Lucent Technologies
Bell Labs Innovations

BCMS Vu™ **Software**

R2

User Guide

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Preface

Introduction

Note	In this guide, the term "DEFINITY® system" means the DEFINITY Prologix or DEFINITY system Generic 3 Version 4 (G3V4), R5, or R6.

Welcome to the *BCMS Vu*™ call center monitoring software from Lucent Technologies. This document explains how to use *BCMS Vu* software.

This section includes the following topics:

- Audience
- Contents of this document
- Conventions used in this document
- Related documents.

Audience

You will find this user guide helpful if you are

- A call center manager/server administrator who needs to store and display data from a DEFINITY system.

  This guide tells you how to

    — Configure *BCMS Vu* software
    — Manage the software
    — Download historical data from the DEFINITY system
    — Register clients so they can access the server
    — Register wallboards
    — Manage data
    — Inspect the error log.

- A split/skill supervisor who needs to review the present and previous status of a call center.

  This guide tells you how to

    — Create real-time bar graphs, real-time pie charts, real-time text reports, time traces, wallboard displays and Historical Reports
    — Open previously saved reports
    — Print text and Historical Reports
    — Schedule printing of Historical Reports
    — Set thresholds and alerts
    — Resolve problems with operation of the software
    — Respond to error messages.

This manual assumes that you are familiar with

- Your computer

- *Microsoft* *Windows** 95 or *Windows* NT* 4.0 Workstation operating systems

- Standard *Windows* conventions, such as using the F1 key to activate Help.

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Contents of This Document

The *BCMS Vu Software R2 User Guide* describes what you need to know to use the *BCMS Vu* software on a daily basis, in particular, how to perform the tasks listed in the section entitled "Audience."

To install the *BCMS Vu* software, refer to the *BCMS Vu Software R2 Installation Guide* (585-217-103).

The user guide is organized into the following chapters:

Chapter 1   **Introduction**
Specifies the hardware and software environment needed to run *BCMS Vu* software and describes the features and benefits of the software

Chapter 2   *BCMS Vu* **Server Basics**
Describes how to start the *BCMS Vu* Server software and how to access the features of the software

Chapter 3   *BCMS Vu* **Client Basics**
Describes how to start the *BCMS Vu* Client software and how to access the features of the software

Chapter 4   **Configuring and Managing *BCMS Vu* Software**
Describes how to configure *BCMS Vu* software to use with the DEFINITY system and external wallboards and how to maintain the software and database for maximum results

Chapter 5   **Understanding Real-Time Reports**
Describes the types of real-time reports available

Chapter 6   **Understanding Historical Reports**
Describes the types of Historical Reports available

Chapter 7   **Working with Reports**
Describes how to create, edit, save, open and print reports

Chapter 8	**Displaying Information on External Wallboards**
	Describes how to display the contents of Wallboard Displays on external wallboards and how to broadcast messages to external wallboards
Chapter 9	***BCMS Vu* Real-Time and Historical Report Data Items**
	Defines the data items used in reports
Chapter 10	**Troubleshooting**
	Provides possible solutions to common operation problems you may encounter, and explains error messages
Glossary	Defines commonly used telecommunications and call center terms that are used in this document and the *BCMS Vu* software

Conventions Used in This Document

The following conventions are used in this document:

Bold type	Menu names, button names, option names, and file paths on a disk are shown in **bold type**. For example: "Select **Save** from the **File** menu." "The file is located in **C:\Program Files**." Sometimes items are shown in bold type for emphasis.
Italics	*Italics* are used for trademarks, the exact wording of file names, and the titles of referenced documents. For example "*BCMS Vu* software runs on *Microsoft Windows.*" "Look for the file *bcmsvuclient.*" Sometimes words are italicized for emphasis.
Mouse button	Unless the secondary mouse button is specified, use the primary mouse button whenever you are instructed to click or select an item.
Terminology	Standard call center industry terminology is used in this document, as well as terms such as split/skill, ACD, and AUX. For definitions of terms used in this document, refer to the Glossary.

Whenever there are several ways to perform a command (for example, double-click on a file name *or* highlight the file name and click on OK), the term *select* is used. You may choose either of the methods.

Another example of different ways to do the same thing is either selecting a command in a menu (for example selecting **Save** in the **File** menu) or clicking on the corresponding toolbar button. In this case you are instructed to *select* **Save**.

Related Documents

The following documents contain additional information about the *BCMS Vu* software and DEFINITY system:

- *BCMS Vu Software R2 Installation Guide* (585-217-103)

- *BCMS Vu Wallboard Models WB1, WB2, IW1, and IW2 Installation, Programming, and Troubleshooting Instructions* (555-230-706)

- *Wallboard Models WB3 and IW3 Installation, Programming, and Troubleshooting Instructions* (585-216-100)

- Wallboard *Model WB5 Installation, Programming, Troubleshooting Instructions (585-216-102)*

- *DEFINITY Communications System Generic 3 Basic Call Management System (BCMS) Operations* (555-230-703)

- *DEFINITY Communications System Generic 3 Feature Description* (555-230-204)

- *DEFINITY Enterprise Communications Server Release 5 Feature Description* (555-230-301)

- *8400B Plus Data Module User Guide* (555-020-709)

- *7400B/7400B Plus Data Module User Guide* (555-020-710)

- *Microsoft Access*[*] user documentation.

If you are using a spreadsheet or another application to analyze *BCMS Vu* historical data, consult the user documentation for that application.

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[*] *Access* is a registered trademark of *Microsoft* Corp.

1

Introduction

BCMS Vu Software

BCMS Vu is a graphical user interface software application that monitors the status and performance of a call center. It uses data collected in the Basic Call Management System (BCMS) on a DEFINITY Prologix or DEFINITY System G3V4, R5, or R6.

This chapter describes the benefits and features of the *BCMS Vu* software. It includes the following topics:

- Features of *BCMS Vu* software
- Benefits of *BCMS Vu* software
- When to use *BCMS Vu* software
- Differences between Release 2 and Release 1 of *BCMS Vu* software
- Operating environment
- Software restrictions
- Administrative requirements
- Performance considerations
- Help escalation
- Software for maintenance contracts.

Features of *BCMS Vu* Software

BCMS Vu software lets you

- Receive real-time data from the DEFINITY system and display it in textual and graphical form on a PC monitor

- Print the textual form of this real-time data

- Display real-time data as a Wallboard Display that mimics the display capabilities of external wallboards used in call centers

- Select the data items you want to display when you define a real-time report or Wallboard Display

- Redirect the display output of one of the defined Wallboard Displays to several types of external wallboards

- Specify alerts on real-time data items to provide a visual or visual/audible indication that the item has crossed the threshold alert level

- Download DEFINITY system historical data regularly to a database on the PC

- Display this stored data in a text format and retrieve it through third-party products

- Print this data

- Access this data from several DEFINITY systems

- Create and print Historical Reports from downloaded historical data

- Schedule printing of Historical Reports.

Benefits of *BCMS Vu* Software

BCMS Vu software provides the following benefits:

- Real-time data can be displayed graphically.

- Wallboard displays provide easy monitoring of call center activity.

- Multiple reports can be displayed on the screen at the same time.

- The ability to set alerts on data items allows "management by exception."

- Graphical output under *Microsoft Windows* removes reliance on the DEFINITY system text-based terminal.

- *BCMS Vu* software lets you store more than the seven days of historical data a DEFINITY system stores. With *BCMS Vu* software, you can keep historical data for as long as you want by periodically archiving the historical database.

- The historical database created by the *BCMS Vu* software can be accessed using other products, such as *Microsoft Access*.

- *BCMS Vu* software provides an interface to the DEFINITY system that allows you to create custom real-time reports using the BCMS data that resides on the DEFINITY system.

- The Server/Client architecture allows more real-time monitors of BCMS data than the DEFINITY system supports.

- There is no limit to the number of Historical Reports you can schedule for printing.

- *BCMS Vu* R2 is Year 2000-compliant.

Differences between R1 and R2

Release 2 of *BCMS Vu* is the response by Lucent Technologies to requests from users for more features than exist in Release 1.

The most obvious difference between Release 1 and Release 2 is the separation of the Server application from the Client application. The Server application is installed on one PC, which is connected to a DEFINITY system. The Server receives data from the DEFINITY system. Client applications are installed on the same PC as the Server or on other PCs, which connect to the Server over a LAN, instead of connecting directly to the DEFINITY system. Thus only one physical port is needed for several clients to access data from the same DEFINITY system.

With Release 2, users can now

- Access real-time data without each *BCMS Vu* program having a direct connection to a system management port on the DEFINITY system.

- Create real-time pie chart graphs and time-trace graphs.

- Print real-time text reports.

- Schedule printing of Historical Reports.

- Send displays to wallboards connected to other PCs in the network. Wallboards need to be registered with but not physically connected to the Server PC.

- Send one report to several wallboards or send different reports to wallboards daisy-chained together.

- Alternate reports and a broadcast message to the same wallboard or wallboards.

- Define four levels of alerts and thresholds in reports.

- Define different thresholds for each split/skill, agent, and VDN.

- Manage the storage of interval and daily data separately.

In addition, *BCMS Vu* is now licensed for one, five or ten clients.

| Note | The 486 processor is no longer supported.

Operating Environment

To install *BCMS Vu* Software R2, you must have *at least* the following hardware and software:

For the *BCMS Vu* Server PC

❐ A single-processor Pentium.

❐ *Windows* 95 (for a Server with one Client attached) or *Windows* NT 4.0 Server or Workstation (for a Server with more than one Client attached) with Service Pack 3 installed on the PC.

❐ 64 MB of main memory.

❐ Up to 500 MB (512,000 KB) of disk space[*].

❐ A double-speed CD-ROM drive.

> | Note | If you install the software from a remote network drive, the machine on which the software is installed (either Server, Client, or Wallboard) does not need a CD-ROM drive.

❐ One serial port to connect to the DEFINITY system through a data module. This serial port must be an external port.

❐ You may need other unused serial ports:

— One to connect to a wallboard. This serial port must be an external port.

— One for remote maintenance if you are using an external modem.

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[*]For splits/skills, agents, VDNs and trunk groups measured by BCMS, the following formula is an approximate guide to the space required in megabytes for each *day's* historical data when the interval measured is an hour. (When the interval is a half-hour, use 185 instead of 370 in the formula.)

$$\frac{\text{\# splits/skills + \# agents + \# trunk groups + \#VDNs}}{(370) * \text{BCMS interval in hours}}$$

❐ A parallel port to connect the hardware key. A printer may be also connected to this port.

❐ The *BCMS Vu* R2 software distribution CD-ROM.

❐ A data module, either an 8400B Plus or 7400B/7400B Plus that is capable of accessing the DEFINITY system.

❐ A DEFINITY system telephone number (hunt group extension for Netcon channel), login name and password for access to BCMS.

❐ A sound card and speakers if you want to use the training CD-ROM.

❐ The *pcANYWHERE* CD-ROM.

❐ An internal or external modem for remote maintenance using *pcANYWHERE*.

❐ The name of the Server PC, the names of all Client PCs on the network, and the names of all wallboards on the network that you want to use.

For the *BCMS Vu* Client PC

❐ A single-processor Pentium

❐ 32 MB of main memory with *Windows* 95 installed or 64 MB of memory with *Windows* NT 4.0 installed

❐ 5 MB (5,120 KB) of free disk space

❐ A double speed CD-ROM drive

❐ A serial port for each external wallboard connected to the PC, or one port if the wallboards are daisy-chained

❐ *Windows* 95 or *Windows* NT 4.0 Workstation or Server with Service Pack 3 installed on the PC

❐ The *BCMS Vu* R2 software distribution CD-ROM

❐ (Option): One of the wallboards dedicated to *BCMS Vu* software

❐ The name of the Server you want to connect to

❐ A sound card and speakers if you want to use the training CD-ROM.

Chapter 1

For a Wallboard PC without Client Software

❐ A single-processor Pentium

❐ *Windows* 95 or *Windows* NT 4.0 installed on the PC

❐ 32 MB of RAM

❐ 10 MB of free disk space

❐ A double-speed CD-ROM drive

❐ An available serial port for each non-daisy-chained wallboard.

Software Restrictions

| Note | *BCMS Vu* software supports English, French, German, Italian, Spanish, Dutch, Portuguese, and Japanese languages on *Windows* 95 and *Windows* NT 4.0 operating systems. |

| Note | Lucent Technologies certifies that *BCMS Vu* software has been tested and found to run co-resident with *Microsoft* Office 95 and 97, and *Symantec pcANYWHERE*. Lucent makes no claims whatsoever as to the compatibility of *BCMS Vu* software with any other software application. |

Those who attempt to run *BCMS Vu* software with any other co-resident application do so at their own risk.

Administrative Requirements

In order to view data on *BCMS Vu* reports, you must have the login name and password for the DEFINITY system to allow the Server PC to access BCMS data.

| Note | For the PC to be able to access BCMS data on the DEFINITY system, the login must have the following permissions: |

Display Admin and Maint Data
System Measurements

Lack of these permissions prevents reports and/or downloads from functioning properly.

Do **not** use the *craft* login or any service Login ID as the BCMS login.

If you need to create these permissions, contact your DEFINITY system administrator.

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| Note | For non-EAS installations: If the System Parameters Customer Options Field, *bcms loginIDs*, is set to "y," the Feature-related System Parameters Field, *Validate Login IDs*, must also be set to "y." |

In this case, if *Validate Login IDs* is not set to "y," Agent Reports will not function properly.

Performance Considerations

There are three general criteria you should keep in mind when you use the *BCMS Vu* software:

- The larger the call center, the more disk space is required to store historical data. For example, a small call center with one trunk group, five VDNs, five splits/skills and ten agents using an interval of a minute will require approximately 57 KB a day; a call center with three trunk groups, ten VDNs, 20 splits/skills and 40 agents using an interval of a half-hour requires approximately 400 KB a day. Refer to the formula on page 1-6 for a better method of calculating historical data storage needs.

- The more reports there are running, the slower real-time updates will be.

- Historical downloads take longer at larger call centers.

| Note | Each DEFINITY system type has a limit to the number of simultaneous system management sessions that can be active at any one time. Each *BCMS Vu* Server that is currently logged into the DEFINITY system counts as one session. |

Help Escalation

If errors occur while you are using *BCMS Vu* software, take the following steps to resolve the error:

1. Consult on-line help.

2. Refer to the "Troubleshooting" chapter to see if the error is discussed there.

3. Contact your Lucent Technologies product distributor. In the United States you can also call the Lucent Technologies Call Center Helpline on 1-800-242-2121.

Software for Maintenance Contracts

In addition to installing *BMCS Vu* software, you need to install *pcANYWHERE* software on the same PC as the Server software. The *pcANYWHERE* software enables Lucent Technologies Services to log into your PC remotely and perform troubleshooting procedures.

Use the installation procedures in the *pcANYWHERE* documentation to install your Server PC as a host computer.

Lucent Technologies recommends that *pcANYWHERE* software be opened only when working with Lucent Technologies Services personnel, to prevent unauthorized remote access to the *BCMS Vu* Server PC. Remote access is possible only when *pcANYWHERE* software is open and set up as a host PC.
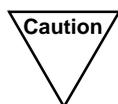
> **Caution** Because *pcANYWHERE* software allows a remote PC to access the *BCMS Vu* Server PC, it is essential that you take the following precautions:

- While installing *pcANYWHERE* software, do not select the Autoload option. The Autoload option starts *pcANYWHERE* each time the computer is turned on.

- Do not start *pcANYWHERE* software unless you are asked to do so by Lucent Technologies Services, and be sure to close it immediately afterwards.

- If you must leave *pcANYWHERE* software open at all times for your own purposes, use a password that is not related in any way to the passwords you use to access the DEFINITY system or BCMS. Include characters in the password that are not alphabetic (use numbers, special characters). Do not make this password widely known. Refer to the *pcANYWHERE* user's guide for instructions on establishing passwords.

2

BCMS Vu Server Basics

Introduction

This chapter describes the main features of *BCMS Vu* Server software. It includes the following topics:

- What can I do using *BCMS Vu* Server?

- Starting *BCMS Vu* Server software.

- Disconnecting *BCMS Vu* Server from a DEFINITY system.

- Reconnecting *BCMS Vu* Server to a DEFINITY system.

- Exiting *BCMS Vu* Server software.

- Understanding the *BCMS Vu* Server main window.

- Using *BCMS Vu* Server On-Line Help.

What Can I Do Using *BCMS Vu* Server?

Use *BCMS Vu* Server to

- Connect to a DEFINITY system
- Disconnect from a DEFINITY system
- Download historical data from a DEFINITY system
- Schedule historical data downloading on a regular basis
- Register wallboards
- Register Clients
- Manage historical data
- Perform maintenance on the database
- View the error log.

Starting *BCMS Vu* Server Software

The *BCMS Vu* installation program creates a menu item on your PC's **Start/Programs** menu. Refer to *BCMS Vu R2 Software Installation Guide* (585-217-103) for detailed installation instructions.

| Note | The following procedure presumes that whoever installed *BCMS Vu* software on the Server accepted the default program locations. If the installer chose to install the program icons in a different location (folder), you will have to go to that location to start *BCMS Vu* software using the program icon.

An alternate method of starting *BCMS Vu* is to use the Find function of *Windows* to locate the program file for *BCMS Vu* Server (*BCMSVuServer.exe*) and select it.

| Note | If the hardware key is not attached to the PC before you start *BCMS Vu* software, the software will be loaded, but the program will run only in simulator mode when you try to start it. To view real-time reports and download historical data from the DEFINITY system, you must attach the hardware key and restart *BCMS Vu* Server software.

Chapter 2

To start *BCMS Vu* software, do the following. Refer to the following illustration.
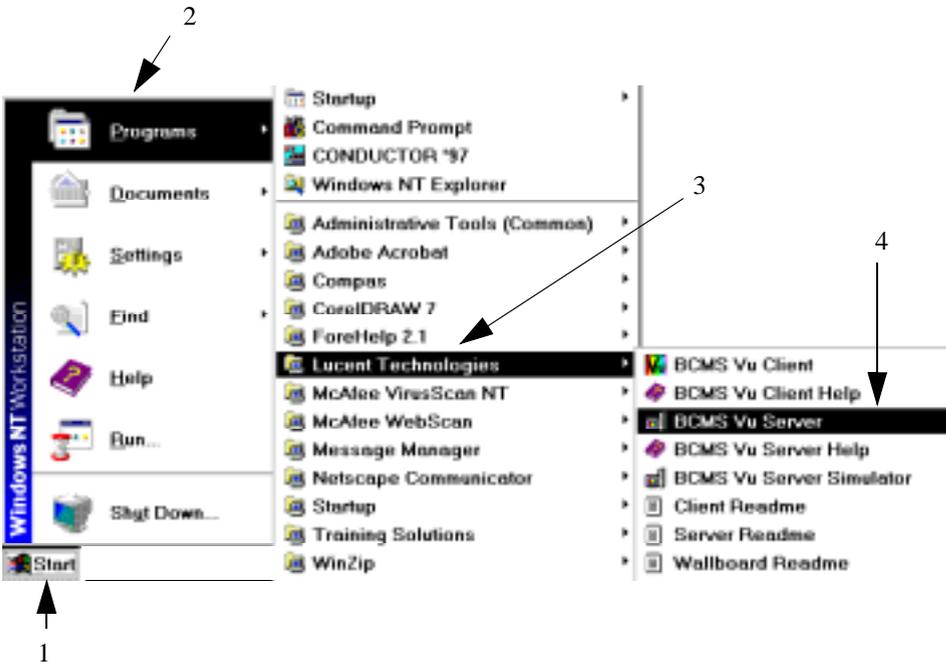
1. Select the **Start** button from the Taskbar.

2. Move the cursor over **Programs** in the **Start** menu.

3. Move the cursor over **Lucent Technologies** in the **Program** menu.

4. Move the cursor over the *BCMS Vu* Server icon ⬜ in the **Lucent Technologies** menu and click once.

Note	If you want to become familiar with *BCMS Vu* software but are not connected to or do not want to connect to a DEFINITY system, select the *BCMS Vu* Server Simulator icon in **Start/Programs/Lucent Technologies/**. This is a version of *BCMS Vu* Server software that simulates a connection to a switch and provides randomly generated data for real-time and Historical Reports.

The "Server Identification" window appears:

Server Identification   ✕

To connect to a BCMS Vu Server, select the Server name from the list below and click the "Connect" button.
To add a Server name to the list, double-click the "Add Server" icon or click the "Add" button.

Server Names	
📁 Add Server...	
📁 BCMSVuServer	

Add...	Remove	Connect

Save	Cancel	Help
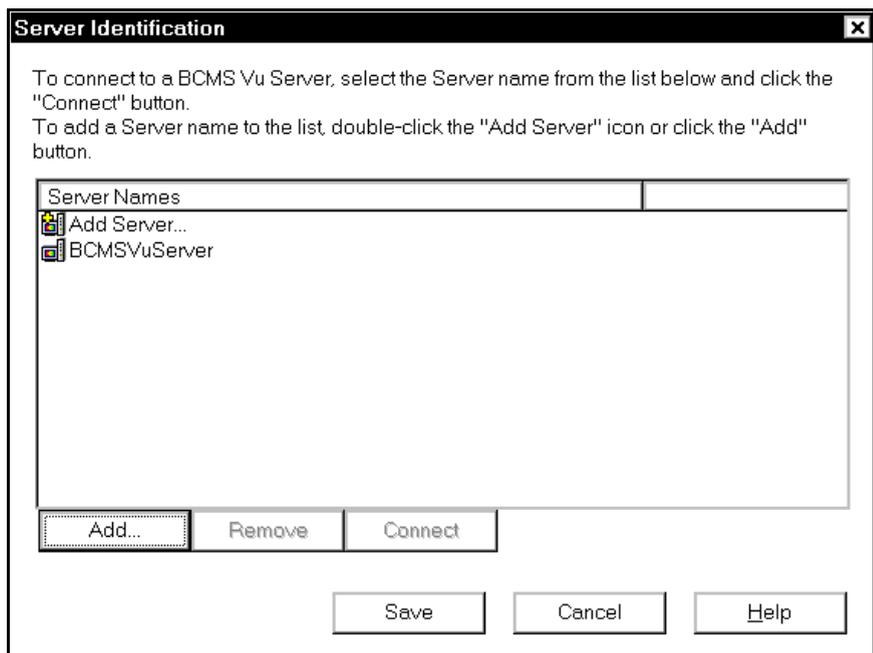
5. Highlight the name of the server that will connect to the switch you want to monitor and select **Connect**.

    The first time you open *BCMS Vu* Server, accept the default, "BCMSVuServer" as the Server name.

6. If the name of the Server to which you want to connect is not in the list of server names, select **Add Server...** or **Add...**.

A second "Server Identification" window appears.

   a. In the second "Server Identification" window, enter the name used to identify the server you want to add to the list.

   b. Select **OK**.

   The second "Server Identification" window disappears and the first "Server Identification" window becomes the active window.

   c. If you want to keep the name of the Server you just added in the list of Servers, select **Save**.

   d. Highlight the name of the Server you just added to the list and select **Connect**.

   The "Server Identification" window disappears.

Opening *BCMS Vu* Server the First Time

Note

The first time you connect to the Server after you install *BCMS Vu* Server software, a configuration wizard appears. The first window of this wizard, the "Welcome" window gives you some information about what follows. It is shown in the following illustration:

```
┌─────────────────────────────────────────────────────────────────────┐
│ Configuration Wizard - Page 1 of 8                                 ☒ │
│                                                                       │
│                                                                       │
│     Welcome to BCMS Vu                                                │
│                                                                       │
│     This wizard steps you through the settings to allow you to connect to a switch, │
│     schedule the historical data download, register clients and set up wallboards.  │
│                                                                       │
│                                                                       │
│     The wizard also gives you the option of testing your switch connection and      │
│     wallboard connection.                                             │
│                                                                       │
│                                                                       │
│                                                                       │
│                                                                       │
│                                                                       │
│  ┌────────┐  ┌────────┐  ┌────────┐  ╔════════╗  ┌────────┐           │
│  │  Help  │  │ Cancel │  │ < Back │  ║ Next > ║  │ Finish │           │
│  └────────┘  └────────┘  └────────┘  ╚════════╝  └────────┘           │
└─────────────────────────────────────────────────────────────────────┘
```
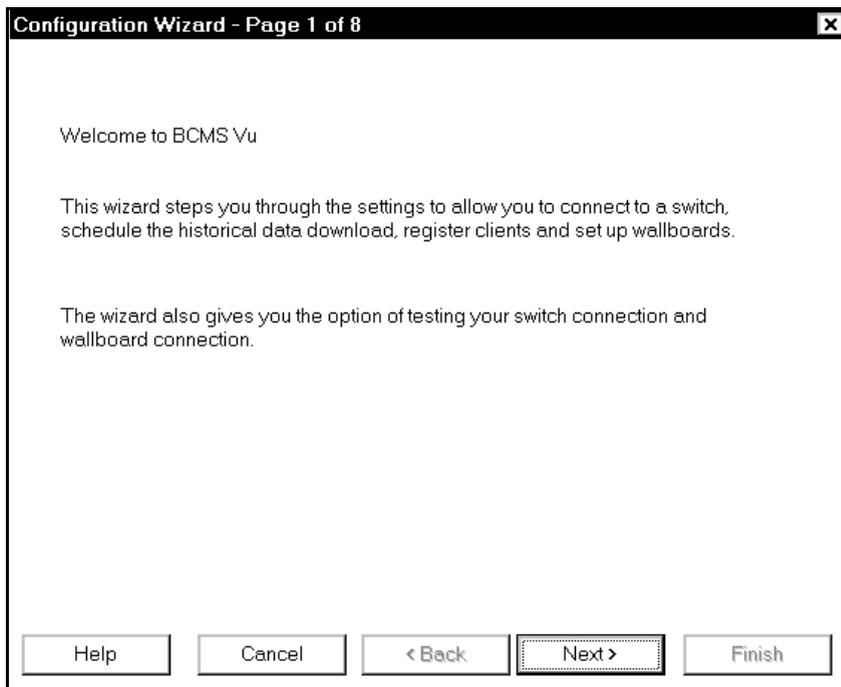
Select **Next**.

The wizard that follows is identical to the wizard you encounter when you chose **Options | Configure | First Time**. For a description of the wizard, refer to "Configuring BCMS Vu from the Server" on page 4-3.

Disconnecting *BCMS Vu* Server from the DEFINITY System
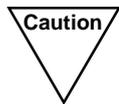
Caution Do not disconnect *BCMS Vu* Server from the DEFINITY system while any client is connected to the Server or you may experience problems.

If *BCMS Vu* Server is running and is connected to a DEFINITY system, you can disconnect it without closing the Server application, by doing the following:

In the **Options** menu, select **Disconnect**

or

Select the **Disconnect** toolbar button.

Reconnecting *BCMS Vu* Server to the DEFINITY System

If you have disconnected *BCMS Vu* Server from a DEFINITY system without closing the Server application, you can reconnect to a DEFINITY system by doing the following:

In the **Options** menu, select **Connect**

or

Select the **Connect** toolbar button.

The "Server Identification" window (refer to page 2-5) appears. Highlight the Server name that will connect to the DEFINITY system you want to monitor, and select **Connect**.

Exiting *BCMS Vu* Server Software
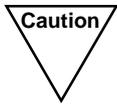
| Caution | Do not exit *BCMS Vu* Server while any client is connected to the Server or you may experience problems. |

You can exit *BCMS Vu* Server software using any of the standard *Windows* methods, including:

- Select **Exit** from the **File** menu.

- Select the **Close** button in the upper-right corner of the main window.

- Select **Close** from the System drop-down menu box.

| Note | *BCMS Vu* can take a while to shut down. If you experience problems with other applications not working properly, you may want to make sure that the *BCMS Vu* software shut down completely (and end the task if it did not). To do this, complete the following steps: |

1. Press **CTRL**+**ALT**+**DEL** to open the "Windows NT Security" window (*Windows* NT 4.0) or "Close Program" window (*Windows* 95).

2. Select **Task Manager** (*Windows* NT 4.0 only)

3. In the "*Windows* NT Task Manager" window or "Close Program" window look for *BCMSVuServer*.

4. If it is displayed in the list of running applications, highlight it.

5. Select **End Process** (*Windows* NT 4.0) or **End Task** (*Windows* 95).

The *BCMS Vu* Server Main Window

The *BCMS Vu* Server main window contains the following items, as shown in the figure below:

- System menu box
- Title bar
- Menu bar
- Toolbar

- Status bar
- Server action area
- Download status
- Connection status

System Menu box   Title bar   Menu bar   Toolbar

Status bar   Server action area   Download status   Connection status
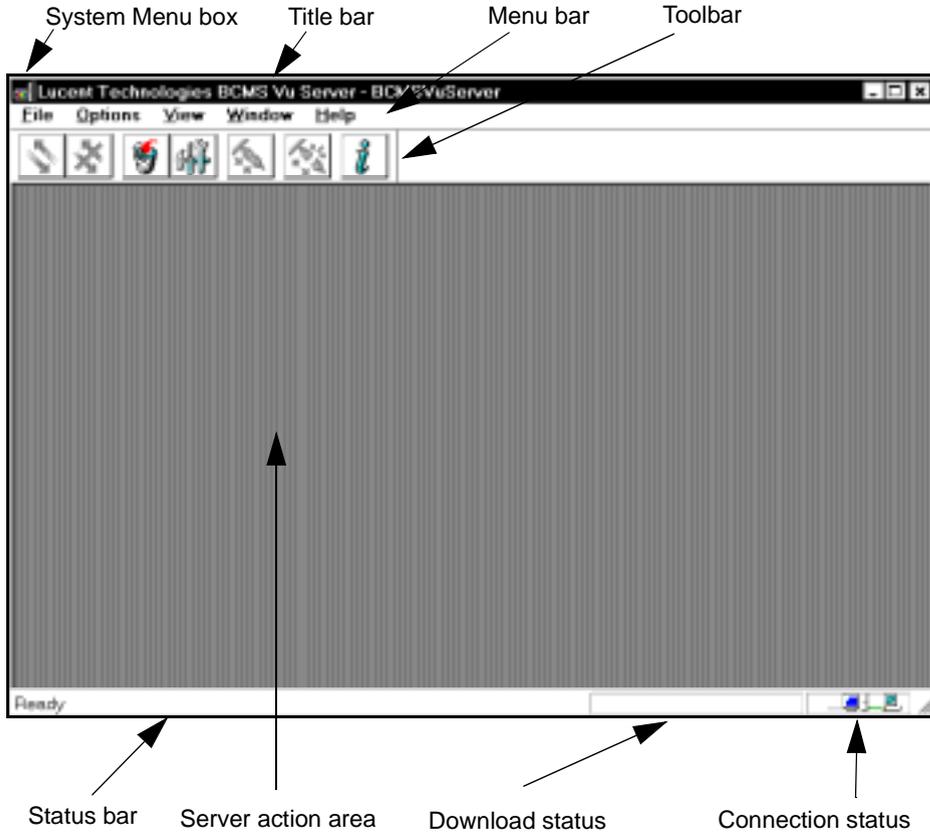
System Menu Box

Use the "System Menu" box to carry out common *Windows* operations, such as closing the current window.

Title Bar

The "Title" bar displays the name of the application (in this case, Lucent Technologies *BCMS Vu* Server) and the name of the server being run.

Menu Bar

The "Menu" bar displays the available drop-down menu commands.

The following tables present the options available from each menu.

File

The **File** menu has the following item:

Menu Item	Action
Exit	Selecting the **File**	**Exit** command closes the *BCMS Vu* Server application.

Options

The **Options** menu has the following items:

Menu Item	Action

<u>C</u>onfigure	You configure your system using commands in the **Options|Configure** menu. There are six commands available:
	   • Switch Connection
	   • Downloads
	   • Wallboards
	   • Clients
	   • First Time
	   • Sharing Setup
	With these commands you can administer the connections to the DEFINITY system and register Clients and Wallboards. See Chapter 4, "Configuring and Managing BCMS Vu Software," to find out how to use these commands.

<u>U</u>pdate BCMS data	Downloads details of the internally measured splits/skills, trunk groups, and VDNs used on the BCMS system and those agents who can be logged into the splits/skills. **NOTE:** If the Vectoring feature is not administered on the DEFINITY system, there will be no VDN data.
Download <u>H</u>istorical Data	Starts an immediate download of historical data from the switch. If the DEFINITY system is reset, BCMS data will be lost on the switch and will not be downloaded to *BCMS Vu*. As a result, Historical Reports that include a period when the switch was reset may not display complete data. To be sure that you retain as much of the data from the switch as possible, you should use this menu item to download the historical data once calls have ceased, but before the switch is reset.

Menu Item	Action
<u>S</u>top data download	Halts any active update of BCMS data or an active historical data download.

D<u>e</u>lete Records	You can delete records (database items downloaded from the DEFINITY system and stored on a PC) to prevent your hard disk from becoming overloaded with data.
	You will probably want to **archive** this data before you delete it from your hard disk.
	You can choose the type of records that you want to delete:
	
	  • Interval data only
	  • Daily data only
	  • Both interval and daily.
	
	You can delete all of the data selected according to the
	  • date on which it was stored
	  • length of time it has been stored.
	In the latter case, you can order that records stored more than a given length of time be deleted daily.
	
	CAUTION: The importance of performing periodic backup of your database cannot be overemphasized. To protect the integrity of your database, you must schedule frequent backups on a regular basis.

Chapter 2

Menu Item	Action
Repair Database	The database records that have been downloaded and stored on your PC hard disk can become corrupted. You can correct this by using the **Repair Database** command in the **Options** menu. After you repair the database, you will probably want to update the database Index that allows reports to be quickly created. You can also compact the database in order to store more data on your hard disk.
Connect	Connects the Server to a DEFINITY system. If the Server is already connected to a switch, this command is disabled.
Disconnect	Breaks the connection between the Server and the DEFINITY system. If there is no active connection with the DEFINITY system, this command is disabled.

View

The **View** menu has the following items:

Menu Item	Action
Toolbar	Shows or hides the Toolbar
Status Bar	Shows or hides the Status bar
Error log	Displays the Error log
System Configuration	Produces a graphic representation of the DEFINITY system, the Server, and the Clients connected to the Server

Window

The **Window** menu has the following items:

Menu Item	Action
Cascade	Arranges windows so that they overlap
Tile	Arranges windows in non-overlapping tiles

Help

The **Help** menu has the following items:

Menu Item	Action
Help topics	Displays a list of help topic categories
About *BCMS Vu*	Shows version, copyright and other information about the *BCMS Vu* software

Toolbar

The following *BCMS Vu* toolbar buttons provide quick ways to start common *BCMS Vu* tasks:

Icon	Name	Command
	Download Historical Data	Downloads latest historical data
	Terminate Download	Terminates historical data download that is in progress

Icon	Name	Command
	Delete Records	Deletes old records from the database
	Repair Database	Performs maintenance on the historical database
	Connect	Establishes a connection to a switch
	Disconnect	Breaks the connection to a switch
	Help Topics	Opens Online Help

Status Bar

The status bar displays a brief description of menu commands when the commands are highlighted by the mouse pointer, and displays a description of a toolbar button when the mouse pointer is positioned over the button.

The status bar also has two status indicators:

Download Status   When data is being downloaded from the DEFINITY system, this indicator displays status messages relating to the download.

**Connection
Status**

When *BCMS Vu* Server is connected to the DEFINITY system, the status bar shows icons of a large and small PC connected by moving colored dots. When *BCMS Vu* Server is disconnected from the DEFINITY system, only one icon appears.

The download status and connection status are not visible or active if the Status bar is disabled from the **View** menu.

Server Action Area

The Server Action area is the area of the Server application where windows resulting from menu selections appear.

