part of the daily cleanup of expired notices.
BUL$ADD1 XEDIT	Adds or replaces entries in BB$$TABL NOTICES files.
BUL$ADD2 XEDIT	Adds or replaces entries in BB$$TABL NOT$DATA files.
BUL$ADD3 XEDIT	Creates new notices from publishing requests.
BUL$CLN2 XEDIT	Part of the daily cleanup of expired notices.
BUL$DEL XEDIT	Deletes notices from BB$$TABL NOTICES and BB$$TABL NOT$DATA files.
BUL$MULT XEDIT	Assigns sequence numbers for Categories/Topics with multiple publishers.
BB$$SERV NL$TABLE	Contains text and messages.
SAMPLE BB$$DI$K	Sample disk identifier.
AUTHORIZ SAMPLE	Sample authorization table.
BB$$CATS SAMPLE	Sample category and topic listing.
MULT$$CT SAMPLE	Header to build BULLETIN MULT$$CT files.
MULTIPLE SAMPLE	Header to build BULLETIN MULTIPLE files.
NOT$DATA SAMPLE	Header to build BB$$TABL NOT$DATA files.
NOTICES SAMPLE	Header to build BB$$TABL NOTICES files.

Publishing files

These files must be installed on each system that will be used by the notice publishers.

BB$$HELP EXEC	Displays help information panels.
PUBLISH EXEC	The starting EXEC for the publishing process.
PUB$BLD XEDIT	Imbeds the proper SCRIPT commands into the text of the notice before formatting.

PUB$STRP XEDIT	Erases blank lines from the end of the SCRIPTed file.
PUBLISH XEDIT	The main program of the publishing process.
PUB$CFRM HEADING	Message sent to the contact person for individual notices to inform them that the notice they are responsible for has just been published.
PUBLISH NL$TABLE	Contains text and messages.
BB$$HELP PUBLISH	The text for all of the help panels in the publishing portion of BULLETIN.
BB$$PUBR SAMPLE	Sample publisher configuration table.

BULLETIN Documentation

BUL$INST SCRIPT	Installation Guide (this document)
BUL$USER SCRIPT	User's Guide
PUB$USER SCRIPT	Publisher's Guide

Additional packages

BULLETIN also requires the following packages:

DATECALC	Performs various calendar functions.
TOOLSRUN	Must be at least Release 6.0.
TOOLCARE	Keeps masters and shadows synchronized.

Chapter 4. Upgrading from BULLETIN 1.0 to 1.1

In general, the system administrators should follow the instructions from the beginning as if this was a new installation, and make only the changes that are needed.

It is important that the actual BULLETIN data not be modified, so no changes or replacements should be made to the NOTICES and NOT$DATA files.

The following list summarizes the changes to files and instructions that occured in this release:

Change History

All Programs

- All text removed from within programs. Now contained in NL$TABLE files.
- Category/Topic appears in parentheses after the date in published notices.

End-User Programs

- An "All Notices" function has been added to the Category Listing Panel. This function lists all the notices published in any selected category in the past 90 days.
- A new entry line on the Notice Listing, Stored Notices, and Search Results panels allows users to apply a function to all notices in the list by typing only a single action code.
- The EXIT function is now supported in the Copy Notice, Send Notice, and Feedback functions.
- When reading a notice, the Category and Topic will appear next to the date. This feature does not apply for notices published prior to this latest release of BULLETIN.
- An XEDIT panel is used to compose Feedbacks and messages attached to notices sent to other users. This eliminates the limits previously associated with text in the "Feedback" (24 lines) and "Send Notice" (5 lines) functions.
- When the PROFS/OVVM option is used to send Feedbacks and copies of notices to other users, the resulting file will now resemble an actual PROFS/OVVM note, with "From:", "To:", and "Subject:" lines.
- Copies of Feedbacks will be appended to a file on the user'sA-disk called FEEDBACK BULLETIN. The previous name (FEEDBACK NOTEBOOK) caused problems with some PROFS-related programs.
- If the file specified in the "Copy Notice" panel already exists, users can now also append the notice to the end of that file, in addition to replacing the file or specifying a different file name.
- The various Required Reading (REQD) categories and topics that are enabled on the system are now indicated in the Subscription Panels.

- When a "Search by notice title" or "Search by notice content" will involve more than 200 notices, the user is told the total number of notices and asked if they wish to continue.

- The $BULLET$ USERDATA and $BULLET$ REMINDER files (which keep track of the last notices read by users and their Stored Notices) will be automatically updated to reflect any renaming of categories and topics.

- A facility for System Administrators to rename categories and topics.

- A warning panel will be displayed whenever any of a user's Stored Notices is within 7 days of expiring. They will also be told if the Stored Notice is no longer in the database, and if problems were detected with the user's settings for PF Keys or colors and highlightings.

- A new option allows BULLETIN to be executed only if new notices have been posted in user's subscribed categories and topics.

- References and links to NATBOARD have been removed.

Publishing Utility Programs

- Several of the publishing utility files can now be installed on a common minidisk.

- Multiple publishers now allowed for a category/topic.

- SCRIPT profiles and symbol and macro libraries (i.e., DSMPROF3 and DSMGML3) are specified in the configuration table.

- The proofreading program is specified in the configuration table.

- Contact/Feedback node & userid now entered in PROFS/OVVM format: i.e., NODE(USERID)

- Up to five other users can also be informed when a notice is published.

- The notice is displayed before deleting for verification.

Service Machine Programs

- Multiple publishers now allowed for a category/topic.

- Responses back to publishers and System Administrator now in PROFS/OVVM format.

- The SENDRDR package is no longer required.

- Disk filemodes no longer have to be hardcoded in the TOOLSRUN CONTROL files.

- Disks do not have to be individually specified in the TOOLDAY EXEC. The BUL$$CLN EXEC will automatically detect and process all disks for nightly clean-up.

- ERASABLE files will be automatically removed (via TOOLDISK) if a disk is more than 85% full.

- System Administrator node/userid now obtained from BB$$SERV NL$TABLE file.

Files Changed

All programs have been changed in some form, so all existing files should be replaced.

The following files have been added to the BULLETIN 1.1 package:

- BB$$WARN EXEC
- BUL$DISK EXEC

- PUBLISH NL$TABLE
- BB$$SERV NL$TABLE

- AUTHORIZ SAMPLE
- MULT$$CT SAMPLE
- MULTIPLE SAMPLE

- BB$$NOTE XEDIT
- BB$$UPDT XEDIT
- BUL$MULT XEDIT

The following files used in BULLETIN 1.0 have been deleted in 1.1:

- BUL$$MSG GOODRUN
- BUL$$MSG NOCATTOP
- BUL$$MSG NOTAUTH
- BUL$$MSG WRONGDSK

Additional Instructions

For those sites that are upgrading existing BULLETIN installations, there is one change to the instructions. In step 8 ("Create NOTICES and NOT$DATA files"), instead of copying the sample files to the A-disk, you will be copying the BB$$TABL NOTICES and BB$$TABL NOT$DATA files from each of your local disks.

For example, if your CONTROL file had linked to REGIONAL as 'N' and LOCAL1 as 'P', then the commands would be:

```
  COPYFILE BB$$TABL NOTICES N REGIONAL NOTICES A
  COPYFILE BB$$TABL NOTICES P LOCAL1 NOTICES A
  COPYFILE BB$$TABL NOT$DATA N REGIONAL NOT$DATA A
  COPYFILE BB$$TABL NOT$DATA P LOCAL1 NOT$DATA A
```

In addition, you do not code a filemode in the TOOLSRUN disk statements in BULLETIN 1.1.

Chapter 5. Installation Procedure for BULLETIN

The following are the steps needed to install BULLETIN at your site. They are broken into two groups:

- Creation of the various Service Machines and installation of the files needed for end-users to run BULLETIN.
- Installation of the Publishing files so that authorized persons can begin publishing notices.

The following sections will cover the installation process in step-by-step detail. A sample scenario for a typical installation is included in Chapter 8, "Appendix A - Sample Installation" on page 45.

Defining the services machines and installing the end-user programs

1. **Define hub node**

   From all the nodes at your site, one must be chosen as the Hub Node. This is the one node that will receive all publishing requests (except those designated as SINGLSYS) and forward them on to the other nodes at your site. It is also the node that will be used to distribute any news your site generates that you wish to share with other sites, and the node that will receive any incoming news from other sites (including NATIONAL).

2. **Determine your categories and topics**

   Define the categories and topics that will be used at your location, as well as any that will be shared with other locations. While there no limit as to the number of categories or topics BULLETIN can support, you should group similar items together to make it easier for your end-users to identify the contents. For example, a topic named PEOP could contain all news items involving people: promotions, awards, transfers, et cetera.

   Remember that for consistency:

   - **Categories** should be created and named along physical location or organizational lines
   - **Topics** should group notices by subject matter

   Refer to "Individual notices" on page 4 for examples.

   Do not forget to plan for any notices considered vital for all employees, which BULLETIN refers to as required reading. The category/topic REQD READ is reserved for these types of national notices, while the topic REQD is used to post local notices which are considered required reading.

3. **Create userids and obtain minidisks**

   Obtain a dedicated userid for each node that will contain a BULLETIN service machine. To facilitate posting of SINGLSYS notices, this userid should be the same on all your local systems.

   Next, determine how many minidisks you'll need to hold the notices and data files. This will be based on how extensive a bulletin board system you wish to create, but at the very least you'll need one minidisk. One disk will also be

dedicated to the National notices distributed to all sites, and will be given the TOOLS disk name NATIONAL. If you plan to have news that will be appearing on only one node and no other, then you will need another disk that will be called SINGLSYS. You can then have as many local and regional news disks as necessary. These disks can be called any name you want within TOOLS naming conventions (1 to 8 characters). Those disks being shadowed from others sites should use the same disk name as used by the originating site.

The amount of DASD required for each of these disks is based on several factors: the number of notices posted, how long they remain on the system, and how much text is in each notice. For example, one IBM site using BULLETIN retains most of their local notices for one year. There are about 40 to 50 notices posted per week, and everything fits on a 25-cylinder 3380 disk. Ten to 15 cylinders may be a good starting point for your disks. Remember that you probably won't need as much for SINGLSYS. In addition, TOOLS will warn you when the disks start becoming full, and you can allocate additional DASD at that time.

