

# Call Accounting Systems

This Product Survey presents the major characteristics of Call Accounting Systems marketed for the management and control of telephone system usage. All systems are standalone units, and typically connect to the Station Message Detail Recording output port of an electronic PBX or key/hybrid telephone system.

The survey covers 2 other types of telephone management systems. One is **least cost routing (LCR)**, which connects to the outgoing trunk lines of a PBX or key/hybrid system and controls the placement of calls over least-cost telephone lines. These products have diminished in numbers in the last 2 years as more PBX/key systems have powerful routing features of their own.

The other system type covered is a **polling** unit. It is designed to call up other call record collecting devices, gather data from each location, and either processes it into management reports or acts as a front end for another processing system.

All systems are microprocessor controlled, with a few notable exceptions, and make extensive use of high-density diskette and hard disk storage media to handle call records. Most connections to an associated phone system are through a **serial RS-232C interface**. Some systems will also connect to older telephone equipment via **tip and ring** at the main distribution frame.

Application software gives each system its own unique personality, and determines the number and variety of management reports available to the end user. Most systems have a basic reports package to handle call usage on a per-station, department level, division level, and company-wide basis. Traffic usage reports identify opportunities to fine-tune system trunk lines to control and reduce costs. More sophisticated packages provide equipment inventories, message centers, company

telephone directories, and records of repair and maintenance activities.

There are 2 major categories of management software: **business and hotel/motel**. Most business packages have at least 10 to 15 reports for call detail and traffic usage. Hotel packages provide detail by guest room, and can also program in a profit margin for the house. Several hotel/motel systems have interfaces to property management systems (PMS) in use at the hotel. This permits the house to obtain even greater detail of internal operations.

A new trend in call accounting is the use of **IBM Personal Computers and PC-compatible systems** as the hardware in a total package. The PC's power and flexibility make it an excellent choice for this application. Numerous applications have been developed for the PC, and this trend is expected to grow rapidly during 1985 and beyond.

This edition of the Product Survey presents specifications and pricing on **100 Call Accounting/Least-Cost Routing/Polling Models manufactured by 36 vendors**. Listings are arranged alphabetically by vendor, then by specific product name. Each model entry is further divided into **12 logical categories**, defining function, system configuration, associated telephone system configuration, software, standard features, optional features, date of first delivery, number of systems installed, average system size installed, average system cost, method of distribution, and installation/maintenance/training. Specific topic areas within each section are further identified with a solid dot (\*). The Call Accounting Systems Outline table below is a quick reference guide to vendors whose product parameters match specific user requirements. Outline parameters define the principal applications and features of call accounting systems.

## CALL ACCOUNTING SYSTEMS OUTLINE

COMPANY	FUNCTION SMDR Call Accounting Tip & Ring Call Accounting Least Cost Routing Polling	CPU HARDWARE Proprietary IBM PC/XT Other PCs Mainframes	TELEPHONE SYSTEM SUPPORTED 1 to 100 Stations/Trunks 101 to 500 Stations/Trunks 501 to 1000 Stations/Trunks 1001 and Up Stations/Trunks	CALL RECORD STORAGE 1 to 5000 5001 to 50000 50000 and up	FEATURES General Business Version Hotel/Motel Version Resale Version Service Bureau	INTERACTIVE OPERATION Call Costing Using 1/8th Tables Account Codes Memory Overflow Outgoing Trunk Queuing	Database Updates Database Updates - Re Diagnostics - On Battery Ba
Account-A-Call	••••	••••	••••	••••	••••	••••	••••
Autotel Information Systems	••••	••••	••••	••••	••••	••••	••••
Bitek Inc	••••	••••	••••	••••	••••	••••	••••
Communications Group Inc	••••	••••	••••	••••	••••	••••	••••
Communication Support Systems	••••	••••	••••	••••	••••	••••	••••

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Control Key Corp	• - - -	• - - -	• • • -	• • - -	• • • -	• • • • -	• • • • •
Conversational Voice Tech Corp	• • - •	• - - -	• • • -	• • - -	• - - -	• - - - -	- - - - -
CP National	• • - •	• - - -	• • • -	• • - -	• - - -	- • • • -	• • • • •
Digital Interface Systems	• - - -	• • - •	• - - -	• • • -	• - - -	• • • • -	• - - - •
Honeywell Communications	• • - •	- - - •	• • • •	• • • -	• - - -	• • • • •	• - - - •
Instor Corporation	• • - -	• - - •	• • • •	• • - -	• - - -	• • • • -	• • - - •
Lang Systems	• - - -	• - - -	• - - -	• - - -	• - - -	- • - - -	• - - - •
Moscom Corp	• - - -	• - - -	• • - -	• • - -	• • - -	- • - - -	• • - - •
Mountain Enterprises	• - - -	• - - -	• - - -	- - - -	• - - -	• • - - -	• - - - •
Nat'l Applied Computer Tech	- - - •	- - - •	• • - -	• • • -	• - - •	• • • • •	• • • • •
NEC Information Systems	• - - •	• - - -	• • • •	• • • -	• - - -	• • • • -	• • • • •
NEC Telephones	• - - -	• - - -	• • - -	• • - -	• • - -	• • - - -	• - - - •
Newcastle Communications	• - - -	• - - -	• • - -	• • - -	• - - -	• • • • -	• • - - •
Opcom, Inc	• • • •	• • - •	• • - -	• • - -	• - - -	• • • • •	• - - - •
Rolm Corporation	• - - -	• - - -	• • • •	• • • -	• • • •	• • • • -	• - - - •
Summa Four, Inc	- • - -	• - - -	• • • •	• • - -	• • • •	• • - - -	• • • • •
Sykes Datatronics	• • • •	• - - -	• • • •	• • • -	• • • •	• • • • -	• - - - •
TDX Systems, Inc	• • • •	• • - •	• • • •	• • • •	• - - •	- • • • •	• • • • -
Techtran Industries	• • • •	• • - •	• • • •	• • • -	• • • •	• • • • -	• • • • •
Teknekron Infoswitch	• • • •	• • - •	• • • •	• • • -	• - - •	• • • • •	• • • • •
Tekno Industries	• • - -	• • - -	• • • •	• • • -	• • - -	- • - - -	• - - - •
Telco Research Corp	• - - •	- • - -	• • • •	• • • •	• - - -	• • - - -	• • • • -
Telecommunications Service Bureau	- - - •	• - - -	• • • •	• • • •	• - - •	- • - - -	• • - - •
Telematic Products, Inc	• - - -	• • - •	• • - -	• • - -	• - - -	• • • • -	• - - - •
Telephone Budgeting Systems Inc	• - - •	- • - -	• • • •	• • • -	• - - •	• • • • -	• - - - •
TeleSciences, Inc	• - - -	• - - -	• • • •	• • • -	• - - -	- • • • -	• - - - •
United Technologies Com Dev	• • - •	• - - -	• • • •	• • • -	• • • -	• • • • -	• • • • •
Western Telematic, Inc	• - - -	• - - -	• • • •	• • • -	• - - -	• • • • -	• - - - •
Xiox Corporation	• - - -	- • - -	• • • •	• • • •	• - - -	• • • • -	• - - - •
Xtend Communications Corp	• - - -	- • - •	• • • •	• • • •	• - - -	• • • • -	• - - - •

