

**Lucent Technologies**  
Bell Labs Innovations



**Call Accounting Systems**  
Cost Allocator Version 2 Enhanced  
Rating II

555-006-511  
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# Contents

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	<b>About This Document</b>	1
	▪ Purpose	1
	▪ Intended Audience	1
	▪ How This Document Is Organized	1
	▪ Document Design	2
	▪ Conventions Used in This Document	2
	▪ Related Resources	3
	▪ How to Make Comments About This Document	4

---

<b>1</b>	<b>Overview</b>	1-1
	▪ ISDN Costing	1-1
	▪ Eight-Carrier/FX Costing	1-2

---

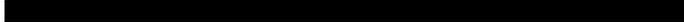
<b>2</b>	<b>Installation</b>	2-1
----------	---------------------	-----

---

<b>3</b>	<b>Setting Up Rating Information</b>	3-1
	▪ Adding a Sitegen	3-2
	▪ Verifying a Sitegen Installation	3-2
	▪ Editing Telephone System Configurations	3-3
	▪ Entering ISDN Markups	3-6

---

	<b>Index</b>	IN-1
--	--------------	------



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## About This Document

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### **Purpose**

This document is intended to guide those who want to understand the Enhanced Rating II option for the Cost Allocator Version 2 (CA V2) system. Complete details for installation and operation of the option are provided.

### **Intended Audience**

This document is written for the following audiences:

- Users and administrators of the CA V2 system
- AT&T installation, maintenance, and other service technicians
- Technical Response Center personnel

### **How This Document Is Organized**

This document describes every function of the CA V2 Enhanced Rating II option. An introductory chapter precedes the installation and configuration procedures; an index follows.

- Chapter 1, *Overview*, describes how the option enables ISDN costing and the addition of up to 8 carrier services per site.

- Chapter 2, *Installation*, describes how to install the option.
- Chapter 3, *Setting Up Rating Information*, describes how to install a “sitegen” (a disk containing customized carrier rating tables) and incorporate new rating tables into a telephone system configuration.

## Document Design

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This document is designed to insert into the *Cost Allocator Version 2.0 Administration, Operations, and Maintenance* binder. A tab is provided for quick identification of the Enhanced Rating II documentation.

## Conventions Used in This Document

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The following typographic conventions are used in this document:

- Keys that you press are shown in brackets — for example:  
Press <ESC>.
- Two or more keys that you press simultaneously are shown together in brackets — for example:  
Press <Ctrl-c>.
- Some commands in a data-entry screen are executed by typing the first letter of the command name (shown in brackets) — for example:  
Press <U>pdate.
- The word “enter” in a procedure means to type a value and press <↵> (the carriage return on your keyboard) — for example:  
Enter **y** to continue.
- Information displayed on the screen is shown in `constant-width` type — for example:  
The message `Rating Running.` appears.
- User entries shown in `constant-width bold` type must be typed exactly as shown — for example:  
At the `login:` prompt, enter **v2**

- Variables that you supply are shown in *italic* type — for example:

Enter the time in *mm:ss* format.

## **Related Resources**

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The following documents may provide you with additional or related information:

- *Cost Allocator Version 2 Administration, Operation, and Maintenance* (555-006-506) — for CA V2, describes call accounting networks and operation in general, and CA V2 functionality and report capability in detail.
- *Cost Allocator Version 2 Installation and Verification* (555-006-111) — for AT&T technicians and/or others interested in understanding or performing an installation.
- CA V2 optional module documentation — in addition to this document, the following documents describe the installation and operation of the CA V2 software options:
  - *Cost Allocator Version 2 Enhanced Reporting Module* (555-006-508)
  - *Cost Allocator Version 2 Integrated Poller Module* (555-006-509)
  - *Cost Allocator Version 2 Enhanced Rating I Module* (555-006-510)
  - *Cost Allocator Version 2 Enhanced Chargeback Module* (555-006-512)
- *Call Detail Recording Unit/Small* (555-006-212) — describes installation and administration for the CDRU/S.
- *Call Detail Recoding Unit/SE* (555-006-212) — describes installation and administration for the CDRU/SE.
- *UNIX System V/386 Release 3.2.3 Operations/System Administration* — describes administration for the UNIX operating system running on a 6386 WGS processor.
- *UNIX System V/386 Release 3.2.3 FACE User's Administrator's Guide* — describes administration for the 6386 WGS under UNIX System V, using the FACE menu system.