You also must decide where the BULLETIN end-user files will reside. BULLETIN EXEC, BB$$HELP EXEC, BB$$HELP BULLETIN, and the system configuration file must be placed on a common disk that all end-users always have access to. The rest can be placed on that same common access disk, or on a minidisk controlled by the service machine. As common disks are often quite full, you may find the latter choice more convenient. The programs will fit onto a three cylinder 3380 disk.

The end-users at your site must have read access to the disks where the BULLETIN end-user programs are stored, and to all NATIONAL, SINGLSYS and local notices disks. It is recommended that all of the above be minidisks on the service machine userids, but they can be disks on other userids if desired. If you choose the latter, make sure that the service machines are given Control (not Write) access to the disks. Consult your local VM systems programmer if you have any questions about how to control access to these minidisks.

4. TOOLS setup

Create the TOOLSRUN CONTROL files on each Service Machine. Start with the node you identified above as the Hub Node, then use that to feed the other nodes at your location. If you intend to distribute your local news to other sites, use this hub node to feed them also. Remember that news coming from other sites enters your location through this hub node.

Any node that sends files to another node is referred to as a master, and does this using COPY statements in its CONTROL file. The receiving node is called a slave, and identifies the source of its files with a MASTER statement in its CONTROL file. Based on the way you design your installation, a node can be both a Slave and a Master - receiving files from one node then sending them on to others.

The following points should be kept in mind when defining your CONTROL files:

- The node and userid of the System Administrator will be entered in the SYSTEM statements. That person will receive all TOOLS-related messages regarding these service machines.

- The Master for the NATIONAL disk on your Hub Machine is in Atlanta. When you have completed the installation of BULLETIN, send a note to

AXISMNT at ATLVM2, telling them the nodes and userids of your Hub Node and system administrator. They will contact you with the final instructions for loading your disk.

- SINGLSYS notices are sent directly to the appropriate service machine, and are not distributed to other locations or systems. Thus, the SINGLSYS disk should not have a MASTER or a COPY statement in its definition.

- The only disks that can have PRIV statements are SINGLSYS and those master disks on your hub machine. There should be no PRIV statements in the CONTROL file for slave disks. In addition, the only userids that should be PRIV are the service machine itself and the system administrator.

- Make sure the disknames on the DISK statements of the various service machines are consistent. It is especially important when shadowing local notices between different sites that the disknames agree.

The following are examples of TOOLS control files for a typical master node and slave node.

```
 LOCAL    NYCVM1   *    SMSG MSGNOH 11
 MSG      LOCAL
 INTERVAL 00:05:00
 SYSTEM   NYCVM1   JOEDOE


 *----------------------------------------------------------------------
 * New York City Local notices.
 *----------------------------------------------------------------------

 DISK     NEWYORK  NYCID 201 NONE

  OPTION   CLEAN    ERASABLE
  NOTIFY   NYCVM1   JOEDOE
  HELP     BULLETIN:  New York City Local Notices.
  RESPONSE * * *

  COPY     NYCVM2   PUBTOOL
  COPY     NYCVM3   PUBTOOL

  PRIV     NYCVM1   JOEDOE
  PRIV     NYCVM1   PUBTOOL
```

Figure 4. Sample CONTROL file for a TOOLS master node

```
 LOCAL    NYCVM2   *    SMSG MSGNOH 11
 MSG      LOCAL
 INTERVAL 00:05:00
 SYSTEM   NYCVM1   JOEDOE


*--------------------------------------------------------------------
* New York City Local notices.
*--------------------------------------------------------------------

 DISK     NEWYORK  NYCID 201 NONE

  OPTION   CLEAN    ERASABLE
  NOTIFY   NYCVM1   JOEDOE
  HELP     BULLETIN:  New York City Local Notices.
  RESPONSE * * *

  MASTER   NYCVM1   PUBTOOL
```

Figure 5. Sample CONTROL file for a TOOLS slave node

5. Install the service machine programs

Copy the service machine files onto the A-disk of the service machines you
have just defined. Service Machines. Refer to "Service machine files" on
page 12 for the list of files.

Three of the files should then be renamed to override those in TOOLSRUN:

- Rename BUL$DAY EXEC to TOOLDAY EXEC
- Rename BUL$DISK EXEC to TOOLDISK EXEC
- Rename BUL$EXIT EXEC to TOOLEXIT EXEC

The file BB$$SERV NL$TABLE must be edited to include information about the
System Administrator. On the first line (T.000), change sysnode and sysuser to
the System Administrator's node and userid. Change T.001 to include the
name, phone number, et cetera. Do NOT modify any of the information before
column 10, or on any of the other lines.

A modified file could look like:

```
    T.000 17 NATVM7  JOEDOE
    T.001 78 Joseph T. Doe, NATVM7(JOEDOE), tie line 555-1212.
    ******************************************************************
```

6. Create the authorization table

A file named BULLETIN AUTHORIZ must be created and placed on the the
A-disk of every service machine that has a SINGLSYS disk. If you will be
publishing local notices at your location, this must also be done for the service
machine on your hub node.

This file will contain all of the local category/topic combinations and their
authorized publishers for that machine. If this is not the hub node, then the file
should only contain the people authorized to publish notices on that node's
SINGLSYS disk.

This file must not contain the category/topic combinations that you are shadowing from the NATIONAL disk or other local disks. The verification of publishing authority will have already been performed at the originating site, using their own BULLETIN AUTHORIZ file. The national system administrator is responsible for creating the one for the NATIONAL disk.

Use the AUTHORIZ SAMPLE file shipped with BULLETIN as a reference when creating your BULLETIN AUTHORIZ files.

The format of the file is:

```
COLUMN DATA
------ --------------------------------------------------
 1-4   Category (using '$' character as fill character)
 5-8   Topic (using '$' character as fill character)
10-17  Publisher node
19-26  Publisher userid
```

```
   NYC$CAFE NYCVM5   MAINCHEF
   NYC$EDUC NYCVM5   JOEDOE
   NYC$PEOP NYCVM5   BYTEMAN
   NYC$TDAY NYCVM5   JOEDOE
   NYC$TECH NYCVM5   SIRCODER
```

Figure 6. The AUTHORIZ SAMPLE file shipped with BULLETIN

7. Create the multiple publishing authorization files

On the same nodes for which you created BULLETIN AUTHORIZ files in the previous step, rename MULT$$CT SAMPLE to BULLETIN MULT$$CT and MULTIPLE SAMPLE to BULLETIN MULTIPLE, and place them on the A-disk of the appropriate service machines.

If you will not be having multiple users publish in the same category/topic, you can go to the next step.

The BULLETIN MULT$$CT file should be edited to contain the names of the categories and topics which will allow multiple publishers. The format of the file is:

```
COLUMN DATA
------ --------------------------------------------------
 1-4   Category (using '$' character as fill character)
 5-8   Topic (using '$' character as fill character)
```

```
   CAT$TOP$
```

Figure 7. The MULT$$CT SAMPLE file shipped with BULLETIN

The header statement, as shipped in the MULT$$CT SAMPLE file, must be the first record in your BULLETIN MULT$$CT file.

The BULLETIN MULTIPLE should not be edited, and should only contain one record - the header statement.

8. **Create NOTICES and NOT$DATA files**

On the same nodes for which you created BULLETIN AUTHORIZ files in the previous step, also create files with the filetypes NOTICES and NOT$DATA and place them on the A-disk of the appropriate service machines. The filenames will be the same as the TOOLS disknames found on the DISK statements in the CONTROL files on those nodes. Do this for every disk that will be receiving actual publishing requests (for example, SINGLSYS). For example, if the service machine controls three disks called: REGIONAL, SINGLSYS and LOCAL1, you would issue the commands:

```
COPYFILE NOTICES SAMPLE A REGIONAL NOTICES A
COPYFILE NOTICES SAMPLE A SINGLSYS NOTICES A
COPYFILE NOTICES SAMPLE A LOCAL1 NOTICES A
COPYFILE NOT$DATA SAMPLE A REGIONAL NOT$DATA A
COPYFILE NOT$DATA SAMPLE A SINGLSYS NOT$DATA A
COPYFILE NOT$DATA SAMPLE A LOCAL1 NOT$DATA A
```

When completed, these files *must* only contain one record - the header statement (refer to "BB$$TABL NOTICES" on page 6 and "BB$$TABL NOT$DATA" on page 7).

When publishing requests are received, the appropriate entries will be added to the *<diskname>* NOTICES and *<diskname>* NOT$DATA files. A COPYFILE command with the REPLACE option will create a BB$$TABL NOTICES and BB$$TABL NOT$DATA file on the A-disk, then TOOLS commands will place these two files on the appropriate disks. Therefore, BULLETIN will always be creating various BB$$TABL NOTICES and BB$$TABL NOT$DATA files on the A-disks of the Service Machines which will always be changing to reflect the various disks that requests are received for.

9. **Start up all service machines**

On each of the service machines, begin executing the TOOLSRUN program using the following command:

```
EXEC TOOLSRUN START
```

You may want to put this command in the PROFILE EXEC, so that TOOLSRUN is automatically started whenever the userid is logged on. You should also go through whatever steps are used at your site to make sure these Service Machines are always logged on (for example, after system IPL's).

10. **Create disk identifiers**

On the System Administrator's userid, take the SAMPLE BB$$DI$K file and make a copy for every disk that publishing requests will be sent to. The filetype remains BB$$DI$K, and the filenames will be the TOOLS disk names (the same as used to create the NOTICES and NOT$DATA files in the previous step). Again, using our previous example, you would issue the commands:

```
COPYFILE SAMPLE BB$$DI$K A REGIONAL BB$$DI$K A
COPYFILE SAMPLE BB$$DI$K A SINGLSYS BB$$DI$K A
COPYFILE SAMPLE BB$$DI$K A LOCAL1 BB$$DI$K A
```

Using the TOOLS CREATE command, send the BB$$DI$K files to the appropriate disks on the hub machine and to all the service machines that have SINGLSYS disks. TOOLS will then propagate these files to all the other nodes as needed.