## CALL ACCOUNTING SYSTEMS FEATURES

### CALL ACCOUNTING SYSTEM FEATURES

#### FUNCTION

This Features Section describes the type and principal application of the call accounting product. This does not preclude other specific user applications, but specifies the primary function for which the system is used.

#### CONFIGURATION

This Features Section describes the hardware configuration of the call accounting system. It includes the type of microprocessor, memory, storage devices, and input/output units. It also specifies the type of interface the system uses to connect to its associated PBX/key system. It specifies the **maximum number of call records stored**.

If a **least cost routing system**, the section also indicates the **maximum number of trunks supported**, the **maximum number**

**of trunk groups supported**, and the **maximum number of routing patterns** the system provides.

If a **polling system**, this section also indicates the **maximum number or remote units the system can poll**.

#### ASSOCIATED TELEPHONE SYSTEM CONFIGURATION

This Features Section describes the telephone system types that can be connected to the call accounting system in question. It also describes the **type of connections used**, e.g., RS-232C for SMDR-based PBXs or tip and ring. The **maximum configuration of the associated phone system** is also described.

#### SOFTWARE

This Features Section describes the software components of the system. It highlights the type of **operating system**, the **application software used**, and the **maximum number of reports** the software produces.

## Call Accounting Systems

### STANDARD SYSTEM FEATURES

This Features Section lists all features of the system associated with system-related functions. The cost of these features is embedded within the cost of the basic system.

#### FIRST DELIVERY

This Features section presents the date the first system was installed in the field for customer use.

#### SYSTEMS INSTALLED

This Features Section discloses the total number of a specified model that has been installed in the field for customer use. In many cases, however, this information was **not available per model**. Where the systems installed reflected the total number of models included in the vendor's product line, it is noted as such.

#### AVERAGE SYSTEM SIZE INSTALLED

This Features Section discloses the average number of stations and trunks of associated telephone systems the system has been connected to. It has nothing to do with the maximum line capacity, but with the actual size of the existing customer base utilization.

### AVERAGE SYSTEM COST

This Features Section presents the average purchase price or price range of a system, and is provided only as a **reference**. Many systems are sold through dealers and distributors who establish pricing independently of others; therefore, the identical system configuration from 2 or more dealers/distributors may be priced differently by each one.

### DISTRIBUTION

This Features Section deals with the manner in which the vendor has decided to market a product. The vendor may choose to sell the product directly, or use a dedicated staff of marketing agents from independent dealer or distributor groups to sell its products.

### INSTALLATION/MAINTENANCE/TRAINING

This Features Section describes who provides maintenance (upkeep), installation, and training of the system. The vendor may choose to install and service the product directly, or use dealers and distributors that sell the product to install and maintain the system. A combination of both types of support may also be adopted by the vendor using remote diagnostics.

## CALL ACCOUNTING SYSTEMS LISTINGS

### ■ ACCOUNT-A-CALL CORPORATION

4450 Lakeside Drive, Burbank, CA 91505 • 818-846-3340.

#### □ TUMS (Telephone Usage Management System)

**Function** • SMDR, polling, service bureau.

**Configuration** • company processes call records, provides SMDR software, polls multiple sites via TADPOLL • maximum call records: unlimited.

**Associated Telephone System Configuration** • any System with call detail recording or SMDR; no limit on configuration.

**Software** • operating system: OS, DOS (IBM mainframes); MPE (HP/3000) • application software: proprietary • management reports produced: 20 to 50, depending on needs.

**Standard Features** • reports analyze all types of telephone expenses; up to 3,000 stored call records—TADPOLL I; up to 28,000 stored call records—TADPOLL II.

**Optional Features** • client billing; traffic engineering reports; report polling; inventory control; network optimization.

**First Delivery** • October 1977 (TUMS); company formed in 1972.

**Systems Installed** • over 80 (software only); over 400 (service bureau/pollled locations).

**Average System Size Installed** • undisclosed.

**Average System Cost** • \$25,000 software product; \$3,500 to \$6,000 TADPOLL; service bureau costs vary with size of system, number of records processed.