Chapter 2

Using *BCMS Vu* Server On-Line Help

You can get on-line help for the following:

- Toolbar buttons and menu options

- The *BCMS Vu* window you are working in

- A particular *BCMS Vu* topic or function.

For information about a toolbar button or menu option, move the mouse pointer over the item. Brief information or instructions will appear either in the status bar at the bottom of the *BCMS Vu* main window or as a tooltip.

For information about any *BCMS Vu* window you are working in, press the F1 key, or select a Help button if one is displayed in the window.

To select a particular topic or read about *BCMS Vu* functions, choose **Help Topics** from the **Help** menu.

BCMS Vu Client Basics

Introduction

This chapter describes the main features of *BCMS Vu* Client software. It includes the following topics:

- What can I do using *BCMS Vu* Client?

- Starting *BCMS Vu* Client software.

- Disconnecting *BCMS Vu* Client from a Server.

- Reconnecting *BCMS Vu* Client software to a Server.

- Exiting *BCMS Vu* Client software.

- Understanding the *BCMS Vu* Client main window.

- *BCMS Vu* Client Online Help.

What Can I Do Using *BCMS Vu* Client?

Use *BCMS Vu* Client to

- Connect to a server

- Receive real-time data from the DEFINITY system and display it in textual and graphical form on a PC monitor

- Print real-time textual reports

- Display real-time data

  — As Wallboard Displays on a monitor that mimic the display capabilities of external wallboards used in call centers

  — On several types of external wallboards

- Select the data items you want to display when you define a real-time report or Wallboard Display

- Specify alerts on real-time data items to provide a visual or visual/audible indication that the item has exceeded or fallen below the threshold alert level

- Create and print Historical Reports from the downloaded historical data

- Schedule the printing of Historical Reports

- Save and reopen all types of reports

- View the error log

- Display stored historical data in a table format using *Microsoft Access* or *Microsoft Excel*[*].

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* *Excel* is a registered trademark of *Microsoft* Corp.

Starting *BCMS Vu* Client Software

The *BCMS Vu* installation program creates a menu item on your PC's "Programs" menu. Refer to *BCMS Vu R2 Software Installation Guide* (585-217-103) for detailed installation instructions.

| Note | The following procedure presumes that whoever installed the *BCMS Vu* Client software accepted the default program locations. If the installer chose to install the program start icons in a different location (folder), you will have to go to that location to start *BCMS Vu* using the program start icon. |

An alternate method of starting *BCMS Vu* is to use the Find function of *Windows* to locate the program file for *BCMS Vu* Client (*bcmsvuclient.exe*) and select it.

| Note | Before you can connect a Client to a Server, the Client must be registered with the Server. See "Registering Clients" on page 4-13. |

Chapter 3

To start *BCMS Vu* Client software, do the following. Refer to the following figure.
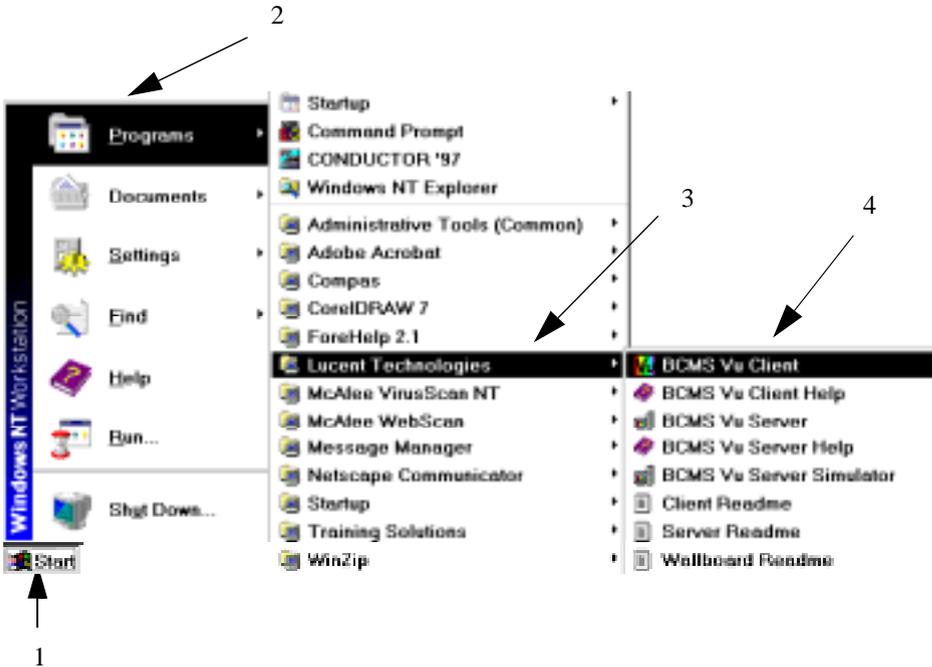
1. Select the **Start** button from the Taskbar.

2. Move the cursor over **Programs** in the **Start** menu.

3. Move the cursor over **Lucent Technologies** in the **Program** menu.

4. Move the cursor over the *BCMS Vu* Client icon [icon] in the **Lucent Technologies** menu and click once.

    The Lucent Technologies splash window appears for a few seconds. You may clear it quickly by clicking on it.

    The "Server Connection" window appears.
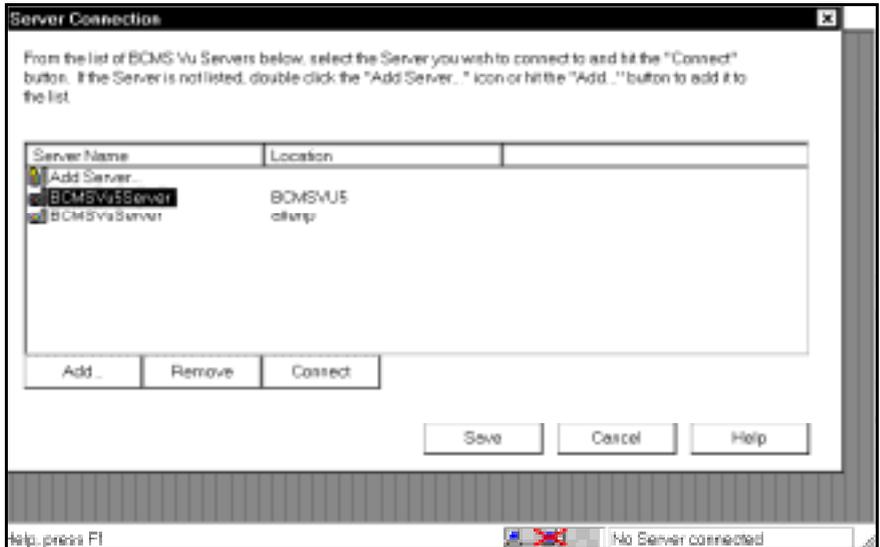
5. Select the name of the Server to which you want to connect the client.

    a. If the Server's name is in the list of server names, highlight it and
        select **Connect**.

    b. If the server's name is not in the list of server names, double-click
        Add Server... or select **Add...**.

        The "Server Selection" window appears.

    c. In the "Server Selection" window, enter the name of the new Server
        you want to create and configure.

    d. Select **OK**.

        The "Server Selection" window disappears and the "Server
        Connection" window reappears.

    e. To save the name of the new Server in the list of Server names and
        connect to it, highlight it and select **Connect**.

    f. To save the name of the Server in the list of Server names without
        connecting to it, select **Save**.

        The "Server Connection" window closes.

Disconnecting *BCMS Vu* Client from a Server
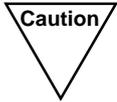
Caution⚠️ If *BCMS Vu* Client is generating reports, do not close the Client application or disconnect the Client from the Server until the reports are displayed or you will lose some of the reports.

If *BCMS Vu* Client is connected to a Server, you can disconnect from the Server without closing the Client application by doing either of the following:

In the **Options** menu, select **Disconnect**.

or

Select the **Disconnect** toolbar button.

Reconnecting *BCMS Vu* Client to a Server

If you have disconnected the Client from a Server without closing the Client application, you can reconnect by doing either of the following:

In the **Options** menu, select **Connect.**

or

Select the **Connect** toolbar button.

The "Server Connection" window appears. (See page 5). Highlight the name of the Server you want to connect to and select **Connect**.

Exiting *BCMS Vu* Client Software
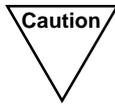
Caution If *BCMS Vu* Client is generating reports, do not close the Client application or disconnect the Client from the Server until the reports start printing or you will lose some of the reports.

You can exit *BCMS Vu* software using any of the standard *Windows* methods, including:

- Select **Exit** from the **File** menu.

- Select the **Close** button in the upper right corner of the main window.

- Select **Close** from the **Window** menu.

Note *BCMS Vu* can take a while to shut down. If you experience problems with other applications not working properly, you may want to make sure that *BCMS Vu* has shut down completely (and end the task if it did not). To do this, complete the following steps:

1. Press **CTRL+ALT+DEL** to open the "Windows NT Security window (*Windows* NT 4.0) or "Close Program" window (*Windows* 95).

2. Select **Task Manager** (*Windows* NT 4.0 only).

3. In the "Windows NT Task Manager" window or "Close Program" window look for *bcmsvuclient*.

4. If it is displayed in the list of running applications, highlight it.

5. Select **End Process** (*Windows* NT 4.0) or **End Task** (*Windows* 95).

Chapter 3

The *BCMS Vu* Client Main Window

The *BCMS Vu* Client main window contains the following items, as shown in the figure below:

- System menu box
- Title bar
- Menu bar
- Toolbar

- Status bar
- Report display area
- Connection status
- Server name
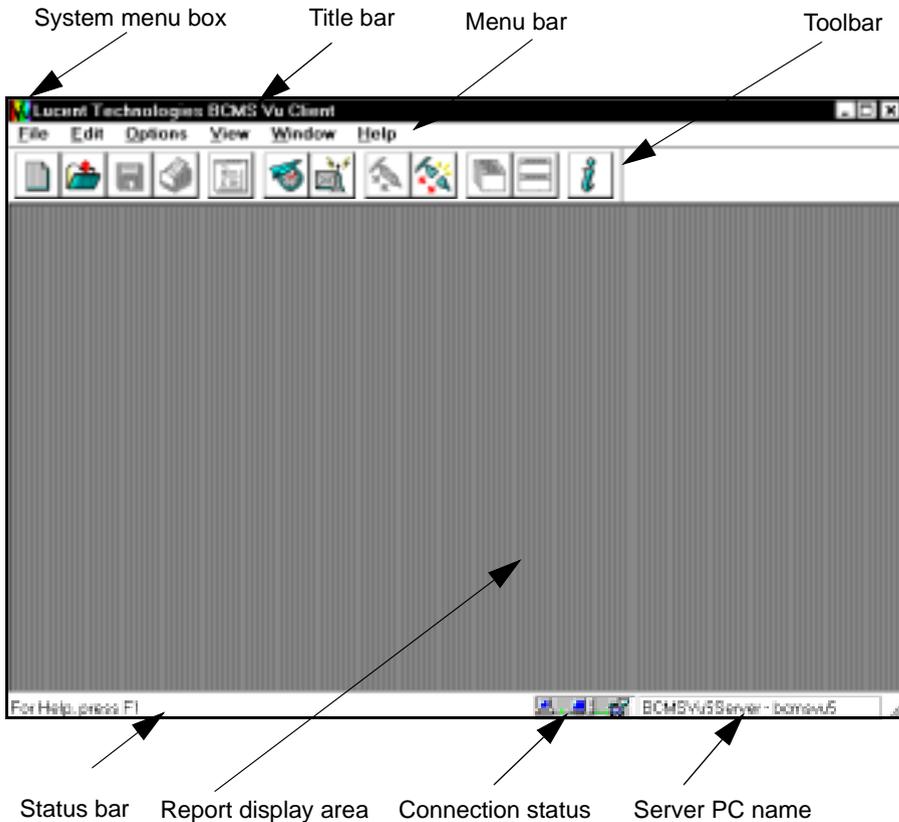
System menu box   Title bar   Menu bar   Toolbar

Status bar   Report display area   Connection status   Server PC name

System Menu Box

Use the "System Menu" box to carry out common *Windows* operations, such as closing the current window.

Title Bar

The "Title" bar displays the name of the application (in this case, Lucent Technologies *BCMS Vu* Client). If one or more reports in the report display area are displayed, the name of the active report is also shown in the title bar.

Menu Bar

The "Menu" bar displays the available drop-down menu commands.

The following tables present the options available from each menu.

File

The **File** menu has the following items:

Menu Item	Action
New Report	Creates a new report
Open Reports	Opens an existing report
Close Report	Closes an open report
Save Report	Saves an open report with the same file name
Save Report As	Saves an open report to a different file name
Print Report	If a Real-Time Text Report or a Historical Report is active, selecting this menu item displays a standard *Windows* print window.

Menu Item	Action
P<u>r</u>inter Setup	Displays a standard *Windows* printer setup window. The *BCMS Vu* software supports parallel or network-connected printers.
recently used reports	After the *BCMS Vu* software has been used for the first time, a list of the most recently displayed reports appears here. Select the number or name that corresponds to the report you want to open.
E<u>x</u>it	Exits *BCMS Vu* Client and terminates the connection to *BCMS Vu* Server

Edit

The **Edit** menu has the following items:

Menu Item	Action
Report <u>P</u>roperties	Runs the Properties Wizard to let you change the properties of the active report on your screen

Options

The **Options** menu has the following items:

Menu Item	Action
<u>C</u>onfigure	Runs a **Configuration Wizard** to change the configuration settings for the following: - Alerts - Color Palettes - Thresholds and Maximum Values.
<u>B</u>roadcast Message	Broadcasts a message to be displayed on the wallboard. If a wallboard is not registered, this command is disabled.

Menu Item	Action
Ca**ncel Broadcast**	Terminates an active broadcast message
Co**nnect**	Attempts to establish a connection with the Server. If a connection is already established, this command is disabled.
Disconnect	Breaks the connection with the Server. If there is no active connection with a Server, this command is disabled.
Schedule **Historical Reports**	Lets you schedule the printing of Historical Reports at a later date

Chapter 3

View

The **View** menu has the following items:

Menu Item	Action
To**o**lbar	Shows or hides the toolbar
Status Bar	Shows or hides the status bar
Error log	Displays the error log. Because the error log is stored on the Server, this item is disabled when the client is not connected to a Server.

Window

The **Window** menu has the following items:

Menu Item	Action
Tile	Arranges windows in non-overlapping tiles
Cascade	Arranges windows so that they overlap
list of open reports	Goes to a specified report. Available only when one or more reports are open.

Help

The **Help** menu has the following items:

Menu Item	Action
Help topics	Displays a list of help topic categories
About BCMS Vu	Displays version and copyright information about *BCMS Vu*

Toolbar

The following *BCMS Vu* toolbar buttons provide quick ways to start common *BCMS Vu* tasks:

Icon	Name	Command
	New Report	Creates a new Real-Time or Historical Report or Wallboard Display
	Open Reports	Opens an existing Real-Time or Historical Report or Wallboard Display
	Save Report	Saves the properties of the active report. This button is available only if one or more reports are open.
	Print current report	Prints the active report. This button is available only if the active report is a Real-Time Text or a Historical Report. *BCMS Vu* software supports parallel and network-connected printers.
	Report Properties	Changes the properties of the active report. This button is available only if one or more reports are open.
	Schedule Historical Reports	Schedules the future printing of a Historical Report
	Wallboard Broadcast	Broadcasts a message to an external wallboard
	Server Connect	Attempts to connect to a Server. If there is an active connection to a Server, this button is disabled.

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Icon	Name	Command
	Server Disconnect	Disconnects from a Server. If there is no active connection to a Server, this button is disabled.
	Cascade Windows	Arranges the open reports so that they overlap one another
	Tile Windows	Displays the open reports in non-overlapping tiles, displaying the current report at the top left of the *BCMS Vu* Report Display area
	Help	Opens the Help Topics window

Status Bar

The status bar displays a brief description of menu commands when they are highlighted by the mouse pointer, and displays a description of a toolbar button when the mouse pointer is positioned over the button.

Report Display Area

The report display area is the area of the application where *BCMS Vu* displays new and existing real-time and Historical Reports. It also displays activities shown in windows, such as setting threshold and alert windows.

Connection Status

If there is an active connection between the Client and a Server, three icons connected by moving dots appear in this area, one icon symbolizing the Client, one the Server, and one the DEFINITY system.

If there is no connection between the Server and the DEFINITY system, the DEFINITY system icon is covered by a red "X."

If there is not an active connection between the Client and a Server, an icon covered by a red "X" and the words "No Server connected" appear in this area.

The connection status will not be visible or active if the status bar is disabled from the menu.

Server Name

If there is an active connection between the Client and a Server, the Server name and the Server PC name appear in this area.

Chapter 3

BCMS Vu Client On-Line Help

You can get on-line help for the following:

- Toolbar buttons and menu options

- The *BCMS Vu* window you are working in

- A particular *BCMS Vu* topic or function.

For information about a toolbar button or menu option, move the mouse pointer over the item. Brief information or instructions will appear either in the status bar at the bottom of the *BCMS Vu* main window or as a tooltip.

For information about any *BCMS Vu* window you are working in, press the **F1** key, or click a **Help** button if one is displayed in the window.

To select a particular topic or read about *BCMS Vu* functions, choose **Help Topics** from the **Help** menu.

Configuring and Managing *BCMS Vu* Software

Introduction

This chapter is divided into four main sections:

- Configuring *BCMS Vu* software from the Server after it has been installed on your PC

- Configuring *BCMS Vu* software from the Client after it has been installed on your PC

- Managing historical data from the Server

- Managing miscellaneous *BCMS Vu* software functions.

In *BCMS Vu* Server you use configuration wizards to

- Establish a connection from the Server to the DEFINITY system to retrieve real-time data

- Specify when and where historical data will be downloaded from the DEFINITY system to your PC

- Register external wallboards

- Register clients.

In *BCMS Vu* Client you use configuration wizards to

- Define alerts
- Specify palette colors for real-time reports
- Define thresholds and maximum values for items displayed in real-time reports.

You manage historical data when you

- Download historical data
- Back up the historical database
- Remove historical data from the PC
- Back up folders and files
- Repair the database
- Re-index the database
- Compact the database
- Manage memory allocation.

A miscellaneous *BCMS Vu* function you manage is downloading BCMS data.

After you initially configure *BCMS Vu* software you can change the configuration options.

Configuring *BCMS Vu* from the Server

The *BCMS Vu* Server contains four configuration wizards:

- The **Switch Connection** Configuration Wizard lets you connect to the DEFINITY system whose activity you want to measure.

- The **Downloads** Configuration Wizard lets you schedule historical data downloads from the DEFINITY system.

- The **Wallboards** Configuration Wizard lets you register the wallboards connected to PCs on the network.

- The **Clients** Configuration Wizard lets you register the Clients that you allow to connect to the Server.

Normally you run each of these wizards individually.

The first time you open *BCMS Vu* Server, however, you are presented with the Switch Connection, Downloads, and Clients wizards as successive parts of a larger wizard.

You can also access this larger wizard by selecting **First Time** in the **Options|Configure** menu. As you finish each of the three individual wizards, you select **Next** to move to the next wizard, and after the last window of the Clients wizard, you select **Finish** to close the wizard.

If you want to access only one of the four individual configuration wizards, select it in the **Options|Configure** menu. A description of the four wizards follows.

| Note | If the *BCMS Vu* Server is operating with *Windows* NT 4.0, the user who runs the *BCMS Vu* Server must be a "Power User." |

Chapter 4

Connecting to the DEFINITY System

The Switch Connection Configuration Wizard is pages 1-3 of the larger wizard you are presented when you start *BCMS Vu* Server software the first time and when you choose **First Time** in the **Option|Configure** menu. You can also start the Switch Connection Configuration Wizard by itself.

You connect to the DEFINITY system from the Server.

The windows of the Switch Connection Configuration Wizard allow you to set up a connection between your Server PC and the DEFINITY system. This connection allows you to download data from the BCMS database and to see real-time BCMS data.

| Note | The Server can be physically connected to more than one DEFINITY system through separate serial ports on the PC, but you can access data from only one DEFINITY system at a time.

You specify the connection information for a given DEFINITY system and give this set-up a name through the Switch Connection Configuration Wizard. When you start the Server software, you select the name of the connection you want.

To connect to a DEFINITY system,

1. From the **Options|Configure** menu select **Switch Connection**

     or

   From the **Options|Configure** menu select **First Time**.

   The "Enter a login and password" window appears.

2. In the "Login Name:" box, type the login that will be automatically supplied to the DEFINITY system when you connect to the DEFINITY

system. The login must match the *BCMS Vu* login name administered on the DEFINITY system.

> **Note** This DEFINITY system login must have the following permissions:
> - *Display Admin and Maint Data*
> - *System Measurements*
>
> The DEFINITY system login must **not** be a "service" login.
> Refer to "*BCMS Vu* Login and Password" in Chapter 2 of *BCMS Vu Software R2 Installation Guide* (5850-217-103).

3. In the "Login Password:" box, type the password that is associated with Login Name. It must match the password for the *BCMS Vu* login on the DEFINITY system.

> **Note** If the following conditions exist, you must change the password on the DEFINITY system *and* in *BCMS Vu* Server for that login.
> - Password aging for the *BCMS Vu* logon is in effect on the DEFINITY system, and
> - Aging is in effect for the login that *BCMS Vu* Server uses to access the DEFINITY system, and
> - The password expires.
>
> To eliminate this problem altogether, you may turn off password aging on the DEFINITY system "add login" form. To do this leave the password aging field in the next screen blank. To change login passwords, refer to "*BCMS Vu* Login and Password" in Chapter 2 of *BCMS Vu Software R2 Installation Guide* (5850-217-103).

4. Select **Next**.

    The "Specify the serial port and telephone number for *BCMS Vu* to use to access the switch" window appears.

5. In the "Phone Number:" box type the hunt group extension for Netcon channels that must be dialed for the data module to connect to the DEFINITY system.

Chapter 4

6. Use the drop-down list for the "Serial Port:" box to select the serial port that you are using to connect to the data module. The serial ports that are available in the drop-down list will match the ports available on your PC. If you do not know which serial (COM) port to choose, look at the back of your PC for the port (1 through 8) to which the data module is connected.

7. Select **Next**.

   In the window that appears you will see a diagram showing the path to the DEFINITY system you are trying to connect to. Select **Test Connection** to confirm that the connection has been properly set up.

   A colored dot moves back and forth between the PC icon and the DEFINITY system icon.

   If the connection is established, the words "The test was successful" appear.

   If the connection is not successful, *BCMS Vu* attempts to connect until it times out and tells you why it failed. In this case, select **Cancel** and correct the problem. Refer to "Troubleshooting the Data Module" on page 10-28.

8. To exit the Switch Connection Configuration Wizard, select **Finish**.

   If, however, you entered the Switch Connection Configuration Wizard by selecting **Options**|**Configure**|**First Time** or if this is the first time you have gone through the wizard, and you want to continue to the Download Historical Data Wizard, select **Next**.

| Note | If the connection to the DEFINITY system is dropped, for whatever reason, a Communications Error window appears offering you the following options: |

- Retry the connection
- Cancel the connection.

The program attempts to reconnect. If it does not reconnect and you do not select **Cancel**, the program attempts to reconnect again after thirty seconds, offering the same options. It tries again after a minute, then after two minutes, four minutes, and so forth. It continues trying to reconnect indefinitely at larger and larger intervals, until it is successful or you select **Cancel**.

Connecting to and Disconnecting from the DEFINITY System

BCMS Vu Server normally remains connected for as long as both *BCMS Vu* Sever and the DEFINITY system are running.

While *BCMS Vu* Server is connected to the DEFINITY system, you can manually disconnect it. To do this, select **Disconnect** from the **Options** menu, or select the **Disconnect** icon from the toolbar. *BCMS Vu* Server disconnects.

If *BCMS Vu* Server is not connected to the DEFINITY system, you can manually connect it. To do this,

1. Select **Connect** from the **Options** menu, or select the **Connect** icon on the toolbar.

   The "Server Connection" window appears.

2. Highlight the Server you want to connect to and select **Connect**.

   Provided the PC is properly connected and the DEFINITY system is running, *BCMS Vu* Server connects to the DEFINITY system. Allow several minutes for the connection to be established.

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When *BCMS Vu* Server is connected to the DEFINITY system, the status bar shows icons of a large and small PC connected by moving colored dots. If *BCMS Vu* Server is disconnected from the DEFINITY system, only one icon appears.

Downloading Historical Data

The Downloads Configuration Wizard in the Server allows you to specify how often, at what time, and where the historical database is downloaded from the DEFINITY system to your PC.

You download historical data from the Server.

| Note | Downloading historical data regularly and correctly is absolutely necessary for accurately reporting DEFINITY system data. We strongly advise you to download data for half-hour intervals at least twice a day, and for hour intervals at least once a day. Be sure to carefully read "Downloading Historical Data" on page 4-21 and "How the DEFINITY System Stores Data" on page 4-22. |

This wizard is pages 4-6 of the wizard you are presented when you start *BCMS Vu* Server the first time. The same wizard appears when you choose **First Time** in the **Options|Configure** menu.

To schedule downloads of historical data,

1. In the **Options|Configure** menu, select **Downloads**.

2. In the window that appears, be sure the box next to "Enable Downloading of Historical Data" is checked.

3. Select **Next**.

   The "Specify the time at which ..." window appears.

4. In the Upper box, enter the time of day when you want the first download of the day to occur. Use the time format specified on the "Time" tab of the "Regional Settings" *Windows* application.

5. In the lower box, enter (in hours) how often you want downloads to occur. For example, if you enter the number "6," downloads occur every six hours.

6. Be sure that the correct path for the folder where the data is stored appears below the words "Database Location." If the correct path is not displayed, select the "Browse" button to bring up an Explorer-type window, in which you can specify the correct path.

| Note | When you install *BCMS Vu* Server software, the installation program suggests that you store historical data in a default location. If you accept the default location, historical data is stored in **C:\Program files\Lucent\BCMS Vu\Server**. You can decide to store the data in another location. |

The "Automatic purging of old data" window appears.

7. Select the kind of purging you want to take place and fill in the interval in the box that opens.

    If you do not choose automatic purging, you need to use the **Delete records** menu command or the corresponding toolbar button periodically to reduce the size of the database.

8. To schedule the download and close the configuration wizard, select **Finish.**

    If you entered the Switch Connection Configuration Wizard by selecting **Options | Configure | First Time** or if this is the first time you have gone through the wizard, and you want to continue to the Client Configuration Wizard, select **Next**.

| Note | *BCMS Vu* software is Year 2000-compliant. You should have no problems with historical data when the year 2000 begins. |

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Note	The amount of data you leave in your historical database is a matter of choice. You will probably want to use a hard disk with a large storage capacity and save at least five years of daily data and six months of interval data in order to track trends effectively. After you decide how long you want to save historical data, use the formula below to determine approximately how much disk space you need.

For splits/skills, agents, VDNs and trunk groups measured by BCMS, the following formula is an approximate guide to the space required in megabytes for each day's historical data:

$$\frac{\text{\# splits/skills} + \text{\# agents} + \text{\# trunk groups} + \text{\#VDNs}}{(370) * \text{BCMS interval in hours}}$$

When the interval is a half-hour, use 185 instead of 370 in the formula.

Note	Your PC's inner clock automatically changes from Standard to Daylight Savings Time if you specify this feature in **Control Panel/Date/Time** in *Windows.* However, the DEFINITY system does not change automatically.

We recommend that you turn off automatic "daylight savings change" on the PC and manually adjust the time on the DEFINITY system and on the PC at the same time when no agents are logged in or call center activity is very low. If you do this, remember that turning back the time on the DEFINITY system clears BCMS data on the DEFINITY system.

If agents are logged in at this time, you may receive incorrect data when you switch to Standard Time.

Before you change the time, perform a historical data download to minimize data loss.

Registering Wallboards

When you configure a wallboard you register it with the Server. A Client can then send a report or message to any wallboard connected to any PC in the network. *BCMS Vu* Wallboard software must be installed and running on the PC to which the wallboard is connected.

You register a wallboard from the *BCMS Vu* Server.

| Note | The Wallboard Configuration Wizard is not part of the wizard that appears the first time you run *BCMS Vu* Server or when you select **Options | Configure | First Time**. |

| Note | Before you can register a wallboard from the server, it must already be connected to a PC with Wallboard software installed and running. The PC must be on the network. |

1. In the **Options | Configure** menu item, select **Wallboards**.

   The "Wallboard Registration" window appears. Previously registered wallboards are listed under "Wallboard Names."

2. In the "Wallboard Registration" window, double-click on **Add Wallboard...** or select **Add...**.

3. In the "Wallboard Name" window, enter the name of the wallboard which you want to be accessible to the Clients. The wallboard name is an arbitrary designation, unique in the network, that you assign to the external wallboard. It is the name by which you select the wallboard when you want to send a display or message to it. You will probably want to give each wallboard a name that describes its characteristics or location.

4. Select **OK**.

   The "Specify the name and model type of the wallboard" window appears.

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5. In the "Machine name" box, enter the name of the PC to which the wallboard is physically attached. If you do not know this name, open **Start/Settings/Control Panel/Network** from *Windows*. On the **Identification** tab, the machine name is in the "Computer Name" field.

6. From the "Model of wallboard" pull-down menu, select the model name of the wallboard.

7. In the "Address" box, enter the address of the wallboard. This is a number from zero to 127. Refer to the wallboard user guide to find out how to specify the wallboard address.

Note	You address Lucent wallboards using the remote control unit that comes with the wallboard. Refer to the user's guide that comes with the wallboard.

You address a Lucent wallboard using hexadecimal notation. However, when you enter a wallboard address in the *BCMS Vu* configuration procedure, you must use decimal notation. Furthermore, *BCMS Vu* accepts wallboard addresses only from 0 to 127 (decimal).

For a table that translates hexadecimal addresses into decimal addresses, refer to "Installing the Wallboard" in Chapter 5 of *BCMS Vu Software R2 Installation Guide* (585-217-103).

8. Select **Next**.

The "Specify the Serial Port..." window appears.

9. From the pull-down menu, select the name of the port on the PC to which the wallboard is connected.

Note	Only COM Port numbers from 1 through 8 are allowed.

10. Select **Next**.

A window appears that allows you to test whether the wallboard is properly registered and physically connected to a PC.

11. Click on the "Test Connection" button.

A window appears with a message asking you if you saw the "Test message" on the wallboard.

If you select "Yes," you are told that the test was successful, meaning that the wallboard is properly registered and connected to a PC.

If you select "No," you are told that the test failed and why it failed. The following conditions will cause a failure:

- The wallboard is not connected to the specified port on the specified PC.

- Wallboard software is not running on the PC to which the wallboard is attached.

- The wallboard is not properly registered.

- The wallboard address is not correct.

- The wallboard has a poor physical connection.

Registering Clients

Client registration is page 7 of the wizard you are presented when you start *BCMS Vu* Server the first time and when you choose **First Time** in the **Options|Configure** menu.

To register a Client with a Server, you must be in the *BCMS Vu* **Server** application.

1. In the **Options|Configure** menu, select **Clients**.

The "Registered Clients" window appears.

2. If you want to register a Client that is not listed in the Registered Clients column, double-click on **Add Client** or select **Add...**.

A window entitled "Client Registration" appears.

3. Enter the *Windows* Login ID of the Client that you want to register.

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The "Registered Clients" window reappears.

4. To exit the wizard, select **Save**.

About Shares

Certain configuration information, for example, saved reports and Client and Wallboard configurations, is stored in the Server folder. The historical database is also stored in the Server folder. Clients operating from other PCs on the network must be able to access these folders. This permission, known as a *share*, gives Clients read permission for these folders.

A share is permission to access (read) the files in a particular folder. This includes access to all files in all folders below the share folder. To a Client accessing a shared folder from another PC on the network, the shared folder appears to be in the root directory of the server PC. The share name can be an *alias*, different from the name of the folder on the Server PC.

During the installation of *BCMS Vu* Server, the folders in which these files are stored are created by default. The folder containing configuration information and the historical database is created in the path **C:\Program Files\Lucent\BCMS Vu\Server** and is named "BCMSVuServer." You can refuse to accept the default and can create your own folder to store these items.

To find out which folders are shared, select **Sharing Setup** in the **Options|Configure** menu item.

Shares is a *Windows* Network concept and if you want to change the sharing setup you can do so from *Windows Explorer*. For more information, refer to your *Microsoft Windows* documentation.

| Note | If you make changes to the sharing setup, you may prevent clients from creating historical reports and opening and saving reports. Do not change sharing setup unless it is absolutely necessary. |

Configuring *BCMS Vu* from the Client

Activating Alerts

In order for an alert to function, threshold(s) for the alert must be defined and activated. You may define the threshold(s) before or after you activate the alert(s).

To activate an alert:

1. In the **Options** menu, select **Configure**.

2. Select **Alerts**.

    The Alerts Wizard appears.

3. Select the radio button next to the type of alert you want to activate. Notice that you cannot choose an audible alert without an accompanying visual alert.

> **Note** You cannot set different types of alerts for different data items. For example, if you chose visual-only alerts in this wizard, alerts in all reports for this client for all data items will be visual only.

4. To close the Alerts Wizard, select **OK**.

Configuring Color Palettes

A color palette is a set of colors that are applied to different sections of a graph, pie-chart, text report or time trace for easier differentiation between the sections. *BCMS Vu* R2 lets you choose among four different color schemes and a gray-scale scheme for a total of five different ways to differentiate between various sections of a graph, pie-chart, and time trace.

When you select a new color palette, that set or combination of colors applies to all graphs, pie-charts, and time traces; you cannot apply one set of colors to one kind of report and a different set of colors to another kind of report at the same time.

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To configure a color palette,

1. In the **Options** menu, select **Configure.**

2. Select **Color Palettes**.

   The "Color Palettes Configuration" window appears.

3. Select the radio button next to the graphic that displays the set of colors you want to activate.

4. To visualize what the colors will look like before you exit the configuration window, select **Apply**.

5. To close the "Color Palettes Configuration" window, select **OK**.

Thresholds and Maximum Values Configuration

Thresholds

BCMS Vu software can display or sound an alert in all reports except Pie Charts and Historical Reports whenever a specified item exceeds or falls below a pre-selected value. Each Client sets its own threshold values, and these values do not apply to reports created by other Clients. Thresholds are set for each *data item*, not for each report. Therefore, once a Client sets a threshold for a data item, the alert applies to that data item on all graphs, text reports, and Wallboard Displays created by that Client.

For each threshold, you can specify that the alert be visual, visual and audible, or disabled.

Audible alerts - An audible alert is a beep from the PC.

Visual alerts - If the default palette is used, visual alerts appear as follows:

• In a Real-Time Graph Report a visual alert is indicated by the item bar color changing to red when the item is outside either of the set warning threshold values. The item bar color changes to yellow when the item is outside the set caution threshold values.

• In a Real-Time Text Report a visual alert is indicated by the background color of the item text changing to red when the item is outside either of

the set warning threshold values. The background color changes to yellow when the item is outside the set caution threshold values.

- In a Wallboard Display, a visual alert is indicated by the item text color changing to red when the item is outside either of the set warning threshold values. The item text color changes to yellow or amber when the item is outside the set caution threshold values.

    Palette settings do not affect wallboards.

- In a Time Trace Report, the horizontal bands in the warning zones turn to red when the item is outside the set warning threshold values. The horizontal bands in the caution zones turn to yellow when the item is outside the set caution threshold values.

Thresholds exist for the sole purpose of generating alerts.

After an alert has been triggered, it continues until the item value falls within the threshold range, or until you reset the threshold value or disable the alert.

You can define any or all of the following four limits:

High Warning	If the value of the data item goes above this threshold, a warning alert occurs.
High Caution	If the value of the data item goes above this threshold, a caution alert occurs.
Low Caution	If the value of the data item goes below this threshold, a caution alert occurs.
Low Warning	If the value of the data item goes below this threshold, a warning alert occurs.