The format for the TOOLS CREATE command is:

```
EXEC TOOLS SENDTO <machnode> <machid> <machdisk>
          CREATE <machdisk> BB$$DI$K (comment

          where  <machnode> is the node of the service machine
                 <machid>   is the userid of the service machine
                 <machdisk> is the disk name as specified in the CONTROLfile
```

For example:

```
EXEC TOOLS SENDTO NYCVM1 PUBTOOL SINGLSYS CREATE SINGLSYS BB$$DI$K (Initial load
```

In addition, if the BULLETIN user files will be placed on a minidisk controlled by the service machines (Step 3), an identifier must be created for this disk also. The name of this file *must* be CODEDISK BB$$DI$K.

For example:

```
EXEC TOOLS SENDTO NYCVM1 PUBTOOL BBCODE CREATE CODEDISK BB$$DI$K (Initial load
```

where BBCODE is the TOOLS disk name in the CONTROL file.

11. Create category/topic descriptions

Files called BB$$CATS will be created to list all of the categories and topics available on all of your local disks. There will be a file created for each local disk. Do not create a file for any disks you shadow from other locations. Also, do not create one for SINGLSYS unless it will contain categories and topics not found on your other local disks. The national system administrator will be responsible for creating one for the NATIONAL disk. Use the file BB$$CATS SAMPLE shipped with BULLETIN as a reference. The description files will be called BB$$CATS <machdisk>, where <machdisk> is the name of the disk as specified in the CONTROL file.

The format of the file is:

```
COLUMN DATA
------ --------------------------------------------------
 1-4   Category (using '$' character as fill character)
 5-8   Topic (using '$' character as fill character)
10-80  Description
```

Use the TOOLS CREATE command from the system administrator's userid to place these files on the appropriate service machine disks. TOOLS will then propagate them to all other nodes. An example is shown following.

```
NYC$REQD New York City Required reading
NYC$CAFE New York City Cafeteria Menu
NYC$EDUC New York City Education
NYC$PEOP New York City Promotions
NYC$TDAY New York City TODAY
```

Figure 8. The BB$$CATS SAMPLE file shipped with BULLETIN

12. Create the end-user configuration table

BULLETIN uses a configuration table to specify on which minidisks the notices and user files are located, along with local option settings. When BULLETIN is executed, it first looks for a file named BB$$TABL <nodename> on any of the currently linked disks (<nodename> is the name of the node the end-user is currently logged onto). If it is unable to find this file, then it looks for a file named BB$$TABL ALL. This allows you to customize individual nodes, or use the same file for all nodes. Your configuration table *must* be placed on a common user access disk. The file CONFIG SAMPLE shipped with BULLETIN can be used as a guide when creating your configuration tables.

The following are the end-user configuration table keywords, which may appear in any order.

Note: All keywords *must* start in Column 1, and arguments in column 10.

Keyword	Description and Syntax
CODEDISK	This line tells BULLETIN where to find the BULLETIN end-user files if they are not located on a disk that all end-users are automatically linked to at logon time.
	CODEDISK <userid> <diskaddr>
COPY	Whether or not end-users are allowed to copy notices to their own minidisks.
	• enable copying: COPY ON
	• disable copying: COPY OFF
FASTE	FastEnter.
	Tells whether the FastEnter feature is to be enabled for first time end-users of BULLETIN (refer to the Glossary for a definition of FastEnter).
	• to enable: FASTE ON
	• to disable: FASTE OFF
LOCAL	This keyword tells BULLETIN where to find any local notices and associated files.
	LOCAL <userid> <diskaddr> <toolname> <opt description>
	<toolname> is the disk name coded in the CONTROL file.
	There can be more than one LOCAL statement in the table.

LOCALCAT Use this keyword to list all of the local category names that are available.

LOCALCAT <catname> <reqdflag> <description>

<catname> is the one- to four-character category name. Do not use the '$' fill character here.

<reqdflag> is set to REQD if required reading notices are available in that category and you want it enabled for your end-users. Otherwise it is set to '*'. You can set this field to '*' even if there is a REQD topic for this category. This is useful when you don't want to force your end-users to see required notices posted by other sites you shadow.

There can be more than one LOCALCAT statement in the table.

NATIONAL This keyword tells BULLETIN where to find all the NATIONAL notices and associated files.

NATIONAL <userid> <diskaddr> <opt description>

PRINT Gives the name of the default printing EXEC that will be invoked if the end-user does not have access to PROFS/OVVM.

PRINT   <execname>

SEND Whether or not end-users are allowed to send copies of notices to other end-users.

- enable sending: SEND   ON
- disable sending: SEND   OFF

SHOWMODE Tells how new notices are to be displayed for first time end-users of BULLETIN. Daily mode refers to the grouping and display of a list of notices by individual days. Cumulative mode displays all new notices in one list.

- for Daily mode: SHOWMODE D
- for Cumulative mode: SHOWMODE C

SUPPORT The node and userid of the system administrator.

SUPPORT <node> <userid>

WELCOME The number of times first-time users of BULLETIN are shown the Welcome panel. This keyword is optional, and should only be used if you do not want to accept the BULLETIN default value of 1.

WELCOME <times>

VERCOUNT The number of times users are shown the "New this release" panel. This keyword is optional, and should only be used if you do not want to accept the BULLETIN default value of 1.

VERCOUNT <times>

* Indicates a comment line

A sample configuration table is shown on the following page.

```
* This is the disk where the BULLETIN code resides
CODEDISK BULLETIN 150

* This is the disk containing National notices
NATIONAL BULLETIN 199 National

* These are the disks containing local notices
LOCAL    BULLETIN 201 NEWYORK  New York City
LOCAL    BULLETIN 300 NEREGION Northeast Region

* The Local Category names
LOCALCAT NYC REQD New York City
LOCALCAT PA  *    Pennsylvania

* The default printing EXEC if PROFS/OVVM not available
PRINT    HARDCOPY

* Who will be contacted for BULLETIN problems
SUPPORT  NYCVM5  JOEDOE

* FastEnter default is on
FASTE    ON

* How new notices are grouped (daily)
SHOWMODE D

* End-users are allowed to copy notices
COPY     ON

* End-users not allowed to send notices
SEND     OFF

* Number of times first-time users of BULLETIN shown the Welcome panel
WELCOUNT 2

* Number of times users are shown the "New this release" panel
VERCOUNT 3
```

Figure 9. The CONFIG SAMPLE file shipped with BULLETIN.   Comment lines explain each step.

13. Install the BULLETIN end-user files on all nodes

Refer to "End-user files" on page 11 for the list of files. Four of the files - BULLETIN EXEC, BB$$HELP EXEC, BB$$HELP BULLETIN, and the BB$$TABL end-user configuration table (created in the previous step) - *must* be placed on a common end-user access disk.

If the programs are to be stored on a disk under the control of your Service Machines, the System Administrator can use the TOOLS CREATE commands shown earlier to install them.

14. Contact any sites you shadow to load up your machines

If you are shadowing local news that originates from another site (or are ready to start receiving NATIONAL news), contact the respective system administrators and let them know you are ready to begin receiving notices. As mentioned earlier, send a note to AXISMNT at ATLVM2 telling them the nodes and userids of your Hub Node and System Administrator for instructions on loading the NATIONAL disk.

Likewise, if you are sending copies of your news to other locations, their system administrators should contact you to let you know when their service machines are ready to begin receiving files from your system(s).

At this time both system administrators stop (or shut down) their respective hub machines. The CONTROL file for the machine sending notices is updated to include the appropriate COPY statement(s). The CONTROL file for the machine that will be receiving the notices is updated to include the appropriate MASTER statement(s). The hub service machines then restart TOOLSRUN, and the changes to the CONTROL files will take effect.

There may be times when a site begins shadowing a disk from another location that has already been processing publishing requests. While making the above changes to the CONTROL files will allow the shadowing location receive any new notices that are created, they will be missing copies of any existing notices from that disk. previously created. To send all of the currently existing notices to the new shadow hub machine, the sending system administrator would issue the following command:

```
 TOOLS SENDTO <fromnode> <fromid> <fromdisk> COPY * * <tonode> <toid> <todisk>
```

The <fromdisk> and <todisk> must be the same.

For example:

```
TOOLS SENDTO NYCVM1 PUBTOOL NEREGION COPY * * BINGVM0 BINGO NEREGION
```

It is important that the sending site system administrator and the receiving site system administrator coordinate their activities. While they do not have to be totally synchronized, it is important to make sure that the Sending Hub Machine is not restarted before the Receiving Hub Machine. Otherwise, publishing requests could be forwarded to the Receiving Machine before it is ready, resulting in error messages.

15. BULLETIN has now been installed.

Note: BULLETIN cannot be executed until at least one notice has been published on one of the disks (via the publish option). The notice published must be dated with the current date or a previous date. If you attempt to execute BULLETIN before there are available notices on your system you will receive error messages from the DATECALC program.

Now proceed to the next section on installing the publishing utility.

Installing the publishing programs

The following are the steps needed to install the BULLETIN Publishing Option for the authorized publishers at your site. Refer to the "BULLETIN Publisher's Guide" if you have any questions about the publication process.

1. **Create an Archive Disk.**

   Every person who will be authorized to publish notices needs a separate minidisk on their userid to hold the publishing programs and copies of the notices. This disk will be referred to as their archive disk. Five cylinders is a good starting point, and they will be warned whenever the disk is 85% or more filled.

   When notices are published or replaced, a copy of the notice is placed on the publisher's archive disk. The filename and filetype of this copy will be the same as that used to store the notice in the database (i.e., in the form YYMMDDSS CATTOP). However, whereas the notice in the database has been formatted, the copy on the archive disk is the same raw text file that the publisher used when submitting the request (that is, the first three lines contain the title, and the rest of the file may contain SCRIPT commands).

   There are several reasons for this:

   a. When publishing new notices, the archive disk is used to determine the proper sequence number. The publisher enters the date on the main panel, and the category/topic is selected on a succeeding panel. The program checks the archive disk for previous notices published on that date in that category/topic, then assigns the next number in sequence.

   b. When a notice needs to be corrected and replaced, the publisher enters the date and selects the category/topic. The archive disk is searched for notices that have previously been published on that date and in that category/topic combination, and their titles presented on screen. By selecting from this list, the publisher can easily identify the notice to be replaced without actually knowing its sequence number.

   c. The raw text is readily available should the notice itself (or a variation of it) ever need to be published again at a later date.