**Distribution** • nationwide through distributors; Account-A-Call.

**Installation/Maintenance/Training** • software installed by client, TADPOLL by distributor; maintenance by distributor—TADPOLL, Account-A-Call for software and service bureau; training by Account-A-Call.

### ■ AUTOTEL INFORMATION SYSTEMS

4944 North Country Road 18, Minneapolis, MN 55428 • 612-533-7888.

#### □ Com-Manager

**Function** • SMDR; remote polling.

**Configuration** • IBM PC-XT, PC-AT, PC-compatibles; 256K-byte RAM; 10M-byte disk; printer; RS-232C interface • maximum

remote units polled: 50 • maximum call records: 120,000 per 10M-byte disk, 4,500 per polling unit.

**Associated Telephone System Configuration** • all types using SMDR and RS-232C; no configuration size limit.

**Software** • operating system: MS-DOS 2.0; Xenix • application software: proprietary • management reports produced: 25.

**Standard Features** • system can be used as service bureau, using PC to poll remote units; battery backup.

**First Delivery** • 4th quarter 1983.

**Systems Installed** • over 50.

**Average System Size Installed** • 200 stations.

**Average System Cost** • \$9,000.

**Distribution** • direct; authorized distributors.

**Installation/Maintenance/Training** • Autotel.

### ■ BITEK, INC

6010 Paramount Boulevard, Long Beach, CA 90805 • 213-634-8950.

#### □ Models 110, 210, 310, 450 & 510

**Function** • SMDR; least cost routing for hotel/motel applications.

**Configuration** • CPU; 512K-byte memory; printer; CRT; RS-232C; tip and ring scanners • maximum trunks: 64 • maximum routing patterns: 16 • maximum trunk groups: 16 • maximum call records: 30,000.

**Associated Telephone System Configuration** • all types using SMDR and RS-232C or tip and ring connectors; up to 3,200 stations.

**Software** • operating system: Bitek proprietary • application software: proprietary • management reports produced: 10.

**Standard Features** • database updates; domestic rate tables; HOBIC interface; on-site programmable; resale of service; battery backup; property management system interface; international.

**First Delivery** • 1981 (original products introduced 1975).

**Systems Installed** • over 1,000.

**Average System Size Installed** • 15 trunks, 700 stations.

**Average System Cost** • \$2,000 to \$50,000.

## Call Accounting Systems

**Distribution** • smaller systems (under 200 stations) through authorized dealers; larger systems sold direct.

**Installation/Maintenance/Training** • Bitek.

### ■ COMMUNICATIONS GROUP, INC (CGI)

443 South Gulph Road, King of Prussia, PA 19406 • 215-265-6615.

#### □ Telecommunications Management Service (TMS)

**Function** • SMDR; service bureau; data collection.

**Configuration** • service bureau • maximum call records: unlimited.

**Associated Telephone System Configuration** • all types with SMDR and RS-232C or tip and ring scanning.

**Software** • operating system: proprietary • application software: proprietary • management reports produced: up to 50.

**Standard Features** • remote polling capability, on-site processing; network optimization studies; consulting services.

**First Delivery** • 1974.

**Systems Installed** • 400 customers.

**Average System Size Installed** • 700 stations.

**Average System Cost** • monthly billings from \$150, depending on size of system.

**Distribution** • CGI.

**Installation/Maintenance/Training** • CGI.

### ■ COMMUNICATION SUPPORT SYSTEMS, INC

123 Felton Street, Waltham, MA 02154 • 617-647-9190.

#### □ CSS IV Models 1,500, 5,000 & 15,000

**Function** • SMDR.

**Configuration** • custom CPU; RAM; printer; RS-232C • maximum call records: 15,000.

**Associated Telephone System Configuration** • most systems with SMDR and RS-232C; up to 50 trunks supported.

**Software** • operating system: proprietary • application software: proprietary • management reports produced: 16.

**Standard Features** • 4-digit extension summary; client number capability; up to 1,000 account numbers; markup capabilities; battery backup.

**First Delivery** • January 1983.

**Systems Installed** • 500.

**Average System Size Installed** • 175 stations.

**Average System Cost** • undisclosed.

**Distribution** • distributors; dealers; OEMs.

**Installation/Maintenance/Training** • distributors; dealers; OEMs.

#### □ CSS Print

**Function** • SMDR.

**Configuration** • CPU; memory; printer; RS-232C • maximum call records: none; system prints out details in real-time.

**Associated Telephone System Configuration** • most systems with SMDR and RS-232C.

**Software** • operating system: none • application software: proprietary • management reports produced: 4.

**Standard Features** • call markup capability; real-time printout of call records; 4-digit extension support; available in single-board or standalone configuration.

**Optional Features** • keyboard for user programming; 1500-call buffer.

**First Delivery** • May 1983.

**Systems Installed** • 2,000.

**Average System Size Installed** • under 60 stations.

**Average System Cost** • \$1,395 to \$8,000.

**Distribution** • distributors; dealers; OEMs.

**Installation/Maintenance/Training** • distributors; dealers; OEMs.

### ■ CONTROL KEY CORPORATION

57 Pickering Wharf, Salem, MA 01970 • 617-745-2330.

#### □ FM 5000, FM 5000 Hotel/Motel, FM 5000 Resale

**Function** • SMDR.

**Configuration** • 8088 CPU; RAM; RS-232C and Centronics interfaces • maximum call records: 40,000.

**Associated Telephone System Configuration** • most systems with SMDR and RS-232C; up to 250 trunks, 1,000 stations.

**Software** • operating system: proprietary • application software: standard package, hotel/motel package, resale • management reports produced: 23—standard; 12—hotel/motel; 27—resale.