## **How to Make Comments About This Document**

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Reader comment cards are included at the beginning of this document. We are interested in your suggestions for improving this document and urge you to fill out a card and send it in. If the reader comment cards have been removed from this document, please send your comments to:

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Denver, Colorado 80234

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The Enhanced Rating II option package consists of a disk containing the option software and this manual explaining its installation and use.

The option provides the rating enhancements described in the paragraphs that follow.

## **ISDN Costing**

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Enhanced Rating II adds costing of calls for facilities using Integrated Services Digital Network (ISDN) interfaces. Compared to the traditional switched network, ISDN end-to-end digital communication increases efficiency and lowers the cost of voice and data transmissions. It offers a broad range of features such as source identification of incoming calls (automatic number identification — ANI) and direct communication between telephones and computers.

You implement ISDN costing by identifying the items listed below.

- IXC (Interexchange Carrier Code) — a standard 3-digit code identifying the carrier, for example 288 = AT&T, 222 = MCI.
- NSF/INS (Network Service Field Code) — a 3-digit code identifying a tariffed service name, for example AT&T MEGACOM.
- BCC (Bearer Capability Class) — a 1-digit code identifying the type of service and its data-transfer rate. Each BCC code is given a markup (or discount).

A carrier's IXC and NSF/INS are part of a rate table installation. In most cases, change them only if they do not match the station message detail reporting (SMDR) output from your switch. After you install the Enhanced Rating II option, enter BCC code markups within the percentage range specified in chapter 3.

## **Eight-Carrier/FX Costing**

The standard CA V2 system allows installation of a maximum of 2 customized carrier services (each with normal and operator-assisted rating tables) per site. Enhanced Rating II increases the number of customized carrier services allowed per site to 8. The option package supports installation of up to 4 disks (each containing up to 4 rating tables) per site. All tables on a disk use the same NPA/NXX as the point of origin.

Generally, rating is based on a site's "home" NPA/NXX as the calls's point of origin. The rating tables cost long-distance calls using your primary carrier's network (when you dial "1" before the area code), as well as those calls using the network associated with your second customized table (accessed by dialing the associated carrier's prefix). Enhanced Rating II allows up to 4 sets of rating tables based on different NPA/NXXs (representing true FX costing) per site.

Installing the Enhanced Rating II option is a simple process, as described in the steps below.

⇒ **NOTE:**

To perform an option installation, you must access CA V2 using the login created to install your software. Generally CA V2 is installed using the login `ca`. The installation login is part of the information passed on to you (the system administrator) from the account team.

1. Use the installation login to access the application. From the main menu, select `Administration`, then `Software Options and Modules`. A screen display prompts you for the `root password`. After you enter the password, a second prompt asks for the location of the drive containing the software option disk.
2. Identify the drive, insert the option software disk, and press `<↓>`. When the message `Installation complete` displays, remove the disk, and follow the screen messages to return to the menu system.
3. To verify a successful installation, from the main menu, select `Call Rating`, then `ISDN Markups`. After the data-entry screen is displayed, press `<E>` to exit.
4. Press `<→>` until the `Administration` menu is displayed. Select `Add Sitegen`. After the data-entry screen is displayed, press `<E>` to return to the menu system.

If you are unable to access any functions' data-entry screen, repeat the installation and verification procedures. If problems still exist, call the Technical Support Center at 1-800-442-6622.



This chapter describes how to add rating tables to an existing site and integrate them into your telephone system configuration. BCC code setup is also described.

- *Adding a Sitegen* — describes how to add a set of rating tables to an existing site.
- *Verifying a Sitegen Installation* — describes how to verify that new rating tables are added.
- *Editing Telephone System Configurations* — describes how to update your telephone system configuration with carrier information created by adding sitegens.
- *Entering ISDN Markups* — describes how to enter a markup or discount for BCC codes.

## Adding a Sitegen

Use this procedure to add rating tables to a site's carrier service database.