   It is not expected that notices remain forever on the archive disk, but it is up to each Publisher to manage their archive disk. Obsolete notices that are no longer needed should be regularly erased from the archive disk.

2. **Copy the publishing files**

   The publishing files "Publishing files" on page 12 (except BB$$PUBR SAMPLE) should be installed on either a common disk that the publishers have access to, or may be copied directly onto each publisher's archive disk. If BB$$HELP EXEC is already available on a common end-user access disk from the installation of the BULLETIN end-user files, then it does not need to be re-installed.

   If the common disk approach is used, the PUBLISH EXEC and PUB$CFRM HEADING files must still be installed on each publisher's archive disk. Also, make sure that all end-users cannot access this common publisher disk. Only publishers should have read access to the disk.

3. Edit the PUB$CFRM HEADING file

The file PUB$CFRM HEADING should be edited to include information about the individual publisher. Because this file will be unique for each publisher, it should be placed on their archive disk. When a notice is published, the contents of this file are appended to confirmation notes sent to the designated feedback contact. The file attributes should be RECFM F, LRECL 75. An example is shown below.

```
The following notice has been accepted and published by NYCVM1(JOEDOE)
Contact John Doe at tie line 123-4567 if you have any questions.

**************************************************************************
```

Figure 10. Sample PUB$CFRM HEADING file shipped with BULLETIN

4. Create the publishing configuration table.

Each publisher must have a publishing configuration table on their archive disk. This disk describes the categories and topics that the publisher is authorized to post notices under. To create this file, copy the BB$$PUBR SAMPLE file to BB$$TABL PUBLISHR. Edit the file to describe the publishing authority given to this individual. The format of the file is described below.

Keyword	Description and Syntax
CATGTOPC	This keyword is coded for every Category and Topic that a person is authorized to publish to.
	CATGTOP <cat> <topic> <numdays> <hubnode> <hubid> <hubdisk> <singleflag> <description>
	<cat> is the one- to four-character Category name. Do not use the '$' fill character here.
	<topic> is the one- to four-character Topic name. Do not use the '$' fill character here.
	<numdays> is the default number of days notices in this Category/Topic remain in the database before expiration. The actual Expiration Date for a specific notice can still be entered during the publishing process.
	<hubnode> is the node of the Hub Machine where the publish request is sent.
	<hubid> is the userid of the Hub Machine where the publish request is sent.
	<hubdisk> is the TOOLS name for the disk where the notice is to be published.
	<singleflag> is a flag indicating whether the capability exists to publish notices in this Category/Topic on individual nodes (i.e., the SINGLSYS disk), and whether

there will be multiple users publishing to this category/topic. This field should either 'YES' for publishing on individual nodes, 'NO' for not, and 'MULT' for multiple publishers. Categories/Topics with multiple publishers CANNOT be published on individual nodes.

<description> is a description of the Category/Topic.

MAXEXP This line tells PUBLISH the maximum number of days **any** notice can remain in the database. It is used for error checking when a specific Expiration Date is entered during the publishing process.

The syntax is: MAXEXP <numdays>

PRINT The name of the default printing EXEC that will be used if the end-user does not have access to PROFS/OVVM.

The syntax is: PRINT   <execname>

PROOF The name of the EXEC or utility used for proofreading on the publisher's node.

The syntax is: PROOF   <execname>

PUBCODE Optional. If the code is placed on a common publisher's disk, this specifies the userid and disk address.

The syntax is: PUBCODE <userid> <diskaddr>

SCR-LIB The name of the symbol and macro library used by your release of SCRIPT.

The syntax is: SCR-LIB <libname>

SCR-PROF The name of the profile used by your release of SCRIPT.

The syntax is: SCR-PROF <profname>

SINGLSYS This keyword is coded for every node that you can submit individual requests to (i.e., nodes that have SINGLSYS disks). The userid that the individual requests are sent to is picked up from the CATGTOPC keyword.

The syntax is: SINGLSYS <nodename>

A configuration table must be created for each user that will be publishing notices. An example is shown in the following figure:

```
   * This publisher can post in one National and two Local Category/Topics
   CATGTOPC CORP NEWS  90 IBMVM0    NATMACH  NATIONAL NO  Corporate Headquarters
   CATGTOPC NYC  CAFE  30 NYCVM5    PUBMACH  NEWYORK  YES New York Cafeteria
   CATGTOPC NYC  TDAY 365 NYCCM5    PUBMACH  NEWYORK  YES New York TODAY


   * Maximum life for any notice is one year
   MAXEXP   365


   * Alternate printing exec if PROFS/OVVM not available
   PRINT    HARDCOPY


   * Proofreading EXEC
   PROOF    PROOF


   * Location of publisher common disk
   PUBCODE  PUBLISHR 101


   * Current level of SCRIPT profiles and macros
   SCR-LIB  DSMGML3
   SCR-PROF DSMPROF3


   * Instead of posting on all local nodes, notices can also be specifically
   * published on either of these two individual nodes
   SINGLSYS NYCVM1
   SINGLSYS NYCVM5
```

Figure 11. A sample of a BB$$TABL PUBLISHR file. This is the BB$$PUBR SAMPLE file shipped with BULLETIN.

Testing the installation

1. Invoke BULLETIN by typing: BULLETIN

2. A "Welcome to BULLETIN" Help Panel will appear (this comes up the first time for all new end-users). Scroll through and read the information. When finished, press the Cancel key.

3. Check that all expected categories are listed on the Category Listing Panel.

4. Go the Search action bar entry and select "Search by Category".

5. Type an asterisk (*) for the category name and press Enter. All the notices published prior to and including today should be displayed.

Refer to the "BULLETIN User's Guide" for additional information about how to use BULLETIN. It is strongly recommended that you test to ensure that all of the available end-user options and publishing functions are working correctly before making BULLETIN generally available.

Chapter 6. Administration and Maintenance

Feedback messages

As mentioned previously, each notice has a Contact Person assigned to it during the Publishing process. That Contact Person is responsible for answering any questions and comments regarding their assigned notices.

BULLETIN also allows end-users to generate feedback about the application itself. Those questions and comments are sent directly to the system administrator.

Security

One of the advantages of BULLETIN is that it allows notices to be created and distributed well in advance of their publication date. This is useful for notices that repeat on a regular basis, and also allows the publishing process to be performed when it is most convenient for the publisher.

When an end-user executes BULLETIN, any notices that have publication dates beyond today's date are prevented from being displayed and accessed within the application. However, BULLETIN is not a secure system, and is not intended as such.

Since all end-users have been given Read-Only access to all of the minidisks that make up the BULLETIN database at any site, anyone can link to these disks outside of BULLETIN and view all the notices on these disks. Consequently, information that is considered confidential or sensitive should not be published in advance, but should be held and published just before the announcement.

Changes in publishing

The BULLETIN facility at your site will no doubt be changing over time. Because of personnel changes, new individuals may be taking on publishing responsibilities. New Categories and Topics may also be created. The following section describes some of the changes that may occur, and the steps necessary to update an existing BULLETIN installation:

1. **Responsibility for publishing a Category/Topic is turned over to a new person.**

   The easiest way to handle this is to always use generic userids for the publishers. That way, when responsibility is transferred, the new person can assume ownership of the userid and no additional work (other than training) is required.

   When this is not possible:

   - Obtain an archive disk for the new publisher.

   - Transfer all files on the archive disk from the old to the new publisher.

   - Modify the PUB$CFRM HEADING file to reflect the change.

- Log on to the appropriate service machines and modify the BULLETIN AUTHORIZ and BULLETIN MULTIPLE files (on the machine's A-disks) to reflect the new userid for the affected categories/topics.

2. A new category/topic is created.

- Log on to the appropriate Service Machines and modify the BULLETIN AUTHORIZ files (on the machines A-disks) and BULLETIN MULT$$CT files (if it is a category/topic with multiple publishers) to reflect the new category/topic and authorized publishers.

- If this is a local category/topic, then from the system administrator's userid modify the appropriate BB$$CATS file and distribute it to the service machines using the TOOLS REPLACE command. This command has exactly the same syntax as the TOOLS CREATE command. For example:

```
EXEC TOOLS SENDTO NYCVM1 NEWYORK NEREGION REPLACE BB$$CATS NEREGION (New Cat/Top
```

- If this is a new local category, then add a LOCALCAT entry to your end-user configuration tables. If this is a category that would be shadowed to other sites, make sure they are aware of it so that they can also add it to their configuration tables.

- If the new category/topic is to be published by an existing publisher, then edit that publisher's BB$$TABL PUBLISHR file and add an entry for the new category/topic. If it is a new publisher, then follow the steps for installing the publishing option (see "Installing the publishing programs" on page 31).

3. A category/topic must be renamed

If you cannot avoid having to rename or delete a category/topic on your system, the system administrator can create files that will automatically update the users' $BULLET$ USERDATA and $BULLET$ REMINDER files (that keep track of last notice read and all Stored Notices. See Chapter 7, "Local Considerations" on page 41).

This is done by creating a file called BB$$UPDT yymmdd and placing it on the appropriate data disk via TOOLS. yymmdd is the year, month, and day; i.e., BB$$UPDT 920329.

This file should be placed on the system in advance of the change. When that day comes, the instructions within the file will update the users' files.

The format for the commands within the file are:

```
    COLUMN DATA
    ------ --------------------------------------------------
       1   Command
     3-10  Old category/topic (using '$' character as fill character)
    12-19  New category/topic (using '$' character as fill character)
```

Two commands are supported:

- C - Change category/topic

- D - Delete category/topic

For delete, the new category/topic field is left blank.

In the following example, NYC/PEOP will be renamed to NYC/NEWS, and NYC/INFO will be deleted.

```
C NYC$PEOP NYC$NEWS
D NYC$INFO
```

Figure 12. Sample BB$$UPDT file

After sufficient time has passed, you can use TOOLS commands to erase the BB$$UPDT file from the data disk.

4. **Creating a new disk.**

- Obtain a minidisk and give the necessary accesses.

- Shut down the service machines and add the disk to the CONTROL files.

- Create the <diskname> NOTICES and <diskname> NOT$DATA files and place them on the A-disks of the appropriate machines.

- Restart all service machines.