**Standard Features** • plug-in rating module; memory overflow alarm; membrane control panel; up to 2,000 account codes; RS-232C and Centronics interfaces; battery backup; programmable report printing.

**Optional Features** • application software packages; remote polling; remote alarm; subscription service for tariff updates.

**First Delivery** • August 1983 (basic system); March 1984 (hotel/motel); 200 (resale).

**Systems Installed** • 1,500 (basic system); 400 (hotel/motel); 200 (resale).

**Average System Size Installed** • undisclosed.

**Average System Cost** • \$5,000 (basic system); \$3,750 (hotel/motel); \$5,000 (resale).

**Distribution** • interconnect companies.

**Installation/Maintenance/Training** • installation by interconnect; maintenance by NEC Telephones, toll-free number for Control Key; training by interconnect.

#### □ FM 5000K

**Function** • SMDR for key/hybrid systems.

**Configuration** • 8088 CPU; RAM; RS-232C and Centronics interfaces • maximum call records: 40,000.

**Associated Telephone System Configuration** • most key/hybrid systems with SMDR and RS-232C; up to 40 trunks, 60 stations.

**Software** • operating system: proprietary • application software: proprietary • management reports produced: 23.

**Standard Features** • plug-in rating module; memory overflow alarm; membrane control panel; up to 2,000 account codes; RS-232C and Centronics interfaces; battery backup; programmable report printing.

**Optional Features** • remote polling; remote alarm; subscription service for tariff updates.

**First Delivery** • October 1984.

**Systems Installed** • 300.

**Average System Size Installed** • undisclosed.

**Average System Cost** • \$3,750.

**Distribution** • interconnect companies.

**Installation/Maintenance/Training** • installation by interconnect; maintenance by NEC Telephones, toll-free number for Control Key; training by interconnect.

### ■ CONVERSATIONAL VOICE TECHNOLOGIES CORPORATION (CVTC)

4205 Grove Avenue, Gurnee, IL 60031 • 312-249-5560.

## Call Accounting Systems

### LAM 1, LAM LINK

**Function** • portable traffic measurement system; 5 models, all upgradeable; remote polling via LAM LINK.

**Configuration** • LAM 1: programmable microprocessor; printer • LAM LINK: Z-80; 128K-byte RAM; 16K-byte ROM; integral 212A modem; battery supply • maximum call records: 10,000 per reporting period.

**Associated Telephone System Configuration** • any type PBX using tip and ring; key system tip and ring control leads.

**Software** • operating system: proprietary • application software: proprietary • management reports produced: up to 18; reports printed on demand or on scheduled basis.

**Standard Features** • portable; units upgradeable in field; recording in 10-line increments, expandable with simplified connections; connects to tip and ring plus key system control leads; supports local C.O., WATS, FX, OCC, Centrex lines; supports loop and ground start trunks.

**Optional Features** • remote polling; auto-dial capability.

**First Delivery** • 1978.

**Systems Installed** • over 200.

**Average System Size Installed** • 10 to 40 trunks.

**Average System Cost** • \$5,400 to \$9,975.

**Distribution** • CVTC.

**Installation/Maintenance/Training** • CVTC.

### CP NATIONAL CORPORATION

242 Old New Brunswick Road, Piscataway, NJ 08854 • 201-981-8100.

### Reel Recorder

**Function** • SMDR data recording.

**Configuration** • magnetic tape system; 9-track, 1600 bpi; 32M-byte storage • maximum call records: 500,000.

**Associated Telephone System Configuration** • all types using SMDR and RS-232C or tip and ring scanner; configuration unlimited.

**Software** • operating system: IBM DOS/VSE; OS/MVS; VM/CMS • application software: proprietary CP National products • management reports produced: up to 20 when using CP National Telemanagement Software System (TSS).

**Standard Features** • 9-track; 800- or 1600-bpi formats; 32M-byte storage.

**Optional Features** • ASCII/EBCDIC code converters.

**First Delivery** • January 1978.

**Systems Installed** • over 3,000.

**Average System Size Installed** • 150 trunks; 800 stations.

**Average System Cost** • \$11,995.

**Distribution** • direct through CP National.

**Installation/Maintenance/Training** • CP National.

### Telepol

**Function** • polling unit.

**Configuration** • standalone unit with 64K- to 512K-byte RAM; battery backup; 300-/1200-bps modem • maximum call records: 17,000.

**Associated Telephone System Configuration** • all types using SMDR and RS-232C or line scanner; configuration unlimited.

**Software** • operating system: IBM DOS/VSE; OS/MVS; VM/CMS • application software: proprietary CP National products • management reports produced: up to 20 when using CP National Telemanagement Software System (TSS).

**Standard Features** • battery backup for memory; built-in 300-/1200-bps modem; call record compression; identification

password for security; wide range of remote commands; batch or interactive transmission.

**Optional Features** • alert when Telepol is 80 percent full.

**First Delivery** • January 1984.

**Systems Installed** • over 200.

**Average System Size Installed** • 150 trunks; 800 stations.

**Average System Cost** • \$3,495 to \$6,495.

**Distribution** • direct through CP National.

**Installation/Maintenance/Training** • CP National.

### DIGITAL INTERFACE SYSTEMS, INC (DIS)

2390 Pipestone Road, P.O. Box 1408, Benton Harbor, MI 49022 • 616-926-2148.

### OS 500

**Function** • SMDR.

**Configuration** • 16-bit CPU; 128K-byte RAM; dual 320K-byte diskettes; CRT/keyboard; 10M-byte disk drive; RS-232C • maximum call records: 50,000.