The value of each item in the above list (except the first value) must be lower in value than the item above it.

Maximum Values

Maximum values are used to scale graphs appropriately to the data you expect. The number you specify as the maximum value determines the maximum height to which a bar or trace will extend. You will probably choose as a maximum value, a value that the data item often approaches but seldom exceeds. For example, if the value of Number of ACD Calls, is often

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at least 90 but seldom more than 100, you might select 100 as the maximum value. If you do this, the maximum height of a vertical bar graph or time trace will represent 100. For a value above 100, the bar will extend above the maximum value line and terminate in an apex. The actual value of the item will appear above the point of the apex.

Every data item is assigned a default maximum value. You can change each of these default values through the **Options|Configure|Thresholds and Maximum Values** menu command.

| Note | If multiple splits/skills or types of data items are represented on the same report, the maximum height of the graph will be the largest of the maximum thresholds of all the data items selected. |

Configuring Thresholds and Maximum Values

You set thresholds and maximum values from a window of the same name. You open this window by selecting **Options|Configure| Thresholds and Maximum Values**.

The following is a description of this window:

When the tree in the left-hand window is collapsed fully, three categories of measured entities (Split/Skill, Agent summary, and VDN summary) are listed. You cannot set a maximum value or threshold for a category.

If you expand a category, the data items that pertain to that category (for example, Calls Waiting and Oldest Call) are displayed. You can set a maximum value and thresholds for a data item across all members of a category.

For example, you can designate an upper caution value of five minutes for "Average Speed of Answer" for *all* splits/skills. To do this,

1. Expand Split/Skill (click on the "+" next to the split/skill icon).

2. Highlight **Average Speed of Answer**.

3. Set the upper caution value to "05:00."

A caution alert now appears in reports covering any and all splits/skills where Average Speed of Answer is being measured and the average rises above 5 minutes.

You can also choose to set a unique threshold for each data item for each split/skill, agent or VDN.

For example, you can designate an upper caution value of 5 minutes for Average Speed of Answer for all split/skills except Service, and an upper caution value of 3 minutes for Service. To do this,

1. Under the category Split/Skill, designate an upper caution value of 5 minutes for Average Speed of Answer (see above).

2. Expand Average Speed of Answer (click on "+").

3. Highlight "Service."

4. Set the upper caution value to "03:00."

   Now a caution alert will go on when the Average Speed of Answer for calls to Sales exceeds 3 minutes, and when it exceeds 5 minutes for calls to all other splits/skills.

Setting Thresholds and Maximum Values

To set Thresholds and Maximum Values,

1. In the **Options** menu, select **Configure**.

2. Select **Thresholds and Maximum Values**.

   The "Thresholds and Maximum Values" window appears.

3. In the tree structure in the window on the left side of the wizard window, open either Split/Skill, Agent summary, or VDN summary, (depending on whether you want to set a threshold for a split/skill, agent, or VDN data item) by selecting the "+" next to the name of the category.

4. Select the data item for which you want to set thresholds.

   When you have highlighted the name of a data value, the name will appear just above the "Maximum Bar Height" box on the right side of the window.

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5. If you want to change the value in the "Maximum Bar Height" box at this time, type the number that you want a fully extended bar to represent. For example, if you are assigning threshold values for Number of ACD Calls, you might select 100 as the Maximum Bar Height. If you do this, 100 ACD Calls will cause the bar to extend to its maximum length.

6. Check the box next to the type of warning or caution for which you want to define and activate a threshold. If you use the default palette,

   • The **Upper Warning** threshold is the value above which the bar on the graph will appear red. You will probably want to make this threshold number less than the Maximum Bar Height.

   • The **Upper Caution** threshold is the value above which the bar on the graph will appear yellow.

   • The **Lower Caution** threshold is the value below which the bar on the graph will appear yellow.

   • The **Lower Warning** threshold is the value below which the bar on the graph will appear red.

7. Type the threshold value for the type of warning you selected in step 6.

8. Repeat steps 4 through 7 for other types of warnings and cautions you want to define.

9. If you decide you do not want a threshold activated, remove the check from the box next to that type of warning or caution.

10. Unless you activate them, alerts will not function when a threshold is exceeded.

> **Note** There is a difference between activating a threshold and activating an alert:
> Checking the box next to a caution or warning threshold in the "Thresholds and Maximum Values" window assigns the value in the adjacent box. However, the alert associated with this threshold does not function unless the alert is turned on through the **Options | Configure | Alerts** menu item.

11. To close the Thresholds and Maximum Values Wizard, select **Finish**.

Managing *BCMS Vu* Historical Data

This section includes the following general data management topics:

- Downloading historical data

- How the DEFINITY system stores data

- Backing up the historical database

- Removing historical data from the PC

- Backing up folders and files

- Repairing the database

- Re-indexing the database

- Compacting the database

- Managing memory allocation.

Downloading Historical Data

Perhaps the most important task in managing your data is being sure it is downloaded regularly and safely from the DEFINITY system. Failure to do this carefully can cause you to lose data irrevocably. Downloading data is described in an earlier section of this chapter.

In order for you to download data in a timely manner and not lose data, you should consider how the DEFINITY system stores data. The following section describes this process.

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Note	When you install *BCMS Vu* Server software, the installation program suggests that you store historical data in default locations. If you accept the default location, historical data is stored in **C:\Program files\Lucent\BCMS Vu\Server**. You can decide to store the data in another location.

How the DEFINITY System Stores Data

The DEFINITY system stores interval data for only 24 intervals (12 hours of half-hour intervals and 24 hours of hour intervals), and daily data for only seven days. In order to save data for longer periods, you must download it before it is deleted from the DEFINITY system.

Using the Server, you download the data to the hard disk where the database destination location has been defined. You can perform the download immediately, or you can schedule it to take place later on a regular basis.

When you schedule downloads to take place on a regular basis, you choose how frequently the downloads occur. You can specify that they occur as often as every hour, or as infrequently as every twenty-four hours. Remember, however, that the intervals you choose for downloading data from the DEFINITY system are not necessarily the same as the intervals at which data is stored on the DEFINITY system. Be sure that you download data often enough so that none is lost. For example, if the DEFINITY system saves interval data every half-hour, you should download interval data at least every twelve hours (24 intervals) to make sure none is lost.

Backing up the Historical Database

If you want to perform periodic archives of the historical database to keep its size reduced, do the following:

1. In the database directory, select the file *histdb.mdb*.

2. Copy the file to another location. For security, you may want to keep a copy on a different external disk.

3. In the database directory, copy the file *empty.mdb* to the database directory.

4. Rename the copy of *empty.mdb* file to *histdb.mdb*.

Removing Historical Data from the PC

BCMS Vu stores historical data until you remove it. You may need to periodically remove data to prevent your disk from filling up and to keep the performance of your reports acceptable. This can be done through automatic purging of database records. We suggest that you back up the historical database before removing old database records.

For splits/skills, agents, VDNs and trunk groups measured by BCMS, the following formula is an approximate guide to the space required in megabytes for each day's historical data:

$$\frac{\text{\# splits/skills + \# agents + \# trunk groups + \#VDNs}}{(370) * \text{BCMS interval in hours}}$$

When the interval is a half-hour, use 185 instead of 370 in the formula.

For example, a small call center with one trunk group, five VDNs, five splits/skills and ten agents using an interval of 60 minutes will require approximately 57 KB per day.

You can choose the type of records that you delete:

— Interval data only

— Daily data only

— Both interval and daily.

You can delete all of the data selected according to the date on which it was stored, or according to the length of time it has been stored. In the latter case, you can request that records stored more than a given length of time be deleted daily.

To delete historical data:

1. From the **Options** menu, select **Delete records** or select the **Delete Record** toolbar button.

2. From the "Choose the type of records to be removed:" window, select the radio button next to the type of data you want removed.

3. Select **Next**.

4. From the "Choose the records to be removed:" window, click the box next to the criteria according to which you want the data removed:

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a. Click on the window next to "Remove data by date" if you want data stored before a certain day removed, and type this date into the "Remove stored data before" window.

b. Click on the window next to "Remove data by age" if you want data that has been stored for a certain length of time removed, and type the age (number of days old) of the data you want removed into the "Remove stored data older than (in days):" window.

c. Click in the box labeled "Continue removing records this old" if you want records of this age automatically removed every day.

5. Select **Next**.

6. To remove the records, select **Finish** in the "Confirm destruction of historical records" window.

Backing Up Folders and Files

Because the *BCMS Vu* historical database and the reports you create using the *BCMS Vu* software are stored on your hard drive, it is important for you to establish a backup process to prevent loss of data should problems occur with your PC.

You can use a backup utility on your PC to back up the *BCMS Vu* data and settings. The information that you should back up includes the following:

*   The properties that you define for Historical Reports, Real-Time Reports, and Wallboard Displays

*   Your *BCMS Vu* configuration options

*   The historical database.

> **Note** | If you want to perform periodic archives of the historical database so that it is not so large, refer to "Backing up the Historical Database" on page 4-22.

Archiving the historical database in this manner is useful because it lets you keep historical data for as long as you want, yet lets you keep the

size of the historical database that you are using on a daily basis relatively small.

Once you have archived the historical database, you can retrieve it in one of several ways. You can install Server software in simulator mode on a PC that points to the archived data and have a Client connect to this "Server," or you can use *Microsoft Access, Microsoft Excel,* or another database tool to run reports and extract data from the archived database.

If you accepted the *BCMS Vu* software default file locations during the installation, the folders or files that you must include in your regular *BCMS Vu* backup are as follows:

Data	Location
Historical database	\Program Files\Lucent\ BCMS Vu\Server*Server Name*
Historical Reports and Real-Time Graph Reports	*Server PC Name*\VuShare*Server Name**Client Name*
BCMS configuration downloaded from the DEFINITY system	*Server PC Name*\Program Files\ Lucent\BCMS Vu\Server*Server Name*
Thresholds and alerts configuration settings	*Server PC Name*\Program Files\Lucent\BCMS Vu\Server*Client Name*

| Note | The actual locations of the files depend on the paths you specified in the installation of the software. |

Repairing the Database

The database records that have been downloaded and stored on your PC hard disk can become corrupted.

You can correct this by using the **Repair Database** command in the **Options** menu. After you repair the database, you will probably want to update the database index that allows reports to be quickly created.

You can also compact the database in order to store more data on your hard disk.

> **Note**   To avoid problems, be sure that all Clients are logged out when you repair the database.

To repair a corrupted database,

1. In the **Options** menu, select **Repair Database...** or select the **Repair Database** toolbar button.

2. In the window that appears, select **Repair Corrupted Database**.

   The buttons in the window become gray temporarily. When the operation finishes or fails, the grayed items become normal.

   If the operation fails, an error notice appears.

3. To exit the window, select **Finish.**

Re-indexing the Database

After you repair the database, update the database index that allows reports to be quickly created.

To re-index the database,

1. In the **Options** menu, select **Repair Database...** or select the **Repair Database** button on the toolbar.

2. In the window that appears, click on **Rebuild the Table Indices**.

   The buttons in the window become gray temporarily. When the operation finishes or fails, the grayed items become normal.

   If the operation fails, an error notice appears.

3. To exit the window, select **Finish**.

Compacting the Database

A database can become fragmented. It is a good idea to compact the database periodically. This ensures the integrity of the database and regains hard drive disk space by reducing the size of the database.

To compact the database,

1. In the **Options** menu, select **Repair Database...** or select the **Repair Database** button on the toolbar.

2. In the window that appears, select **Compact the Database**.

   The buttons in the window become gray temporarily. When the operation finishes or fails, the grayed items become normal.

   If the operation fails, an error notice appears.

3. To exit the window, select **Finish**.

Managing Memory Allocation

Memory errors may occur if you do not allocate sufficient virtual memory for *BCMS Vu*. We recommend that you allow *Windows* to manage your memory. When you first install *BCMS Vu* Server, Client, or Wallboard, perform the following steps. If a memory error occurs subsequently, perform these steps again.

For *Windows* **NT 4.0**:

1. Select **Start/Control Panel/ System/ Performance**.

2. On the "Performance" tab, in the "Virtual Memory" box, select **Change**.

3. In the box labeled "Total Paging File Size for all Drives," note the number next to "Recommended."

4. Enter this number in the box labeled "Maximum Size (MB)."

5. Select **Set**.

6. Exit the Control Panel.

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For ***Windows* 95**:

1. Select **Start/Control Panel/System/Performance**.

2. On the "Performance" tab, select "Virtual Memory."

3. Activate the radio button next to "Let Windows manage my virtual memory settings."

4. Select **OK**.

5. Exit Control Panel.

Managing Miscellaneous *BCMS Vu* Functions

Downloading BCMS Data

BCMS Vu continually monitors real-time measurements for as long as it is connected to the DEFINITY system. However, it downloads administration and descriptive data, such as agent and split/skill names, only during a historical data download.

If you want to download organizational and descriptive data at any other time, do the following:

Select **Update BCMS Data** from the **Options** menu.

The Download Status indicator in the status bar shows the progress of the download.

The following data, which is internally-measured on the DEFINITY system, is downloaded to *BCMS Vu*:

- Split/Skill names, numbers, and acceptable service levels

- Agent names and numbers

- BCMS/VuStats logical IDs (if Validate = Y on the DEFINITY system) for non-EAS only

- Split members for non-EAS only

- Trunk Group names and numbers

- VDN names, numbers, and acceptable service levels (if Vectoring = Y on the DEFINITY system).

5

Understanding Real-Time Reports

Introduction

This section of this chapter introduces you to Real-Time Reports and tells you how to decide what type of report fulfills a particular need.

The five types of real-time reports available are

- Real-Time Graph Reports
- Real-Time Pie Chart Reports
- Real-Time Text Reports
- Wallboard Displays
- Time Trace Reports.

The remainder of the chapter describes in detail the five types of real-time reports. The sections included in this chapter are

- Which type of real-time report shall I use?
- About Real-Time Graph Reports.
- About Real-Time Pie Chart Reports.
- About Real-Time Text Reports.
- About Wallboard Displays.
- About Time Trace Reports.

Which Type of Real-Time Report Shall I Use?

To get the most value from displaying real-time data, you should consider the following:

- Real-Time Graphs, Real-Time Pie Charts and Wallboard Displays are not just different ways of displaying the same data. Each has strengths and weaknesses.

- Real-Time Text reports display the same information that is available on a BCMS SAT screen.

- You can be notified of thresholds being met on all types of real-time reports except Real-Time Pie Charts.

You use a

- Real-Time Text report when you want to report on a large number of items

- Real-Time Graph report, Real-Time Pie Chart report or Wallboard Display to report on a smaller number of items

- Time Trace report when you want a visual display showing how one item changes over time.

When you decide between a Real-Time Graph, Real-Time Pie Chart or Wallboard Display you should consider the following:

- Real-Time Graphs are easy to monitor for anomalies and imbalances. For example, you can monitor several splits/skills, agents, or VDNs on one graph.

- Real-Time Pie Charts indicate the balance for one split/skill, agent, or VDN by showing the relative values of certain items.

- Wallboard Displays are easy to monitor for actual values and for values that vary widely. For example, you might display "oldest call waiting" values for several splits/skills.

- You can open several Real-Time Graphs, Real-Time Pie Charts and Wallboard Displays at the same time. This means that you can be very flexible about how data are grouped and displayed.

- You can send data from any Wallboard Display to several external wallboards so that your agents or others in the call center can see the information.

About Real-Time Graph Reports

BCMS Vu Real-Time Graphs provide periodically updated images of the current status of the call center. The first time you open a *BCMS Vu* Real-Time Graph report, you use the **New Report** option in the **File** menu to create the report. After you have created and saved a Real-Time Graph report, you can access the report using the **Open Reports** option on the **File** menu.

You can specify that the bars on a Real-Time Graph Report be either horizontal or vertical. The numeric value of each item will be displayed next to the bar that represents it.

This section includes the following sub-sections:

- Categories of Real-Time Graph Reports
- Sample Real-Time Graph Report
- Things to remember about Real-Time Graph Reports
- Maximum values and real-time graph scales
- Real-time Graph Report attributes.

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Categories of Real-Time Graph Reports

You can create four categories of Real-Time Graphs. You select the category of Real-Time Graph on the first window of the Graph Properties Wizard. The categories are:

- Split/Skill Summary — Summary information about one or more splits/skills

- Split/Skill Details — Detailed information about one split/skill

- Agent Summary — Data items for all agents logged into a single split/skill.

  | Note | Real-time agent reports will function only if you select fewer than 100 agents logged into the split/skill for which the report is running.

- VDN Summary — Details relating to calls processed by VDNs.

  | Note | The VDN summary is available only if the Vectoring feature is administered on the DEFINITY system.

You select how items are grouped on graphs:

- By measured entity (split/skill, agent, VDN)

- By attribute (for example, average speed of answer, answered calls, abandoned calls).

Sample Real-Time Graph Report

The following illustration is an example of how Real-Time Graph Reports appear in *BCMS Vu* when you choose to group by a measured entity.
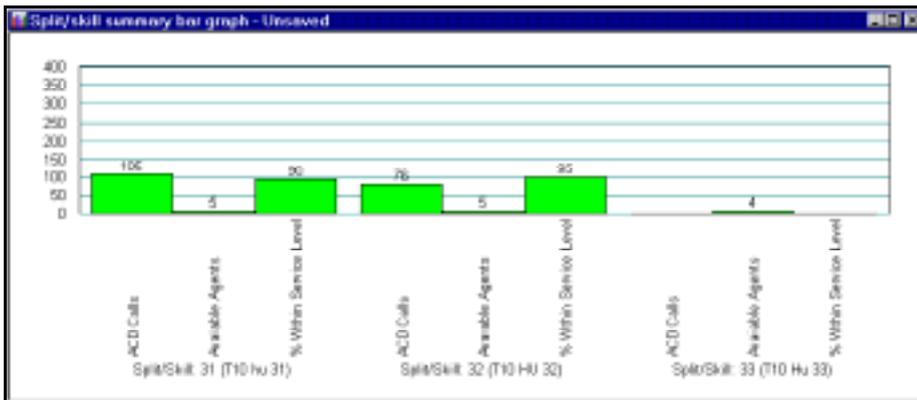
The following illustration is an example of how Real-Time Graph reports appear in *BCMS Vu* when you choose to group by attribute.
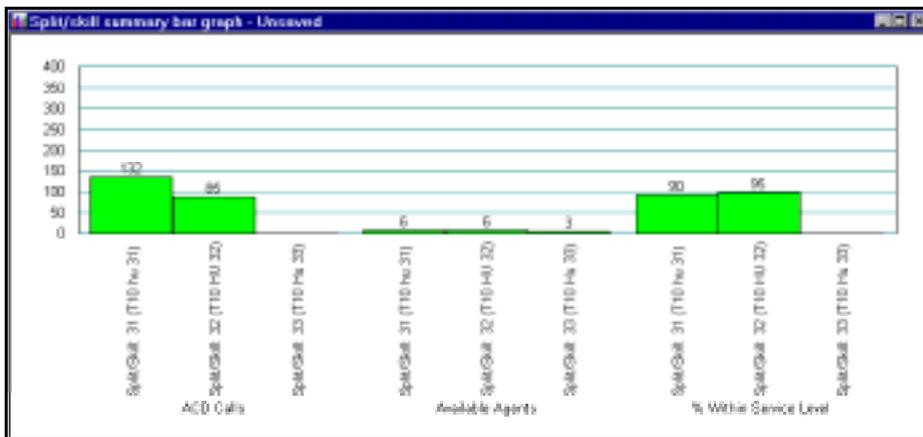
Things to Remember About Real-Time Graph Reports

There are several things you need to remember when planning a Real-Time Graph:

- Items appear on the graph in the order in which you select them.
- You cannot select some table items in a Real-Time Graph Report because:
  — They are not measurements (for example, Agent extension in the Agent Summary table), or
  — *BCMS Vu* automatically includes them on the graph (for example, the x-axis labels for Agent Summary are Agent Names).
- You should consider the probable range of maximum values when you decide which items of a table to show in a Real-Time Graph. If you include items that vary significantly in their ranges of values, items with smaller ranges will appear not to update when they are displayed. For example, assume you want to monitor a group of items, one of which has typical values of about 100 and varies between 50 and 150, and another that has typical values of about five and varies between two and eight. If both of these items are displayed on the same Real-Time Graph, the changes in the smaller item may not be noticeable.
- Real-Time Graphs update as fast as every ten seconds. Downloading of historical data takes precedence over the updating of real-time data. Therefore, real-time reports will update at a slower rate while historical data are downloading from the DEFINITY system to the historical database.
- If you display too many items in a graph with vertical bars, their values will not appear above the bars. If the label containing the value of the item is wider than the bar, the value is not shown. This prevents numbers from overlapping numbers above adjacent bars.
- If there is no data available from the DEFINITY system, zeros appear above the names of the items.
- You cannot print Real-Time Graph Reports.

Maximum Values and Real-Time Graph Scales

To determine the scale of a Real-Time Graph, *BCMS Vu* uses the highest specified maximum value of the items that the graph contains.

To obtain the best results from a Real-Time Graph, you should do the following:

- Specify maximum values that are reasonably close to actual values. See "Thresholds and Maximum Values Configuration" on page 4-16.

- Select items whose maximum values are similar.

At installation, *BCMS Vu* specifies the default maximum values for all measurement items. To change the specified maximum value for any item, select **Thresholds and Alerts** in the **Options|Configure** menu. See "Thresholds and Maximum Values Configuration" on page 4-16.

Real-Time Graph Report Attributes

The following table lists the available categories of Real-Time Graph Reports and the data items that you can choose to measure in each. Data items are defined in Chapter 9, "BCMS Vu Real-Time and Historical Report Data Items."

Split/Skill Summary Graph Report	Split/Skill Details Graph Report
Abandoned Calls	Calls Waiting
ACD Calls	Oldest Call
Available Agents	Total ACD
Average Abandoned Time	Total ACW
Average After Call	Total AUX
Average Speed of Answer	Total Available
Average Talk Time	Total Extn
Calls Waiting	Total Other
Oldest Call	Total Staffed
% Within Service Level	% Within Service Level

Agent Summary Graph Report	VDN Summary Graph Report
ACD Calls	Abandoned Calls
EXT In Calls	ACD Calls
EXT Out Calls	Average Abandoned Time
	Average Speed of Answer
	Average Talk/Hold Time
	Calls Busy/Disc
	Calls Waiting
	Connected Calls
	Flow Out
	Oldest Call
	% Within Service Level

Creating a Real-Time Graph Report

To create a Real-Time Graph Report, refer to "Creating a Real-Time Graph Report" on page 7-2.

About Real-Time Pie Chart Reports

BCMS Vu Real-Time Pie Charts provide periodically updated images of the current status of the call center. The first time you open a *BCMS Vu* Real-Time Pie Chart report, you use the **New Report** option on the **File** menu to create the report. After you have created and saved a Real-Time Pie Chart report, you access the report using the **Open Reports** option on the **File** menu.

Real-Time Pie Chart reports give a quick idea of the relative values of different BCMS items, in a pie chart format. Each segment represents the value of a different data item and is presented in a different color or pattern. The value of the data item is displayed next to the pie segment, and a legend identifies the data item represented by each segment and shows the value of each segment as a numerical value.

If no data is available, a window similar to the following illustration appears.
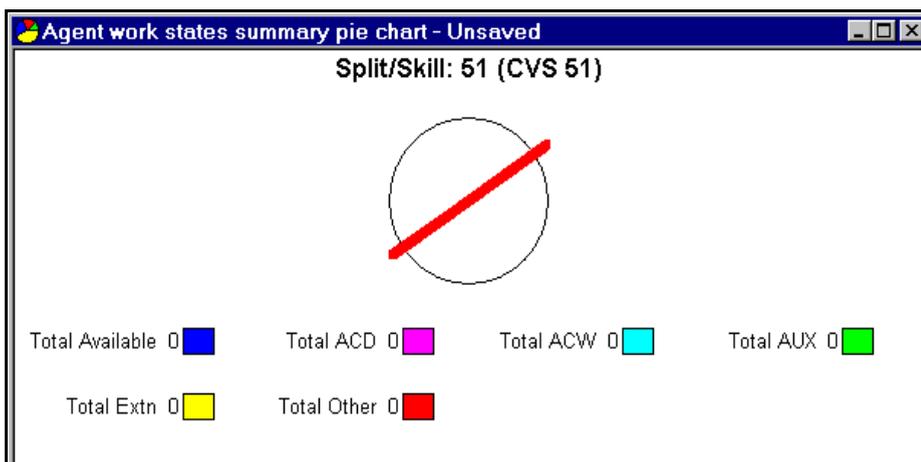
Pie charts do not give visual or audible indication of alerts when thresholds are reached.

You cannot select which data items will be displayed in a pie chart (unlike in a bar graph report). Only those attributes that add up to a whole domain are

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allowed in pie charts, and there is only one set of such attributes for Agent Work State for Split/Skill, Agent Call Summary, and VDN Call Summary reports.

Real-Time Pie Charts cannot be printed.

This section includes the following sub-sections:

- Categories of Real-Time Pie Chart Reports

- Sample Real-Time Pie Chart Report

- Real-Time Pie Chart Report attributes.

| Note | Real-Time Pie Charts update as fast as every ten seconds. Historical data downloading takes precedence over the updating of real-time data. Therefore, real-time reports update at a slower rate while historical data are downloading from the DEFINITY system to the historical database. |

Categories of Real-Time Pie Chart Reports

You can create three categories of Real-Time Pie Chart Reports. You select the category of Real-Time Pie Chart Report in the first window of the Graph Properties Wizard. The categories are:

- <u>Agent Work States for Split/Skill</u> — Shows a full domain of agent attributes for one split/skill

- <u>Agent Call Summary</u> — Shows a full domain of attributes for one agent's work in one split/skill

- <u>VDN Call Summary</u> — Shows a full domain of attributes for one VDN.

| Note | The VDN summary is available only if the Vectoring feature is administered on the DEFINITY system. |

Sample Real-Time Pie Chart Report

The following illustration is an example of how Real-Time Pie Chart Reports appear in *BCMS Vu.*
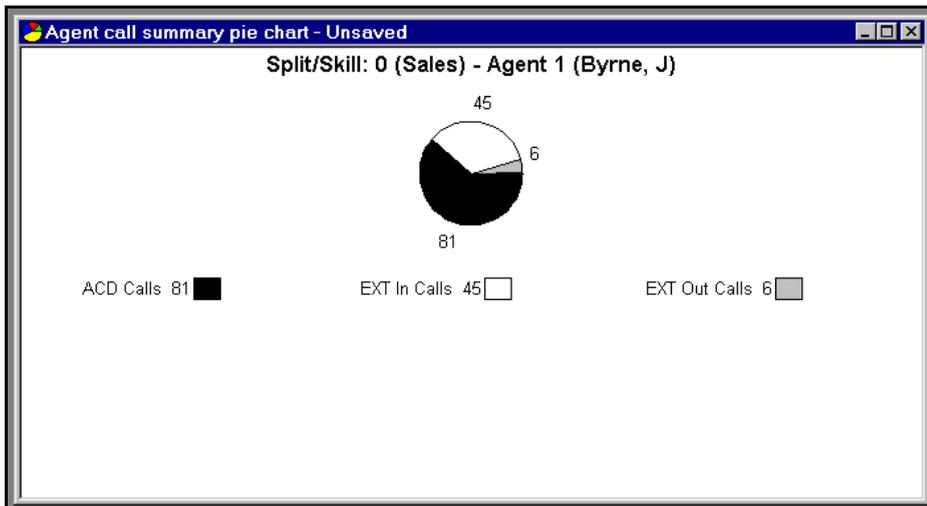
Real-Time Pie Chart Report Attributes

The following table lists the categories of Real-Time Pie Charts and the attributes (data items) that are measured in each category. Data items are defined in Chapter 9, "*BCMS Vu* Real-Time and Historical Report Data Items."

Agents Work States for
Split/Skill Pie Chart
    Total Available
    Total ACD
    Total ACW
    Total AUX
    Total Extn
    Total Other

Agent Call Summary
Pie Chart
    ACD Calls
    Ext In Calls
    Ext Out Calls

VDN Calls Summary
Pie Chart
    Abandoned Calls
    ACD Calls
    Calls Busy/Disc
    Connected Calls
    Flow Out

Creating a Real-Time Pie Chart Report

To create a Real-Time Pie Chart Report, refer to "Creating a Real-Time Pie Chart Report" on page 7-7.

About Real-Time Text Reports

BCMS Vu Real-Time Text Reports are displays of the standard monitor BCMS SAT forms. You use the **New Report** option in the **File** menu to create Real-Time Text Reports. Real-Time Text Reports are predefined to display the data as it appears when you use the "monitor bcms xxx" commands on a BCMS SAT terminal. You can name and save a Real-Time Text Report and open it later, and you can print it when it is open.

Real-Time Text Reports mimic the features of the three monitor CMS SAT forms. If you need detailed information on a large number of items, you will use a Real-Time Text Report.

You can sort the items in a Real-Time Text Report in ascending or descending order, according to the entries in any column, by clicking on the column title.

You can choose which split(s)/skill(s) or VDN(s) to measure in the report, and you can choose whether to sort data according to the name or number of a split/skill, agent, or VDN. However, you cannot choose what attributes are measured.

When the value of an item in a Real-Time Text Report triggers a visual alert, the background of the text changes to yellow (caution) or red (warning).

Note	If there is no data available from the DEFINITY system, zeros appear in this report as the values of items.

This section describes the following topics:

- Categories of Real-Time Text Reports
- Sample Real-Time Text Report
- Real-Time Text Report attributes.

Categories of Real-Time Text Reports

There are three categories of Real-Time Text Reports:

- <u>System Summary Real-Time Text Report</u> — Displays predetermined attributes of one or several splits/skills that you select.

- <u>Split/Skill Summary Real-Time Text Report</u> — Displays predetermined attributes of a single split/skill that you select.

- <u>VDN Summary Real-Time Text Report</u> — Displays predetermined attributes of one or more VDNs that you select.

> **Note** The VDN Real-Time Text Report is available only if the Vectoring feature is administered on the DEFINITY system.

Sample Real-Time Text Report

Below is an example of how Real-Time Text reports appear in *BCMS Vu*.

Creating a Real-Time Text Report

To Create a Real-Time Text Report, refer to "Creating a Real-Time Text Report" on page 7-10.

Real-Time Text Report Attributes

The following table lists the attributes reported in each category of a Real-Time Text Report. Data items are defined in Chapter 9, "*BCMS Vu* Real-Time and Historical Report Data Items."

System Summary Text Report	Split/Skill Summary Text Report
Abandoned Calls	ACD Calls
ACD Calls	Agent Extension
Available Agents	Agent Login ID
Average Abandoned Time	Agent Name
Average After Call	Agent State
Average Speed of Answer	EXT In Calls
Average Talk Time	Ext Out Calls
Calls Waiting	Time
Direct Agent Call	
Oldest Call	
Split/Skill ID	
Split/Skill Name	
% Within Service Level	

VDN Summary Text Report

  Abandoned Calls
  ACD Calls
  Average Abandoned Time
  Average Speed of Answer
  Average Talk/Hold Time
  Calls Busy/Disc
  Calls Waiting
  Connected Calls
  Flow Out
  Oldest Call
  VDN ID
  VDN Name
  % Within Service Level

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About Wallboard Displays

In *BCMS Vu*, a Wallboard Display is a window on the PC screen that mimics the behavior of an external wallboard. When you create a display on your monitor, you can send it to be displayed on an external wallboard.

This section includes the following topics:

- Categories of Wallboard Displays

- Wallboard Display features

- Types of wallboards

- Sample Wallboard Display

- Wallboard Display attributes.

Categories of Wallboard Displays

There are four categories of Wallboard Displays:

Split/Skill Summary — Displays values of one or more data items over one or more splits/skills. The data items you can choose for this report are different from those in a Split/Skill Details Wallboard Display. See "Wallboard Display Attributes" on page 5-20 for a list of these items.

Split/Skill Details — Displays values of one or more data items for one split/skill. The data items you can choose for this report are different from those in a Split/Skill Summary Wallboard Display. See "Wallboard Display Attributes" on page 5-20 for a list of these items.

Agent Summary — Displays values of one or more data items for one or more agents in one split/skill.

VDN Summary — Displays values of one or more data items for several VDNs.

Wallboard Display Features

When you define a Wallboard Display, you select the type of data and the data items to display. The Wallboard Display shows default labels for the items that you choose and the current value of the item. You can change the labels in the Wallboard Wizard.

Items are displayed on a Wallboard Display in the order in which you select them.

A Wallboard Display on your monitor shows the data that you will see on an external wallboard. You can have more than one Wallboard Display open on your PC at the same time, and you can send a wallboard displayed on your monitor to several external wallboards or send different displays to different wallboards.

You can change the size of a report window that contains a Wallboard Display. *BCMS Vu* changes the size of the display text, not the number of characters displayed or the proportion of empty space.

When an item on a wallboard display on your monitor exceeds a threshold, the item name and value are displayed in yellow (caution) or red (warning). If you send the display to an external wallboard, the colors also appear, provided the external wallboard supports these colors.

You can specify how long (from one second to one hour) the lines of a multiple-line display remain on a wallboard before the next line or lines appear.

You can have as many as 35 characters per line in a display on your monitor. Remember, however, that the maximum number of characters that fit on a line on an external wallboard is limited by the wallboard itself. Refer to the table in the following section.

Types of Wallboards

BCMS Vu supports the following types of wallboards.

Wallboard Type	Manufacturer	Number of Lines	Characters per Line
WB1/IW1	Lucent	2	20
WB2/IW2	Lucent	2	26
WB3/IW3	Lucent	2	33
WB5/IW5	Lucent	1	20
TCD226C	AdvaTel	1	26
TCD426C	AdvaTel	4	26
Japanese Wallboard	AdvaTel	2	26
UPD 64	Ferrograph	2	30

Sample Wallboard Display

Below is an example of a Wallboard Display in *BCMS Vu*.
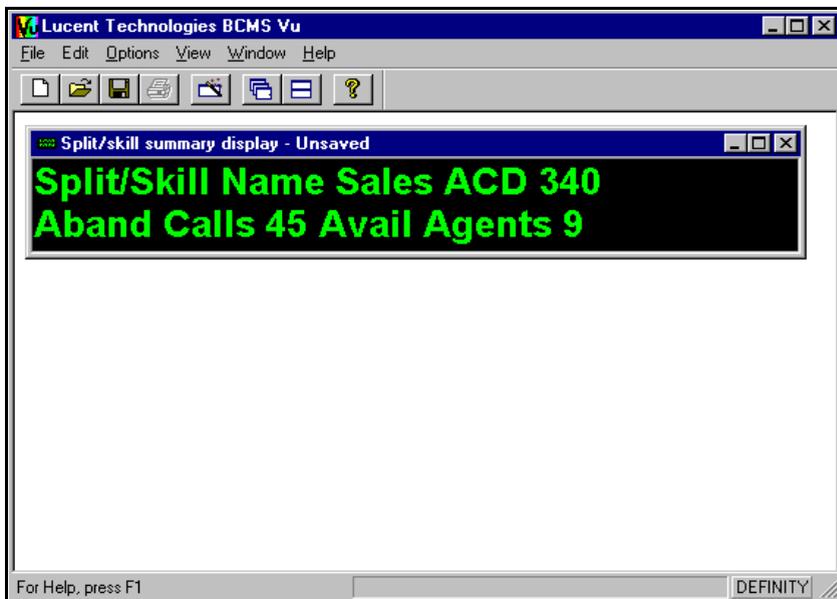
Creating a Wallboard Display

To create a Wallboard Display, refer to "Creating a Wallboard Display" on page 7-13.

Wallboard Display Attributes

The following tables list the data items measured in the different categories of Wallboard Display Reports. Data items are defined in Chapter 9, "*BCMS Vu* Real-Time and Historical Report Data Items."