- On the system administrator's userid, create a <diskname> BB$$DI$K identifier file and send a TOOLS CREATE request to the hub machine.

- Now follow all the steps that were described in the previous section "A new category/topic is created".

In case of errors

The following is a quick summary of common problems that may occur. The BULLETIN programs will attempt to identify the source of any errors that occur, and to issue appropriate error/warning messages. If the information contained in the messages is not sufficient to resolve the problem, then the following suggestions may be useful.

End-user cannot access BULLETIN

- Verify that the end-user has access to the BULLETIN EXEC and the local configuration table

- Verify that the end-user has read access to all of the disks which are used to store notices

- Verify the contents of the configuration table

- Verify that xxx xx xxx are on common access disks

Publisher can not publish notices

- Verify that the publisher is attempting to submit a legitimate request, for which they are authorized

- Verify that the publisher has access to the disk where the publishing programs are stored

- Verify that the publisher's BB$$TABL PUBLISHR file is correct

- Verify that xxx xx xxx are on common access disks

- Verify that the system administrator has not made any changes to the BULLETIN AUTHORIZ, BB$$CATS files or BB$$TABL files that might affect this publisher's requests

Service machine encounters errors

- Verify the contents of the service machine CONTROL file, and the configuration tables

- Verify that the service machine has access to the disk where the TOOLS programs are stored

- If the error involves a disk shadowed from another site, verify that their site's system administrator has not made any changes to the categories/topics or disk description

- Verify that the request was submitted is a valid request submitted by an authorized individual

Service machine encounters database errors for a disk

Check the <diskname> NOTICES and <diskname> NOT$DATA files stored on the service machine A-disks to see if they contain the same number of records. If the files are not the same size, then the service machine will not be able to post notices on the disk. To resolve the problem,

- Compare the <diskname> NOTICES and <diskname> NOT$DATA files to the BB$$TABL NOTICES and BB$$TABL NOT$DATA files stored on that disk. You may need to compare the files to the actual disk contents, also.

- If the BB$$TABL files appear undamaged, then simply replace the files on the service machine A-disk using the following commands:

```
COPY BB$$TABL NOTICES <filemode> <diskname> NOTICES A (REPLACE OLDDATE
COPY BB$$TABL NOT$DATA <filemode> <diskname> NOT$DATA A (REPLACE OLDDATE
```

- When finished, all four files should contain the same number of records.

Recovering from an error on the service machine

If the service machine is unable to process a request due to an error condition, the request file will be placed in the reader in Class H. Once you have corrected the error, you must transfer these files to Class T before the TOOLSRUN exec can process them. To transfer the files issue the command:

```
CP CHANGE RDR ALL CLASS T
```

Chapter 7. Local Considerations

End-user data files

The file LASTING GLOBALV is used to store many of the BULLETIN settings that can be altered by the end-user (such as color and PF Key assignments, environment, last day accessed, etc.). As expected, end-users cannot erase or modify this file without the risk of significant impact to not only BULLETIN, but any other programs they access that make use of LASTING GLOBALV. End-users should use the facilities provided within BULLETIN to change their settings (from the OPTIONS pull-down).

BULLETIN also creates and updates a file on their A-disk called $BULLET$ USERDATA. This file contains the names of all the categories and topics available at their site, along with the date and sequence number of the last notice in each category/topic that was presented to them in a Notice Listing panel. It also indicates whether or not they are subscribed to that category/topic.

If end-users have any stored notices, then a second file called $BULLET$ REMINDER is also written to their A-disk. This file contains the filename and filetype of their stored notices.

To indicate the nature of these files and the fact that end-users should not alter the contents, both files contain the following header in lines 1-3:

```
Bulletin User Data
**Do Not Modify**
-----------------
```

The format of the $BULLET$ USERDATA file is:

```
COLUMN  DATA
------  --------------------------------------------------------------
 1-8    Category/topic name
  9     Subscription indicator ('*' if set, blank if not)
10-17   Last notice.  Format is yymmddss, and matches the filename
        of the notice.
```

The format of the $BULLET$ REMINDER file is:

```
COLUMN  DATA
------  --------------------------------------------------------------
 1-8    Stored Notice filename
 9-16   Stored Notice filetype
```

Obviously there is no way to prevent end-users from erasing these files and loosing the records of their previous BULLETIN sessions. However, many sites have installed on their systems a modified ERASE EXEC which warns end-users when they are about to erase critical files, such as PROFS/OVVM notelogs. If such an EXEC exists at your site, you may want to add $BULLET$ USERDATA and $BULLET$ REMINDER to the list of files that it checks for.

Automatic execution

BULLETIN provides the ability for end-users to automatically execute the program once a day from their PROFILE EXEC (or any other EXEC). This is done by executing BULLETIN with the option 'FIRST', as in:

```
EXEC BULLETIN FIRST
```

When the 'FIRST' option is used, BULLETIN checks to see whether or note the end-user has already executed it on that day. If yes, BULLETIN ends ends and control passes to the next command. Otherwise, BULLETIN continues with its execution.

End-users have further control over 'FIRST' with the 'ON' and 'OFF' options. If an end-user types:

```
BULLETIN ON
```

a flag is set in LASTING GLOBALV indicating that BULLETIN should perform the checking for daily execution whenever the 'FIRST' option is encountered. When the end-user types:

```
BULLETIN OFF
```

the flag is set indicating that BULLETIN should immediately terminate whenever 'FIRST' is encountered.

How you implement this automatic invocation and communicate it to your end-user community will have to be a site decision. Each location has unique ways in which PROFILEs and directories are set up. For many locations, a basic userid only has directory links to its own disks. It is up to the end-users to code links and accesses to common system tools disks in their PROFILEs. You will have to tell your end-users that it is up to them to add the 'EXEC BULLETIN FIRST' statement to their PROFILEs.

Other sites may have this work already done for the end-user. For example, at one IBM facility the link to the site's common tools disk is placed in the directory of each userid. The BULLETIN application is placed on this tools disk, so that at the very start of the logon, the end-user already has access to BULLETIN. The PROFILE for each userid contains a call to an EXEC called PROFSYS. PROFSYS is maintained by that IBM site's Information Services organization and contains programs or information deemed important to the end-user community. It is in PROFSYS where they have placed the 'EXEC BULLETIN FIRST' statement, so that all end-users there will automatically execute BULLETIN during their first signon.

Of course, many end-users do not want BULLETIN invoked automatically. Some have multiple userids, and want BULLETIN to come up on only one of them. Other

userids may be used to control processes, and again BULLETIN would not be desired there. It is in these situations where the BULLETIN OFF command is used. This command only needs to be executed once by each userid to keep BULLETIN from automatically executing during the logon procedure.

End-users can query BULLETIN to find out whether they have the override set to ON or OFF by using the 'SET' option. Typing BULLETIN SET returns the following message:

```
    Your current BULLETIN setting is:  xxx
    This applies to calls to BULLETIN using the FIRST option.
    Contact your System Administrator for more information as
    to how the FIRST option is implemented at your site.
```

In the first line of the message, xxx is either ON or OFF.

Chapter 8. Appendix A - Sample Installation

This section will help illustrate how BULLETIN can be installed in several different environments and configurations.

Background

In this example we will show how BULLETIN is installed at fictional sites in New York City, Boston, and Binghamton, NY. While Atlanta will tell you the exact node and userid that will be distributing the National notices for your own installation, for this exercise we will assume that the National Hub is NATMACH at IBMVM0.

New York City system description

The local category called "NYC" for New York City will have four topics. The local category/topic descriptions and authorized publishers are listed below.

```
Category  Topic  Description          Publisher
--------  -----  --------------------  ----------------------
  NYC     REQD   Important local news  NYCPUB at NYCVM1
  NYC     TDAY   Today - site news     NYCPUB at NYCVM1
  NYC     CAFE   Cafeteria menu        NYCPUB at NYCVM1
  NYC     EDUC   Education classes     NYCPUB at NYCVM1
  NYC     SYS    System Availability   NYCPUB at NYCVM1
```

Besides having its own local offices, New York City is also the central location of the Northeast sales region. The region category/topic descriptions and authorized publishers are listed below.

```
Category  Topic  Description          Publisher
--------  -----  --------------------  ----------------------
  NE      SALE   Sales Events Notices  NYCPUB at NYCVM1
  NE      PEOP   People - Promotions   NYCPUB at NYCVM1
```

The hub node for New York City is NYCVM1. New York City has five VM systems - VM1 through VM5 - and all news will appear on all systems. Therefore, there will not be a SINGLSYS disk defined for these systems.

Boston system description

Boston's Category name is BOST, and they have the same Topics as New York City (TDAY, CAFE, EDUC, and SYS), but they do not have a need for a required reading Topic. The local categories/topics and publishers are listed below:

```
Category  Topic  Description          Publisher
--------  -----  --------------------  ----------------------
  BOST    TDAY   Today - site news     MASSCOM at BOSTVMB
  BOST    CAFE   Cafeteria menu        MASSCOM at BOSTVMB
  BOST    EDUC   Education classes     MASSCOM at BOSTVMB
  BOST    SYS    System Availability   MASSCOM at BOSTVMB
```

Boston will also be shadowing the Northeast region news.

The SYS news will be unique on each system, thus we will be defining SINGLSYS disks for these machines.

Boston actually has two separate computer facilities. The first location, called the east building, consists of BOSTVM1 and BOSTVM2. The second location, called the west building, consists of BOSTVMA, BOSTVMB and BOSTVMC. BOSTVMA serves as the hub into Boston for all communications (including BULLETIN). BOSTVM1 serves as the gateway into the east building machines.

Binghamton system description

The Binghamton location is strictly a sales office, and as such does not have any of its own local news. It will only shadow the National and Northeast region news. There is one system, BINGVM0.

Expiration dates

For this example we will assume the following lifespan for notices:

Type of Notice	Life (days)
Cafeteria Menu	7
System Availability	14
All other local	365

The lifespan tells BULLETIN for how many days after the publishing date the notice should be kept on the system. When the notice reaches the expiration date it is automatically erased.

End-users and service machines

Now that we have described our sample installation, we will begin the actual installation process. The following is a step-by-step example showing how BULLETIN would be installed at the three sites.