1. From the main menu, select Administration, then Add Sitegen. A screen similar to the one below appears. Use <Q>uery, <N>ext, or <P>revious to display the site of interest.

```
COMMANDS: Query Next Previous Start Exit
           Query database for record
-----
                        ADD SITEGEN
-----

      Site Name: Headquarters      Site Number: 1
Site Area Code: 716
Site Exchange: 381
Site Address: 3750 Monroe Ave.
Site City State Zip: Pittsford, NY 14534
Site Contact Person: J. Brown

Site Tax Percentage: Fed: 2.0   Suppress Authorization Code Printing? Y
                   State: 1.5   Store Raw Call Records? N
                   County: 0.0
                   Other: 0.0

                        Date
Installation: 09:37 Jul 31 1992
Last Update: 09:37 Jul 31 1992
```

2. Press <S>tart and follow the instructions. When prompted, enter your root password and press <↵>.
3. Identify the drive containing your sitegen disk. If required, press <ESC> to stop and return to the menu system. Otherwise, insert the sitegen disk and follow the instructions to begin adding the rate tables.
4. When the tables are loaded, remove the disk, press <↵>, and follow the instructions to return to the menu system.

The number of carrier services available to a site is increased by the number of rating tables added each time this procedure is performed.

## Verifying a Sitegen Installation

Use this procedure to verify a successful sitegen installation.

1. From the main menu, select Call Rating, then Carrier Information. A screen similar to the one that follows appears. Use <Q>uery, <N>ext, or <P>revious to display the site of interest.

```
COMMANDS: Query Next Previous Detail Exit
          Find Detail record
-----
EDIT CARRIER INFORMATION
-----
Site: Headquarters
```

2. Press <D>etail to view a screen similar to the one below.

```
COMMANDS: Next Pervious Update Master Exit
          Update the displayed record
-----
EDIT CARRIER INFORMATION
-----
Site: Headquarters
Carrier Number: 1
Carrier Name: ATT
Carrier Dialing Prefix: 10288
Number of Digits in Non-Equal
Access Authorization Code: 0
Rating Method: T
Carrier Rate: 0.00
Rate Source Area Code/Exhcange: 716/381
ISDN Enterexchange Carrier Code: 288
ISDN Network Service Field Code: 03
ISDN Carrier Direction: 0
Order Number and Date Installed: M99999-0000 12:00 Oct 31 1991
Update Number and Data Installed: M99999-0000 12:00 OCT 31 1991
```

3. Press <N>ext until you view a display for each rating table that you added in the previous procedure. When complete, press <E>xit to return to the menu system.

⇒ **NOTE:**

Standard systems have 2 or 4 rating tables per site. Enhanced Rating II increases the maximum rating tables per site to 16. Each time you add a sitegen, rating tables are added in increments of 2 or 4.

## Editing Telephone System Configurations

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Use this procedure to incorporate new carrier service rate tables into your telephone system configuration.

1. From the main menu, select Call Rating, then Edit Telephone System Config. A screen similar to the following one appears. Use <Q>uery, <N>ext, or <P>revious to display the desired site.

```

COMMANDS: Query Next Previous Update Detail Exit
          Query database for record
-----
EDIT TELEPHONE SYSTEM CONFIGURATION
-----
Site: Headquarters
    
```

2. Press <D>etail to display a screen similar to the one below.

```

COMMANDS: Query Next Previous Add Update Remove Master Detail Exit
          Find detail record
-----
EDIT TELEPHONE SYSTEM CONFIGURATION
-----
Site: Headquarters
Trunk Group: ???
Facility: CO
    
```

3. To input the information described below, press <A>dd and enter data from the keyboard, or press <F1> when available to use a help menu. Press <↵> to move from one data-entry field to another. When complete, press <ESC>.

- Trunk Group. An arbitrary number, 0-9999, that you assign to a group of trunk lines providing the same telephone service.
- Facility. The name, 1-5 characters, that you assign to a type of telephone service available at this site. Any facility name other than CO creates a call type with the same name.