**Associated Telephone System Configuration** • all systems using SMDR and RS-232C; up to 500 stations; up to 100 trunks; data rates up to 4800 bps.

**Software** • operating system: MS-DOS; CP/M-86 • application software: proprietary • management reports produced: 15 standard; 4 optional.

**Standard Features** • user-configurable; V&H tables for call pricing; self-diagnostics; error recovery; account codes.

**Optional Features** • color CRT; printer; memory expansion to 192K or 256K; spreadsheet/graphics capability; database updates; serial port; battery backup.

**First Delivery** • 1984.

**Systems Installed** • over 100 (all models).

**Average System Size Installed** • 30 trunks; 190 stations.

**Average System Cost** • \$6,500 to \$35,000.

**Distribution** • authorized distributors.

**Installation/Maintenance/Training** • distributors, DIs.

### OS 2500

**Function** • SMDR.

**Configuration** • 16-bit CPU; 192K-byte RAM; 320K-byte diskette; 10M-byte hard disk; CRT/keyboard; RS-232C; alarms; multifunction operation • maximum call records: 350,000.

**Associated Telephone System Configuration** • all systems using SMDR and RS-232C; up to 1,000 stations; up to 500 trunks; data rates to 4800 bps.

**Software** • operating system: MS-DOS; CP/M-86 • application software: proprietary; business or hotel/motel • management reports produced: 17 standard; 4 optional.

**Standard Features** • same as for OS 500.

**Optional Features** • color CRT; printer; station directory; hotel/motel features; HOBIC interface; property management system interface; battery backup; database updates; serial port.

**First Delivery** • 1984.

**Systems Installed** • over 100 (all models).

**Average System Size Installed** • 50 trunks; 300 stations.

**Average System Cost** • \$9,500 to \$40,000.

**Distribution** • authorized dealers.

**Installation/Maintenance/Training** • distributors; DIs.

### OS 3000

**Function** • SMDR.

## Call Accounting Systems

**Configuration** • 16-bit TI CPU; 256K-byte RAM; 1.2M-byte diskette; 17M-byte hard disk; CRT/keyboard; printer; RS-232C; alarm.

**Associated Telephone System Configuration** • all systems using SMDR and RS-232C; up to 1,000 stations; up to 500 trunks; data rates to 4800 bps.

**Software** • operating system: MS-DOS; CP/M-86 • application software: proprietary; business or hotel/motel • management reports produced: 16 standard; 5 optional.

**Standard Features** • same as for OS 500.

**Optional Features** • additional RS-232C ports; hotel/motel package; HOBIC interface; 43M-byte hard disk; authorization codes; property management system interface.

**First Delivery** • 1984.

**Systems Installed** • over 100 (all models).

**Average System Size Installed** • 100 trunks; 500 stations.

**Average System Cost** • \$11,000 to \$45,000.

**Distribution** • authorized distributors.

**Installation/Maintenance/Training** • distributors; DIs.

### ■ HONEYWELL COMMUNICATIONS SYSTEMS DIVISION

4401 Beltwood Parkway South, Dallas, TX 75234 • 214-386-3500.

#### □ Roadrunner Digital Edition

**Function** • SMDR, least cost routing.

**Configuration** • Data General Nova IV; 256K words of memory; 84M-byte hard disk; 9-track, 1600-bpi tape drive; CRT/keyboard; printer; voice response unit; trunk ports; digital trunk interfaces • maximum trunks: 3,800 user ports • maximum routing patterns: 511 • maximum trunk groups: 3,800 • maximum call records: 250,000.

**Associated Telephone System Configuration** • all types using tip and ring or SMDR and RS-232C; no configuration size limit.

**Software** • operating system: proprietary • application software: proprietary • management reports produced: over 20.

**Standard Features** • nonblocking; queuing; supports T1 lines; up to 80,000 authorization codes; supports OCC, international dialing, equal access; extensive routing patterns; multinode networking capabilities; dynamic bandwidth allocation; time-of-day routing; remote access to system; call duration warning tones; overflow to DDD warning tone; speed dialing; remote and on-site diagnostics; performance analysis reports.

**Optional Features** • redundant processing components; variable report formatting.

**First Delivery** • 1982.

**Systems Installed** • over 30.

**Average System Size Installed** • 60 trunks; 500 stations.

**Average System Cost** • \$225,000 and up.

**Distribution** • Honeywell.

**Installation/Maintenance/Training** • Honeywell.

### ■ INSTOR CORPORATION

199 Jefferson Drive, Menlo Park, CA 94025 • 415-326-9830.

#### □ Call Analyzer/34, Call Analyzer/36

**Function** • SMDR.

**Configuration** • IBM System/34 or System/36; Instor Call Recorder/50 or Call Recorder/85 • maximum call records: 16,000 per diskette.

**Associated Telephone System Configuration** • any system using SMDR and RS-232C; unlimited number of trunks/stations.

**Software** • operating system: SSP • application software:

proprietary • management reports produced: unlimited variety.

**Standard Features** • custom database; V and H tables; full call costing; call query; archival storage; prices domestic and international calls; prices private network calls; multilocation pricing.

**Optional Features** • polling; tip and ring scanning.

**First Delivery** • 1984.

**Systems Installed** • 40 (all models).

**Average System Size Installed** • 75 trunks; 2,000 stations (all models).

**Average System Cost** • \$11,600 and up.

**Distribution** • direct through Instor.

**Installation/Maintenance/Training** • Instor.

#### □ Call Analyzer/38

**Function** • SMDR.

**Configuration** • IBM System/38; Instor Call Recorder/50 or Call Recorder/85 • maximum call records: 16,000 per diskette.