1. Define hub nodes

The hub nodes have already been assigned in the background section:

LOCATION	HUB NODE
National	IBMVM0
New York City	NYCVM1
Boston	BOSTVMA
Binghamton	BINGVM0

In this example, the system administrators at each site will have the userid SYSADMIN on the hub nodes.

2. Determine your Categories and Topics.

Already defined in "Background" on page 45

3. Create userids and obtain minidisks

For simplicity in this example, all sites will be using the same minidisks addresses for the disks:

Content	Address	TOOLS Disk Name
BULLETIN end-user code	150	BBCODE
National notices	199	NATIONAL
Local notices	200	LOCAL
SINGLSYS	201	SINGLSYS
Regional notices	300	NEREGION

The userids for the service machines are:

SITE	USERID
National	NATMACH
New York City	NEWYORK
Boston	BOSTON
Binghamton	BINGO

The installing programmer would be responsible for obtaining the correct number of cylinders for these disks, and for assigning access authority. We'll assume that the programmer has done so, and proceed with the installation.

4. TOOLS Setup

The TOOLS files will be placed on the A-disks of the service machine userids as described in the "TOOLS Setup" procedure on 20. The next step is the creation of the CONTROL files.

```
*----------------------------------------------------------------------
* TOOLSRUN CONTROL file for New York City.
*----------------------------------------------------------------------

 LOCAL    NYCVM1   *    SMSG MSGNOH 11
 MSG      LOCAL
 INTERVAL 00:05:00
 SYSTEM   NYCVM1   SYSADMIN

*----------------------------------------------------------------------
* BULLETIN End-user Code Disk.
*----------------------------------------------------------------------

 DISK     BBCODE   NEWYORK  150 NONE

 OPTION   CLEAN    ERASABLE
 NOTIFY   NYCVM1   SYSADMIN
 HELP     BULLETIN End-user code disk.
 RESPONSE * * *

 COPY     NYCVM2   NEWYORK
 COPY     NYCVM3   NEWYORK
 COPY     NYCVM4   NEWYORK
 COPY     NYCVM5   NEWYORK

 PRIV     NYCVM1   SYSADMIN

*----------------------------------------------------------------------
* New York Local notices.
*----------------------------------------------------------------------

 DISK     LOCAL    NEWYORK  200 NONE

 OPTION   CLEAN    ERASABLE
 NOTIFY   NYCVM1   SYSADMIN
 HELP     BULLETIN New York Local notices.
 RESPONSE * * *

 COPY     NYCVM2   NEWYORK
 COPY     NYCVM3   NEWYORK
 COPY     NYCVM4   NEWYORK
 COPY     NYCVM5   NEWYORK

 PRIV     NYCVM1   SYSADMIN
 PRIV     NYCVM1   NEWYORK
```

Figure 13 (Part 1 of 2). New York CONTROL file (sample installation)

```
*--------------------------------------------------------------------
* National notices.
*--------------------------------------------------------------------

 DISK     NATIONAL NEWYORK  199 NONE

 OPTION   CLEAN    ERASABLE
 NOTIFY   NYCVM1   SYSADMIN
 HELP     BULLETIN National notices.
 RESPONSE * * *

 MASTER   IBMVM0   NATMACH

 COPY     NYCVM2   NEWYORK
 COPY     NYCVM3   NEWYORK
 COPY     NYCVM4   NEWYORK
 COPY     NYCVM5   NEWYORK


*--------------------------------------------------------------------
* Northeast Region notices.
*--------------------------------------------------------------------

 DISK     NEREGION NEWYORK  300 NONE

 OPTION   CLEAN    ERASABLE
 NOTIFY   NYCVM1   SYSADMIN
 HELP     BULLETIN Northeast Region notices.
 RESPONSE * * *

 COPY     NYCVM2   NEWYORK
 COPY     NYCVM3   NEWYORK
 COPY     NYCVM4   NEWYORK
 COPY     NYCVM5   NEWYORK

 COPY     BOSTVMA  BOSTON

 COPY     BINGVM0  BINGO

 PRIV     NYCVM1   SYSADMIN
 PRIV     NYCVM1   NEWYORK
```

Figure 13 (Part 2 of 2). New York CONTROL file (sample installation)

```
*---------------------------------------------------------------------
* TOOLSRUN CONTROL file for Boston (West building).
*---------------------------------------------------------------------

 LOCAL    BOSTVMA  *    SMSG MSGNOH 11
 MSG      LOCAL
 INTERVAL 00:05:00
 SYSTEM   BOSTVMA  SYSADMIN


*---------------------------------------------------------------------
* BULLETIN End-user Code Disk.
*---------------------------------------------------------------------

 DISK     BBCODE   BOSTON   150 NONE

 OPTION   CLEAN    ERASABLE
 NOTIFY   BOSTVMA  SYSADMIN
 HELP     BULLETIN End-user code disk.
 RESPONSE * * *

 COPY     BOSTVMB  BOSTON
 COPY     BOSTVMC  BOSTON
 COPY     BOSTVM1  BOSTON

 PRIV     BOSTVMA  SYSADMIN

*---------------------------------------------------------------------
* Boston Local notices.
*---------------------------------------------------------------------

 DISK     LOCAL    BOSTON   200 NONE

 OPTION   CLEAN    ERASABLE
 NOTIFY   BOSTVMA  SYSADMIN
 HELP     BULLETIN Boston Local notices.
 RESPONSE * * *

 COPY     BOSTVMB  BOSTON
 COPY     BOSTVMC  BOSTON
 COPY     BOSTVM1  BOSTON

 PRIV     BOSTVMA  SYSADMIN
 PRIV     BOSTVMA  BOSTON
```

Figure 14 (Part 1 of 2). Boston CONTROL file / West building (sample installation)

```
*---------------------------------------------------------------------
* National notices.
*---------------------------------------------------------------------

 DISK      NATIONAL BOSTON   199 NONE

 OPTION    CLEAN    ERASABLE
 NOTIFY    BOSTVMA  SYSADMIN
 HELP      BULLETIN National notices.
 RESPONSE * * *

 MASTER    IBMVM0   NATMACH

 COPY      BOSTVMB  BOSTON
 COPY      BOSTVMC  BOSTON
 COPY      BOSTVM1  BOSTON


*---------------------------------------------------------------------
* Northeast Region notices.
*---------------------------------------------------------------------

 DISK      NEREGION BOSTON   300 NONE

 OPTION    CLEAN    ERASABLE
 NOTIFY    BOSTVMA  SYSADMIN
 HELP      BULLETIN Northeast Region notices.
 RESPONSE * * *

 MASTER    NYCVM1   NEWYORK

 COPY      BOSTVMB  BOSTON
 COPY      BOSTVMC  BOSTON
 COPY      BOSTVM1  BOSTON


*---------------------------------------------------------------------
* SINGLSYS disk.
*---------------------------------------------------------------------

 DISK      SINGLSYS BOSTON   201 NONE

 OPTION    CLEAN    ERASABLE
 NOTIFY    BOSTVMA  SYSADMIN
 HELP      BULLETIN SINGLSYS disk.
 RESPONSE * * *

 PRIV      BOSTVMA  SYSADMIN
 PRIV      BOSTVMA  BOSTON
```

Figure 14 (Part 2 of 2). Boston CONTROL file / West building (sample installation)

```
 *---------------------------------------------------------------------
 * TOOLSRUN CONTROL file for Boston (East building).
 *---------------------------------------------------------------------

 LOCAL    BOSTVM1  *    SMSG MSGNOH 11
 MSG      LOCAL
 INTERVAL 00:05:00
 SYSTEM   BOSTVMA  SYSADMIN

 *---------------------------------------------------------------------
 * BULLETIN End-user Code Disk.
 *---------------------------------------------------------------------

 DISK     BBCODE   BOSTON   150 NONE

 OPTION   CLEAN    ERASABLE
 NOTIFY   BOSTVMA  SYSADMIN
 HELP     BULLETIN End-user code disk.
 RESPONSE * * *

 MASTER   BOSTVMA  BOSTON

 COPY     BOSTVM2  BOSTON

 *---------------------------------------------------------------------
 * Boston Local notices.
 *---------------------------------------------------------------------

 DISK     LOCAL    BOSTON   200 NONE

 OPTION   CLEAN    ERASABLE
 NOTIFY   BOSTVMA  SYSADMIN
 HELP     BULLETIN Boston Local notices.
 RESPONSE * * *

 MASTER   BOSTVMA  BOSTON

 COPY     BOSTVM2  BOSTON
```

Figure 15 (Part 1 of 2). Boston CONTROL file / East building (sample installation)

```
*--------------------------------------------------------------------
* National notices.
*--------------------------------------------------------------------

 DISK      NATIONAL BOSTON   199 NONE

 OPTION    CLEAN    ERASABLE
 NOTIFY    BOSTVMA  SYSADMIN
 HELP      BULLETIN National notices.
 RESPONSE * * *

 MASTER    BOSTVMA  BOSTON

 COPY      BOSTVM2  BOSTON


*--------------------------------------------------------------------
* Northeast Region notices.
*--------------------------------------------------------------------

 DISK      NEREGION BOSTON   300 NONE

 OPTION    CLEAN    ERASABLE
 NOTIFY    BOSTVMA  SYSADMIN
 HELP      BULLETIN Northeast Region notices.
 RESPONSE * * *

 MASTER    BOSTVMA  BOSTON

 COPY      BOSTVM2  BOSTON


*--------------------------------------------------------------------
* SINGLSYS disk.
*--------------------------------------------------------------------

 DISK      SINGLSYS BOSTON   201 NONE

 OPTION    CLEAN    ERASABLE
 NOTIFY    BOSTVMA  SYSADMIN
 HELP      BULLETIN SINGLSYS disk.
 RESPONSE * * *

 PRIV      BOSTVMA  SYSADMIN
 PRIV      BOSTVM1  BOSTON
```

Figure 15 (Part 2 of 2). Boston CONTROL file / East building (sample installation)

```
*---------------------------------------------------------------------
* TOOLSRUN CONTROL file for Binghamton.
*---------------------------------------------------------------------

 LOCAL     BINGVM0  *     SMSG MSGNOH 11
 MSG       LOCAL
 INTERVAL 00:05:00
 SYSTEM    BINGVM0  SYSADMIN

*---------------------------------------------------------------------
* BULLETIN End-user Code Disk.
*---------------------------------------------------------------------

 DISK      BBCODE   BINGO    150 NONE

 OPTION    CLEAN    ERASABLE
 NOTIFY    BINGVM0  SYSADMIN
 HELP      BULLETIN End-user code disk.
 RESPONSE * * *

 PRIV      BINGVM0  SYSADMIN

*---------------------------------------------------------------------
* National notices.
*---------------------------------------------------------------------

 DISK      NATIONAL BINGO    199 NONE

 OPTION    CLEAN    ERASABLE
 NOTIFY    BINGVM0  SYSADMIN
 HELP      BULLETIN National notices.
 RESPONSE * * *

 MASTER    IBMVM0   NATMACH

*---------------------------------------------------------------------
* Northeast Region notices.
*---------------------------------------------------------------------

 DISK      NEREGION BINGO    300 NONE

 OPTION    CLEAN    ERASABLE
 NOTIFY    BINGVM0  SYSADMIN
 HELP      BULLETIN Northeast Region notices.
 RESPONSE * * *

 MASTER    NYCVM1   NEWYORK
```

Figure 16. Binghamton CONTROL file (sample installation)

5. Install the service machine programs

The installing programmer would install the service machine programs as described on page 22.