Splits/Skills Summary	Split/Skills Details
Available Agents	Acceptable Service Level
Abandoned Calls	Calls Waiting
ACD Calls	Oldest Call
Average Abandoned time	Split/Skill
Average After Call	Split/Skill Name
Average Speed of Answer	Total ACD
Average Talk Time	Total ACW
Calls Waiting	Total AUX
Direct Agent Call	Total Available
Oldest Call	Total Extn
Split/Skill Name	Total Other
% Within Service Level	Total Staffed
	% Within Service Level

Agent Summary	VDN Summary
ACD Calls	ACD Calls
Agent Extension	Abandoned Calls
Agent Login ID	Average Abandoned Time
Agent Name	Average Speed of Answer
Agent State	Average Talk/Hold Time
EXT In Calls	Calls Busy/Disconnected
EXT Out Calls	Calls Waiting
Split/Skill	Connected Calls
Split/Skill Name	Flow Out
Time	Oldest Call
	VDN Name
	% Within Service Level

About Time Trace Reports

Time Trace Reports show the value of a single attribute (for example, Call Waiting, Average Speed of Answer) for a single measured entity (agent, split/skill, or VDN) over a period of time. The value of the attribute is represented by the height of the trace above the baseline. Time is represented by distance along the baseline.

This section describes the following topics:

- Categories of Time Trace Reports
- Characteristics of Time Trace Reports
- Sample Time Trace Report
- Time Trace Report attributes.

Categories of Time Trace Reports

The following categories of Time-Trace Reports are available:

Split/Skill Summary Data Time Trace — Shows variations in the value of a single data item for a single split/skill over time. The data items you can choose for this report are different from those in a Split/Skill Details Time Trace. See "Time Trace Report Attributes" on page 5-24 for a list of these items.

Split/Skill Details Time Trace — Also shows variations in the value of a single data item for a single split/skill over time. The data items you can choose for this report are different from those in a Split/Skill Summary Data Time Trace. See "Time Trace Report Attributes" on page 5-24 for a list of these items.

Agent Data Time Trace — Shows variations in the value of a single attribute for a single agent over time.

VDN Data Time Trace — Shows variations in the value of a single attribute for a single VDN over time.

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Characteristics of Time Trace Reports

You can specify time in either of two ways:

- As a specified number of data points, in which case the distance along the baseline represents a fixed period of time, and data older than this time is dropped from the left edge of the graph as new data is displayed at the right edge.

- As the time that has elapsed since the report was newly created or opened. In this case, over a period of time, the scale of the baseline decreases to represent the total period since the report began.

A maximum of twelve hours can be displayed on one time trace.

The baseline is labeled with the clock time at the beginning and end of the trace.

Threshold ranges are represented by colored or patterned horizontal bands. Caution and warning colors are those you select with the **Option|Configure|Color Palette** command, but the normal band is the default color.

When the trace is at its highest distance above the baseline, it represents the maximum value you set with the **Options|Configure|Thresholds and Maximum Value** command (or the default maximum value, if you do not choose one).

If no data is available at a particular time, a special character appears on the graph. If you position the cursor over this character, a tool-tip displays "No data available."

Time trace values greater than the maximum value are indicated by a distinctive mark at the maximum value level.

If you position the cursor over a time trace graph line, the value and time of that point on the graph appears in a pop-up window.

| Note | If there is no data available from the DEFINITY system, the value of the trace is given as zero. |

Sample Time Trace Report

The following illustration is an example of a Time Trace Report.
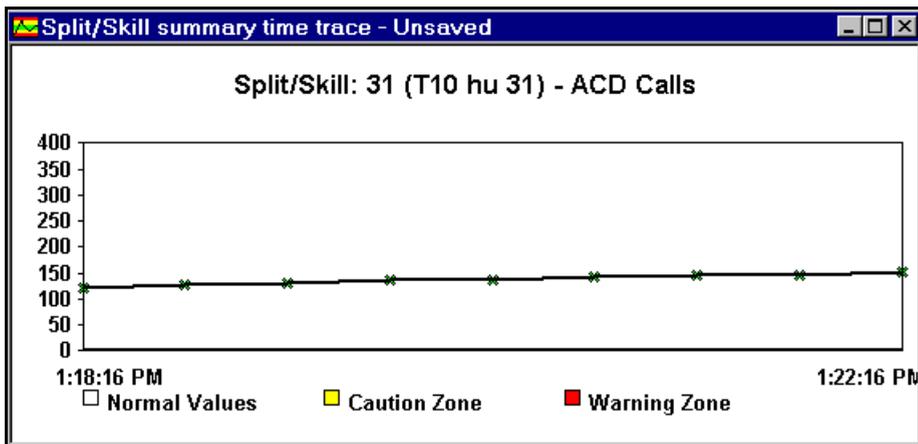
Creating a Time Trace Report

To create a Time Trace Report, refer to "Creating a Time Trace Report" on page 7-22.

Time Trace Report Attributes

The following table lists the data items measured by the different categories of Time Trace Reports. Data items are defined in Chapter 9, "*BCMS Vu* Real-Time and Historical Report Data Items."

Split/Skill Summary Data Time Trace	Split/Skill Details Time Trace
Abandoned Calls	Calls Waiting
ACD Calls	Oldest Call
Available Agents	Total ACD
Average Abandoned Time	Total ACW
Average After Call	Total AUX
Average Speed of Answer	Total Available
Average Talk Time	Total Extn
Calls Waiting	Total Other
Oldest Call	Total Staffed
% Within Service Level	% Within Service Level

Agent Data Time Trace	VDN Data Time Trace
ACD Calls	Abandoned Calls
Ext In Calls	ACD Calls
Ext Out Calls	Average Abandoned Time
	Average Speed of Answer
	Average Talk/Hold Time
	Calls Busy/Disc
	Calls Waiting
	Connected Calls
	Flow Out
	Oldest Call
	% Within Service Level

6

Understanding Historical Reports

Historical Report Basics

In addition to viewing on-going activity of a DEFINITY system in real-time reports, you can create, view and print reports that describe past status. These reports of past activity are called Historical Reports.

You create Historical Reports in two steps:

- Downloading data from the DEFINITY system and storing it in a database. You do this from *BCMS Vu* Server.

- Selecting the data for the report and putting it into a report. You do this from *BCMS Vu* Client.

After a report has been created, you can print it immediately, save it, and schedule it to be printed later. You do this from *BCMS Vu* Client.

This section describes the following topics:

- Data on the DEFINITY system
- Categories of Historical Reports
- Creating and opening Historical Reports
- Sample Historical Report
- Historical Report attributes
- Scheduling Historical Reports
- Exporting Historical Reports.

Data on the DEFINITY system

BCMS stores data on the DEFINITY system in two formats: *interval* and *daily*.

Interval data is stored on the DEFINITY system in increments of a half-hour or an hour. (The interval length is set at the DEFINITY system, not from *BCMS Vu*.) For example, if the DEFINITY system stores data in half-hour intervals, each line of a report created from interval data presents a half-hour's worth of data. If the DEFINITY system stores data in intervals of an hour, each line of a report created from interval data will present an hour's worth of data. However, the DEFINITY system can store no more than 24 intervals worth of data before it deletes the oldest data to make room for the most recent. Thus data stored on the DEFINITY system can be no older than 12 hours (if the DEFINITY system stores in half-hour intervals) or 24 hours (if the DEFINITY system stores in hour intervals).

Daily data is stored on the DEFINITY system in increments of one day. Thus, each line of a report created from daily data represents a day's worth of data. However, the DEFINITY system can store daily data no more than seven days; daily data older than seven days is deleted to make room for new data.

Since BCMS saves data for a limited time, if you want to view old data, you must copy data from the DEFINITY system to a location you can access before it is erased from the DEFINITY system. This is called "downloading data." To learn how to download historical data, refer to "Downloading Historical Data" on page 4-8.

| Note | If the DEFINITY system is reset, BCMS data will be lost on the DEFINITY system and will not be downloaded to *BCMS Vu*. As a result, Historical Reports that include a period when the DEFINITY system was reset may not display complete data. |

Categories of Historical Reports

There are nine kinds of Historical Reports:

<u>Agent</u> — Displays data for one, several, or all agents. Agent activity data is for all splits/skills that each agent was logged into during the reporting interval. Each agent is allotted a separate line on the report for each time interval, day, week, and so forth, that is measured.

<u>Agent Summary</u> — Displays data for one, several, or all agents. Agent activity data is for all splits/skills that each agent was logged into during the reporting interval. Each agent is allotted one line on the report. The value of each data item is the average or total of the item over the entire time covered by the report.

<u>Split/Skill</u> — Displays data for one or more splits/skills during the reporting interval.

<u>Trunk</u> — Displays data for one or more trunk groups on the DEFINITY system.

<u>VDN</u> — Displays data for one or more VDNs measured by BCMS. (You can create VDN reports only if the Vectoring feature is administered on the DEFINITY system.)

<u>Abandoned Calls Split/Skill</u> — Displays a summary of abandoned calls by split/skill, during the reporting interval.

<u>Abandoned Calls VDN</u> — Displays a summary of abandoned calls by VDN during the reporting interval.

<u>Overflowed Calls Split/Skill</u> — Displays a summary of the overflowed calls, by split/skill, during the reporting interval.

<u>Overflowed Calls VDN</u> — Displays a summary of the overflowed calls, by VDN, during the reporting interval.

On all Historical Reports, you cannot choose the format or kinds of data (items) that the report displays, although you can choose the type, date range, level of detail and other parameters. You can also export historical data to other applications, such as spreadsheets.

Creating Historical Reports

Historical Reports are reports that you create using the interval and daily data downloaded from the DEFINITY system. In addition to presenting the report in interval and daily increments, *BCMS Vu* can take daily data and summarize it over a week, month and quarter (three-month) period.

You create a *BCMS Vu* Historical Report using the **New Report** option in the **File** menu. After you have created and saved a Historical Report, you can access the report using the **Open Reports** option in the **File** menu.

Historical Reports have predefined formats, and you cannot choose the data items reported in each category of Historical Report. You choose the type, date range, interval, and some other aspects of the report.

To learn how to create, open and print Historical Reports, refer to Chapter 7, "Working with Reports."

Sample Historical Report

The following illustration is an example of a Historical Report.

Note	The format of columns that display length of time is *minutes:seconds*.

Historical Report Attributes

The following tables list the data items reported in the different categories of Historical Reports. Data items are defined in Chapter 9, "*BCMS Vu* Real-Time and Historical Report Data Items."

Agent and Agent Summary Historical Reports	Split/Skill Historical Report
ACD Calls	Abandoned Calls
Agent	ACD Calls
Agent Name	Average Abandoned Time
Average External Time	Average Speed of Answer
Average Talk Time	Average Staffed
External Calls	Average Talk Time
Total After Call	Flow In
Total AUX/Other	Flow Out
Total Available Time	Split/Skill
Total Hold Time	Split/Skill Name
Total Time Staffed	Total After Call
	Total AUX/Other
	% Within Service Level

Trunk Historical Report

    Group
    Group Name
    Incoming Abandoned
    Incoming Calls
    Incoming CCS
    Incoming (Hold) Time
    Outgoing Calls
    Outgoing CCS
    Outgoing (Hold) Time
    Outgoing Completed
    % All Busy
    % Time Maintenance

VDN Historical Report

    Abandoned Calls
    ACD Calls
    Average Abandoned Time
    Average Talk/Hold Time
    Average Speed of Answer
    Calls Busy/Disconnected
    Connected Calls
    Calls Offered
    VDN
    VDN Name
    % In Service Level

Abandoned Calls Split/
Skill Historical Report

    Abandoned Calls
    Average Abandoned Time

Abandoned Calls VDN
Historical Report

    Abandoned Calls
    Average Abandoned Time

Overflowed Calls Split/
Skill Historical Report

    ACD Calls
    Flow Out
    Split/Skill
    Split/Skill Name

Overflowed Calls VDN
Historical Report

    ACD Calls
    Flow Out
    VDN
    VDN Name

Scheduling Historical Reports

To schedule the printing of Historical Reports, refer to "Scheduling the Printing of a Historical Report" on page 7-39.

Exporting Historical Reports

You can export a Historical Report in various formats by e-mail using MAPI (Mail Application Programming Interface) if *Microsoft* Messaging is installed on your PC. If *Microsoft* Messaging is installed, you can see a Messaging icon in the Historical Report status bar.

You can also save a Historical Report to a *file* in various formats.

To export a Historical Report,

1. Click on the **Export** icon.

    The "Export" window appears.
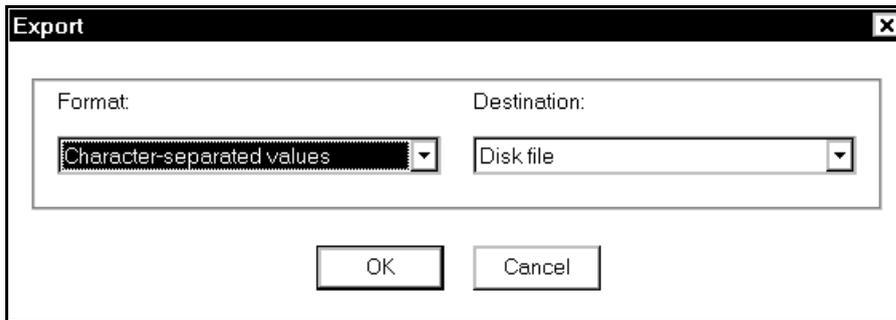
2. Choose either "Disk File" or "Microsoft Mail (MAPI)" in the "Destination:" pull-down menu on the right.
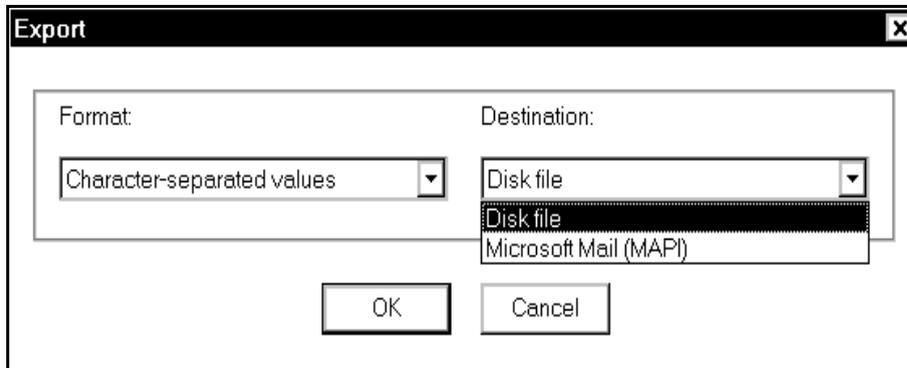
3. Choose one of the formats in the "Format:" pull-down menu on the left:

Export	☒

Format:

Character-separated values	▼

Character-separated values ▲
Comma-separated values (CSV)
Crystal Reports (RPT)
Data Interchange Format (DIF)
Excel 2.1 (XLS)
Excel 3.0 (XLS)
Excel 4.0 (XLS)
Excel 5.0 (XLS)
Lotus 1-2-3 (WK1)
Lotus 1-2-3 (WK3)
Lotus 1-2-3 (WKS) ▼

Destination:

Disk file	▼

Cancel
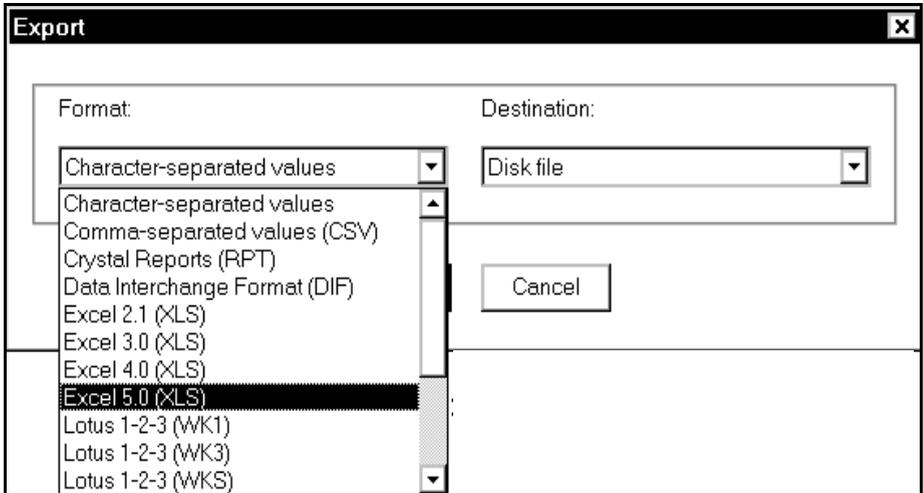
4. Select **OK**.

If you select "Microsoft Mail (MAPI)," an e-mail-type window appears. Enter the appropriate information and select **Send**.

Send Mail			☒
Send	Check Names	Address	Cancel

To:

Cc:

Subject:

Message
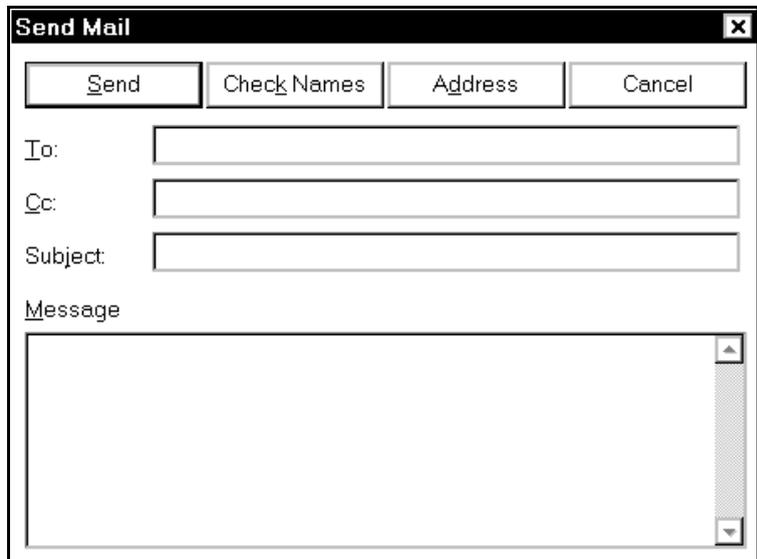
If you select "Disk File," a window entitled "Choose Export File" appears. Select the file location and file name you want and select **Save**.

7
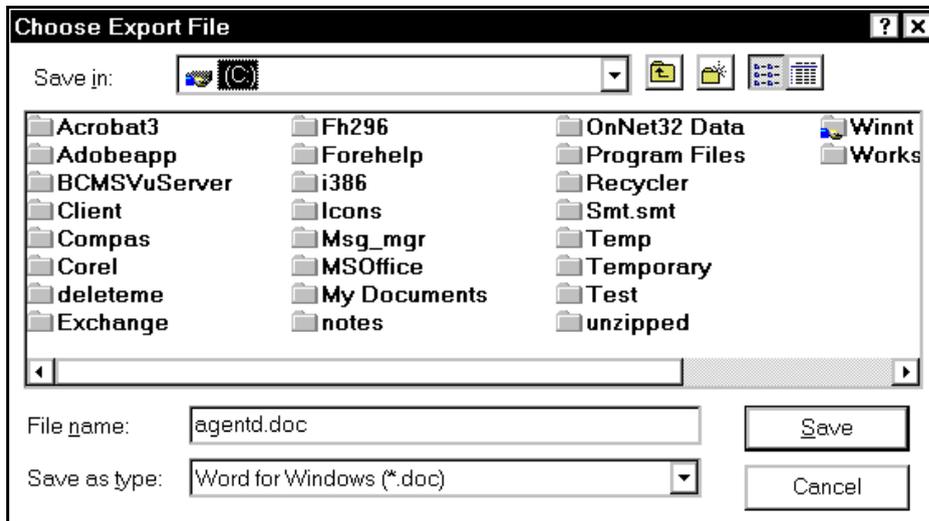
Working with Reports

Overview

Chapters 5 and 6 described Real-Time and Historical Reports, what they are and what they measure. In this chapter you will learn how to

- Create different types of reports
- Save reports
- Open previously saved reports
- Change the properties of a report
- Print reports
- Schedule the printing of Historical Reports
- Use the controls on the Historical Report window.

| Note | Reports are created, saved, opened, edited and printed from *BCMS Vu* Client. |

Creating a Real-Time Graph Report

To create a Real-Time Graph Report

1. In the **File** menu select **New Report**.

    The "New" window appears.

2. Select **Real-Time Graph**.

The "Select the type of data you wish to graph" window appears.

```
┌─────────────────────────────────────────────────────────────────┐
│ Real-Time Graph Properties Wizard - Page 1 of 4            [×]   │
├─────────────────────────────────────────────────────────────────┤
│                                                                  │
│   Select the type of data you wish to graph:                     │
│                                                                  │
│         ○ Split/Skill summary                                    │
│                                                                  │
│         ○ Split/Skill details                                    │
│                                                                  │
│         ⊙ Agent summary                                          │
│                                                                  │
│         ○ VDN summary                                            │
│                                                                  │
│                                                                  │
│                                                                  │
│                                                                  │
│                                                                  │
│  ┌────────┐  ┌────────┐  ┌────────┐ ┌────────┐  ┌────────┐       │
│  │  Help  │  │ Cancel │  │ < Back │ │ Next > │  │ Finish │       │
│  └────────┘  └────────┘  └────────┘ └────────┘  └────────┘       │
└─────────────────────────────────────────────────────────────────┘
```

3. Select the radio button next to the type of data (for example, Agent summary) that you want to show on this Real-Time Graph.

4. Select **Next**.

The specific window that appears depends on the type of data you selected on the first window. For example, the following window appears if you select the radio button next to "Agent summary."

5. Select the splits/skills, agents, or VDNs (as appropriate) that you want to include on the display.

   a. If there is a pull-down menu on the wizard page, choose one item from the menu.

   b. If there are "Available" and "Selected" windows on the wizard page, select one or more items from the "Available" list:

      1. To select all items in the "Available" list, select **Add All**.

      2. To select individual items, highlight them and select **Add**.

      3. Use the **Remove** and **Remove All** buttons to remove items that you do not want to display.

6. Select **Next**.

   The next window that appears, which depends on the type of data you selected on the first window, asks you to choose the attributes that you want to measure in the report. For example, the following illustration shows the window that appears if you chose the radio button next to Agent summary.

Real-Time Graph Properties Wizard - Page 3 of 4   ⊠

Select the Agent Summary items you wish to graph:

Available Items   Selected Items

| EXT Out Calls | | ACD Calls |
| | | EXT In Calls |

                        Add All >

                         Add >

                        < Remove

                       < Remove All

| Help | Cancel | < Back | Next > | Finish |

---
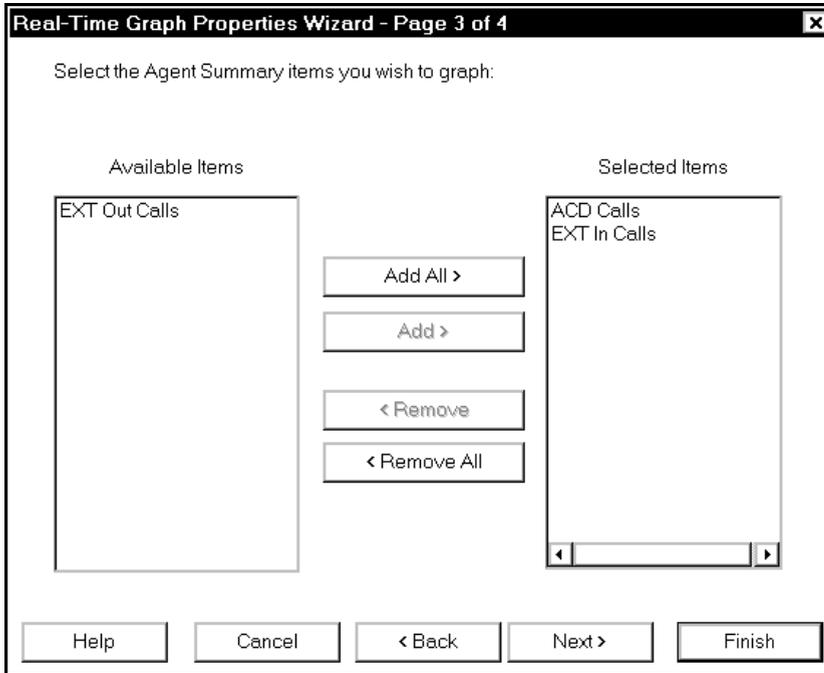
7. Select the attributes (data items) that you want to include on the display.

   a. To select all items in the "Available" list, select **Add All**.

   b. To select individual items, highlight them and select **Add**.

   c. Use the **Remove** and **Remove All** buttons to remove attributes that you do not want to display.

8. When all the data items you want to display are in the "Selected Items" list select **Next**.

   The "Select orientation of the bar chart" window appears.

Real-Time Graph Properties Wizard - Page 4 of 4   ☒

Select the orientation of the bar chart:

   ⦿ Vertical Bars

   ○ Horizontal Bars

Select the grouping of the bar chart data:

   ⦿ By agent

   ○ By data item

| Help | Cancel | < Back | Next > | Finish |

---
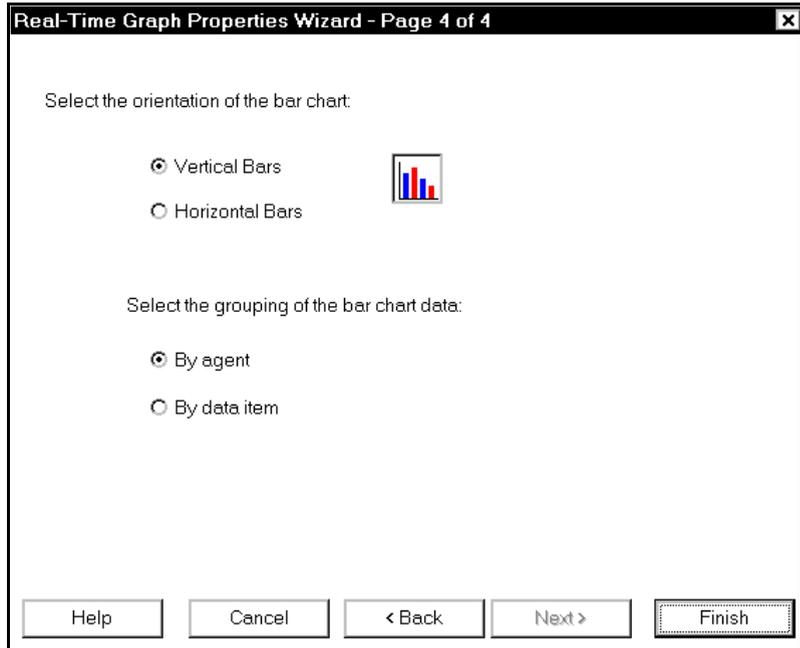
9. a. Select the radio button next to "Vertical Bars" or "Horizontal Bars," depending on how you want the bars in the chart to align themselves.

   b. Select the radio button next to either "By split/skill" (or "By agent" or "By VDN," as appropriate) or "By data item" depending on how you want the data arranged on the report. Refer to "Sample Real-Time Graph Report" on page 5-5 for examples of the two ways of displaying Real-Time Graph Reports.

10. To close the wizard and display the report, select **Finish**.

   The Graph Properties Wizard closes and the Real-Time Graph you have just defined appears on the *BCMS Vu* main window.

If you choose "Agent summary" in the first wizard window and "By split/skill" in the fourth wizard window, your report resembles the following illustration.
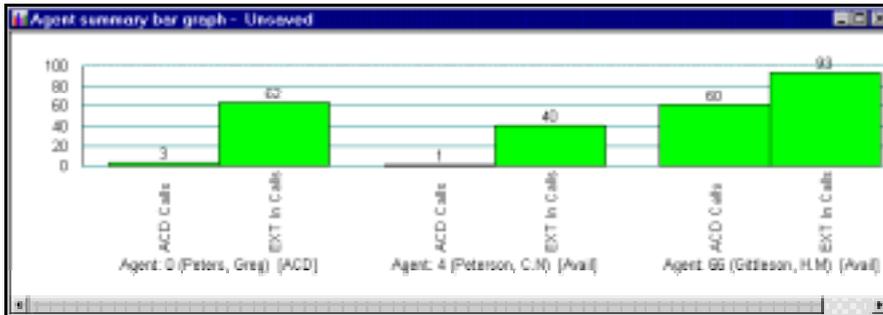
| Note | After you create a new report, you can save it if you want to. If you try to close a report without saving it, a message appears asking if you want to save the report. |

Creating a Real-Time Pie Chart Report

To create a Real-Time Pie Chart Report

1. In the **File** menu select **New Report**.

   The "New" window appears.

2. Select **Real-Time Pie Chart**.

The "Select the type of data for which to create a pie chart:" window appears.

```
┌─────────────────────────────────────────────────────────────────────┐
│ Pie Chart Properties Wizard - Page 1 of 2                        [X] │
├─────────────────────────────────────────────────────────────────────┤
│                                                                       │
│                                                                       │
│    Select the type of data for which to create a pie chart:          │
│                                                                       │
│                                                                       │
│           ⦿ Agent Work States for Split/Skill                        │
│                                                                       │
│           ○ Agent Call Summary                                        │
│                                                                       │
│           ○ VDN Call Summary                                         │
│                                                                       │
│                                                                       │
│                                                                       │
│                                                                       │
│                                                                       │
│                                                                       │
│                                                                       │
│  ┌────────┐  ┌────────┐  ┌────────┐  ┌────────┐  ┌────────┐          │
│  │  Help  │  │ Cancel │  │ < Back │  │ Next > │  │ Finish │          │
│  └────────┘  └────────┘  └────────┘  └────────┘  └────────┘          │
└─────────────────────────────────────────────────────────────────────┘
```

3. Select the radio button next to the category of data that you want to show on this Real-Time Pie Chart Report.

4. Select **Next**.

   The "Pie Chart Wizard" window, page 2 of 2, appears. This window depends on which type of report you selected in the previous window.

The following illustration shows the window that appears if you select "Agent Work State for Split/Skill" in the first window.
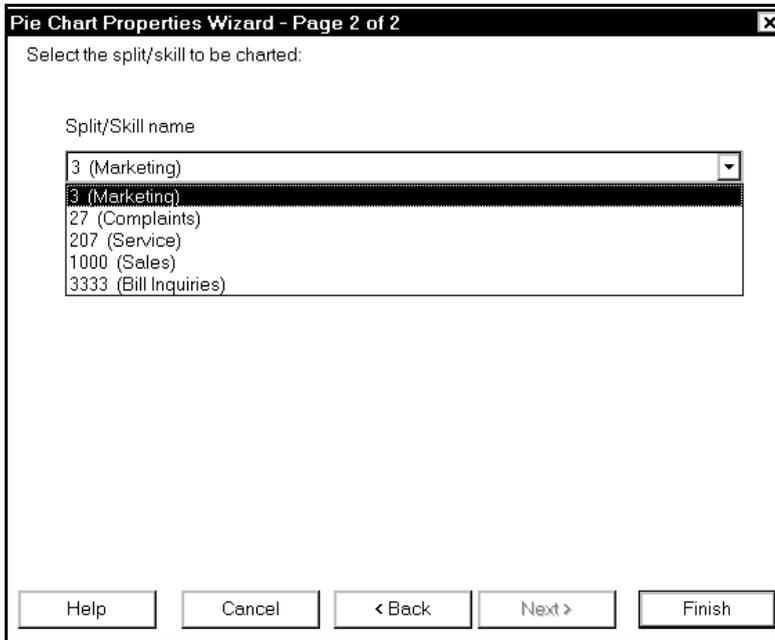
5. For an Agent Work States for Split/Skill Report or a VDN Calls Summary Report, select a split/skill or VDN from the pull-down menu.

   For an Agent Call Summary report, select a split/skill and an agent from the two pull-down menus.

6. To close the wizard and display the Pie Chart Report, select **Finish**.

   The Graph Properties Wizard closes and the Real-Time Pie Chart you have just defined appears on the *BCMS Vu* main window.

If you choose "Agent Work States for Split/Skill" on the first page of the wizard, your pie chart report resembles the following illustration:

| Note | After you create a new report, you can save it if you want to. If you try to close a report without saving it, a message appears asking if you want to save the report. |

Creating a Real-Time Text Report

To create a Real-Time Text Report

1. In the **File** menu, select **New Report**.

   The "New" window appears.

2. Select **Real-Time Text**.

   The "Select the type of data on which to base the report:" window appears.

```
┌─────────────────────────────────────────────────────────────────┐
│ Real-Time Text Properties Wizard - Page 1 of 2              [X]   │
│                                                                   │
│                                                                   │
│     Select the type of data on which to base the report:         │
│                                                                   │
│                                                                   │
│              ⦿ System summary                                     │
│                                                                   │
│              ○ Split/Skill summary                                │
│                                                                   │
│              ○ VDN summary                                        │
│                                                                   │
│                                                                   │
│                                                                   │
│                                                                   │
│                                                                   │
│   ┌────────┐  ┌────────┐  ┌────────┐ ┌────────┐  ┌────────┐       │
│   │  Help  │  │ Cancel │  │ < Back │ │ Next > │  │ Finish │       │
│   └────────┘  └────────┘  └────────┘ └────────┘  └────────┘       │
└─────────────────────────────────────────────────────────────────┘
```
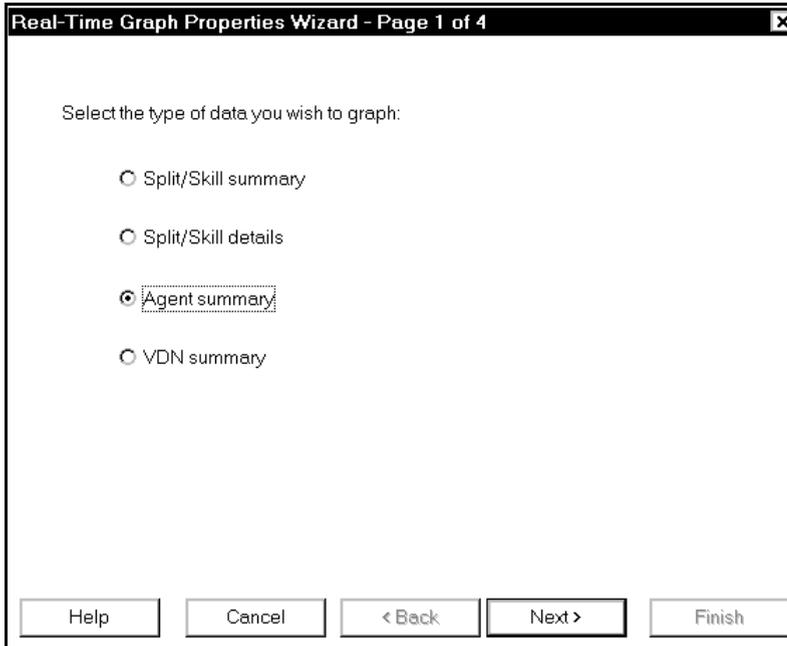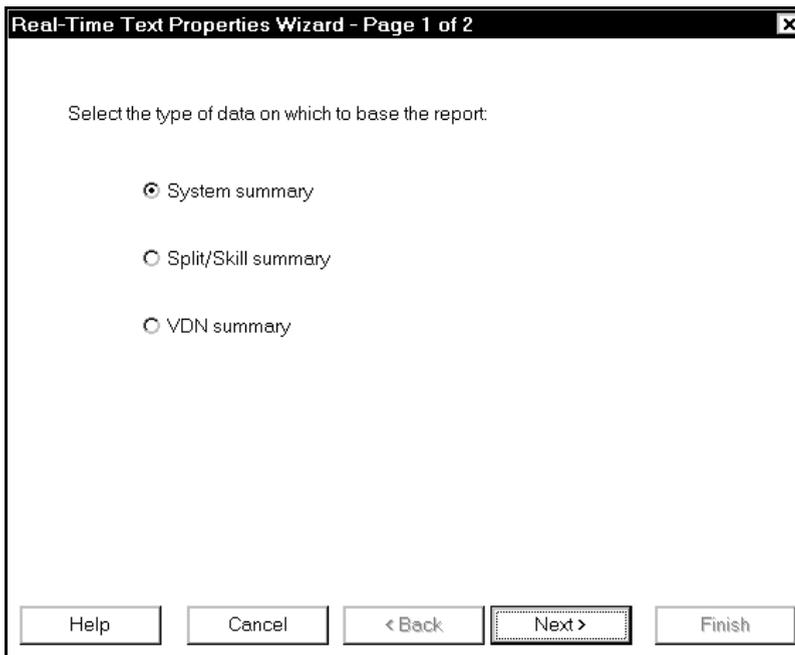
3. Select the radio button next to the type of data (System summary, Split/Skill summary, or VDN summary) that you want to show on this Real-Time Text report.