**Associated Telephone System Configuration** • any system using SMDR and RS-232C; unlimited number of trunks/stations.

**Software** • operating system: CPS • application software: proprietary • management reports produced: unlimited variety.

**Standard Features** • customer database; V and H tables; full call costing; call query; archival storage; prices domestic and international calls; prices private network calls; multilocation pricing.

**Optional Features** • polling; tip and ring scanning.

**First Delivery** • 1984.

**Systems Installed** • 40 (all models).

**Average System Size Installed** • 75 trunks; 2,000 stations (all models).

**Average System Cost** • \$15,400 and up.

**Distribution** • direct through Instor.

**Installation/Maintenance/Training** • Instor.

#### □ Call Analyzer/PC

**Function** • SMDR.

**Configuration** • IBM PC-AT or PC-XT; Instor Call Recorder/50 Diskette System or Instor/30 polling unit • maximum call records: 5,000 per diskette.

**Associated Telephone System Configuration** • any system using SMDR and RS-232C.

**Software** • operating system: PC-DOS • application software: proprietary • management reports produced: unlimited variety.

**Standard Features** • custom database; V and H tables; full call costing; call query; archival storage; prices domestic and international calls; prices private network calls; multilocation pricing.

**Optional Features** • polling; tip and ring scanning.

**First Delivery** • 1984.

**Systems Installed** • 40 (all models).

**Average System Size Installed** • 74 trunks; 2,000 stations (all models).

**Average System Cost** • \$9,000 and up.

**Distribution** • direct through Instor.

**Installation/Maintenance/Training** • Instor.

#### □ Call Recorder/50 & Call Recorder/85

**Function** • SMDR data capture device.

**Configuration** • connects to RS-232C port on PBX • maximum call records: 5,000 (Model 50); 12,000 (Model 85).

## Call Accounting Systems

**Associated Telephone System Configuration** • any system with SMDR and RS-232C.

**Standard Features** • data speeds up to 19.2K bps; blocked or unblocked mode; supports IBM 1, 2, and 2D formats.

**First Delivery** • 1983 (Model 85); 1984 (Model 50).

**Systems Installed** • 200 (Model 85); 12 (Model 50).

**Average System Cost** • \$3,500 (Model 85, single drive); \$4,500 (Model 85, dual drive); \$2,500 (Model 50).

**Distribution** • direct through Instor.

**Installation/Maintenance/Training** • Instor.

### ■ LANG SYSTEMS, INC

1010 O'Brien Drive, Menlo Park, CA 94025 • 415-328-5555.

#### □ Model 2020/2022 Telephone Line Scanner

**Function** • line scanner for PBX/Centrex systems without SMDR.

**Configuration** • standalone unit, expandable in 48-line increments • maximum call records: on-board buffer stores up to 62 calls prior to output to external storage.

**Associated Telephone System Configuration** • all types using tip and ring; up to 192 lines per module; modules can be multiplexed for larger systems.

**Software** • application software: proprietary • management reports produced: none; system produces call record detail in 1 of 3 formats • standard HOBIC or Dimension FP-15 SMDR.

**Standard Features** • up to 32 digits recorded per call; tone and pulse dial supported.

**Optional Features** • HOBIC output; Dimension FP-15 SMDR output.

**First Delivery** • May 1982.

**Systems Installed** • over 700 worldwide.

**Average System Size Installed** • 96 lines.

**Average System Cost** • \$5,000; dealer discounts available.

**Distribution** • dealers; OEMs; Lang; Graybar; Alltel Supply.

**Installation/Maintenance/Training** • dealers; Interline; Infortext; telephone contractors.

#### □ Models 2024/2025 Key System Scanner

**Function** • line scanner for key/hybrid system without SMDR.

**Configuration** • standalone unit; CPU; memory; RS-232C output • maximum call records: on-board buffer stores up to 25 calls prior to output to external storage.

**Associated Telephone System Configuration** • all types using RJ21X connections; configurations 16 trunks, 144 stations to 48 trunks, 48 stations.

**Software** • application software: proprietary • management reports produced: none; system produces call record detail in 1 of 3 formats—standard, HOBIC, or Dimension FP-15 SMDR.

**Standard Features** • tone and pulse dial supported.

**Optional Features** • HOBIC output; Dimension FP-15 SMDR output; account codes.

**First Delivery** • November 1984.

**Systems Installed** • under 10.

**Average System Size Installed** • 10 trunks; 30 stations.

**Average System Cost** • \$5,680; dealer discounts available.

**Distribution** • dealers; OEMs; Graybar; Alltel supply.

**Installation/Maintenance/Training** • dealers; Interline; Infortext; telephone contractors.

### ■ MOSCOM CORPORATION

300 Main Street, East Rochester, NY 14445 • 716-385-6440.

#### □ M4000

**Function** • SMDR for business and hotel/motel.

**Configuration** • CPU; RAM; 4 ports; diskette; printer; RS-232C • maximum call records: 2,000 (basic); 4,500 (expanded).

**Associated Telephone System Configuration** • all types using SMDR and RS-232C; up to 80 stations (basic); up to 150 stations (expanded).

**Software** • operating system: proprietary • application software: proprietary • management reports produced: over 10.

**Standard Features** • remote access; tariff updating; printer.

**First Delivery** • 1983.

**Systems Installed** • over 500.

**Average System Size Installed** • 60 stations.

**Average System Cost** • \$4,500 to \$6,000.

**Distribution** • authorized distributor, including AT&T Information Systems; FirstTel Information Systems; BellSouth; Executone; Honeywell.