6. Create the authorization tables

We will need to create authorization tables for each location that will perform local publishing. Since Binghamton will not be performing local publishing, it will not have an authorization table. The authorization tables for New York City and Boston are shown on the following pages.

```
Category (col 1-4)                  ------------
|   Topic (col 5-8)                           |
|   |      Publisher node (col 10-17)         | Column identifiers -
|   |      |           Publisher userid (col 19-26) | Not part of file.
|   |      |           |                      |
v   v      v           v            ------------

NE$$PEOP NYCVM1   NYCPUB
NE$$SALE NYCVM1   NYCPUB
NYC$CAFE NYCVM1   NYCPUB
NYC$EDUC NYCVM1   NYCPUB
NYC$REQD NYCVM1   NYCPUB
NYC$SYS$ NYCVM1   NYCPUB
NYC$TDAY NYCVM1   NYCPUB
```

Figure 17. New York City BULLETIN AUTHORIZ file (sample installation)

```
Category (col 1-4)                  ------------
|   Topic (col 5-8)                           |
|   |      Publisher node (col 10-17)         | Column identifiers -
|   |      |           Publisher userid (col 19-26) | Not part of file.
|   |      |           |                      |
v   v      v           v            ------------

BOSTCAFE BOSTVMB   MASSCOMM
BOSTEDUC BOSTVMB   MASSCOMM
BOSTSYS$ BOSTVMB   MASSCOMM
BOSTTDAY BOSTVMB   MASSCOMM
```

Figure 18. Boston BULLETIN AUTHORIZ file / West building (sample installation)

```
     Category (col 1-4)                ------------
     │   Topic (col 5-8)                          │
     │   │      Publisher node (col 10-17)        │ Column identifiers -
     │   │      │          Publisher userid (col 19-26) │ Not part of file.
     │   │      │          │                      │
     v   v      v          v          ------------

     BOSTSYS$ BOSTVMB  MASSCOMM
```
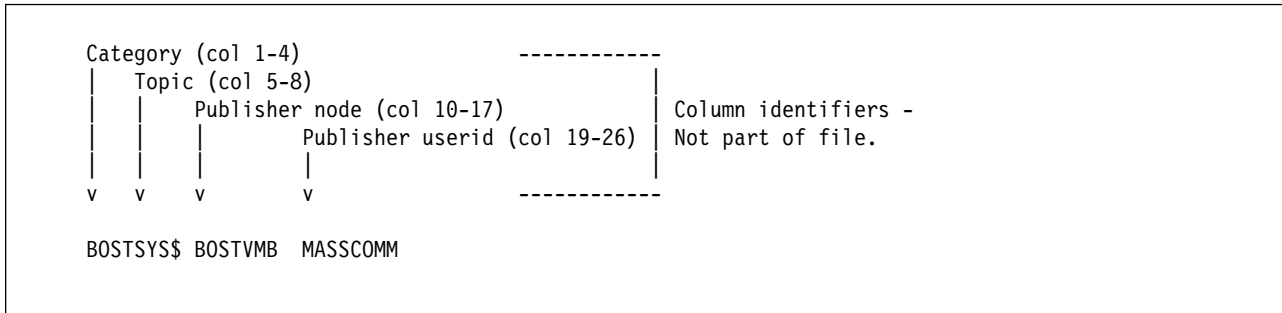
Figure 19. Boston BULLETIN AUTHORIZ file / East building (sample installation)

7. Create the multiple publishing authorization files

Since there are no multiple publishers in our example, the files do not have to be edited after copying.

8. Create NOTICES and NOT$DATA files

The <diskname> NOTICES and <diskname> NOT$DATA files must be created for each disk by copying the NOTICES SAMPLE and NOTICES NOT$DATA files. Note that you only have to create these files for the master copies of the disk. If another system/location shadows the disk, then the files will be distributed to their shadow systems in step 9. files:

Site	Files
New York City	LOCAL NOTICES and LOCAL NOT$DATA
	NEREGION NOTICES and NEREGION NOT$DATA
Boston (West)	LOCAL NOTICES and LOCAL NOT$DATA
	SINGLSYS NOTICES and SINGLSYS NOT$DATA
Boston (East)	SINGLSYS NOTICES and SINGLSYS NOT$DATA
Binghamton	None.

9. Start up all service machines

The PROFILE EXECs of the service machines should be modified to have the following as their last executable statement:

```
'EXEC TOOLSRUN START'
```

This way the service machines will automatically begin running the TOOLSRUN and BULLETIN service programs every time they are logged on.

10. Create disk identifiers

The System Administrators at each site get a copy of SAMPLE BB$$DI$K and place it on their A-disks. They then use the following commands to create and replicate the disk identifier files.

Site	Commands

New York City

COPYFILE SAMPLE BB$$DI$K A LOCAL = =

EXEC TOOLS SENDTO NYCVM1 NEWYORK LOCAL
CREATE LOCAL BB$$DI$K A (Initial placement

COPYFILE SAMPLE BB$$DI$K A NEREGION = =

EXEC TOOLS SENDTO NYCVM1 NEWYORK NEREGION
CREATE NEREGION BB$$DI$K A (Initial placement

COPYFILE SAMPLE BB$$DI$K A CODEDISK = =

EXEC TOOLS SENDTO NYCVM1 NEWYORK BBCODE
CREATE CODEDISK BB$$DI$K A (Initial placement

Boston (West)

COPYFILE SAMPLE BB$$DI$K A LOCAL = =

EXEC TOOLS SENDTO BOSTVMA BOSTON LOCAL
CREATE LOCAL BB$$DI$K A (Initial placement

COPYFILE SAMPLE BB$$DI$K A SINGLSYS = =

EXEC TOOLS SENDTO BOSTVMA BOSTON SINGLSYS
CREATE SINGLSYS BB$$DI$K A (Initial placement

COPYFILE SAMPLE BB$$DI$K A CODEDISK = =

EXEC TOOLS SENDTO BOSTVMA BOSTON BBCODE
CREATE CODEDISK BB$$DI$K A (Initial placement

Boston (East)

COPYFILE SAMPLE BB$$DI$K A SINGLSYS = =

EXEC TOOLS SENDTO BOSTVM1 BOSTON SINGLSYS
CREATE SINGLSYS BB$$DI$K A (Initial placement

COPYFILE SAMPLE BB$$DI$K A CODEDISK = =

EXEC TOOLS SENDTO BOSTVM1 BOSTON BBCODE
CREATE CODEDISK BB$$DI$K A (Initial placement

Binghamton

COPYFILE SAMPLE BB$$DI$K A CODEDISK = =

EXEC TOOLS SENDTO BINGVM0 BINGO BBCODE CREATE
CODEDISK BB$$DI$K A (Initial placement

11. Create category/topic descriptions

The following are the BB$$CATS files that need to be created on the system administrator's userids. Because Binghamton does not have any categories/topics of its own, it will not require a BB$$CATS file. To place them on the appropriate disks, use the same TOOLS commands as in the previous step, only substitute BB$$CATS xxxxxxxx for xxxxxxxx BB$$DI$K, where xxxxxxxx is the TOOLS disk name. Binghamton will not have any BB$$CATS files.

```
     BB$$CATS LOCAL file
     --------------

     Category (col 1-4)              -----------
     |    Topic (col 5-8)                       |
     |    |      Description (col 10)           | Column identifiers -
     |    |      |                              | Not part of file.
     v    v      v                   -----------

     NYC$REQD New York City Required reading
     NYC$CAFE New York City Cafeteria Menu
     NYC$EDUC New York City Education
     NYC$SYS$ New York City System Schedule
     NYC$TDAY New York City TODAY




     BB$$CATS NEREGION file
     -----------------

     Category (col 1-4)              -----------
     |    Topic (col 5-8)                       |
     |    |      Description (col 10)           | Column identifiers -
     |    |      |                              | Not part of file.
     v    v      v                   -----------

     NE$$PEOP Northeast Region People
     NE$$SALE Northeast Region Sales
```

Figure 20. New York City BB$$CATS files (sample installation)

```
        BB$$CATS LOCAL file
        --------------

        Category (col 1-4)              -----------
        |    Topic (col 5-8)                |
        |    |      Description (col 10)     | Column identifiers -
        |    |    |                          | Not part of file.
        v    v    v                     -----------

        BOSTCAFE Boston Cafeteria Menu
        BOSTEDUC Boston Education
        BOSTTDAY Boston TODAY



        BB$$CATS SINGLSYS file
        -----------------

        Category (col 1-4)              -----------
        |    Topic (col 5-8)                |
        |    |      Description (col 10)     | Column identifiers -
        |    |    |                          | Not part of file.
        v    v    v                     -----------

        BOSTSYS$ Boston System Schedule
```

Figure 21. Boston BB$$CATS files / West building (sample installation)

```
        BB$$CATS SINGLSYS file
        -----------------

        Category (col 1-4)              -----------
        |    Topic (col 5-8)                |
        |    |      Description (col 10)     | Column identifiers -
        |    |    |                          | Not part of file.
        v    v    v                     -----------

        BOSTSYS$ Boston System Schedule
```

Figure 22. Boston BB$$CATS files / East building (sample installation)

Now that the BB$$CATS files have been created, the system administrators should distributed them using the following TOOLS commands:

Site	Commands

New York City

EXEC TOOLS SENDTO NYCVM1 NEWYORK LOCAL
CREATE BB$$CATS LOCAL A (Initial placement

EXEC TOOLS SENDTO NYCVM1 NEWYORK NEREGION
CREATE BB$$CATS NEREGION A (Initial placement

Boston (West)

EXEC TOOLS SENDTO BOSTVMA BOSTON LOCAL
CREATE BB$$CATS LOCAL A (Initial placement

COPYFILE SAMPLE BB$$DI$K A SINGLSYS = =

EXEC TOOLS SENDTO BOSTVMA BOSTON SINGLSYS
CREATE BB$$CATS SINGLSYS A (Initial placement

Boston (East)

EXEC TOOLS SENDTO BOSTVM1 BOSTON SINGLSYS
CREATE BB$$CATS SINGLSYS A (Initial placement

12. Create the end-user configuration table

These files will be placed on a common access disk at each site. We will
assume each site has its own procedures in place to do this, so that process
will not be shown here. We also assume that the same configuration table will
be used on all nodes at a site, so that the table will be named BB$$TABL ALL.
If a site needed to use specific configuration tables for each node, for example,
they were creating a table for NYCVM3, then the table would be named
BB$$TABL NYCVM3.