4. Select **Next**.

    The specific window that appears depends on the type of data you
    selected on the first page of the wizard.

    For example, if you choose the System summary report, the following
    window appears:

```
┌────────────────────────────────────────────────────────────────────────┐
│ Real-Time Text Properties Wizard – Page 2 of 2                        ⊠ │
│                                                                          │
│  Select the splits/skills you wish to include in the display:           │
│                                                                          │
│                                                                          │
│                                                                          │
│     Available Splits/Skills                      Selected Splits/Skills  │
│   ┌──────────────────────┐                      ┌──────────────────────┐ │
│   │ 1000 Sales           │  ┌──────────────┐    │    3 Marketing       │ │
│   │ 3333 Bill Inquiries  │  │  Add All >   │    │   27 Complaints      │ │
│   │                      │  └──────────────┘    │  207 Service         │ │
│   │                      │  ┌──────────────┐    │                      │ │
│   │                      │  │   Add >      │    │                      │ │
│   │                      │  └──────────────┘    │                      │ │
│   │                      │                       │                      │ │
│   │                      │  ┌──────────────┐    │                      │ │
│   │                      │  │  < Remove    │    │                      │ │
│   │                      │  └──────────────┘    │                      │ │
│   │                      │  ┌──────────────┐    │                      │ │
│   │                      │  │ < Remove All │    │                      │ │
│   │                      │  └──────────────┘    │                      │ │
│   └──────────────────────┘                      └──────────────────────┘ │
│                                                                          │
│  ┌─────────┐  ┌─────────┐  ┌─────────┐  ┌─────────┐     ┌─────────┐     │
│  │  Help   │  │ Cancel  │  │ < Back  │  │ Next >  │     │ Finish  │     │
│  └─────────┘  └─────────┘  └─────────┘  └─────────┘     └─────────┘     │
└────────────────────────────────────────────────────────────────────────┘
```

5. If you select System summary or VDN summary on page 1 of the
    wizard, on this page select the splits/skills or VDNs that you want to
    include on the display.

    a. To select all items in the "Available ..." list, select **Add All**.

    b. To select individual splits/skills or VDNs, highlight each and
        select **Add**.

      c. Use the **Remove** and **Remove All** buttons to remove splits/skills and VDNs that you do not want to display.

      d. When all the splits/skills or VDNs that you want to display are in the "Selected..." list, select **Next**.

6. If you choose to create a Split/Skill summary report, from the "Split/Skill name" pull-down menu on this page select the split/skill you want to display.

7. To close the wizard and display the Real-Time Text Report, select **Finish**.

The Real-Time Text Wizard closes and the Real-Time Text report you have just defined appears in the *BCMS Vu* main window.

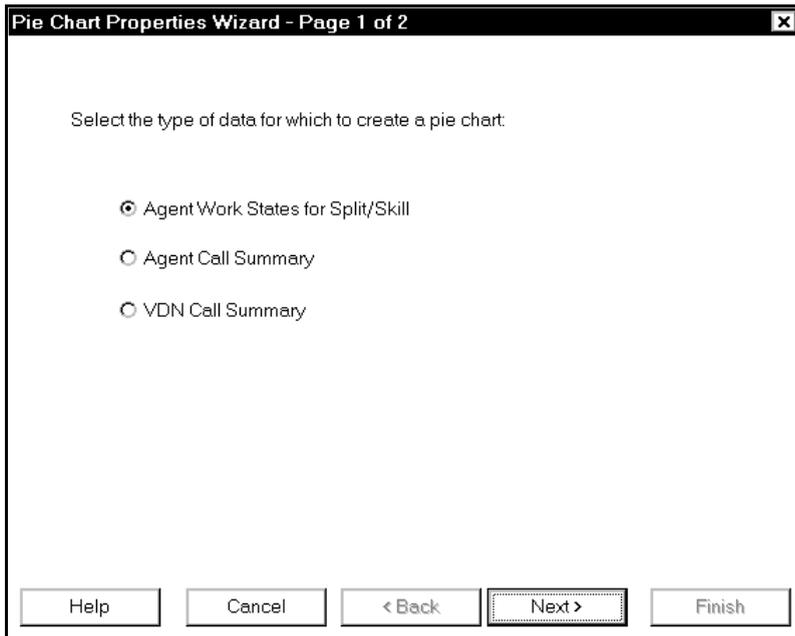| Note | After you create a new report, you can save it if you want to. If you try to close a report without saving it, a message appears asking if you want to save the report. |

Creating a Wallboard Display

To create a Wallboard Display

1. In the "File" menu select **New Report**.

   The "New" window appears.

2. Select **Wallboard Display**.

   Page 1 of the Wallboard Wizard appears.

Wallboard Properties Wizard - Page 1 of 6	☒

☐ Display data on physical wallboard

Select the type of wallboard(s) on which to display data:

Number of lines:

Two Lines ▾

Available Wallboards

Ferrograph
Spectrum 20
Spectrum 26
Spectrum 33

Add All >

Add >

< Remove

< Remove All

Selected Wallboards

Help	Cancel	< Back	Next >	Finish

3. a. If you do not want to display the wallboard report on an external wallboard at this time, select **Next**.

   Page 2 of the Wallboard Wizard appears. Go to step 4.

b. If you want to display the wallboard report on an external wallboard, check the box next to "Display data on physical wallboard" and select **Next**.

Page 1 of the Wallboard wizard changes:

```
Wallboard Properties Wizard – Page 1 of 6                              [X]

  ☑ Display data on physical wallboard

    Select the type of wallboard(s) on which to display data:
                                      Number of lines:
                                      [ Two Lines      ▼ ]


    Available Wallboards                          Selected Wallboards

   ┌────────────────────────┐                   ┌────────────────────────┐
   │ Spectrum 26            │                   │ Ferrograph             │
   │ Spectrum 33            │   ┌─────────────┐ │ Spectrum 20            │
   │                        │   │  Add All >  │ │                        │
   │                        │   └─────────────┘ │                        │
   │                        │   ┌─────────────┐ │                        │
   │                        │   │   Add >     │ │                        │
   │                        │   └─────────────┘ │                        │
   │                        │                   │                        │
   │                        │   ┌─────────────┐ │                        │
   │                        │   │  < Remove   │ │                        │
   │                        │   └─────────────┘ │                        │
   │                        │   ┌─────────────┐ │                        │
   │                        │   │ < Remove All│ │                        │
   │                        │   └─────────────┘ │                        │
   └────────────────────────┘                   └────────────────────────┘

  ┌────────┐  ┌────────┐  ┌────────┐  ┌────────┐  ┌────────┐
  │  Help  │  │ Cancel │  │ < Back │  │ Next > │  │ Finish │
  └────────┘  └────────┘  └────────┘  └────────┘  └────────┘
```
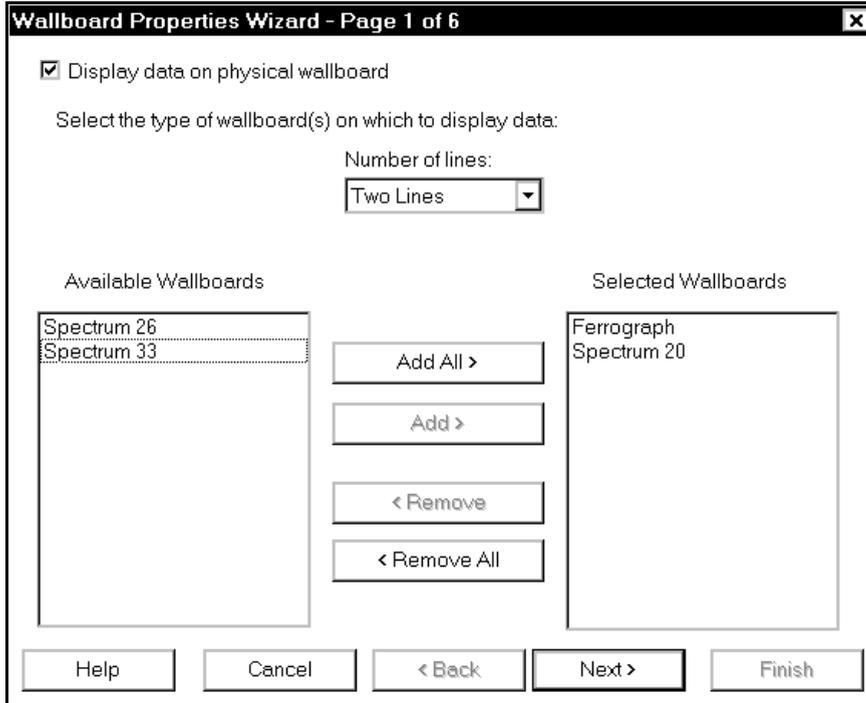
c. From the "Number of lines:" pull-down menu, select the maximum number of rows of text supported on the wallboard(s) you want to use. This is the maximum number of physical rows of text on the external wallboard(s). The names of all registered wallboards connected to PCs on the network that fit this description appear in the "Available Wallboards" list.

d. From the "Available Wallboards" window choose the wallboard(s) on which you want to display the report.

1. To choose all wallboards, select **Add All**.

2. To choose individual wallboards, highlight each and click on **Add**.

3. Select **Remove** and **Remove All** to remove wallboards from the list of selected wallboards.

e. When all wallboards on which you want the display to appear on are in the "Selected Wallboards" list, select **Next**.

Page 2 of the Wallboard Wizard appears.

4. Select the radio button next to the type of data (for example, Split/Skill, Agent summary, VDN summary) that you want to show on this Wallboard Display.

5. Select **Next**.

Page 3 of the Wallboard Wizard appears.

The content of this window depends on the category of data you chose to display in Page 2 of the wizard.

For example, if you chose "Agent summary" in Page 2 of the wizard, the following window appears:

```
┌─────────────────────────────────────────────────────────────────────┐
│ Wallboard Properties Wizard - Page 3 of 6                         [×] │
│                                                                       │
│   Select the split/skill for which to display agent data:            │
│                                                                       │
│   Split/Skill name                                                    │
│   ┌─────────────────────────────────────────────────────────┬───┐    │
│   │ 51  (CVS 51)                                             │ ▼ │    │
│   └─────────────────────────────────────────────────────────┴───┘    │
│                                                                       │
│       Available Agents                        Selected Agents         │
│   ┌──────────────────────┬─┐              ┌──────────────────────┐    │
│   │ 6204 T10 sta 6204  │▲│              │ 6201 T10 sta 6201    │    │
│   │ 6205 T10 sta 6205  │ │  ┌─────────────┐│ 6202 T10 sta 6202    │    │
│   │ 6206 T10 sta 6206  │ │  │  Add All >  ││ 6203 T10 sta 6203    │    │
│   │ 6207 T10 sta 6207  │ │  └─────────────┘│                      │    │
│   │ 6208 T10 sta 6208  │ │  ┌─────────────┐│                      │    │
│   │ 6211 T10 sta 6211  │ │  │   Add >     ││                      │    │
│   │ 6212 T10 sta 6212  │ │  └─────────────┘│                      │    │
│   │ 6213 T10 sta 6213  │ │  ┌─────────────┐│                      │    │
│   │ 6214 T10 sta 6214  │ │  │  < Remove   ││                      │    │
│   │ 6215 T10 sta 6215  │ │  └─────────────┘│                      │    │
│   │ 6216 T10 sta 6216  │ │  ┌─────────────┐│                      │    │
│   │ 6217 T10 sta 6217  │▼│  │ < Remove All││                      │    │
│   └──────────────────────┴─┘  └─────────────┘└──────────────────────┘    │
│                                                                       │
│  ┌────────┐  ┌────────┐  ┌────────┐  ┌────────┐  ┌────────┐          │
│  │  Help  │  │ Cancel │  │ < Back │  │ Next > │  │ Finish │          │
│  └────────┘  └────────┘  └────────┘  └────────┘  └────────┘          │
└─────────────────────────────────────────────────────────────────────┘
```
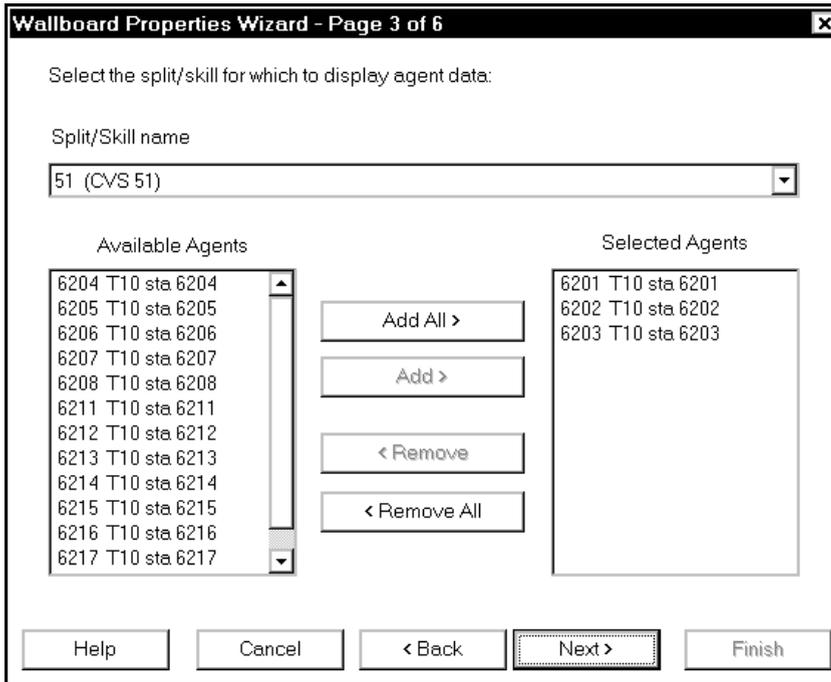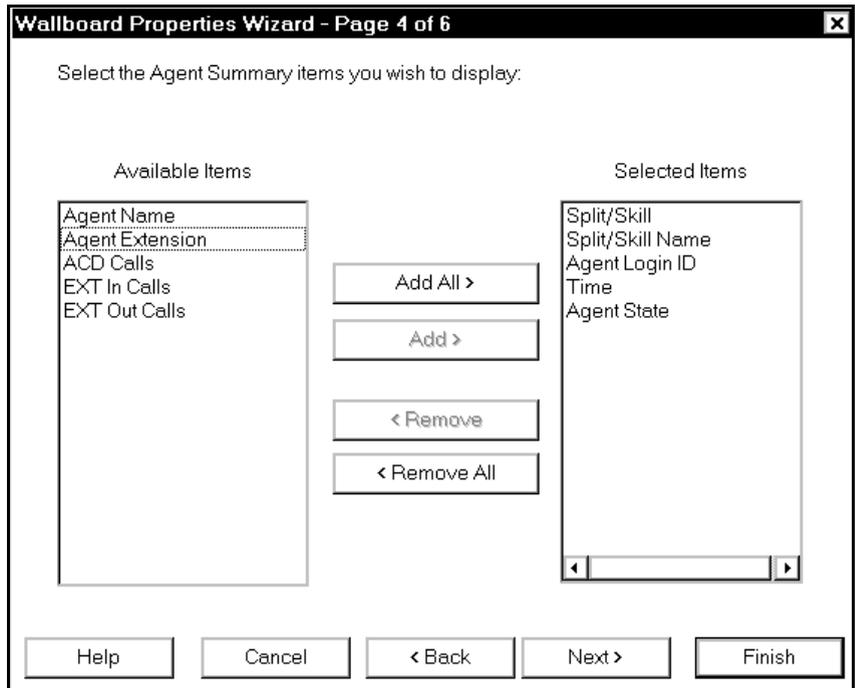
6. Select the items you want to report on:

   a. If there is a "Split/Skill name" pull-down menu on the wizard page, select one item from the menu.

   b. From the "Available ..." list, choose the splits/skills, agents, or VDNs you want to report on.

      1. To choose all splits/skills, agents, or VDNs in the "Available ..." list, select **Add All**.

      2. To choose individual splits/skills, agents, or VDNs, highlight each item and select **Add**.

3. Use the **Remove** and **Remove All** buttons to remove splits/skills, agents, or VDNs from the "Selected ..." list.

7. When all the splits/skills, agents, or VDNs that you want to report on are in the "Selected..." list, select **Next**.

    Page 4 of the Wallboard Wizard appears. It varies slightly, depending on which button you selected on Page 2 of the wizard. For example, if you choose "Agent Summary" in Page 2 of the wizard, the following window appears:

```
┌─────────────────────────────────────────────────────────────────┐
│ Wallboard Properties Wizard - Page 4 of 6                    [X] │
│                                                                   │
│   Select the Agent Summary items you wish to display:             │
│                                                                   │
│       Available Items                        Selected Items       │
│   ┌──────────────────┐                   ┌──────────────────┐    │
│   │ Agent Name       │                   │ Split/Skill      │    │
│   │ Agent Extension  │                   │ Split/Skill Name │    │
│   │ ACD Calls        │   ┌────────────┐  │ Agent Login ID   │    │
│   │ EXT In Calls     │   │ Add All >  │  │ Time             │    │
│   │ EXT Out Calls    │   └────────────┘  │ Agent State      │    │
│   │                  │   ┌────────────┐  │                  │    │
│   │                  │   │  Add >     │  │                  │    │
│   │                  │   └────────────┘  │                  │    │
│   │                  │                   │                  │    │
│   │                  │   ┌────────────┐  │                  │    │
│   │                  │   │ < Remove   │  │                  │    │
│   │                  │   └────────────┘  │                  │    │
│   │                  │   ┌────────────┐  │                  │    │
│   │                  │   │ < Remove All│ │                  │    │
│   │                  │   └────────────┘  │ [◄]          [►] │    │
│   └──────────────────┘                   └──────────────────┘    │
│                                                                   │
│  ┌────────┐  ┌────────┐  ┌────────┐  ┌────────┐  ┌────────┐      │
│  │  Help  │  │ Cancel │  │ < Back │  │ Next > │  │ Finish │      │
│  └────────┘  └────────┘  └────────┘  └────────┘  └────────┘      │
└─────────────────────────────────────────────────────────────────┘
```

8. Choose the attributes (data items) that you want to include on the display.

    a. To choose all items in the "Available" list, select **Add All**.

b. To choose individual items, highlight them and select **Add**.

c. Use the **Remove** and **Remove All** buttons to remove attributes that you do not want to display.

9. When all the data items you want to display are in the "Selected Items" list select **Next**.

Page 5 of the Wallboard Wizard appears.
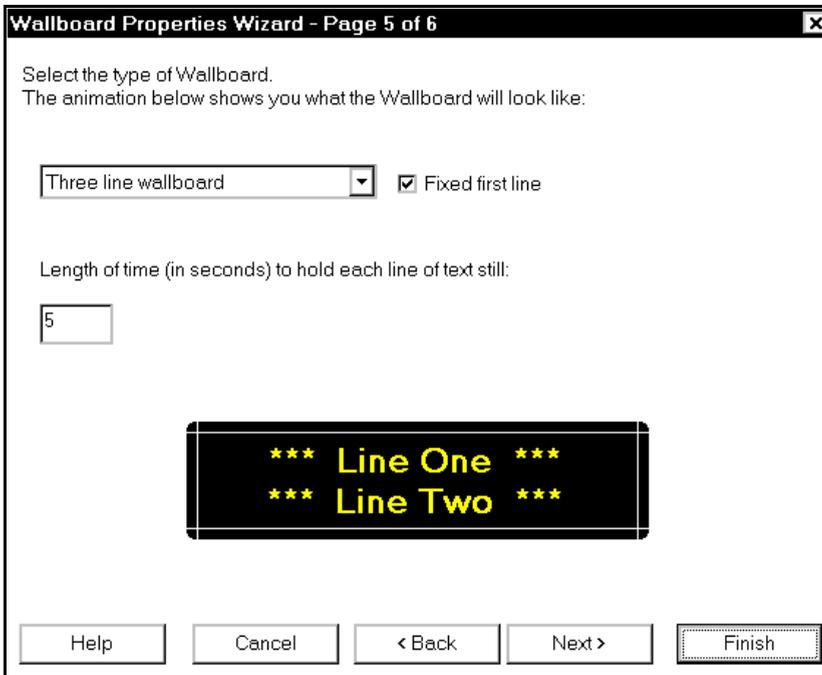
10. Use the drop-down menu at the top of the wizard page to select how many lines of text you want all the information to occupy. **This is not necessarily the same number of rows of text that appear at one time on the external wallboards you selected**. Rather, it is the number of lines of

text over which all the information will be spread. The more lines of text you choose from the menu, the less packed together the characters will be in the rows of the display.

If you have many items to display, you should choose "Four line wallboard."

Obviously, if you choose more lines of text from this menu than there are rows on the external wallboard, the lines of text will have to alternate on the external wallboard.

11. If you choose "Three line wallboard," a check box next to the words "Fixed first line" appears. If you check this box, the first line of text remains on the display while other lines change.

12. In the "Length of time (in seconds) to hold each line of text still," box type the number of seconds that you want each line of the display to be visible before it changes.

The display at the bottom of the window reflects your choice from the pull-down menu on this page.

13. Select **Next**.

Chapter 7

Page 6 of the Wallboard Wizard appears.

14. If you check the box next to "Show Field names," both the abbreviated names and the full names of data items (enclosed by "< >" brackets) appear in the wallboard display on your monitor. On external wallboards brackets are replaced by the data item value.

    If you do not check the box, only abbreviated names appear in the display on the monitor. The fields labeled "Line 1," "Line 2'" and so forth on Page 6 of the wizard, reflect this choice. In the example above, the field names <Agent Login ID> and <Agent State> appear next to the abbreviated names "ID" and "State." Only the abbreviated names appear on the external wallboard and <Agent Login ID> and <Agent States> are replaced by the data item value.

The display at the bottom of this wizard reflects the choice you made from the pull-down menu on Page 5 of the wizard.

In the previous example, "Two Lines" was chosen on page 1 of the wizard. This reflects the fact that the targeted extended wallboard is constructed to display only two rows of text.

"Three line wallboard" was selected on page 5 of the wizard. This distributes the reported data items over three lines of text. Since the external wallboard can display only two rows of characters at a time, the three lines of the text must alternate on the external wallboard. If "Fixed first line" is checked on page 5 of the wizard, the first line of text (split/skill) always appears on the top row of the wallboard and lines 2 and 3 of the text alternate on the second row.

If "Display data on physical wallboard" was not checked on page 1 of the wizard, the number of lines chosen on page 5 of the wizard appears in the black window at the bottom of pages 5 and 6.

15. If you are satisfied with the settings you have specified, select **Finish**.

    The Wallboard Properties Wizard closes and the Wallboard Display you have just defined appears in the *BCMS Vu* main window.

    The display also appears on the external wallboard if you selected the "Display data on physical wallboard" checkbox on page 1 of the wizard.

Chapter 7

Creating a Time Trace Report

1. In the **File** menu select **New Report**.

2. Select **Time Trace**.

   The "Select the type of data you wish to create a time trace for:" window appears.
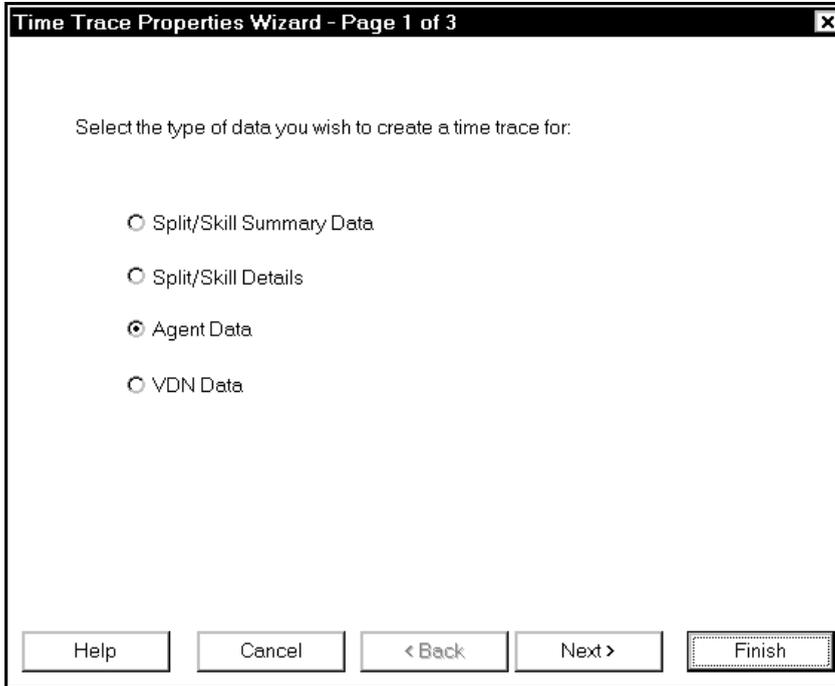
```
┌─────────────────────────────────────────────────────────────────────┐
│ Time Trace Properties Wizard – Page 1 of 3                        ✕ │
│                                                                       │
│                                                                       │
│   Select the type of data you wish to create a time trace for:        │
│                                                                       │
│                                                                       │
│         ○  Split/Skill Summary Data                                   │
│                                                                       │
│         ○  Split/Skill Details                                        │
│                                                                       │
│         ⦿  Agent Data                                                 │
│                                                                       │
│         ○  VDN Data                                                   │
│                                                                       │
│                                                                       │
│                                                                       │
│                                                                       │
│                                                                       │
│  ┌────────┐  ┌────────┐  ┌────────┐  ┌────────┐  ┌──────────────┐    │
│  │  Help  │  │ Cancel │  │ ‹ Back │  │ Next › │  │    Finish    │    │
│  └────────┘  └────────┘  └────────┘  └────────┘  └──────────────┘    │
└─────────────────────────────────────────────────────────────────────┘
```

3. In the "Select the type of data you wish to create a time trace for:" window, select the radio button next to the category of report you want to create.

4. Select **Next**.

The window that appears now depends on what you selected in the first window. For instance, if you selected "Agent Data," the following window appears:
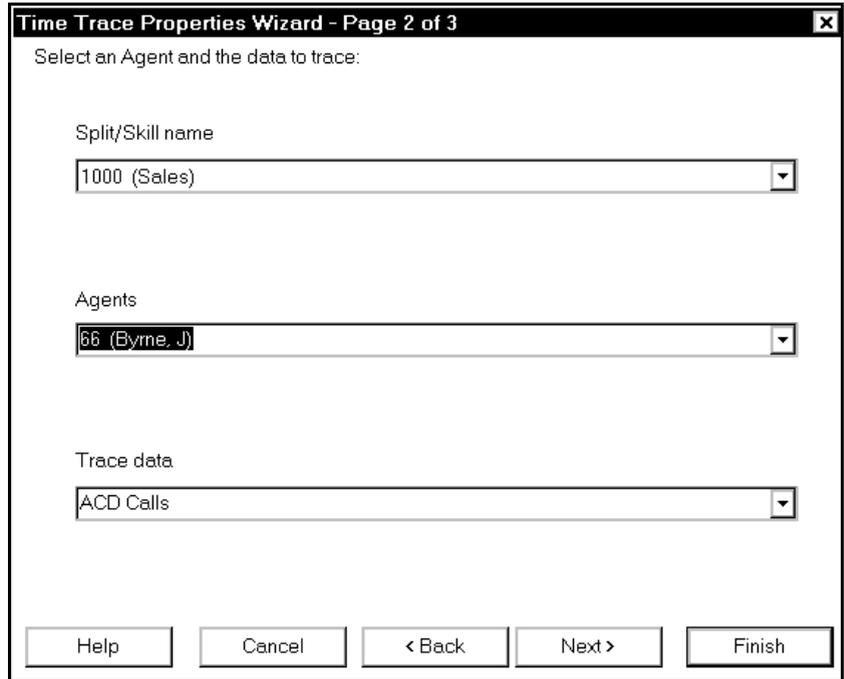
```
Time Trace Properties Wizard - Page 2 of 3                          ⊠

  Select an Agent and the data to trace:


     Split/Skill name

     1000 (Sales)                                                ▼


     Agents

     66 (Byrne, J)                                               ▼


     Trace data

     ACD Calls                                                   ▼



   ┌─────────┐  ┌─────────┐  ┌─────────┐  ┌─────────┐  ┌─────────┐
   │  Help   │  │ Cancel  │  │ ‹ Back  │  │ Next ›  │  │ Finish  │
   └─────────┘  └─────────┘  └─────────┘  └─────────┘  └─────────┘
```
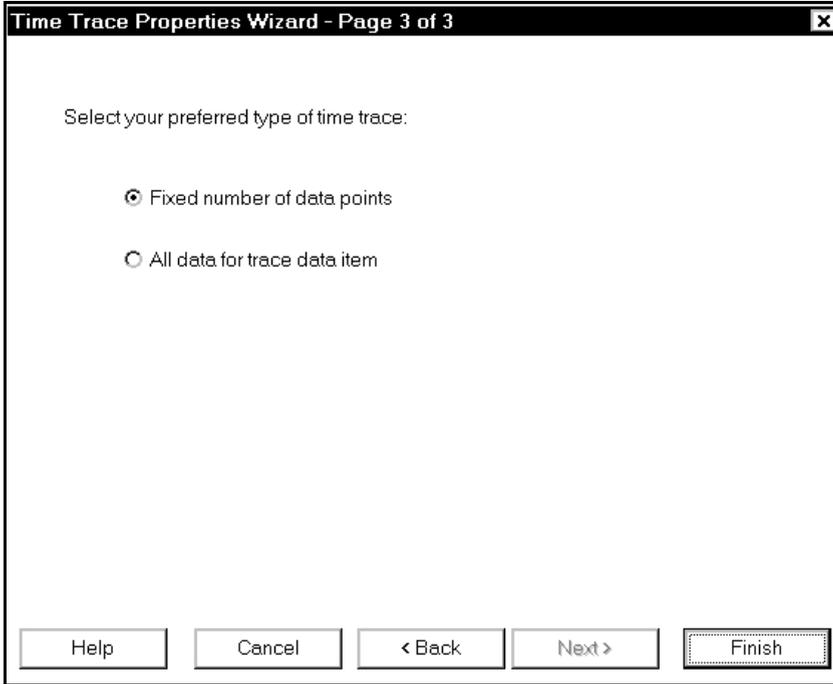
5. In the displayed wizard window, in each pull-down menu, select the name of the split/skill, agent (if appropriate), or VDN, and the time-trace data you want to display.

6. Select **Next**.

The "Select your preferred type of time trace" window appears:

```
┌─────────────────────────────────────────────────────────────────┐
│ Time Trace Properties Wizard - Page 3 of 3                    [X] │
│                                                                   │
│                                                                   │
│    Select your preferred type of time trace:                      │
│                                                                   │
│                                                                   │
│           ⦿ Fixed number of data points                           │
│                                                                   │
│           ○ All data for trace data item                          │
│                                                                   │
│                                                                   │
│                                                                   │
│                                                                   │
│                                                                   │
│                                                                   │
│                                                                   │
│                                                                   │
│                                                                   │
│  ┌────────┐  ┌────────┐  ┌────────┐  ┌────────┐  ┌─────────────┐ │
│  │  Help  │  │ Cancel │  │ < Back │  │ Next > │  │   Finish    │ │
│  └────────┘  └────────┘  └────────┘  └────────┘  └─────────────┘ │
└─────────────────────────────────────────────────────────────────┘
```

7. From the "Select your preferred type of time trace" window, select the radio button next to

    "Fixed number of data points" if you want the time trace graph to display data for a set period of time and to discard old data,

            or

    "All data for trace data item" if you want all data displayed from the time you create the time trace graph to the present. A maximum of twelve hours worth of data will be displayed.

8. To close the wizard and display the Time Trace Report, select **Finish**.

    The Time Trace Report wizard closes and the Time Trace report you have just defined appears. For example, if you choose "Agent Data" on

the first page of the wizard, and select "Fixed number of data points" on the third page, a report similar to the following illustration appears.
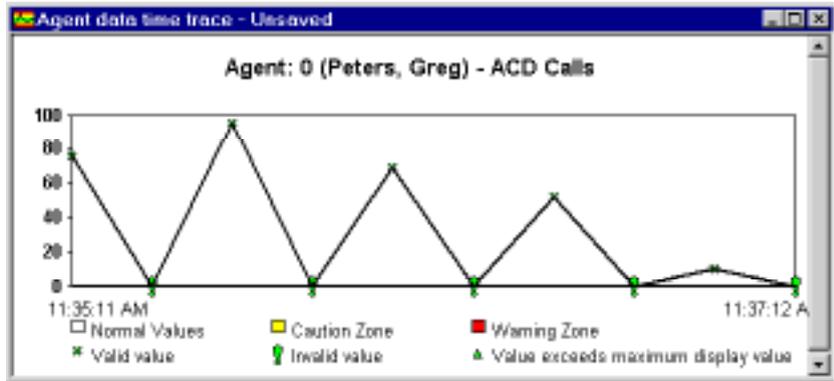
| Note | After you create a new report, you can save it if you want to. If you try to close a report without saving it, a message appears asking if you want to save the report. |

Creating a Historical Report

To create a Historical Report

1. From the **File** menu, select **New Report**.

    The "New" window appears.

2. Select **Historical Report** from the **New** window.

    Page 1 of the Historical Report Wizard, the "Select the class of report you wish to create" window, appears.

Historical Report Wizard - Page 1 of 6   ☒

Select the class of report you wish to create.

The class of report specifies the fields that will be included in the report.

Class of report:

| Agent   ▼ |

| Agent |
| Agent Summary |
| Split/Skill |
| Trunk |
| VDN |
| Abandoned Calls Split/Skill |
| Abandoned Calls VDN |
| Overflowed Calls Split/Skill |
| Overflowed Calls VDN |

| Help | | Cancel | | | Next > | |

---
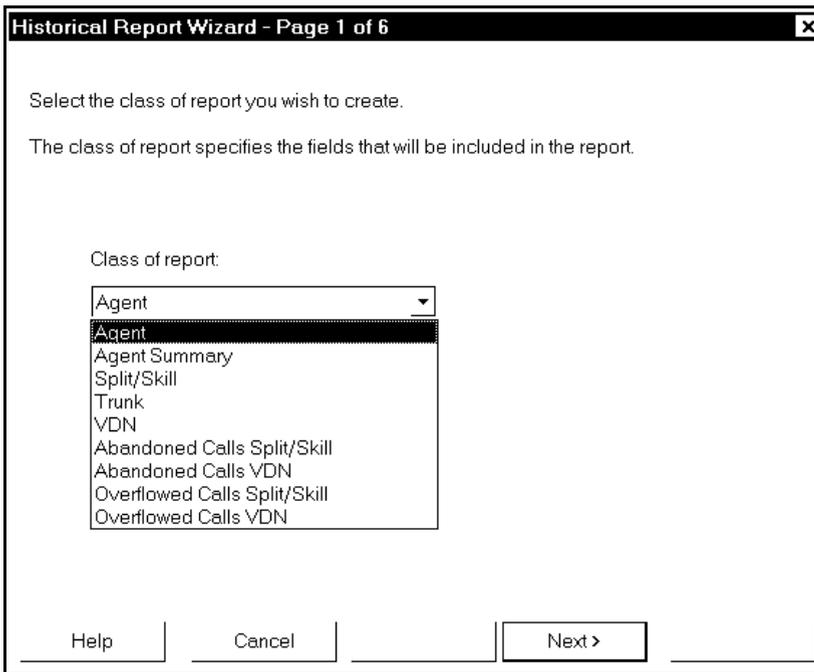
3. Use the drop-down list to choose one of the available Historical Report formats.