**Installation/Maintenance/Training** • authorized distributors.

#### □ M5000

**Function** • SMDR.

**Configuration** • CPU; memory; diskette drive; printer; RS-232C • maximum call records: 10,000.

**Associated Telephone System Configuration** • all types using SMDR and RS-232C.

**Software** • operating system: proprietary • application software: proprietary • management reports produced: over 10.

**Standard Features** • overflow alarm; user configurable.

**Optional Features** • remote alarm.

**First Delivery** • 1983.

**Systems Installed** • over 500.

**Average System Size Installed** • 75 stations.

**Average System Cost** • \$9,500 to \$12,000.

**Distribution** • AT&T Information Systems; Executone; FirstTel Information Systems; Honeywell; other authorized distributors.

**Installation/Maintenance/Training** • authorized distributors.

### ■ MOUNTAIN ENTERPRISES

40095 Big Bear Boulevard, P.O. Box 1707, Big Bear Lake, CA 92315 • 714-866-5826.

#### □ Logger Model 2

**Function** • SMDR.

**Configuration** • self-contained unit; connects to single line • prints out records in real-time.

**Associated Telephone System Configuration** • all types using RJ-11C.

**Software** • not applicable.

**Standard Features** • tone or pulse dial compatible; timing begins after last digit dialed; maximum 1,000 call records per roll of printer tape; 3-hour battery backup.

**First Delivery** • December 1984.

**Systems Installed** • 38.

**Average System Size Installed** • single line/trunk.

**Average System Cost** • \$395.

**Distribution** • direct; distributors; dealers.

**Installation/Maintenance/Training** • end-user installation; maintenance by replacement.

## Call Accounting Systems

### Call Record Generator CRG-1

**Function** • SMDR.

**Configuration** • self-contained unit; connects to single line • prints out records in real-time external printer.

**Associated Telephone System Configuration** • all types using RJ-11C.

**Software** • not applicable.

**Standard Features** • tone or pulse dial compatible; timing begins after last digit dialed; serial port for external printer; 3-hour battery backup.

**First Delivery** • March 1985.

**Systems Installed** • 10.

**Average System Size Installed** • single line/trunk.

**Average System Cost** • \$395.

**Distribution** • direct; distributors; dealers.

**Installation/Maintenance/Training** • end-user installation; maintenance by replacement.

### NATIONAL APPLIED COMPUTER TECHNOLOGIES (NACT)

P.O. Box 1870, 744 South 400 East, Orem, UT 84058 • 801-225-6248.

### LCX 120A

**Function** • least cost routing for telephone companies or resale common carriers; billing.

**Configuration** • TI 990; 256K-byte memory; 20M-byte or 40M-byte hard disk; 8 to 120 nonblocked ports per system control module; 1 to 2 control modules; CRT; printer; keyboard; UPS • maximum trunks: 120; opt 240 • maximum trunk groups: 120 • maximum routing patterns: 128 • maximum call records: 120,000 (20M bytes); 260,000 (40M bytes).

**Associated Telephone System Configuration** • not applicable; used as long distance routing control systems.

**Software** • operating system: PDOS • application software: proprietary • management reports produced: 20.

**Standard Features** • authorization codes; multiple billing periods; interactive customer database; system connects to telco 2-wire loop/ground start trunks, 4-wire E&M Type 1 trunks; call routing user 6-digit translation; queuing; speed dialing; programmable credit limits; data backup; diagnostics; classes of service; long call duration warning tone; international dialing; equal access compatibility.

**First Delivery** • March 1984.

**Systems Installed** • 65.

**Average System Size Installed** • 120 trunks.

**Average System Cost** • \$67,500.

**Distribution** • direct; authorized distributors.

**Installation/Maintenance/Training** • NACT.

### LCX 120S

**Function** • least-cost routing for remote locations under control of LCX 120A.

**Configuration** • TI 990; 256K-byte memory; 20M-byte or 40M-byte hard disk; 8 to 120 nonblocked ports; RS-232C interface • maximum trunks: 120 • maximum trunk groups: 120 • maximum routing patterns: 128 • maximum call records: 150,000.

**Associated Telephone System Configuration** • not applicable; used as long distance routing control system under control of LCX 120A.

**Software** • operating system: PDOS • application software: proprietary • management reports produced: none; reports produced by LCX 120A control site.

**Standard Features** • authorization codes; system connects to telco 2-wire loop/ground start trunks, 4-wire E&M Type 1 trunks; call routing uses 6-digit translation; queuing; speed dialing; remote diagnostics; remote software configuration and management; classes of service; long call duration warning tone; international dialing; equal access compatibility (3rd quarter 1985).

**First Delivery** • May 1985.

**Systems Installed** • under 10.

**Average System Size Installed** • 120 ports.

**Average System Cost** • \$60,000.

**Distribution** • direct; authorized distributors.

**Installation/Maintenance/Training** • NACT.

### NEC INFORMATION SYSTEMS, INC

1414 Massachusetts Avenue, Boxborough, MA 01719 • 617-264-8000.

### Astra-Phacs

**Function** • SMDR; polling.

**Configuration** • Astra Series CPU; 1M-byte memory; 463M-byte disk; CRT/keyboard; RS-232C port • maximum call records: 400,000.

**Associated Telephone System Configuration** • all types with SMDR and RS-232C; no configuration size limit; also supports tip and ring scanners.

**Software** • operating system: proprietary • application software: proprietary • management reports produced: 12; major system functions—SMDR, Traffic Reporting; Attendant Directory/Message Center.