In this example we will not discuss the various end-user related options such as
PRINT, FASTE, SHOWMODE, COPY and SEND. For these options will use
the default settings provided in the sample configuration table shipped with the
BULLETIN product.

```
CODEDISK NEWYORK  150
NATIONAL NEWYORK  199 National
LOCAL    NEWYORK  200 New York City
LOCAL    NEWYORK  300 Northeast Region
LOCALCAT NYC  REQD New York City
LOCALCAT NE   *    Northeast Region
SUPPORT  NYCVM1   SYSADMIN

PRINT    HARDCOPY
FASTE    ON
SHOWMODE D
COPY     ON
SEND     OFF
```

Figure 23. New York City BB$$TABL configuration table (sample installation)

```
CODEDISK BOSTON   150
NATIONAL BOSTON   199 National
LOCAL    BOSTON   200 Boston
LOCAL    BOSTON   201 SINGLSYS
LOCAL    BOSTON   300 Northeast Region
LOCALCAT BOST *   Boston
LOCALCAT NE   *    Northeast Region
SUPPORT  BOSTVMA  SYSADMIN

PRINT    HARDCOPY
FASTE    ON
SHOWMODE D
COPY     ON
SEND     OFF
```

Figure 24. Boston BB$$TABL Configuration Table / East & West (sample installation)

```
CODEDISK BINGO    150
NATIONAL BINGO    199 National
LOCAL    BINGO    300 Northeast Region
LOCALCAT NE   *    Northeast Region
SUPPORT  BINGVM0  SYSADMIN

PRINT    HARDCOPY
FASTE    ON
SHOWMODE D
COPY     ON
SEND     OFF
```

Figure 25. Binghamton BB$$TABL configuration table (sample installation)

13. Install the BULLETIN end-user files on all nodes

The BULLETIN EXEC, BB$$HELP EXEC, and BB$$HELP BULLETIN files, along with the configuration table, will be installed on a common access disk at each site. The remaining end-user files will be sent to the BBCODE disk using the TOOLS CREATE command as illustrated previously. For example:

EXEC TOOLS SENDTO BINGVM0 BINGO BBCODE CREATE BB$$PROG XEDIT (Initial placement

14. Contact any sites you shadow to load up your machines

These commands are used ONLY if a node comes online after a hub machine is created and has files on it. For example, suppose that Binghamton installs BULLETIN three months after New York City does. Binghamton will receive any new notices published on the Northeast region disk, but will be missing those published in the past three months. To avoid this, Binghamton's NEREGION disk should be loaded from the master system as soon as BULLETIN is installed.

Binghamton's system administrator will contact New York to inform them that Binghamton is now ready to shadow the NEREGION disk (the MASTER statement has already been added to the CONTROL file). New York's system administrator will:

- Add the COPY command to the New York CONTROL file on the New York hub machine (NYCVM1)
- shut down the hub machine and bring it back up so that the COPY to Binghamton will be into effect
- Issue the following command from his/her userid:

    TOOLS SENDTO NYCVM1 NEWYORK NEREGION COPY * * BINGVM0 BINGO NEREGION

This will send all existing files on that disk to Binghamton. All future updates to the disk will now be sent automatically.

15. BULLETIN has now been installed!

Publishers

No publishing is done in Binghamton, so the following steps do not apply there. Local publishing is done by end-users in New York and Boston.

1. Create an Archive Disk.

All publishers will get a five-cylinder disk at address 101 accessed as their C-disk.

2. Install the Publishing programs.

All of the Publishing files are copied to the publishers' C-disk - a common publisher's disk is not implemented. The PUB$CFRM HEADING file is edited to include information about each publisher. Here's how the one for New York City might look:

```
The following notice has been accepted and published by NYCVM1(NYCPUB).
Contact Jane Wordsmith at 212/555-4567 if you have any questions.


*****************************************************************************
```

Figure 26. PUB$CFRM HEADING file (sample installation)

3. Create the Publishing Configuration Table.

The BB$$PUBR SAMPLE file is renamed to BB$$TABL PUBLISHR, then edited to include all the information regarding the Categories and Topics that person will be publishing.

The following are the BB$$TABL PUBLISHR files used by the various publishers. For these examples an EXEC called HARDCOPY will be used by all of those publishers who do not have access to PROFS/OVVM, and the PROOFIT EXEC used for proofreading.

```
   For NYCPUB at NYCVM1:
   --------------------

   CATGTOPC NE   PEOP 365 NYCVM1   NEWYORK  NEREGION NO  Northeast Region People
   CATGTOPC NE   SALE 365 NYCVM1   NEWYORK  NEREGION NO  Northeast Region Sales
   CATGTOPC NYC  CAFE   7 NYCVM1   NEWYORK  LOCAL    NO  New York City Cafeteria Menu
   CATGTOPC NYC  EDUC 365 NYCVM1   NEWYORK  LOCAL    NO  New York City Education
   CATGTOPC NYC  REQD 365 NYCVM1   NEWYORK  LOCAL    NO  New York City Required Reading
   CATGTOPC NYC  SYS   14 NYCVM1   NEWYORK  LOCAL    NO  New York City System Schedule
   CATGTOPC NYC  TDAY 365 NYCVM1   NEWYORK  LOCAL    NO  New York City TODAY
   MAXEXP   365
   PRINT    HARDCOPY
   PROOF    PROOFIT
   SCR-LIB  DSMGML3
   SCR-PROF DSMPROF3
```

Figure 27. New York City Publishers' configuration table (sample installation)

```
For MASSCOMM at BOSTVMB:
-----------------------

CATGTOPC BOST CAFE   7 BOSTVMA  BOSTON   LOCAL    NO  Boston Cafeteria Menu
CATGTOPC BOST EDUC 365 BOSTVMA  BOSTON   LOCAL    NO  Boston Education
CATGTOPC BOST SYS   14 BOSTVMA  BOSTON   LOCAL    YES Boston System Schedule
CATGTOPC BOST TDAY 365 BOSTVMA  BOSTON   LOCAL    NO  Boston TODAY
MAXEXP   365
PRINT    HARDCOPY
PROOF    PROOFIT
SCR-LIB  DSMGML3
SCR-PROF DSMPROF3
SINGLSYS BOSTVM1
SINGLSYS BOSTVM2
SINGLSYS BOSTVMA
SINGLSYS BOSTVMB
SINGLSYS BOSTVMC
```

Figure 28. Boston Publishers' configuration table (sample installation)

Glossary

Archive Disk. A minidisk owned by a BULLETIN Publisher. It contains the Publishing files, along with copies of previously published notices.

Category. The one- to four-character name which identifies the location or organization that a notice either pertains to or originates from.

Contact person. The person who is responsible for answering any feedback (comments or questions) about a particular notice.

Cumulative mode. The grouping and display of a list of notices by any criteria other than their dates.

Daily mode. The grouping and display of a list of notices by individual days.

DCF. The IBM Document Composition Facility product. Often called SCRIPT.

Duplicate notice. The posting of a notice in more than one National Category/Topic because the material is pertinent to several areas. The end-user can choose to view only the notice in the highest ranking Category and not display the others.

Expiration date. The date when a notice is removed from the database.

FastEnter. An option in BULLETIN that allows the end-user to set up the Enter key so that while viewing a notice it will perform the Scroll Forward function, then perform the Cancel function when the end of the notice is reached.

Hub Machine. The BULLETIN Service Machine running on the Hub Node.

Hub Node. The one node at a site where all BULLETIN publishing requests (except those for SINGLSYS) will be sent. It is also the node that will distribute and receive notices shadowed to and from other sites.

Local notice. A notice that pertains to a particular site.

Master. A Service Machine that distributes TOOLS requests to another Service Machine. Opposite of *Slave*.

NATIONAL. The TOOLS disk name used in Service Machine CONTROL files for the minidisk that contains National notices.

National notice. A notice that is distribute to all sites throughout a company.

Node. An individual VM system.

Notice. A file containing news of interest to company employees. The file is already formatted for screen display. At the top of the file are the date and the title (underlined).

Publisher. A person who is authorized to create, replace, and delete notices.

Required notices. Notices that are deemed of high enough importance that they will always be displayed when an end-user executes BULLETIN.

SCRIPT. See DCF.

Service Machine. A userid on a node that processes and distributes publishing requests.

Shadow. A disk on a Service Machine that is a mirror image of that on another Service Machine. Refer to *Master* and *Slave*.

SINGLSYS. The TOOLS disk name used in Service Machine CONTROL files for the minidisk that contains notices that are unique to a particular node and not intended for an entire site.

Slave. A Service Machine that accepts TOOLS requests from another Service Machine. Opposite of *Master*.

System Administrator. The person who installs and maintains BULLETIN at a site.

Topic. The one- to four-character name used to group notices within a Category by subject matter.