4. Select **Next**.

Page 2 of the Historical Report Wizard appears. The contents of this window depend on what you selected in step 3, but it will be similar to the window in the following illustration.

```
Historical Report Wizard - Page 2 of 6                                    ☒

  Select the agents you wish to include in the report:

       Available Agents                                    Selected Agents

   ┌────────────────────────┐                          ┌────────────────────────┐
   │ 4202 T10 Agent 4202   ▲│                          │ 4208 T10 Agent 4208    │
   │ 4203 T10 agent 4203    │        ┌──────────────┐  │ 4212 T10 agent 4212    │
   │ 4204 T10 Agent 4204    │        │  Add All >   │  │ 4100 Manual agent 41   │
   │ 4205 T10 agent 4205    │        └──────────────┘  │ 4201 T10 agent 4201    │
   │ 4206 T10 Agent 4206    │        ┌──────────────┐  │                        │
   │ 4207 T10 agent 4207    │        │    Add >     │  │                        │
   │ 4211 T10 Agent 4211    │        └──────────────┘  │                        │
   │ 4213 T10 agent 4213    │                          │                        │
   │ 4214 T10 agent 4214    │        ┌──────────────┐  │                        │
   │ 4215 T10 agent 4215    │        │  < Remove    │  │                        │
   │ 4216 T10 agent 4216    │        └──────────────┘  │                        │
   │ 4217 T10 agent 4217    │        ┌──────────────┐  │                        │
   │ 4218 T10 agent 4218    │        │ < Remove All │  │                        │
   │ 5502 station 5502     ▼│        └──────────────┘  │                        │
   └────────────────────────┘                          └────────────────────────┘


   ┌──────────┐  ┌──────────┐  ┌──────────┐  ┌──────────┐  ┌──────────┐
   │   Help   │  │  Cancel  │  │  < Back  │  │  Next >  │  │  Finish  │
   └──────────┘  └──────────┘  └──────────┘  └──────────┘  └──────────┘
```

5. Depending on what you selected in step 3, select the split(s)/skill(s), agent(s), trunk(s), or VDN(s) you want to report on

   a. To choose all items in the "Available..." list, select **Add All**.

   b. To choose individual items, highlight each and select **Add**.

   c. Use the **Remove** and **Remove All** buttons to remove items that you do not want to display.

6. When all the agent(s), split(s)/skill(s), trunk(s), or VDN(s) you want to display are in the "Selected..." list, select **Next**.

The "Select the time period for the report" window appears.

```
┌─────────────────────────────────────────────────────────────┐
│ Historical Report Wizard - Page 3 of 6                    ⊠  │
│                                                               │
│   Select the time period for the report.                      │
│                                                               │
│                                                               │
│                  ⊙ Interval                                    │
│                                                               │
│                  ○ Daily                                       │
│                                                               │
│                  ○ Weekly                                      │
│                                                               │
│                  ○ Monthly                                     │
│                                                               │
│                  ○ Quarterly                                   │
│                                                               │
│                                                               │
│                                                               │
│                                                               │
│                                                               │
│  ┌────────┐  ┌────────┐  ┌────────┐  ┌────────┐  ┌────────┐  │
│  │  Help  │  │ Cancel │  │ ‹ Back │  │ Next › │  │ Finish │  │
│  └────────┘  └────────┘  └────────┘  └────────┘  └────────┘  │
└─────────────────────────────────────────────────────────────┘
```
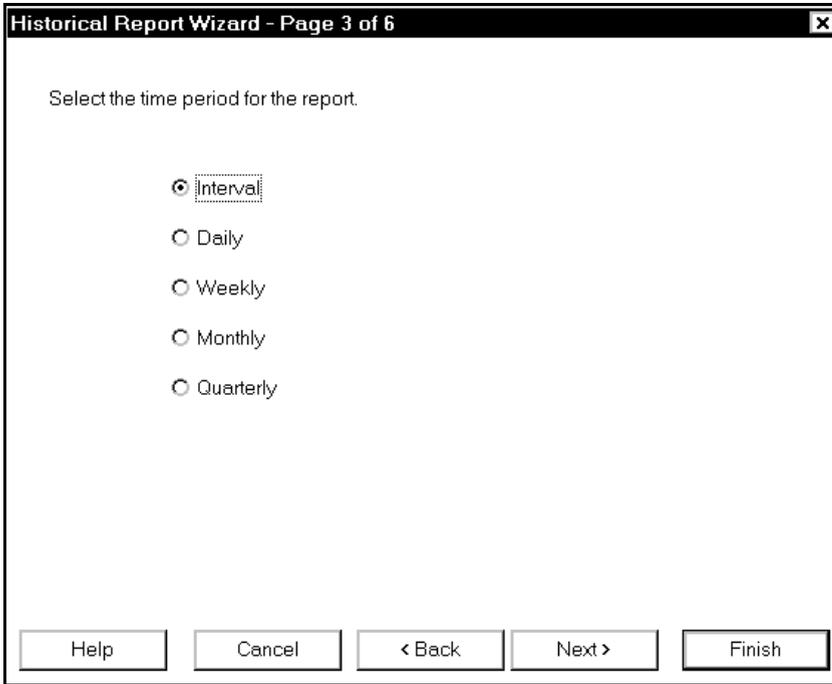
7. Select the radio button next to the time unit that you want the report to include. Available time units are Interval, Daily, Weekly, Monthly, and Quarterly. If you select "Interval," each line of the report contains summary information covering one interval. If you select "weekly," each line of the report contains summary information covering one week.

8. Select **Next**.

   a. If you select anything except "Interval" on page 3 of the wizard, the "Select the days to be included in the report" window appears. Go to step 9.

b. If you select "Interval" on page 3 of the wizard, the "Select the start and end times for the interval data for each day" window appears.

```
┌─────────────────────────────────────────────────────────────────────┐
│ Historical Report Wizard - Page 4 of 7                            [X] │
├─────────────────────────────────────────────────────────────────────┤
│                                                                       │
│  Select the start and end times for the interval data for each day.   │
│                                                                       │
│                                                                       │
│              Start Time:           End Time:                          │
│              ┌────────────┐        ┌────────────┐                     │
│              │1:00 PM     │        │9:00 PM     │                      │
│              └────────────┘        └────────────┘                     │
│                                                                       │
│                                                                       │
│                                                                       │
│                                                                       │
│                                                                       │
│                                                                       │
│                                                                       │
│                                                                       │
│                                                                       │
│  ┌────────┐  ┌────────┐  ┌────────┐  ┌────────┐  ┌────────┐          │
│  │  Help  │  │ Cancel │  │ < Back │  │ Next > │  │ Finish │          │
│  └────────┘  └────────┘  └────────┘  └────────┘  └────────┘          │
└─────────────────────────────────────────────────────────────────────┘
```

1. In the "Start Time" window, enter the time of day for which you want the first entry to appear.

2. In the "End Time" window, enter the time of day for which you want the report to stop reporting.

3. Select **Next**.

The "Select the days included in the report" window appears.


```
Historical Report Wizard - Page 4 of 6                      ☒

    Select the days to be included in the report:

      ☐ Sunday      ☑ Monday    ☑ Tuesday   ☑ Wednesday

      ☑ Thursday    ☑ Friday    ☐ Saturday




     ┌─────────┐  ┌─────────┐  ┌─────────┐  ┌─────────┐  ┌─────────┐
     │  Help   │  │ Cancel  │  │ < Back  │  │ Next >  │  │ Finish  │
     └─────────┘  └─────────┘  └─────────┘  └─────────┘  └─────────┘
```
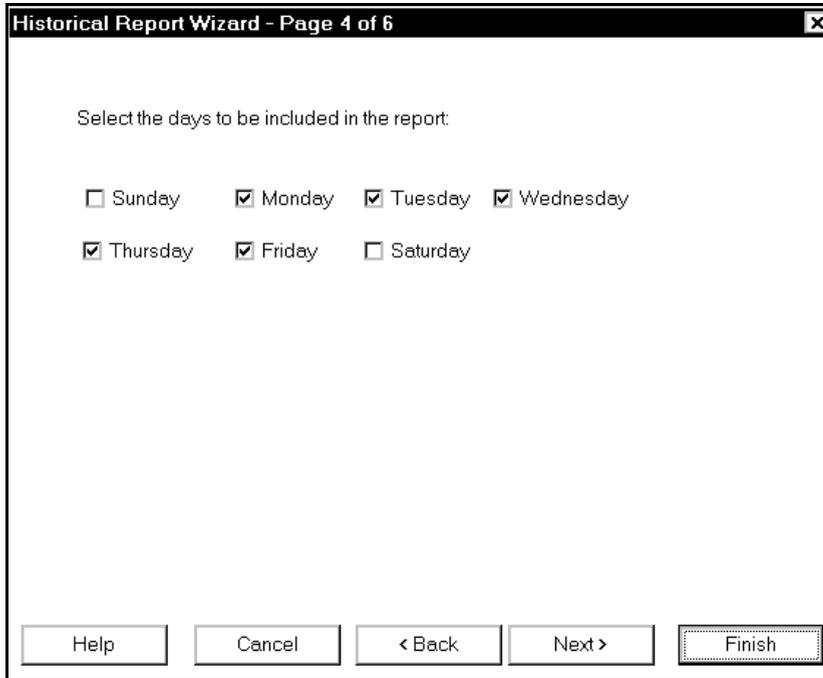
9. Select the days for which you want information. Deselect the days, if any, for which you do not want information. If, for example, you select Saturday and Sunday, information about weekend activity is reported.

Page 5 of the wizard appears.
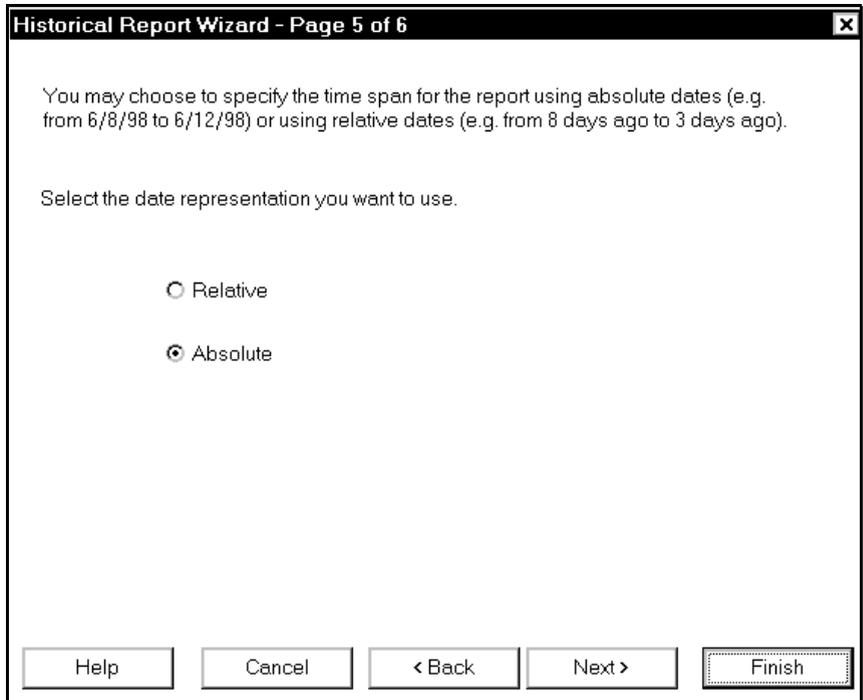
```
┌─────────────────────────────────────────────────────────────────────┐
│ Historical Report Wizard - Page 5 of 6                           [×] │
├─────────────────────────────────────────────────────────────────────┤
│                                                                       │
│   You may choose to specify the time span for the report using        │
│   absolute dates (e.g. from 6/8/98 to 6/12/98) or using relative      │
│   dates (e.g. from 8 days ago to 3 days ago).                         │
│                                                                       │
│                                                                       │
│   Select the date representation you want to use.                     │
│                                                                       │
│                                                                       │
│                 ○  Relative                                           │
│                                                                       │
│                 ⊙  Absolute                                           │
│                                                                       │
│                                                                       │
│                                                                       │
│                                                                       │
│                                                                       │
│                                                                       │
│  ┌──────────┐  ┌──────────┐  ┌──────────┐  ┌──────────┐  ┌──────────┐ │
│  │   Help   │  │  Cancel  │  │ ‹ Back   │  │  Next ›  │  │  Finish  │ │
│  └──────────┘  └──────────┘  └──────────┘  └──────────┘  └──────────┘ │
└─────────────────────────────────────────────────────────────────────┘
```

10. Select the radio button next to either "Relative" or "Absolute" to choose how you want to specify the time for which the report is created:

    a. Check the radio button next to "Absolute" if you want to specify specific dates for the data included in the report (for example, 4/15/98 to 4/21/98).

    b. Check the radio button next to "Relative" if you want to run a report for a specific period of time prior to the time the report is created or, later, prior to the time it is opened (for example, over the last seven days).

11. Select **Next**.

The next window that appears depends on whether you selected "Absolute" or "Relative" in the previous window.

If you selected Absolute, the following window appears:

```
┌─────────────────────────────────────────────────────────────────┐
│ Historical Report Wizard - Page 6 of 6                        ☒  │
├─────────────────────────────────────────────────────────────────┤
│                                                                  │
│   Select the dates to start and end the report.                 │
│                                                                  │
│                                                                  │
│         Start Date:              End Date:                        │
│         ┌──────────────┐         ┌──────────────┐                │
│         │6/15/98       │         │6/19/98       │                │
│         └──────────────┘         └──────────────┘                │
│                                                                  │
│                                                                  │
│                                                                  │
│                                                                  │
│                                                                  │
│                                                                  │
│                                                                  │
│  ┌─────────┐  ┌─────────┐  ┌─────────┐  ┌─────────┐  ┌─────────┐ │
│  │  Help   │  │ Cancel  │  │ < Back  │  │ Next >  │  │ Finish  │ │
│  └─────────┘  └─────────┘  └─────────┘  └─────────┘  └─────────┘ │
└─────────────────────────────────────────────────────────────────┘
```

12. Enter the beginning and end dates for the period of time you want the report to cover.

> **Note** If you enter start dates and/or end dates that do not represent an actual start/end of the week/month/quarter, then you will receive a report that includes the partial data. For example, if you are creating a weekly report and enter dates that are a Monday and a Wednesday, the report displays one line of data for the "week" of Monday through Wednesday.

| Note | If there is no historical data in the database for the dates you select, the report display will appear but will not contain any data. |

If you selected "Relative" in the previous window, the following window appears:

Historical Report Wizard - Page 6 of 6   ⊠

Specify the start and end dates for the report, relative to the day on which the report is run. For example, to run a daily report for the previous 6 days, enter a start date of 6 days ago and an end date of 1 day ago.

Start date: [7] day(s) ago

End date: [1] day(s) ago

| Help | Cancel | ‹ Back | Next › | Finish |

---

13. Enter "how many days ago" you want the report to start reporting and "how many days ago" you want the report to stop reporting.

14. To close the wizard and display the Historical Report, select **Finish**.

A report, similar to the one on page 7-41, appears. Note that the format of columns that display length of time is *minutes:seconds*.

Saving a Report

To save a report, do the following:

1. Select the **Save** toolbar button.

   or

   Select **Save Report** from the **File** menu.

2. If this is the first time you have saved this report, a dialog box appears showing the contents of the *BCMS Vu* reports directory.

3. In the **Files of type** list box, the file extension that matches the type of report you are saving appears. The *BCMS Vu* report file extensions are as follows:

   - Real-Time Graph Report (*.gra)
   - Real-Time Pie Chart Report (*.pie)
   - Real-Time Text Report (*.trp)
   - Wallboard Display (*.wal)
   - Time Trace Report (*.tra)
   - Historical Report (*.his).

4. Type a file name for the report. This name will be displayed in the title bar of the report window the next time you open the report.

5. Select **Save**.

Closing a Report

To close a report, do the following:

1. Click on the Close button in the upper right corner of the report window

   or

   Select **Close Report** from the **File** menu.

   If you have not saved the report since you created it or changed it, a window appears asking you if you want to save the unsaved report.

2. a. If you want to save the report, select **Yes**.

   b. If you want to exit the report without saving it, select **No**.

   c. If you want to return to the report, select **Cancel**.

Chapter 7

Opening a Report

To open a report that you have previously saved, do the following:

1. Select the **Open** toolbar button.

    or

    Select **Open Reports** from the **File** menu.

2. A dialog box appears, showing the contents of the *BCMS Vu* reports directory.

3. In the "Files of type" list box, select the type of report you want to open. The available types are as follows:

    - Real-Time Graph Report (*.gra)
    - Real-Time Pie Chart Report (*.pie)
    - Real-Time Text Report (*.trp)
    - Wallboard Display (*.wal)
    - Time Trace Report (*.tra)
    - Historical Report (*.his).

4. From the available files list, highlight the report you want to open.

5. Select **Open**.

    BCMS Vu opens the report.

Changing the Properties of a Report

To change the properties of a report after you have created it, do the following:

1. Open the report and make it the active report by clicking on its title bar.

2. Select the **Report Properties** toolbar button.

   or

   From the **Edit** menu, select **Report Properties**.

   The appropriate report Properties Wizard, which is the same wizard you used to create the report, starts.

3. Follow the directions in the Report Properties Wizard.

   The changes take effect as soon as you finish working in the wizard. If you select **Cancel** at any point in the wizard, the changes are discarded.

Chapter 7

Printing Reports

The *BCMS Vu* software lets you print Real-Time Text Reports and Historical Reports to your local postscript or network printer.

To print a report,

1. Create or open the report.

2. Make the report the current window.

3. Select the **Print** button on the Historical Report's window   or on the toolbar.

> or

From the **File** menu select **Print Report.**

The "Print" window appears.

4. Be sure the correct printer is displayed. If it is not, use **Print Setup** to select a printer.

5. Define a print range, either all pages or a specific number of pages.

6. Select the number of copies you want printed.

7. Select the **OK** button.

Scheduling the Printing of a Historical Report

To schedule a Historical Report for printing at a later date,

1. In the **Options** menu, select **Schedule Historical Reports** or select the **Schedule Historical Reports** toolbar button.

2. The "Schedule Historical Reports" window appears.

3. If you want to change the schedule for printing a report that is found in this window, highlight the file and select **Properties...**. Go to step 4.

4. If you want to schedule a report that is not in the list,

    a. Double-click on **Add Scheduled Report** or select **Add...**.

    b. From the standard "Open" window, find and select the report whose printing you want to schedule.

    c. Go to step 4.

5. From the "Select the frequency of printing the report" window, select one of the radio buttons, either Daily, Weekly, or Monthly.

    a. If you select "Daily," the "Select the time of day to print the report" appears. Go to step 6.

    b. If you select "Weekly," the "Select the days of the week on which the report should be printed" window appears. Click next to one or more days of the week. Select **Next**. The "Select the time of day to print the report" window appears. Go to step 5.

    c. If you select "Monthly," the "Select the day of the month for printing the report" window appears. Type a 1- or 2-digit number in the box specifying the day of the month that you want the report printed. Select **Next.** The "Select the time of day to print the report" appears. Go to step 5.

6. In the text box in the "Select the time of day to print the report" window, type in the time of day when you want the report printed.

    | Note | If you schedule a report to print to a file, you will be prompted to enter a file name when the report starts to print. Until you enter a file name, printing is halted and other print jobs are stacked in a queue.

7. Select **Next**.

    A printer selection window appears.

8. a. To change the printer shown in the wizard window

        1. Select **Change Printer.**

        2. Select a different printer.

        3. Select **OK.**

        4. Select **Finish**.

    b. To choose the printer shown in the wizard window, select **Finish**.

9. Select **Save**.

    | Note | You may not receive notification if a scheduled report fails to print. However, an information entry is made in the error log when *BCMS Vu* Client successfully passes a print job to the print queue.

    If the error log reports that a job was printed (sent to the print queue) when actually it was not, check to see if the printer was actually offline at the time the report was scheduled to be printed.

Using the Controls on the Historical Report Window

The "Historical Report" window has its own set of controls and indicators which perform the following functions:

Export/E-mail this report.

Save the report in a format suitable for exporting to a spreadsheet or database application (using *Microsoft Word* or *Excel*).

Print the report.

Change the magnification of the view.

Move to first or last page in report.

Current and total pages in report

Move forward or back a page.

8

Displaying Information on External Wallboards

Introduction

BCMS Vu software lets you display information on actual wallboards (external wallboards). There are two different ways you can use the *BCMS Vu* software to display information on external wallboards:

- You can create a Wallboard Display report on your monitor and send the report to an external wallboard.

- You can type a short message, called a *broadcast message*, and send it to an external wallboard to be displayed for a set period of time.

> **Note** When you are creating a Wallboard Display, a maximum of 35 characters per line can appear on your monitor. Keep in mind, however, that the maximum number of characters per line on an external wallboard depends on the specifications of the external wallboard. See "Types of Wallboards" on page 5-18.

Configuring a Wallboard

Before you can show any information from *BCMS Vu* on an external
wallboard, you must first connect the wallboard to a PC and register the
wallboard on the *BCMS Vu* Server. To find out how to do this, see Chapter 5,
"Installing a Wallboard" in *BCMS Vu Software Installation Guide* (585-217-103)
and"Registering Wallboards" on page 4-11.

Starting *BCMS Vu* Wallboard Software

If a wallboard is connected to a PC running *BCMS Vu* Server software, you
do not need to install or start *BCMS Vu* Wallboard software on your Server
PC; it is automatically installed when you install Server software and it
starts automatically when you start Server software.

However, in order to access a wallboard attached to a PC, other than a
Server PC, you must start the Wallboard software on that PC. Therefore, if a
wallboard is connected to a PC without Server software, you must manually
start *BCMS Vu* Wallboard software on that PC.

To start the *BCMS Vu* Wallboard software, in **Start/Programs/Lucent
Technologies**, select **BCMS Vu Wallboard**.

The Wallboard program starts. However, the only indication that it is
running is an icon at the right end of the status bar on your screen.

Exiting *BCMS Vu* Wallboard Software

To exit *BCMS Vu* Wallboard Software,

1. Click with the secondary mouse button on the icon at the right end
   of the status bar.

2. Follow the menu that appears to close the Wallboard software.

Sending a Wallboard Display to an External Wallboard

If an external wallboard has been registered with *BCMS Vu* Server, you can direct the output of one Wallboard Display on your monitor to appear on the external wallboard.

To assign a Wallboard Display to an external wallboard, do the following:

1. If the Wallboard Display Report is already created,

   a. Open it. Refer to "Opening a Report" on page 7-36.

   b. Select the "**Report Properties**" toolbar button

      or

      In **Edit**, select **Report Properties**.

   c. Page 1 of the Wallboard Wizard opens. It is the same window that opened when you created the Wallboard Display. Refer to "Creating a Wallboard Display" on page 7-13.

   d. Check the box next to "Display data on physical wallboard."

   e. Select **Finish**.

2. If the wallboard display report does not exist, create it, following the instructions in "Creating a Wallboard Display" on page 7-13. Be sure you check the box next to "Display data on physical wallboard" on page 1 of the "Wallboard Properties" wizard.

> **Note** If you try to send a display to a wallboard that is being used, the "Wallboard connection failed" window appears with the following message:
>
> *The following wallboards were already in use:*
>
> *<name>*
>
> *<name>*

Chapter 8

Broadcasting a Message on an External Wallboard

If an external wallboard is registered with *BCMS Vu* Server, you can send short messages to the wallboard connected to any PC in the network that is running *BCMS Vu* Wallboard software and from the Server PC. For example, you might broadcast birthday messages or announcements about shift changes.

To broadcast a message on a wallboard, do the following:

1. Choose **Broadcast Message** from the **Options** menu.

   The "Broadcast Message" window appears.
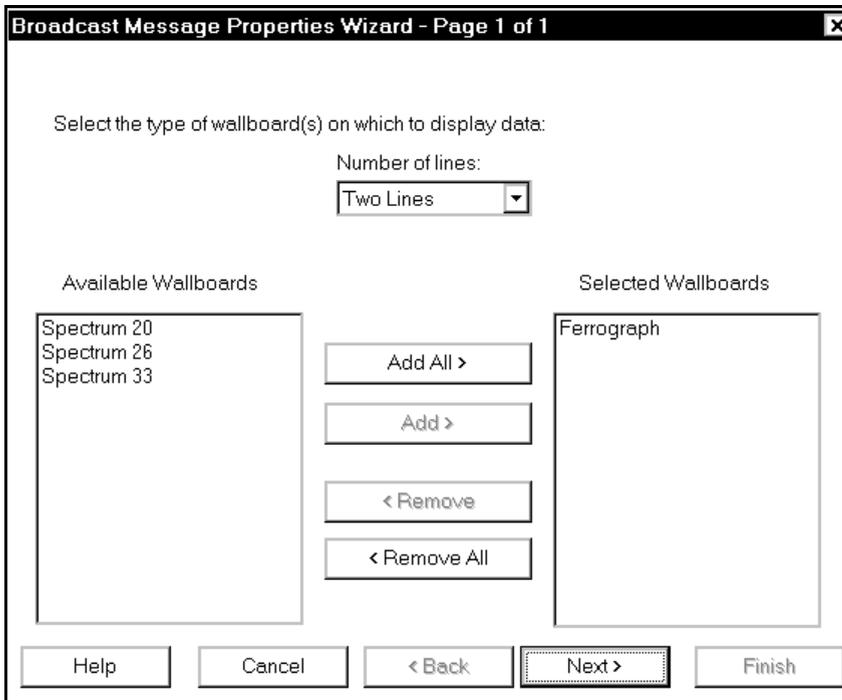
2. In the pull-down menu, select the "number of lines" supported by the wallboard on which you want the message to appear. This is the maximum number or rows of text that can fit at one time on the external wallboard. A list of registered wallboards connected to PCs in the network that fit this description appears in the "Available Wallboards" list.

3. Select the names of the wallboards on which you want to display the message. These are the names you gave to the wallboards when you registered them with the Server.

    a. To select all wallboards in the "Available Wallboards" list, select **Add All**.

    b. To select individual wallboards, highlight each and select **Add**.

    c. Use the **Remove** and **Remove All** buttons to remove wallboards that you do not want to select.

4. When all the wallboards you want to choose are in the "Selected Wallboards" list, select **Next**.

Chapter 8

The "broadcast details" window appears.

Broadcast Message Properties Wizard - Page 2 of 2	☒

Fill in broadcast details:

First line of message:

Congratulations, Team !

Second line of message:

We Hit Our Target !

☐ Double Height Characters

┌ Message Color: ────────────────────┐
◉ [green]   ○ [yellow]   ○ [red]
└──────────────────────────────────────┘

Message hold time (seconds):   5

Message display time [hh:mm:ss]:   00:00:30

Help	Cancel	‹ Back	Next ›	Finish

5. Place your cursor in the first line of the message box.

6. Enter the first line of the message you want to broadcast. If the wallboard accepts more than one line, enter the subsequent line(s) in the message box(es) below.

7. Select the radio button next to the color (green, yellow, or red) in which you want the message displayed.

8. In the "Message hold time:" text box, enter how long (in seconds) you want each line of the message to appear on the external wallboard before the next line appears.

9. In the "Message display time:" text box, enter the period of time (in hr:min:sec:) that you want the entire message to be displayed.

10. To send the message to the wallboard, select **Finish**.

Cancelling a Broadcast Message

To cancel a broadcast message in progress, select **Cancel Broadcast** from the **Options** menu.

9

BCMS Vu **Real-Time and Historical Report Data Items**

Introduction

BCMS Vu uses data items that are stored in database tables to build real-time and historical reports.

Real-time data items are retrieved directly from the BCMS on the DEFINITY system. Historical data items previously downloaded from BCMS are stored in a historical database on your PC.

This chapter defines every data item that is used by *BCMS Vu* to create both real-time and historical reports. It consists of two tables:

Data Items — Real-Time Reports

    This table defines data items used in real-time reports.

Data Items — Historical Reports.

    This table defines data items used in historical reports.

Note	Data items with the same name can have different definitions in different types of reports.

Data Items — Real-Time Reports

Data Items — Real-Time Reports

Data Item	Report Type	Definition
% Within Service Level	Split/Skill Detail Graph	Percentage of calls offered to the split/skill that completed during the interval and were answered within the acceptable service level. This represents a target level of service that is a measure of split/skill performance. For example, a split's service objective might be to answer 90% of calls within 20 seconds (the acceptable service level.) This field is blank if no calls have been recorded for this time interval or if there is no *Acceptable Service Level* administered on the Hunt Group form.
% Within Level	Split/Skill Summary Graph	Percentage of calls offered to the split/skill that completed during the current interval and were answered within the administered acceptable service level. The calculation is based on the following: $$\% \text{ IN SERV LEVL } = \frac{\text{acceptable}}{\text{offered}} \times (100)$$ where "acceptable" are ACD calls answered whose wait time was less than or equal to the administered service level for the split/skill, and "offered" includes all calls that queued to the split/skill, those that were answered, those that abandoned, those that outflowed and those that were queued to another split/skill and were handled in that split/skill.

Data Items — Real-Time Reports

Data Item	Report Type	Definition
% Within Service Leve	VDN	The percent of calls offered to the VDN that completed during the current interval and were answered within the acceptable service level defined on the VDN form. The calculation is: % IN SERV LEVL = $\dfrac{\text{acceptable}}{\text{calls offered}}$ x (100) "calls offered" is defined as: acdcalls + outflows + abandoned + connect + busy/disc, and "acceptable" is the number of ACD and CONNect calls that were answered within the administered service level. This field is blank if no calls were recorded for this time interval. This field is also blank if no Acceptable Service Level has been administered on the VDN form.
Abandoned Calls	Split/Skill Summary Graph	The total number of ACD calls that have hung up while waiting to be answered. This includes those calls that have abandoned while in queue or while ringing. Calls that abandon before queuing (for example, while listening to a forced first announcement) or that cannot be queued (for example, because the queue is full) are not counted as abandoned for the split/skill.
Abandoned Calls	VDN	The number of calls to this VDN that abandoned before being answered during the current period. This includes VDN calls that were routed to an attendant, station, or announcement, and abandoned before being answered.
Acceptable Service Level	(Any)	The number of seconds within which a call to a hunt group or VDN must be answered in order for it to be considered "acceptable." The service level is administered on the hunt group from the DEFINITY system. Timing for a call begins when the call enters the hunt group or when the VDN is encountered.
ACD Calls	Agent Summary Graph	The number of agents who are currently on an ACD call for this split/skill. This value also includes agents on Direct Agent calls.
ACD Calls	Split/Skill Summary Graph	The number of ACD calls answered by agents that completed during the current interval. This number also includes those calls that flow in from other split/skills.

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Data Items — Real-Time Reports

Data Item	Report Type	Definition
ACD Calls	VDN	Number of ACD calls to this VDN that were answered by agents in internally measured splits/skills and that completed during the current interval. The split/skill may have been reached via the queue-to-main, check backup, route-to, messaging split, or adjunct routing commands. Includes Direct Agent calls.
Available Agents	Split/Skill Summary Graph	The number of agents in this split/skill who are currently available to receive an ACD call directed to this split/skill.
Average Abandoned Time	Split/Skill Summary Graph	The average time before an ACD call abandons. This does not include any time spent in another split/skill's queue before intraflowing to this split/skill. The calculation is: AVG ABAND TIME = $\dfrac{\text{Sum of each aband call's time in queue (Total AbanTime)}}{\text{Total Number of Abandoned Calls}}$ This value does not include time spent listening to a forced first announcement or calls that *abandon* before queuing to the split/skill.
Average Abandoned Time	VDN	The average time abandoned calls waited before abandoning during the current period. The calculation is: AVG ABAND TIME = $\dfrac{\text{Total Abandon Time}}{\text{Total Calls Abandoned}}$
Average After Call	Split/Skill Summary Graph	The average ACW time for call-related ACW time completed by agents in this split during this time interval. Call-related ACW is the time that occurs immediately after an ACD call (that is, when an agent was in Manual mode and an ACD call ended, or when the agent presses the ACW button during an ACD call). For G3V4, time that the agents spent on non-ACD calls in ACW is not included, nor is time in ACW following a non-ACD Call. Time on non-ACD calls in ACW is included for the DEFINITY ECS. The calculation for Average After Call is: $\dfrac{\text{Total Call-Related ACW Time}}{\text{Number of Call-Related ACW Sessions}}$ The average is for ACW sessions, which may not correspond to the number of ACD calls either because some ACD calls did not have ACW time or because the call was recorded in another interval.

Data Items — Real-Time Reports

Data Item	Report Type	Definition
Average Speed of Answer	Split/Skill Summary Graph	The average amount of time it takes before ACD calls are being answered. This value includes time waiting in the queue and time ringing at the agent. The calculation is: $$\frac{\text{Sum of Each Completed Call's Time In Queue + Time Ringing}}{\text{Total Number of ACD Calls Answered}}$$ Keep the following things in mind: Calls that flow in from other split(s)/skill(s) do not include time in queue from the other split/skills in this calculation. Also, the AVG SPEED ANS does not include time spent in processing before the call is queued (for example, listening to a forced first announcement). A completed call may span more than one time period. ACD calls that are in process (have not terminated) are counted in the time period in which they terminate. For example, if an ACD call begins in the 10:00 to 11:00 time period, but terminates in the 11:00 to 12:00 time period, the data for this call is counted in the 11:00 to 12:00 time period.
Average Speed of Answer	VDN	The average time to answer ACD and connect calls (see CONN CALLS below) that completed for this VDN during the current period. This includes the time in vector processing, in a split/skill's queue, and time ringing. The calculation is: $$\text{AVG SPEED ANS} = \frac{\text{Total Answer Time}}{\text{Total ACD Calls + Total CONNect CALLS}}$$ "Answer time" for a call is recorded when the call ends. If a call originates in interval x, is answered in interval y, and ends in interval z, the associated answer and talk times are recorded in interval z.
Average Talk Time	Split/Skill Summary Graph	Average talk time for answered ACD calls to the split/skill that completed during the current interval. This calculation includes the time each agent spent talking, but does not include time the call spent ringing at an agent. The calculation is: $$\text{AVG TALK TIME} = \frac{\text{Total ACD Talk Time}}{\text{Total Number of ACD Calls Answered}}$$

Chapter 9

Data Items — Real-Time Reports

Data Item	Report Type	Definition
Average Talk/Hold Time	VDN	The average talk time for ACD calls to this VDN that completed during the current period. This does not include ring time, but it does include Direct Agent calls and any time the caller spent on Hold. The calculation is: AVG TALK/HOLD = Total ACD Talk Time + Total ACD Hold Time ACD Calls
Calls Busy/Disc	VDN	The number of calls that encountered a busy or disconnect step in vector processing
Calls Offered	(Any)	The total number of completed calls that accessed the VDN during the current interval. This calculation is: CALLS OFFERED= ACDCALLS + OUTFLOWCALLS + BUSY_DISCONNECT + ABN CALLS
Calls Waiting	Split/Skill Detail Graph	The number of calls currently queued and calls ringing at an agent's phone
Calls Waiting	Split/Skill Summary Graph	Number of calls waiting in the split/skill's queue or ringing at agents in the split/skill. If any of the calls in the queue are Direct Agent calls, the Direct Agent Calls field is set to "y" (in the Real-Time Text System report). Consult the Glossary for a description of the Direct Agent feature.
Calls Waiting	VDN	The number of calls that encountered this VDN and have not been answered, abandoned, outflowed, or forced busy/disc. Includes calls in queues, in vector processing, and ringing at an agent's station.
Connected Calls	VDN	Total number of calls to this VDN that completed during the interval that were routed to an extension, attendant or announcement, and were answered there
Date	VDN	The current date and time (updated every 30 seconds or when the update key is pressed)
EXT In Call	Agent Summary Graph	Number of non-ACD calls that this agent has received that completed during the current interval. (Calls in process are not counted until they are completed.) The maximum value is 255.