4. Press <D>etail. A screen similar to the one below appears.

```

COMMANDS: Query Next Previous Add Update Remove Master Detail Exit
          Find detail record
-----
EDIT TELEPHONE SYSTEM CONFIGURATION
-----
Site: Headquarters
Trunk Group: ???
Facility: CO
Dial Access Code: ?????
Rate Type: T
Rate: $0.00
Carrier: 1
Carrier Name: ATT
Source NPA/NXX: 716/271
Cost Tandem Calls: N
Cost Inbound Calls: N
    
```

5. The information to configure this facility with a carrier service added by a sitegen is described below. Press <A>dd and enter data from the keyboard, or press <F1> when available to use a help menu. Press <\_> to move from one data-entry field to another. When complete, press <ESC>.
  - Dial Access Code. The number, 0-99999, used to identify a billing scheme for a particular telephone facility. CA V2 translates this from the “access code used” reported by AT&T switches (“line used” in a SPRINT 2448 or “facility” in a System 25 or MERLIN) for outgoing calls. If the switch does not report access codes (as in the case of trunks dedicated to incoming calls), the dial access code is an arbitrary number that you assign — for example, the first trunk number in each group —to act as an identifier for billing.
  - Rate Type. <T>ariff.
  - Rate. \$0.00.
  - Carrier. The number of a carrier service added by a sitegen. Do not use numbers associated with operator-assisted carrier services.
  - Carrier Name (not editable). The internally derived name corresponding to the carrier number, for example ATT.
  - Source NPA/NXX (not editable). The area code and exchange that are the basis of this carrier’s rating table.
  - Cost Tandem Calls. <Y>es or <N>o to cost tandem calls, or <D>iscard.
  - Cost Inbound Calls. <D>iscard, accept at <N>o cost, or <C>ost any incoming calls routed through the attached trunk lines.
6. Press <D>etail to display a screen similar to the one below.

```

COMMANDS: Query Next Previous Add Update Remove Master Detail Exit
          Find detail record
-----
                EDIT TELEPHONE SYSTEM CONFIGURATION
-----

                Site: Headquarters

                Trunk Group: ???
                  Facility: CO
    Dial Access Code: ?????
                Rate Type: T
                  Rate:      $0.00
                  Carrier:  1
                Carrier Name: ATT
                Source NPA/NXX: 716/271
    Cost Tandem Calls? N
    Cost Inbound Calls: N

                Trunk Name: ????????
```

7. To input the information described below, press <A>dd and enter data from the keyboard. When complete, press <ESC>. Repeat this step as many times as necessary.
  - **Trunk Line.** The identifier, up to 7 digits, reported by the switch for the actual route of a call. For AT&T switches, the trunk is the “access code used” (“line used” in a SPIRIT 2448, “facility” in a System 25 or MERLIN). For non-AT&T switches, the trunk is the string of numbers reported as “trunk number” or “circuit” in the call record.
8. To add another carrier service, press <M>aster until you return to the first screen. Display another site and repeat steps 2-6. Press <E>xit to return to the menu system.

## Entering ISDN Markups

Use this procedure to add a markup or discount to a BCC code.

1. From the main menu, select Call Rating, then ISDN Markups. A screen similar to the one below appears. Use <Q>uery, <N>ext, or <P>revious to display the BCC code of interest.

```
COMMANDS: Query Next Previous Add Update Remove Exit
          Query database for record
-----
                      EDIT ISDN MARKUPS
-----
Bearer Capability Class: 0
Markup: 0.0
```

2. To change the markup, press <U>pdate and enter a value from the range -100.00-+100.00. When complete, press <ESC>.
3. To delete a displayed BCC code, press <R>emove.
4. To add a BCC code that is removed, press <A>dd and enter data from the keyboard, or press <F1>when available to use a help menu. When complete, press <ESC>.
5. To return to the menu system, press <E>xit.

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# Index

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## C

### carriers

- adding carrier service rate tables, 3-2
- rating with 8 carriers, 1-2
- verifying rate table additions, 3-2

---

## F

- FX costing, 1-2

---

## I

### installation, 2-1

- login requirements, 2-1
- procedure, 2-1
- verification, 2-1

### ISDN

- adding markups, 3-6
- costing, 1-1
- IXC, 1-1
- NSF/INS, 1-1
- BCC, 1-1

---

## T

- technical support, 2-1
- telephone system configuration, 3-3