Data Items — Real-Time Reports

Data Item	Report Type	Definition
EXT Out Call	Agent Summary Graph	Number of non-ACD calls that this agent has made that completed during the current interval. (Calls in process are not counted until they are completed.) The maximum value is 255.
Flow Out	VDN	Total number of calls to the VDN that were successfully routed to another VDN or off the DEFINITY system
Oldest Call	Split/Skill Detail Graph	Amount of time that the oldest call currently waiting has spent in this split/skill's queue and ringing at an agent
Oldest Call	Split/Skill Summary Graph	Amount of time that the oldest call has been waiting (in this split/skill's queue and ringing) to be answered
Oldest Call	VDN	The number of calls that encountered this VDN and have not been answered, abandoned, outflowed, or forced busy/disc. Includes calls in queues, in vector processing, and ringing at an agent's station.
Total ACD	Split/Skill Detail Graph	Total number of ACD calls that were answered by this agent for this split/skill that completed during the current interval. (Calls in process are not counted until they are completed.)
Total ACW	(Split/Skill Detail Graph	The number of agents in this split/skill who are currently in ACW mode for this split/skill. Refer to the Glossary for a description of After Call Work (ACW) mode. For G3V4, agents on extension calls from ACW are not included in the Total ACW. For the DEFINITY system, agents on extension calls from AUX or from AI/MI are included in the Total AUX. If an agent is in ACW mode for another split, the agent is included in the Other state count for this split.
Total AUX	Split/Skill Detail Graph	The number of agents in this split/skill who are currently in the AUX work mode for this split/skill. For G3V4, agents on extension calls from AUX or from AI/MI are not included in the Total AUX. For the DEFINITY system, agents on extension calls from AUX or from AI/MI are included in the total AUX. If an agent is answering a call from another split/skill or is in ACW work mode for another split/skill, that agent is not considered in AUX work mode for this split/skill and is not included in this number. The agent is included in the Other state count.

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Data Items — Real-Time Reports

Data Item	Report Type	Definition
Total Available	Split/Skill Detail Graph	The number of agents in this split/skill currently available to receive an ACD call. In order to be counted as being available, agents must either be in the Auto-In or Manual-In work mode. Refer to the Glossary for a description of work modes. If the agent is on another split/skill call or is performing After Call Work for another split/skill, the agent is not considered available and is not recorded here. If a call is ringing at the agent's phone or a call is on hold, the agent is not considered available unless Multiple Call Handling is active and the agent selects AI/MI with a call on hold. If the agent is on an extension or on an extension-out call, the agent is not considered available.
Total Extn	Split/Skill Detail Real-Time Graph	The number of agents in this split/skill who are currently on non-ACD calls. These non-ACD calls may be either incoming (direct to the extension) or outgoing (direct from the extension). Those agents receiving or making extension calls while available, or while in the ACW or AUX work mode are recorded as being on extension calls.
Total Other	Split/Skill Detail Graph	The number of agents in this split who • Are on a call from another split/skill • Are in ACW work mode for another split/skill • Have placed a call on HOLD and made no other state selections • Have a call ringing at their voice terminals • Are dialing a number (to place a call or activate a feature). All agents in the Other state are unavailable for ACD calls.
Total Staffed	Split/Skill Detail Graph	The number of agents currently logged into the split/skill. Staffed equals available agents, agents on ACD calls, and agents in ACW, AUX, and Other.
VDN Name	VDN	The name of the VDN being reported. If the VDN does not have a name administered, this field displays EXT XXXXX where "XXXXX" is the VDN's extension.

Data Items — Historical Reports

Data Item — Historical Reports

Data Item	Report Type	Definition
% All Busy	Trunk	The percentage of time that all the trunks in this trunk group were busy (on calls or maintenance busy) during this interval. The calculation is % ALL BUSY = $\dfrac{\text{Total time all trunks busy}}{\text{Time Interval}}$ x (100) where "all trunks busy" is the sum of all times when all trunks were simultaneously busy.
% In Service Level	Split/Skill	The percentage of ACD calls completed during the interval that were answered within the administered service level. % IN SERVICE LEVEL = $\dfrac{\text{acceptable}}{\text{offered}}$ x (100) where: "acceptable" are ACD calls answered whose wait time was less than or equal to the administered service level for the split/skill, and "offered" includes all calls that queued to the split/skill, those that were answered, those that abandoned, those that outflowed, and those that were queued to another split/skill and were handled in that split/skill.

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Data Item — Historical Reports

Data Item	Report Type	Definition
% In Service Level	VDN	The percentage of ACD connect calls that completed during the current interval and that were answered with the administered service level for this VDN. Calculated as follows: % IN SERVICE LEVEL= $\dfrac{\text{acceptable}}{\text{calls offered}}$ x 100 where "acceptable" is the number of answered calls whose answer time was less than or equal to the administered service level for the VDN, and "calls offered" is the total number of calls that accessed the VDN and completed during the current interval. This field is blank if no calls have been recorded for this time interval. This field is also blank if no Acceptable Service Level is administered on the VDN form.
% Time Maintenance	Trunk	The percentage of time that one or more trunks were busied out for maintenance purposes. The calculation is: % TIME MAINTENANCE = $\dfrac{\text{Total Maintenance Busy Time}}{\text{Time Interval x Number of Trunks in Group}}$ x (100) where: "Total Maintenance Busy Time" is the sum of Maintenance Busy Time (in minutes) for all trunks (individually) in this trunk group during this interval, and "Time Interval" is expressed in minutes (for example, 30 if using a half-hour interval, 60 if using a one-hour interval, and 1440 if using a daily summary). Changing the number of trunks in a trunk group can cause unexpected results for that interval.

Data Item — Historical Reports

Data Item	Report Type	Definition
Aband Calls	Split/Skill	The total number of ACD calls that have hung up while waiting to be answered during this time interval. This value includes those calls that have abandoned while in queue or while ringing. Calls that abandon before queuing (for example, while listening to a forced first announcement) or that cannot be queued (for example, because the queue is full) are not counted as abandoned for the split/skill.
Aband Calls	VDN	The total number of calls that have abandoned from the VDN before being answered or outflowed to another position during the current interval. This value includes calls that abandoned while in vector processing or while ringing an agent. It also includes calls with a talk time that is less than the value administered for the BCMS/VuStats Abandon Call Timer.
Acceptable Service Level	(Any)	The number of seconds within which a call to a hunt group or VDN must be answered in order for it to be considered "acceptable." The service level is administered on the hunt group from the DEFINITY system. Timing for a call begins when the call enters the hunt group or when the VDN is encountered.
ACD Calls	Agent	Number of split/skill and direct agent ACD calls that were answered by the agent for all splits/skills that completed during this interval
ACD Calls	Split/Skill	The number of split/skill and direct agent ACD calls that were answered for this split/skill and that completed during this interval
ACD Calls	VDN	The total number of completed split/skill and direct agent ACD calls processed by this VDN that were answered by agents in an internally measured split/skill during this period
Agent	Agent	The extension or login ID of the agent
Agent Name	Agent	The name of the agent. If no name is administered, the agent's extension is displayed in the form EXT 65432.

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Data Item — Historical Reports

Data Item	Report Type	Definition
Avg Aband Time	Split/Skill	The average time before an ACD call abandons. This value does not include any time spent in another split/skill's queue before flowing into this split/skill. The calculation is: AVG ABAND TIME = $$\frac{\text{Sum of each abandoned call's time in queue}}{\text{Total Number of Abandoned Calls}}$$ This value does not include time listening to a forced first announcement or calls that abandon before queuing to the split/skill.
Avg Aband Time	VDN	The average time calls spent waiting in this VDN before being abandoned by the caller during the current interval. The calculation is: AVG ABAND TIME = $$\frac{\text{Total VDN Abandon Time}}{\text{Total Number of Abandoned VDN Calls}}$$
Avg Extn Time	Agent	Average time that was spent talking on non-ACD calls that completed during this interval. This does not include time the call spent on hold. The calculation is: AVG EXTN TIME = $\dfrac{\text{Total Ext Time}}{\text{Total Number of Ext Calls}}$

Data Item — Historical Reports

Data Item	Report Type	Definition
Avg Speed Ans	Split/Skill	The average amount of time that answered ACD calls (split/skill and Direct Agent) that completed during the reporting interval spent in queue and ringing at an agent before being answered during the reporting interval. Calls that flowed in do not have queue time from the previous split/skill included in this average. This calculation is: AVG SPEED ANS = $$\frac{\text{Sum of Each Completed Call's Time In Queue + Time Ringing}}{\text{Total Number of ACD Calls Answered}}$$ Keep the following things in mind: This value does not include time before the call queued to this split/skill, for example, while listening to a forced first announcement. A completed call may span more than one time period. ACD calls that are in process (have not terminated) are counted in the time period in which they terminate. For example, if an ACD call begins in the 10:00 to 11:00 time period, but terminates in the 11:00 to 12:00 time period, the data for this call is counted in the 11:00 to 12:00 time period.
Avg Speed Ans	VDN	The average time to answer ACD and connect calls (see CONN Calls below) that completed for this VDN during the current period. This includes the time in vector processing, in a split/skill's queue and time ringing. This calculation is: AVG SPEED ANS = $$\frac{\text{Total Answer Time}}{\text{Total ACD Calls + Total CONNect CALLS}}$$ A completed call can span more than one time period. ACD calls that are in process (have not terminated) are counted in the time period in which they terminate. For example, if an ACD call begins in the 10:00 to 11:00 time period, but terminates in the 11:00 to 12:00 time period, the data for this call is counted in the 11:00 to 12:00 time period.
Avg Staff	Split/Skill	The average number of agents who were logged into this split/skill (staffed) during the reporting interval. AVG STAFF = $\dfrac{\text{Total Staff Time}}{\text{Time Interval}}$

Chapter 9

Data Item — Historical Reports

Data Item	Report Type	Definition
Avg Talk/Hold Time	VDN	The average duration of ACD calls (from answer to disconnect) for this VDN during the current interval. This includes time spent talking and on hold. The calculation does not include time spent ringing at an agent. The calculation is: AVG TALK TIME = $$\dfrac{\text{Total ACD Talk Time} + \text{Total ACD Hold Time}}{\text{ACD Calls}}$$
Avg Talk Time	Agent	The average duration of ACD calls for all internally measured splits/skills the agent was logged into. This value includes time spent talking but does not include the amount of time the agent was holding an ACD call or ring time at the agent. The calculation is: $$\text{AVG TALK TIME} = \dfrac{\text{Total ACD Talk Time}}{\text{Total Number of ACD Calls Answered}}$$
Avg Talk Time	Split/Skill	The average amount of time agents talked on ACD calls (split/skill and direct agent) for this split/skill. The calculation does not include time that the call was ringing at an agent or time the call spent on hold. The calculation is: $$\text{AVG TALK TIME} = \dfrac{\text{Total ACD Talk Time}}{\text{Total Number of ACD Calls Answered}}$$
Calls Busy/Disc	VDN	The total number of calls that were forced busy or forced disconnect during the current interval
Conn Calls	VDN	The total number of calls completed during this interval that routed to a station, attendant, or announcement and were answered there, or calls that were answered in an unmeasured split/skill
Extn Calls	Agent	The total number of non-ACD incoming and outgoing calls completed by this agent during the reporting interval. Only those non-ACD calls that are originated and/or received while the agent is logged into at least one split/skill are counted.

Data Item — Historical Reports

Data Item	Report Type	Definition
Flow In	Split/Skill	The number of calls that the split/skill received as a coverage point or that call-forwarded to this split/skill from another internally measured split/skill during this interval. This also includes calls answered in this split/skill as the second or third split/skill to which they queued and calls that were redirected from this split/skill by redirection on no answer. This item is recorded immediately when it occurs, not at the end of the call.

Data Item — Historical Reports

Data Item	Report Type	Definition
Flow Out	Split/Skill	The total number of calls queued to this split/skill that were: • Successfully sent to the split/skill's coverage point after queuing for the specified don't answer interval. (This does not include calls that went to coverage based on any other criterion.) • Forwarded out via call forwarding • Forwarded out via a route to station extension vector step • Answered via the Call Pickup feature • Forwarded out via Look Ahead Interflow • First queued to this split/skill and then were answered by the second or third split/skill queued to • Redirected back to this split/skill or its coverage path due to Redirect On No Answer timing FLOW OUTs are recorded when a call ends. When calls are queued to multiple splits/skills at one time, inflows and outflows become a bit more complicated. If a call queued to more than one split/skill is answered in a non primary split/skill (that is, the second or third split/skill to which it is queued), an outflow is recorded in the statistics for the primary split/skill, and an inflow and an answer are recorded in the statistics for the answering split/skill. For example, suppose there are three splits numbered 1 through 3. A call queues for split 1 since all agents are busy in this split. The call then goes into queue for splits 2 and 3. An agent in split 3 answers the call. In this example, an outflow is recorded in the statistics for split 1, and an inflow and an answer are recorded in the statistics for split 3. A dequeued call is counted for split 2. If the call is answered in the primary split, no inflows or outflows are recorded for any split. Splits 2 and 3 record the call as dequeued.

Data Item — Historical Reports

Data Item	Report Type	Definition
Flow Out (Continued)	Split/Skill	If a call queued to three splits (for example, splits 1, 2, and 3, with split 1 being the primary split) encounters a route-to command that sends the call to another VDN, an outflow is recorded in the statistics for split 1. If this other VDN queues the call to splits 4 and 5 and the call is answered in split 4, an answer is recorded in the statistics for split 4. However, no inflow is recorded to the statistics for split 4. If the call is answered in split 5, an outflow is recorded for the statistics for split 4, and both an inflow and an answer are recorded in the statistics for split 5. Similarly, if a call queued to more than one split routes to another split, an outflow is recorded to the statistics for the primary split, but no inflow is recorded to the statistics for the routed-to split.
Flow Out	VDN	The total number of calls that were routed to another VDN or off of the DEFINITY system. Once a call outflows, the system does not take further measurements on the call for this VDN.
Group	Trunk	The trunk group number
Group Name	Trunk	The name that is administered for this trunk group. If no name is administered, then this field is displayed as blank.
Incoming Aband	Trunk	Total number of incoming calls on this trunk group that abandoned during this interval
Incoming Calls	Trunk	The total number of incoming calls carried by this trunk group that ended during this interval
Incoming CCS	Trunk	The total holding time (usage) for incoming calls to the trunk group during the specified reporting interval. The units are expressed in hundred call seconds (CCS).

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Data Item — Historical Reports

Data Item	Report Type	Definition
Incoming (Hold) Time	Trunk	The average holding time for incoming calls to this trunk group that completed during the specified reporting interval. Holding time is defined as the length of time in minutes and seconds that a facility is used during a call. The calculation for incoming time is: INCOMING TIME = $$\frac{\text{Total Holding Time for all Incoming Calls}}{\text{Total Number of Incoming Calls}}$$
Outgoing Calls	Trunk	The total number of outgoing calls for this trunk group that completed during the specified reporting interval
Outgoing CCS	Trunk	The total holding time (usage) for outgoing calls from this trunk group. The units are expressed in CCS.
Outgoing (Hold) Time	Trunk	The average holding time for outgoing calls that completed during the specified reporting interval. The calculation is: OUTGOING TIME = $$\frac{\text{Total Holding Time for Outgoing Calls}}{\text{Total Number of Outgoing Calls}}$$
Outgoing Comp	Trunk	The total number of outgoing calls that were placed over this trunk group and answered during the specified reporting interval. A call is considered completed if network answer supervision is returned or if the call lasts longer than the answer supervision time-out parameter.
Split	Split/Skill	The split/skill number
Split Name	Split/Skill	Displays the name that is administered for this split number. If no name exists, BCMS displays the split extension (for example, EXT 65432).

Data Item — Historical Reports

Data Item	Report Type	Definition
Time/Day	Agent	The time or day interval specified in the command line. Time is always expressed in 24-hour format. Start and stop times are optional. Reports always start at the earliest time interval (either hour or half-hour). If no start time is given, the oldest time interval is the default. A stop time requires an associated start time. If no stop time is given, the last completed time interval (hour or half-hour) is the default. If no start time or stop time is given, the report displays data accrued for the previous 24 time intervals. If you specify day in the command and do not include a start day or stop day, the report displays data accrued for the previous six days and data accrued through the most recently completed interval (hour or half-hour) for the current day.
Total After Call	Agent	The total amount of time that the agent spent in ACW work states (whether related to an ACD call or not) for all splits/skills during the reporting interval. This includes time agents spent on extension-in and extension-out calls while in the ACW work mode. For the DEFINITY system, this does NOT include time agents spent on extension calls while in ACW for G3V4. If an agent entered ACW in one interval, but ended ACW in another interval, the appropriate amount of ACW time is credited to each of the intervals.
Total After Call	Split/Skill	The amount of time that the agents in this split/skill spent in call-related or noncall-related ACW mode during the reporting interval. This value includes time spent on direct incoming or outgoing calls while in ACW. If an agent entered ACW in one interval, but left ACW in another interval, each interval is credited with ACW time.

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Data Item — Historical Reports

Data Item	Report Type	Definition
Total AUX/Other	Agent	The sum of the time that the agent has the AUX button pressed and is not doing anything else for any of the other splits/skills (that is, the sum of the time that the agent is in AUX work mode for all splits/skills). This value does not include time the agent spent in Manual-In, Auto-In, or ACW mode for another split/skill.
		For the G3V4, time on AUXIN/AUXOUT calls is not included here. For the DEFINITY system, time on AUXIN/AUXOUT calls is included here.
		Note that if the agent was in Other for all logged-in splits, that time is reflected here. For example, ringing calls can cause several seconds of AUX/OTHER time to accrue. Also, any non-ACD call time is also counted in the AVG EXTN TIME column. Two points of contrast are:
		• The measurement TOTAL AUX/OTHER is time-interval based, rather than being call-related. For example, if the agent is in AUX from 9:55 to 10:05, five minutes is recorded in the 9:00 to 10:00 time interval and five minutes is recorded in the 10:00 to 11:00 time interval.
		• The measurement AVG EXTN TIME is call related. For example, if an agent is on a non-ACD call from 9:55 to 10:05, the call and ten minutes of EXTN time are recorded in the 10:00 to 11:00 time interval.
		Because the agent report includes some call-related items and some interval-based items, the sum of all items for a given hour may not exactly equal 60 minutes.

Data Item — Historical Reports

Data Item	Report Type	Definition
Total AUX/Other	Split/Skill	The total amount of time that agents spent in the AUX (auxiliary) work mode or in the Other state in all split/skills. This value does not include the time agents spent on another split/skill's calls or in ACW for another split. For the ECS, this value includes time spent on non-ACD calls while in AUX for this split. For G3V4, this value does not include time spent on non-ACD calls while in AUX. For example, AUX TIME is accumulated whenever any agent logs into the split and: • Receives an EXTN call while in AUX or AVAIL state • Makes an EXTN call while in AUX or AVAIL state • Presses his/her AUX button. The AUX/Othertime measurement is time-interval based, since it is not directly related to a call. For example, if an agent is in AUX from 9:55 to 10:05, then five minutes is recorded in the 9:00 to 10:00 time interval and five minutes is recorded in the 10:00 to 11:00 time interval.
Total Avail Time	Agent	The sum of the time that the agent was available to receive ACD calls during the reporting interval. During this time, the agent: • Was in Auto-In or Manual-In work mode for at least one split/skill • Was not in ACW in any split/skill • Was not on any call or placing any call (unless MCH is active) • Did not have ringing calls.
Total Hold Time	Agent	The total time ACD calls spent on hold at this agent. This time is the caller's hold time and is independent of the state of the agent. TOTAL HOLD TIME does not include the hold time for non-ACD calls.
Total Time Staffed	Agent	The total time that the agent spent logged into at least one split/skill during the reporting interval. Staff time is accumulated for an agent who is in multiple splits/skills as long as the agent is logged into any split/skill. Concurrent times for each split/skill are not totaled.

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Data Item — Historical Reports

Data Item	Report Type	Definition
VDN	VDN	The extension number of this VDN at this time
VDN Name	VDN	The name that is administered for this VDN. If no name exists, the VDN extension (for example EXT 64532) is displayed.

10

Troubleshooting

Introduction

This chapter describes procedures to help you identify and resolve problems with the *BCMS Vu* software. It is divided into the following sections:

- Resolving problems

- Error log

- Connection log

- Troubleshooting the data module

- Using a terminal emulator

- Error messages.

> **Note** In addition to using the above methods to troubleshoot *BCMS Vu* software, you should always check the Readme files that are delivered with the software. These files include late-breaking changes to and news about the software. You will find them at **Start/Programs/Lucent Technologies/Server Readme**, **Start/Programs/Lucent Technologies/Client Readme**, and **Start/Programs/Lucent Technologies/Wallboard Readme**.

Resolving Problems

Use the following guidelines to investigate and correct errors:

1. Scan through the **Problem** column to find the description of the problem that you have encountered.

2. In the **Probable Cause** column, one or more problem descriptions are offered. Select the one that best describes the observable condition.

3. Perform the corresponding task in the **Action** column.

Starting/Connecting Problems

Problem	Probable Cause	Action
Attempted to start Server software. Software "froze."	Machine name was changed in **Control Panel/Network Identification/Computer Name**.	Reinstall *BCMS Vu* Server software. (You do not have to first uninstall it.)
Can't start *BCMS Vu* Server except in simulator mode.	Hardware key was not installed before *BCMS Vu* Server software was started.	Attach hardware key and restart *BCMS Vu* Server software. Refer to the Installation Guide and instructions that accompany the hardware key.
DEFINITY system connection test does not pass. Cannot connect to DEFINITY system.	The wrong cable is being used to connect the PC to the data module.	Use the correct cable.
	The cable between the PC and data module is not connected properly.	Properly connect the cable between the PC and data module. Refer to Chapter 3, "Installing the Data Module and Hardware Key" in *BCMS Vu Software R2 Installation Guide* (585-217-103).
Continued on the following page		

Starting/Connecting Problems

Problem	Probable Cause	Action
(**continued**) DEFINITY system connection test does not pass. Cannot connect to DEFINITY system.	No administration session available.	Request an administration session from the DEFINITY system administrator.
	Phone number or password and/or user ID are incorrect.	Obtain the correct phone number, user ID and password from the DEFINITY system administrator.
	User ID permissions are not correct.	Obtain the correct user ID permission from the DEFINITY system administrator.
	BCMS Vu is not communicating with the data module.	Check communication between PC and data module using a terminal emulator such as *HyperTerminal*™. Refer to "Using a Terminal Emulator" on page 10-30.
	The serial port specified to connect to the data module is connected to something else or is not connected.	Specify correct serial port in Server Configuration Wizard.
	Server is intentionally not connected to DEFINITY system.	Start *BCMS Vu* Simulator to run *BCMS Vu* Server and Client with randomly generated data.

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Starting/Connecting Problems

Problem	Probable Cause	Action
"Communications error" window appears offering two options: "Retry the connection" and "Cancel the connection." The program attempts to reconnect. If it does not reconnect and you do not select **Cancel**, the program attempts to reconnect again after thirty seconds, offering the same options. It tries again after a minute, then after two minutes, four minutes, and so forth. It continues trying to reconnect indefinitely at greater and greater intervals, until it is successful or until you select **Cancel**.	The connection to the DEFINITY system has dropped.	Connect to DEFINITY system.
In *Windows* 95 on a single PC without a Network Interface Card (NIC): Cannot connect the Client to the Server, especially with error 6502 ("Client can't find Server").	If you are running *BCMS Vu* Server and Client on a single PC that does not have a NIC, you must configure the PC correctly.	Refer to "Configuring a PC Running *Windows* 95 without a Network Interface Card (NIC)" in Chapter 2 of *BCMS Vu Software R2 Installation Guide* (585-217-103).

Starting/Connecting Problems

Problem	Probable Cause	Action
In *Windows* 95 on a LAN: Attempted to start Server software. Received message that *Omninames* and/or *ConnectionServer* is/are not running.	*Omninames* and/or *ConnectionServer* is/are not running.	1. Close all applications. 2. Reboot the PC. 3. Wait three minutes. 4. Restart Server software. This allows time for the TCP/IP stacks to correctly set up on your PC/LAN. or Restart *Omninames* and *ConnectionServer*: 1. Open **C:\Programs Files\Lucent\ BCMS Vu\Common**. 2. Double-click on *ConnectionServer.exe.* 3. Open the Task Manager (**Ctrl-Alt-Del**) and verify that *ConnectionServer.exe* is running. 4. Close Task Manager. 5. Double click on *omniNames.exe.* 6. Verify that *omniNames.exe* is running, (step 3) and close Task Manager.

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Historical Data Downloading Problems

Problem	Probable Cause	Action
Historical data not updated and/or Historical Reports have no data.	Lost connection to the DEFINITY system	Check the status of the DEFINITY system and the physical connections. If necessary, connect to the DEFINITY system.
	Database location is incorrectly specified.	Check location of database. If database is in incorrect location, correctly specify the location. Refer to Chapter 4, "Configuring and Managing *BCMS Vu Software,"*of *BCMS Vu Software User Guide* (585-217-102). If database location is correct and problem persists, contact Lucent Technologies.
	Lack of proper user permission	Be sure you have the following permissions: *Display Admin and Maint Data* and *System Measurements.*
	Improper username/password	Be sure you are using the correct username/ password combination. Try manual login on SAT.
	There is no data in the database for the "Absolute" dates specified.	Verify that the "Absolute " dates are correct.

Historical Data Downloading Problems

Problem	Probable Cause	Action
Historical data downloads not occurring at scheduled times.	*BCMS Vu* user was shut down at scheduled download times.	Find out if *BCMS Vu* was shut down at time of scheduled download: 1. Log in to the DEFINITY system. 2. Execute command *list history*. 3. Verify that *BCMS Vu* user was logged in at the scheduled download times. If it was not logged in, make sure it is always logged in at scheduled download times. If it was logged in at scheduled download times, make sure database location is correctly specified. See Chapter 4, "Configuring and Managing the *BCMS Vu* Software," of *BCMS Vu Software User Guide* (585-217-102). If database location is correct and problem persists, contact Lucent.

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Historical Data Downloading Problems

Problem	Probable Cause	Action
For *Windows* 95: Historical data download (manual and scheduled) "freezes" on Split/Skill Data Table.	*Microsoft* DAO installation failed.	Reinstall DAO: 1. Close all applications. 2. Insert the *BCMS Vu* CD-ROM into the CD drive. 3. In the "BCMS Vu R2 Master Setup" window select **Exit**. 4. In *My Computer* or *Explorer* select the CD-ROM drive. 5. In the folder **Server\dao\disk1**, double-click on "setup.exe." The program will correctly install DAO.

Historical Report Problems

Problem	Probable Cause	Action
Error message appears on PC monitor: "list bcms xxx day: Column data in BCMS has overflowed DEFINITY system display capacity." Historical Report indicates that an agent was logged on 1092 min, 15 sec, but agent was actually logged on for a longer period of time.	1092 min, 15 sec (18 hr, 12 min, 15 sec) is the longest period of time that DEFINITY system can record.*	Make sure each agent has a unique ID and logs out at the end of each shift.

*   This error is reported if the value of any data item overflows, that is, becomes larger than the maximum value of the item that can be reported. However, the chance of a field in a Historical Report overflowing (other than a time field) is exceedingly small.

Problem	Probable Cause	Action
Each line of data in historical data report is duplicated on the next line.	The database may be fragmented.	Compact the database. Refer to" Compacting the Database" in Chapter 4.
Scheduled Historical Report to print to file, and it did not happen.	If you specify "Print to file" when you schedule the printing of Historical Reports, when the time to print arrives, the program requests that you enter a file name and waits until one is supplied.	Do not schedule a Historical Report to print to a file.

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Historical Report Problems

Problem	Probable Cause	Action
Scheduled Historical Report printing did not occur, and this is not recorded in the error log.	If *BCMS Vu* Server or Client is closed or if printer is not operating when printing is scheduled, this is not indicated in the error log. Error log records only successful scheduled printing.	Check error log. If printing is recorded, find out if *BCMS Vu* Server or Client was closed at the scheduled time or if printer was not operating.
Scheduled Historical Report prints on a printer that was removed from the printer list.	If you remove a printer from your printer list, scheduled reports that are targeted to that printer **will print** if the printer is still **on the network**, and you will not be informed of this.	Change the printer to which the report is targeted.

Real-Time Report Problems

Problem	Probable Cause	Action
For non-EAS installations: Agent Reports are not functioning properly.	Login ID option is not validated.	Validate Login ID at the DEFINITY system by doing the following: • If the System Customer Option Field, "bcms login IDs," is set to "y," the Feature-related System Parameters Field, "Validate loginIDs," must also be set to "y." • If "bcms loginIDs" is set to "n," call Lucent.
Real-time reports are not changing.	Lost connection to the DEFINITY system.	Check connection on status bar. Try to reconnect to the DEFINITY system if the connection is not active and if the DEFINITY system is still operational.
Reports and/or downloads do not appear to be functioning.	Lack of proper user permission	Make sure the login ID for the DEFINITY system has the following permissions: *Display Admin and Maint Data* and *System Measurements*.
	Improper username/password	Make sure you are using the correct username/ password combination. Try manual login on SAT.

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Real-Time Report Problems

Problem	Probable Cause	Action
Real-time reports do not update within thirty seconds.	Too many open real-time reports	Reduce the number of open real-time reports. Ten clients should each be able to open ten real-time reports without impacting performance.
	Download of Historical data is occurring.	Wait until download is completed.
Value of item does not appear above vertical bar in Real-Time Graph report.	If the label containing the value of the item is wider than the bar, the value is not shown. This prevents the numbers overlapping the numbers above adjacent bars.	None

Real-Time Report Problems

Problem	Probable Cause	Action
Real-Time reports do not run on the client PC.	When DNS is used on a Client with *Windows* 95, and the Server uses *Windows* NT 4.0, the Server) must have a line added to the "Hosts" file.	Edit the "host" file. 1. Using an editor, open **WINNT\System32\drivers\etc\Host**. 2. Insert the following line (if it is not there already) with the other "Hosts" lines: *<client IP address><tab><client PC Name>.domain.* 3. For example, if the client PC host name is *BCMSVuPC*, the domain is *ABC,INC* and the IP address is *123.123.123.123*, add the following line: *123.123.123.123<tab>BCMSVuPC.ABC,INC* 4. Save the file and exit the editor.
	DNS is not configured properly.	Configure DNS: Refer to "Configuring a Non-Novell LAN Network" in Chapter 2 of *BCMS Vu Software R2 Installation Guide* (585-217-103).

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Wallboard Problems

Problem	Probable Cause	Action
Reports and messages do not appear on Wallboard.	• Wallboard is not connected to the specified port on the specified PC. • Wallboard software is not running on the PC to which the wallboard is attached. • Wallboard is not properly registered. • Wallboard address is not correct. • Wallboard has a poor physical connection.	Correct problem. Refer to "Installing a Wallboard" in *BCMS Vu Software R2 Installation Guide,* (585-217-103), and "Registering Wallboards" on page 4-11.
	Wallboard COM Port is not activated in your PC hardware configuration.	Consult your PC user guide or its manufacturer's technical support to see how to tell if your COM Port has been disabled.
Wallboard is not changing. Data on wallboard indicates zero value and doesn't update for a long period of time.	Server lost connection to the DEFINITY system.	Check connection on status bar. Try to reconnect to the DEFINITY system if the connection is not active and if the DEFINITY system is still operational. Make sure wallboard software is running on the PC to which the wallboard is connected.

Wallboard Problems

Problem	Probable Cause	Action
Wallboard display does not change for several minutes.	Server program has been closed or Server PC has been disconnected.	Reconnect Server PC and/or restart Server software.
Server cannot register wallboard.	COM Port larger than 8 specified in "COM Port" setting.	Use a COM Port number from 1 through 8.
After you try to register a wallboard, you select **Test Connection**. You do not see "Test Message" on the wallboard, even though you are sure that the wallboard is properly connected and that you entered the correct matching name and COM Port number.	Another Server is accessing the wallboard.	Wait until the other Server has finished accessing the wallboard.
Ferrograph wallboards only: If wallboard is disconnected while you try to write to it, no message is sent reporting that the wallboard can't be contacted.	Nature of Ferrograph wallboard	None

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Miscellaneous Problems

Problem	Probable Cause	Action
Another application on the PC "freezes."	User started to close *BCMS Vu*, but closing was not completed.	1. Press **CTRL-ALT-DEL** to open the *Windows* 95 "Close Program" window or the NT 4.0 "Task Manager" window. 2. Look for *BCMSVuServer*, *bcmsvuclient*, *omniNames.exe* and *ConnectionsServe.* 3. If any of these application names is there, highlight it and select the **End Task** or **End Process** Button.
Another application on the PC is not responding.	*BCMS Vu* is performing a historical data download.	Wait for the download to finish. Consider rescheduling the historical data download for a time of day when you are not using the PC.
When you upgrade from one version of R2 to another version, the old error log remains unchanged.	This is normal. Old entries will remain in the error log. New entries will be added as they occur.	None

Miscellaneous Problems

Problem	Probable Cause	Action
Error # 1111: Message stating that DAO did not install correctly.	*Microsoft* DAO installation failed.	Reinstall DAO: 1. Close all applications. 2. Insert the *BCMS Vu* CD-ROM into the CD drive. 3. In the "BCMS Vu R2 Master Setup" window select **Exit**. 4. In *My Computer* or *Explorer* select the CD-ROM drive. 5. In the folder **Server\dao\disk1**, double-click on "setup.exe." The program will correctly install DAO.

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Miscellaneous Problems

Problem	Probable Cause	Action
Unexpected symptoms, such as processor hanging and/or error messages indicating a memory allocation problem.	Programs other than *Microsoft* Office 95 and *Symantec pcANYWHERE* installed on the Server or Client PC. Lucent Technologies certifies that *BCMS Vu* software has been tested and found to run co-resident with *Microsoft* Office and *Symantec pcANYWHERE.* Lucent makes no claims whatsoever as to the compatibility of *BCMS Vu* software with any other software application.	Remove incompatible application(s) and restart *BCMS Vu.*

Miscellaneous Problems

Problem	Probable Cause	Action
For *Windows* NT 4.0 only: Received a message reporting a virtual memory error or memory allocation error.	Insufficient memory allocated for paging file size.	Check for enough disk free space. Always use at least the file size recommended by *Windows*: 1. Select **Control Panel/ System/ Performance**. 2. On the "Performance" tab, in the "Virtual Memory" box, select **Change**. 3. In the box labeled "Total Paging File Size for all Drives," note the number next to "Recommended." 4. Enter this number in the box labeled "Maximum Size (MB)." 5. Select **Set**. 6. Exit the Control Panel.

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Miscellaneous Problems

Problem	Probable Cause	Action
For *Windows* 95: Received a message reporting a virtual memory error or memory allocation error.	Insufficient memory allocated for paging file size.	Always use at least the file size recommended by *Windows*. 1. Select **Control Panel/ System/ Performance**. 2. On the "Performance" tab, select **Virtual Memory**. 3. Activate the radio button next to "Let Windows manage my virtual memory settings." 4. Select **OK**. 5. Exit Control Panel.

Miscellaneous Problems

Problem	Probable Cause	Action
One or more of the following happens: • Clients "freeze" for over a minute, then post error message telling that network connection from Server is broken, yet in the configuration diagram the Server indicates that Clients are still connected. • Server "freezes" and takes inordinately long time to display menu items. • Server connectivity icons (three icons at right end of taskbar) blink slowly.	Server connection to network is broken.	Stop the Server application and restart it. Server and Client programs should recover.

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Miscellaneous Problems

Problem	Probable Cause	Action
For *Windows* NT 4.0: Can't establish sharing. When you start *BCMS Vu* Server, you receive an error message telling you that the Server cannot establish sharing.	No sharing privileges	The server user must be either an "Administrator" or "Power User." Ask your network administrator to configure your user Login ID as such, or 1. Open **Start/Programs/ Administrative Tools/User Manager**. 2. In the upper window, click on your user name. 3. Click on **Groups**. 4. Add "Administrator" or "Power User" to the Server."

Miscellaneous Problems

Problem	Probable Cause	Action
On Novell network only: Can't access database or configuration files in supposedly shared folders.	Novell network not properly administered.	When you use a Novell network, you must use a TCP/IP stack configuration. If the Server is running on a *Windows* NT 4.0 machine or a *Windows* 95 machine using domain validation, all Clients must log into either the same domain as the NT 4.0 machine, or to a domain that has a trustee relationship with that domain, in addition to logging into the Novell LAN. You may need to refer to your network documentation or contact your network supervisor to do this.
On a LAN network with DHCP: Remote Client can't stay connected to the Server long enough to receive data.	Incorrect network configuration	When you use DHCP, you must be sure the PC running the *BCMS Vu* server has a static IP address. When you configure "DHCP," the "host name" under DNS in TCP/IP network properties must be the name of the PC.

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Miscellaneous Problems

Problem	Probable Cause	Action
On *Windows* 95: Chronic 7105 error (Receive Buffer Overrun)	Receive Buffer Speed set too high	*BCMS Vu* recovers from this problem automatically. If it occurs frequently, try adjusting the buffer speed for maximum performance: 1. Select **Start/Settings/Control Panel.** 2 Select the "System" icon and the "Device Manager" tab. 3. From the "Ports" pull-down window select the COM Port that the PC is connected to. 4. Select **Properties**. 5. Select the "Port Settings" tab and **Advanced**. 6. Move the "Receive Buffer" slider to the left to a lower setting. 7. Select **OK**. 8. After a reasonable time, check the error log to see if 7105 errors have been reduced. 9. Repeat steps 1 through 8 until you find the highest Receive Buffer speed that reduces the number of 7105 errors to an acceptable level.

Error Log

The *BCMS Vu* error log is an ASCII file containing the most recent 300 system messages generated by *BCMS Vu*. It is kept on the Server PC and contains messages about both Server and Client incidents.

| Note | In spite of its name, the error log also reports potential problems and useful information about the software and the system. |

The error log displays information about the last 300 incidents that have occurred. After 300 entries have been reported, the log rolls over, deleting the oldest record and writing in the newest. The contents are updated automatically every 30 seconds; the most recent incident is displayed at the top of the error log window.

You will not be able to see information about incidents which have occurred since you opened the error log until you close the "Notepad" window and re-open it. You should close the error log display as soon as you have read it or fixed the problem. You can select it again later if you encounter any more trouble.

Each row of the error log describes one incident. The significance of each column is as follows:

- There are three **severity levels** indicated by icons:

   Danger: A problem that stops part of the system from functioning normally

   Warning: A problem that should be fixed immediately

   Information: Useful information.

- The **subsystem name** identifies the module of the application in which the problem occurred. For example, the Server, Client, and ConnectionServer.

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- The **error description** is a brief statement about the cause of the error. For more about the cause of the error and how to prevent its happening again, refer to "Error Log" and "Error Codes" in Online Help or "Error Messages" in this guide.

- The **date/time stamp** identifies the time the error occurred.

To see the latest messages in the error log, do the following:

Select **Error log** from the **View** menu.

> or

Start Notepad and open the file **C:\Program Files\lucent\BCMS Vu\Server\BCMSVuServer\ ERR_xx.txt**, where "xx" is the build number of the software version.

| Note | When you update from one version of *BCMS Vu* Software R2 to a higher version, the error log is not recreated. That is, the old error log is copied verbatim into the directory with the new software and new incidents are added as they occur. |

By default, the most recent errors are at the top of the error log. You can scroll through the error log to see recent errors.

When you display the error log from *BCMS Vu*, you can sort the entries according to individual columns. Click on a column heading and the rows are sorted according to the values or alphabetization on the items in the column. To reverse the order or sorting, click on the column heading again.

Connection Log

In addition to the error log, which is typically kept on the Server PC, another file called the connection log resides on each Client PC. In it are stored statistics and information about all instances where the Client attempts to connect to or disconnect from the Server. If the Server is unavailable for some reason, this attempt cannot be logged to the error log, but it is entered into the connection log.

Each line contains details of each attempt the client makes to connect or disconnect from a Server, and contains the following information:

"E"	Ignore
Number	Ignore
Date and Time	The time at which the incident occurred
Severity	

0	Error
2	Warning
1	Information

Logged by	The Client name
ID	

8601	Successful connection
8602	Failed to connect
8603	Normal disconnection
8604	Abnormal disconnection
Details	Textual description of the error

If the Client fails to connect to the Server, the textual description of the entry describes in more detail the cause of the problem and the error number of the problem. Refer to "Error Messages" in this chapter and use this error number to track the real cause of the problem.

The connection log is found at **C:\Program Files\Lucent\BCMS Vu\ Client\Connection.log** and must be viewed in Notepad or any other ASCII editor.

Chapter 10

Troubleshooting the Data Module

Verifying the COM Port

If the DEFINITY system connection test does not pass,

1. Verify that the cable between the data module and the PC serial port is properly connected.

   If it is, go to step 2.

   If it is not, correctly connect the cable between the data module and the PC serial port. If the problem still exists, replace the cable to be sure you do not have a faulty cable. If the problem *still* exists, go to step 2.

2. Verify that you have selected the correct COM Port for the data module.

   If you have, go to step 3.

   If you have not, change the COM Port selection. Go to "Setting Up The COM Port" on page 10-29 for instructions on how to change the COM Port. If the problem still exists after you change the COM Port selection, go to step 3.

3. Consult your PC user guide or its manufacturer's technical support to see how to tell if your COM Port has been disabled.

4. Use the terminal emulator to be sure that your PC is communicating with the data module. See "Using a Terminal Emulator" on page 10-30.

5. Connect the data module voice terminal to another PC where *BCMS Vu* is working properly. If the datamaster voice terminal works properly on the new PC , there is a problem with your PC . Contact your technical support.

Setting Up The COM Port

If you get a message that *BCMS Vu* cannot start, it may be because you selected the wrong COM Port during installation.

You need to configure the COM Port so that your associated software can create the connections between your PC and your data module. To set up the COM Port, configure the DEFINITY system. See "Connecting to the DEFINITY System" on page 4-4.

Restart your PC .

Repairing a Corrupted Database

The database records that have been downloaded and stored on your PC hard disk can become corrupted.

You can correct this by using the **Repair Database** command in the **Options** menu. After you repair the database, you will probably want to update the database Index that allows reports to be quickly created.

You can also **compact** the database in order to store more data on your hard disk.

To repair a corrupted database,

1. In the **Options** menu, select **Repair Database...** or select the **Repair Database Toolbar** button.

2. In the window that appears, click on **Repair Corrupted Database**.

   The buttons in the window become gray temporarily. When the operation finishes or fails, the grayed items become normal.

   If the operation fails, an error notice appears.

3. To exit the window, select **Finish**.

Chapter 10

Using a Terminal Emulator

If you cannot connect *BCMS Vu* Server to the DEFINITY system it may be because *BCMS Vu* Server is not communicating with the data module. You can check the communication between the PC and the data module by using a terminal emulator that can establish a serial connection, such as *HyperTerminal*™, a terminal emulator supplied with *Windows*.

Opening *HyperTerminal* and Setting Options

1. In the **Start** menu, select **Programs/Accessories**.

   For *Windows* 95 only:

   a. In the "Accessories" drop-down menu select **HyperTerminal**.

      The "HyperTerminal" dialog box appears.

   b. In the "HyperTerminal" dialog box, select "Hypertrm(.exe)."
   c. Select **OK**.

For *Windows* NT 4.0 only:

In the "Accessories" drop-down menu select **HyperTerminal/ HyperTerminal.**

> The "HyperTerminal" window opens with the "Connection Description" dialog box active:
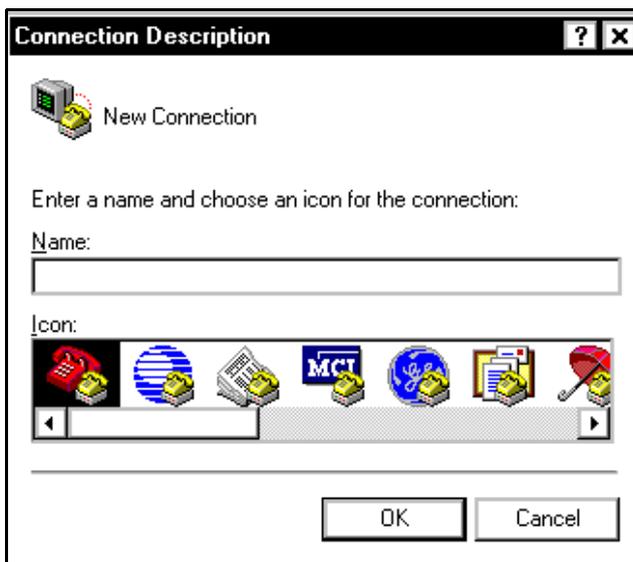
2. In the "Name" field of the "Connection Description" dialog box, enter "Data Module Test."

3. Select **OK**.

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The "Phone Number" (In *Windows* NT 4.0, the "Connect To") dialog box appears.
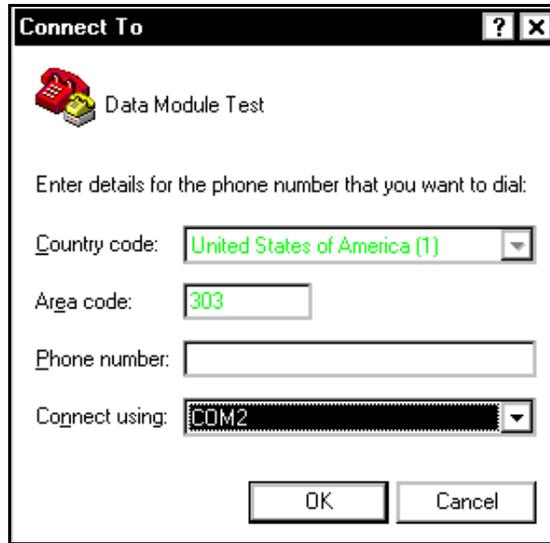
4. In the "Connect using:" field, click on the down arrow to display a pull-down menu of COM Ports.

5. Beginning with COM 1, select each COM Port incrementally until you find the one that connects to your data module.

> **Note** The PC may lock or post an error while you are performing the next several steps. If it does, restart HyperTerminal , and begin at step 1.

6. Select **OK** in the "Phone Number" dialog box.

   a. If the COM Port you selected is not one that is being used by your PC, a window appears with the message, "Unable to open COM *N*."

   b. Select **OK**.

   c. If the PC locks up or you receive an error message, restart HyperTerminal and begin at step 1.

7. If the COM Port you selected is one that is being used by your PC, the "COM Properties" dialog appears:

8. In the "COM Properties" dialog box, select the following port settings from the pull-down menu:

   - **Bits per second** - Choose a baud rate of 9600.

   - **Data bits** - Choose 8 ASCII data bits.

   - **Parity** - Choose the "None" parity setting.

   - **Stop bits** - Choose 1 stop bit.

   - **Flow control** - Choose Xon/Xoff for the flow control.

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The Port Settings should look like this:
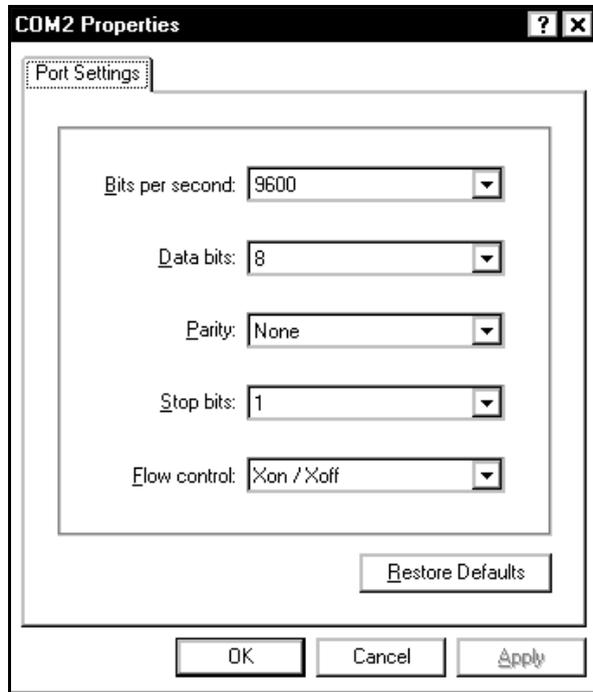
9. Select **OK** to set your current settings and close the "COM Properties" dialog box.

10. In the "HyperTerminal" window, press the **Enter** key.

11. Type **ati**.

12. Press the **Enter** key again.

    If nothing happens repeat steps 9 through 12.

13. Enter ***atd***<*extension*>
    where <*extension*> is the hunt group number. In the following example it
    is 4444.

Note	If you chose a COM Port in step 5 that is being used by your PC, but is not attached to the data module, you cannot type in the "HyperTerminal" window. Check the cabling between the PC and the data module and between the data module and the DEFINITY system. Exit *HyperTerminal* and restart it before testing the next COM Port.

14. When the "HyperTerminal" window resembles the following
    illustration,
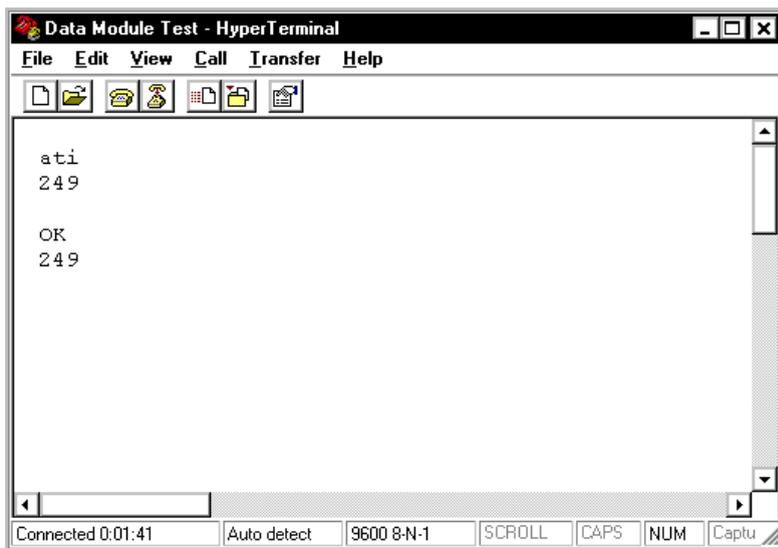
    press **<Enter>**.

    A Login prompt appears.

15. Enter the *BCMS Vu* Login ID (The *BCMS Vu* Login ID administered on the DEFINITY system).

16. Press **<Enter>**.

17. At the password prompt, enter the *BCMS Vu* password associated with the *BCMS Vu* Login ID.

18. Press **<Enter>**.

    Two more lines appear in the open window, which resembles the following illustration:

```
Data Module Test - HyperTerminal                          _ □ ✕
File  Edit  View  Call  Transfer  Help

 ▢ ⬚ ▢ ⬚ ▢ ⬚ ▢

 Login: bcmsvu
 Password:

 System: G3siV5+m     Software Version: G3V5i.05.0.215.0

 Terminal Type (513, 715, 4410, 4425, VT220): [513]


Connected 0:06:09    VT100    9600 8-N-1    SCROLL  CAPS  NUM  Capture  Pri
```
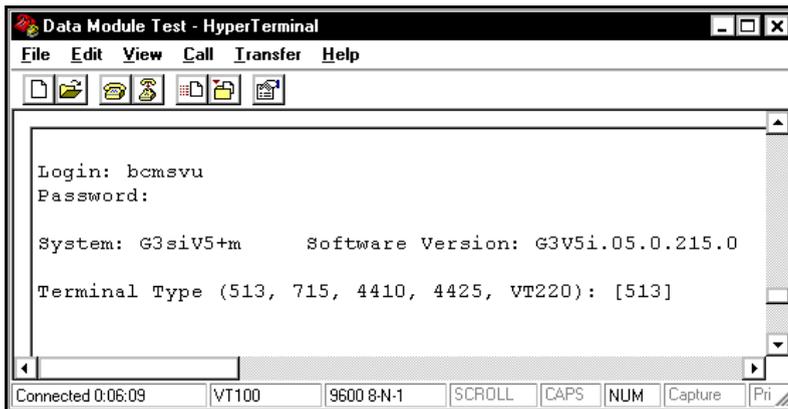
19. If your screen resembles the one above, you have successfully logged into the DEFINITY system. If, after you enter the password in step 17 and press **<Enter>** once, the screen displays "Incorrect Login," a) check the *BCMS Vu* Login ID and password administered on the DEFINITY system and b) re-enter them and press **<Enter>**.

20. If this does not correct the problem, check the data module installation and administration. Refer to Chapters 2 and 3 in *BCMS Vu Software R2 Installation Guide* (585-217-1030).

21. To exit *HyperTerminal*, select **File** and then **Exit** from the
    "HyperTerminal" main menu. The following message appears:
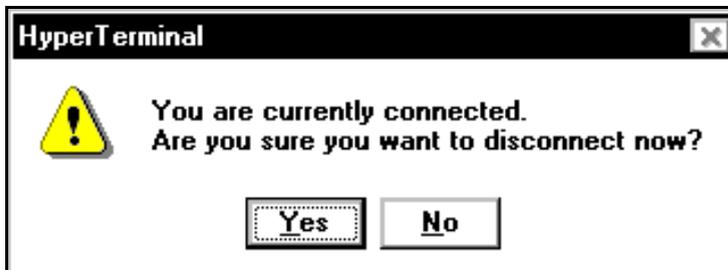
22. Select **Yes**.

    The following message appears:
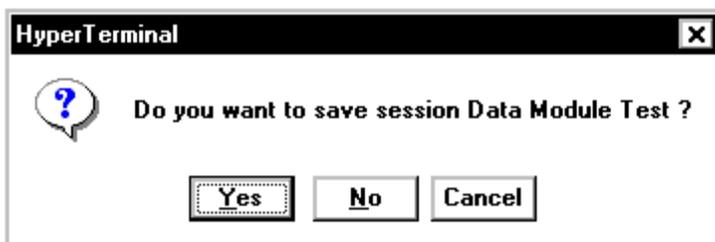
To exit *HyperTerminal* without saving the data module test session, select **No**.

Error Codes

Error codes, their descriptions, and error resolutions are listed in the table below.

ID	Description	Resolution
500	Internal software error	Contact Lucent Technologies.
501	Resource error: a resource could not be obtained for some reason.	Under normal circumstances the software tries this operation again. This is a problem only if it happens repeatedly.
502	Internal software error	Contact Lucent Technologies.
6xx	Problem accessing file	Generally advisory only. *BCMS Vu* will create the file automatically.
1000	Internal software error	Contact Lucent Technologies.
1001	A historical download command cannot be executed.	Check that the DEFINITY system connection is functioning.
1002	Missing or incorrect fids in reply from DEFINITY system	*BCMS Vu* will recover from this problem automatically. If it happens often, check the DEFINITY system connection, serial port, and so forth.
1003	The command scheduler has exited abruptly.	Restart the connection. If this fails, restart the Server.
1101	ODBC reported an error.	*BCMS Vu* may resolve the problem. If not, check the ODBC installation. See "Troubleshooting" in this chapter.

ID	Description	Resolution
1102	The database could not be found.	Check the supposed location of the database in **Options** | **Configure** | **Sharing Setup** and verify that the database is present.
1103	BCMS data does not match DEFINITY system time.	If the difference is more than about a week, this is a DEFINITY system problem. Use *list bcms <object> <id> day* to check date consistency, and contact your DEFINITY system administrator.
1104	Database could not be opened: It may be corrupt.	Try to repair the database. Refer to "Repairing the Database" in *BCMS Vu Software R2 User Guide* (585-217-102). Otherwise, investigate your DAO installation.
1106	Bad time conversion	Check serial connection to the DEFINITY system.
1107	Column data has overflowed - some historical data is too big to be displayed by the DEFINITY system, and appears as ****:** , which is converted to the maximum possible value.	Make sure agents log out at the end of the shift. If it persists, use *list bcms <object> <id>* commands to find out which one has the problem, and track it from there. It is not advisable to measure VRU or AUDIX splits/skills, since the "agents" in these splits/skills will be logged in and available 24 hours a day, which will cause this error to be logged.
1108	*BCMS Vu* passed incomplete data to historical download code.	Contact Lucent Technologies.

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ID	Description	Resolution
1110	Mismatch between a split's list of agents and the overall list of agents	This may happen when agent definitions are changed on the DEFINITY system. Try another download and see if it goes away. Otherwise, contact Lucent Technologies.
1111	DAO failed to initialize.	Reinstall DAO: 1. Close all applications. 2. Insert the *BCMS Vu* CD-ROM into the CD drive. 3. In the "BCMS Vu R2 Master Setup" window, select **Exit**. 4. In *Windows My Computer* or *Explorer* select the CD-ROM drive. 5. In the folder **Server\dao\disk1** double-click on "setup.exe." The program will correctly install DAO.
4000	Attempt to run more than one Server	There are two *BCMS Vu* Servers running. If one of them is not visible, try looking for it in "Task Manager" (*Windows* NT 4.0) or "Close Program" (*Windows* 95).
4001	A client has attempted to log in when the maximum number are already logged in.	This Client cannot be connected to the Server because there are already <number> Clients logged in. You must wait until a Client logs out of the Server. The <number> is determined by the type of hardware key installed.

ID	Description	Resolution
4002	The Server attempted to share a directory so that Client machines could access configuration files. This attempt failed because *<error text>*.	Check that file sharing is enabled, and that the Server login has appropriate permissions. If necessary, create a share manually, sharing the paths specified in **Options	Configure	Sharing Setup**.
4003	Unexpected loss of connection to Client *<name>*. The client machine may have been turned off or disconnected, or the Client may have hung.	Check network connectivity between Server and Client. If this happens inexplicably and often, contact Lucent Technologies.
4004	Attempted login by unregistered Client *<name>*. A client has attempted to log in and is not registered with the Server.	Advisory only. Use **Options	Configure	Client** on the *BCMS Vu* Server to add client permissions.
4100	Modified Administration Object by *<login>* (etc.): Administrative event - the Server setup has been changed.	Advisory only
4101	Registration of Client by *<login>* - <new Client>: Administrative event - a Client has been registered with the Server.	Advisory only
4102	Removal of Client by <login> *<old login>*: Administrative event - a Client has been unregistered from the Server.	Advisory only

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ID	Description	Resolution
4103	Registration of wallboard by *<login> <details>*: Administrative event - a Client has been registered with the Server.	Advisory only
4104	Removal of wallboard by *<login>* - *<details>*: Administrative event: a wallboard has been deregistered from the Server.	Advisory only
4105	Modified Wallboard Object by *<login>* - *<details>*: Administrative event: a registered wallboard configuration has been changed.	Advisory only
4106	Database records have been erased.	Advisory only
4107	A monitored application cannot be found: Connection Server or Omninames are not running.	Restart these applications from the Common directory (refer to "Resolving Problems," this chapter, or stop and restart the Server).
4108	A monitored application has been restarted.	Advisory only
6008	Naming Service not in map	Entries have been removed from the registry of the machine that reports the error. Reinstall *BCMS Vu* on that machine.
6502	**Server:** Connection Server is not running on the machine (PC) specified.	Check that the machine you are trying to connect to has a running Connection Server, or stop and restart the Server.

ID	Description	Resolution
6502	**Client:** Object does not exist.	Find the Server.
6504	Unable to find naming service	Check that Omninames is running, or stop and restart the Server.
7001	Internal software error	Contact Lucent Technologies.
7011	The process you were trying to contact is missing, hung, or unable to complete the operation in time.	Make sure the process is running properly. Retry the operation. Restart the process if necessary. **Note**: if the problem is a DEFINITY system connection, try powering down the data module and powering it up again.
7012	Internal software error.	Contact Lucent Technologies.
7013	The login attempt has failed or timed out.	Check password and login for *BCMS Vu* and the DEFINITY system.
7014	Call not completed. The device could not be connected to.	Verify that the hunt group extension for Netcon channels is correct.
7015	Unknown exception (caught by default)	Retry the operation. Contact Lucent Technologies.
7101	Serial port does not exist.	Check the serial port (COM Port) selection under **Options** | **Configure** | **Switch Connection**.

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ID	Description	Resolution
7102	Serial port in use	Find out what else could be using the Serial port. If nothing is, try restarting the Connection Server. Refer to "Troubleshooting" in this chapter.
7103	Serial port failure	Make sure the data module or wallboard is securely plugged in. Refer to "Troubleshooting" in this chapter.
7104	Serial port lost carrier.	Make sure the data module connection to the DEFINITY system is intact. Refer to "Troubleshooting" in this chapter.
7105	Receive buffer overrun	*BCMS Vu* recovers from this problem automatically. If it occurs frequently, try adjusting the buffer speed through **Start/Settings/Control Panel/System/Device Manager/Com Port/Port Settings/Advanced**. See "Resolving Problems" on page 10-2.
7106	Serial receive error	Check that the serial port connection is securely attached. Retry the connection.
7107	Transmit Buffer overrun	See receive buffer overrun (7105).
7108	Serial transmit error	See serial receive error (7106).
7109	Could not communicate with device.	Be sure the data module or wallboard is securely plugged in.

ID	Description	Resolution
7401	Internal software error	Contact Lucent Technologies.
7402	Server link timed out - the process you were trying to contact is missing, hung, or busy.	Be sure the process is running properly. The missing process will be Omninames, ConnectionServer, or *BCMS Vu* Server. It may be necessary to restart the process.
7406	Server execution error	Restart the Server. Depending on context, this could be the ConnectionServer or the *BCMS Vu* Server. If this persists, contact Lucent Technologies.
7407	The Server is missing.	Restart the Server. Depending on context, this could be the ConnectionServer or the *BCMS Vu* Server.
7408	An internal process on the Server has vanished unexpectedly.	Reconnect the Client or restart the Server.
7411	Unknown host name	Check that host is spelled correctly and is still on the network. Check your DNS settings, and network setup generally. Try using the "ping" command from an MS-DOS prompt to see if TCP/IP connectivity to the machine is working. Refer to "Configure Networks" in Chapter 2 of User Guide.
7412	The Naming Service could not be found.	Restart the Connection Server.

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ID	Description	Resolution
7413	The ConnectionServer device version does not match.	Upgrade your *BCMS Vu* installation or the Connection Server installation.
7414	The ConnectionServer profile version does not match.	Upgrade your *BCMS Vu* installation or the Connection Server installation.
7415	The operation you requested does not exist.	Upgrade your *BCMS Vu* installation or the Connection Server installation.
7420	A DEFINITY system command could not be run to completion. *BCMS Vu* retries it.	*BCMS Vu* recovers from this problem automatically. If it happens often, check the DEFINITY system connection, serial port, and so forth.
7499	An unexpected CORBA error has occurred (code *<number>*).	Note the code number given in the exception message and contact Lucent Technologies.
7500	The session could not be connected.	Check that the connection is not in use already. Otherwise, retry, restart the Connection Server, and if that fails, restart *BCMS Vu* Server.
8001	Cannot open file: *<file full path name>*	Use *Explorer* to check that the file exists in the location given.
8101	Internal software error	Contact Lucent Technologies.
8102	Failed to set database location	ODBC call failed. Verify that ODBC is set up properly through the ODBC control panel.

ID	Description	Resolution
8103	Crystal Report errors (strings generated by Crystal Reports)	A possible cause is no printer driver installed. Install a printer. If this does not solve the problem, contact Lucent Technologies.
8104	Error in report definition file: <*filename*>. The report definition file is present, but unusable.	Remove the file and reinstall *BCMS Vu* Server.
8501	Not enough information given to locate a server	You must specify both a Server name and the name of the *BCMS Vu* Server PC.
8502	The current version of the *BCMS Vu* Server interface (version <*Server version*>) is not compatible with this version of the *BCMS Vu* Client interface (version <*Client version*>).	Upgrade your server or client software to ensure compatibility.
8503	This Client is not registered with that Server.	On the Server application go to menu item **Options**|**Configure** |**Clients** and add the *Windows* login ID of the user on the Client PC.
8504	Too many connections to the Server: The limit is <number>.	This Client cannot be connected to the Server because there are already <*number*> Clients logged in. You must wait until a Client logs out of the Server. The <number> is determined by the type of hardware key installed.

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ID	Description	Resolution
8505	The Server is performing maintenance operations.	Typically, database repairs/compaction are being carried out. Check the Server to see what it is doing, and, if necessary, wait for the operation to finish.
8506	Unknown rejection code: *<number>*	The Server has rejected the Client connection for an unknown reason. Contact Lucent Technologies.
8507	The Server is not properly configured.	The Server has detected a serious problem with its own configuration. Check the Server configuration through **Options	Configure	Switch Connection**.
8508	The Server could not be connected.	The Client has attempted to use the Server without connecting to it. Contact Lucent Technologies.
8509	The historical database was not accessible through the share.	On the Server application go to menu item **Options	Configure	Sharing Setup** and note the name of the share. Go to menu item **Options	Configure	Downloads** to find the location of the historical database. On the Client PC use *Explorer* to check that the historical database is accessible through the share noted above.

ID	Description	Resolution
8510	The configuration files are not accessible through the share.	On the Server application go to menu item **Options** | **Configure** | **Sharing Setup** and note the name of the share. On the Client PC use *Explorer* to check that the configuration files are accessible through the share noted above. The configuration files are "BCMSSwitch" and "BCMSFields".
8511	The Server has detected a problem with the database.	Check the Server to see what sort of problem has occurred. If none is showing, request a download. If this works, try the Client again.
8512	The Server you selected could not be found.	Verify that the *BCMS Vu* Server you have requested is running.

Chapter 10

Glossary

Acceptable Service Level	A target value set to define the acceptable amount of time for an agent to answer a call. Target values are normally set as objectives by management.
	A percentage of calls answered within a set amount of time (for example, 80% of calls answered within 20 seconds).
	Note that *BCMS Vu* calculates the % In Service Level value differently than does BCMS. When there is no activity during an interval, BCMS leaves the value for the service level blank, while *BCMS Vu* includes a zero value for the service level. This difference does not affect the summary calculation for the % In Serv Levl because the summary calculation is a weighted average and it does not include the intervals for which null (blank) and zero were entered for the service level.
ACD	(Automatic Call Distribution).
	A DEFINITY system feature using software that channels high-volume incoming and outgoing call traffic to agent groups (splits or skills).
	Also an agent state where the extension is engaged on an ACD call.

ACD Call
An ACD call is a call that was queued to a split/skill and then answered by an agent in that split/skill, or a call that queued as a direct agent call and was answered by the agent to whom it was queued.

ACD split/skill
See *split/skill.*

Active document
See *Active report.*

Active report
The report whose window is currently selected. To make a report the active report, open it and click on its title bar or anywhere in the report.

ACW
(After Call Work).

ACD work done when the agent is not on a call. There are two types of after call work (ACW): call related ACW and ACW not associated with a call.

For G3V4, time the agents spent on non-ACD calls in ACW is not included, nor is time in ACW following a non-ACD call.

Time on non-ACD calls in ACW *is* included for the DEFINITY system.

AI
(Auto-In).

An ACD work mode that makes the agent available to receive calls and allows the agent to receive a new ACD call immediately after disconnecting from the previous call.

Agent
The login ID that staffed the extension or VRU port. This term is often extended to mean the person who used the ID to staff the extension.

AUX The work state an agent is in when logged into a split/skill but not in ACD, ACW or Other work states. AUX work mode is a work mode in which agents are engaged in non-ACD work. This may represent a break or lunch, training, mail, team meetings, etc.

BCMS (Basic Call Center Management System). A software feature of the DEFINITY system which collects data about inbound ACD calls and how they are handled.

CCS The report item Centum Call Seconds (CCS) is the number of 100-second increments in which the trunk was busy during the intrahour interval. A trunk is "seized" while the call is in queue and while the call is connected to an agent. Therefore, wait time for abandoned calls is figured into the CCS figures. For example, since a half-hour has 1800 seconds, the maximum CCS for each trunk in a trunk group is 18 CCS. Multiplying 18 CCS by the number of trunks in a trunk group gives you the maximum occupancy for the trunk group, which you can then compare with your actual CCS. A CCS example follows.

x = The trunk for this 100-second increment is busy.
(The trunk may not be busy for the entire 100-second increment)

| 1st CCS | 2nd CCS | 3rd CCS | | 16th CCS | 17th CCS | 18th CCS | | 34th CCS | 35th CCS | 36th CCS |

1800 seconds = 1/2 hour
3600 seconds = 1 hour
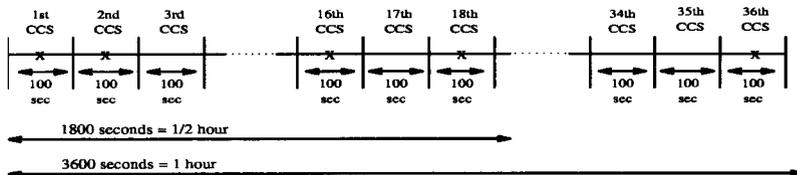
Data module
A serial communications device used for the asynchronous transfer of data. *BCMS Vu* connects to the DEFINITY system through a data module.

> **Note** *BCMS Vu* does not work with analog modems, PDMs, or INADS.

DEFINITY system BCMS interval
The period of time, either one hour or one half hour, during which measurements are collected in the DEFINITY system. At the end of the interval, counts are reset to 0.

Direct Agent Calling
An EAS capability that makes it possible for a caller to reach the same agent every time and still include the call in the management tracking of the call center as an ACD call. This is ideal for claims processing, where a client needs to speak with the agent handling the claim.

Document
See *Report*.

Hundred call seconds
See *CCS*.

Interval
See DEFINITY system BCMS interval.

MI
(Manual-In).

An ACD work mode. The Manual In (MI) mode makes the agent available to receive an ACD call and automatically places the agent into the ACW state upon release from the call.

Other   The work state an agent is in when doing work for splits/skills other than the one for which the current report is being run. The agent is also in the Other state when the agent puts a call on hold from the AI or MI work mode.

Primary Skill   The first split/skill to which a call queues in a VDN is called the primary split/skill.

Report   A name used when referring to Real-Time Graphs, Wallboard Displays, Real-Time Text reports and Historical Reports.

Report class   A set of historical data items contained in *BCMS Vu* Historical Reports. For example, "agent data" comprises a report class.

Secondary Skill   The second split/skill to which a call queues in a VDN is called the secondary split/skill.

Service Level   See Acceptable Service Level.

Split/skill   A group of extensions that are staffed by agents trained to handle a certain type of call.

Tertiary Skill   When a call is queued to multiple splits/skills, the third split/skill the call queued to in a VDN is called the tertiary split/skill.

Glossary

VDN   (Vector Directory Number).

An extension that provides access to the Vectoring feature of the DEFINITY system. Vectoring allows you to specify the treatment of inbound calls based on the dialed number.

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