**Standard Features** • polling; standard SMDR reporting and call pricing; detailed traffic analysis reports; attendant directory and message center; field expandable; battery back; user-programmable parameters; traffic simulation; multitasking.

**Optional Features** • disk storage; printers; CRTs.

**First Delivery** • 1982.

**Systems Installed** • over 100.

**Average System Size Installed** • 30 trunks; 300 stations.

**Average System Cost** • \$15,000 to \$50,000.

**Distribution** • NEC Information Systems.

**Installation/Maintenance/Training** • NEC.

### Mini-Phacs

**Function** • SMDR; polling.

**Configuration** • Astra Series CPU; 512K-byte memory; 4M-byte or 20M-byte disk; RS-232C; CRT/keyboard • maximum call records: 20,000.

**Associated Telephone System Configuration** • all types with SMDR and RS-232C; no configuration size limit; also supports tip and ring scanners.

**Software** • operating system: proprietary • application software: proprietary • management reports produced: 10.

**Standard Features** • polling; standard SMDR call reporting and call pricing; multitasking; traffic simulation.

**Optional Features** • disk storage; printers.

**First Delivery** • 1983.

**Systems Installed** • over 100.

**Average System Size Installed** • 15 trunks; 125 stations.

**Average System Cost** • \$10,000 to \$35,000.

**Distribution** • NEC Information Systems.

**Installation/Maintenance/Training** • NEC.

## Call Accounting Systems

### ■ NEC TELEPHONES, INC

8 Old Sod Farm Road, Melville, NY 11747 • 516-753-7000.

#### Ledger

**Function** • SMDR.

**Configuration** • standalone unit with CPU, RAM, membrane control panel; RS-232C; printer • maximum call records: 35,000.

**Associated Telephone System Configuration** • NEC Electra Series, NEAX 12A with SMDR and RS-232C; up to 48 trunks, 360 stations.

**Software** • operating system: proprietary • application software: proprietary • management reports produced: over 20.

**Standard Features** • user-programmable; updates in rate base by plug-in module; memory overflow alarm; self-diagnostics; battery backup.

**Optional Features** • additional hard disk; printers.

**First Delivery** • 1983.

**Systems Installed** • over 100.

**Average System Size Installed** • 20 trunks; 100 stations.

**Average System Cost** • \$5,000 to \$12,000.

**Distribution** • NEC Telephones; authorized NEC distributors.

**Installation/Maintenance/Training** • NEC; distributors.

### ■ NEWCASTLE COMMUNICATIONS

320 East 86th Street, Suite 3-B, New York, NY 10028 • 212-772-9104; 123 Felton Street, Waltham, MA 02154 • 617-899-2171.

#### CSS/IV Business System

**Function** • SMDR.

**Configuration** • custom CPU; RAM memory and storage; printer; CRT; RS-232C • maximum call records: 15,000.

**Associated Telephone System Configuration** • most systems using SMDR and RS-232C; up to 54 trunks; 400 stations.

**Software** • operating system: not applicable • application software: proprietary • management reports produced: 16.

**Standard Features** • 4-digit extension summary; client numbers; account codes, markup capability; battery backup.

**First Delivery** • January 1983; Resale version January 1985.

**Systems Installed** • over 500.

**Average System Size Installed** • 5 to 40 trunks; 25 to 350 stations.

**Average System Cost** • \$5,000 to \$8,900.

**Distribution** • direct sales; interconnect companies.

**Installation/Maintenance/Training** • in NY, NJ, CT through Newcastle Communications; elsewhere through interconnects.

#### CSS/Print

**Function** • SMDR.

**Configuration** • 8-bit CPU; 8K-byte RAM; 8K-byte EPROM; RS-232C; printer • maximum call records: none, records printed out in real-time.

**Associated Telephone System Configuration** • most types using SMDR and RS-232C; up to 54 trunks; 1,000 stations.

**Software** • operating system: not applicable • application software: proprietary • management reports produced: 4.

**Standard Features** • call markup; real-time printout of call records; 4-digit extension number support; available in single-board or standalone configuration.

**Optional Features** • 1500—call buffer; keyboard for user programming.

**First Delivery** • May 1983.

**Systems Installed** • 2,000.

**Average System Size Installed** • 6 to 10 trunks; 10 to 85 stations.

**Average System Cost** • \$2,300 to \$3,200.

**Distribution** • direct sales; interconnect companies.

**Installation/Maintenance/Training** • in NY, NJ, CT through Newcastle Communications; elsewhere through interconnects.

### ■ OPCOM INC

538 Oakmead Parkway, Sunnyvale, CA 94086 • 408-749-1911.

#### XL150

**Function** • SMDR; least cost routing (pollable).

**Configuration** • multiple Z80s; 128K-byte RAM; 1M-byte diskette; voice response unit • maximum call records: 15,000 • maximum trunks: 53 • maximum trunk groups: 30 • maximum routing patterns: 11.

**Associated Telephone System Configuration** • AT&T-IS Horizon; Dimension; System 75; ITT 3100; other PBXs with tone dial; RJ11C interface; 6 to 12 ports supports over 400 stations.

**Software** • operating system: proprietary • application software: proprietary • management reports produced: 11 for SMDR; 1 for traffic.

**Standard Features** • class of service (up to 8); forced authorization codes (up to 450); exempt numbers (up to 400); speed dial numbers (up to 650); last-number redial; off-hook queuing; callback queuing; traffic simulation; peg counts; local and remote system administration; speed number changes via 2500 set; voice prompts.

**Optional Features** • account numbers.

**First Delivery** • 1982.

**Systems Installed** • 300.

**Average System Size Installed** • undisclosed.

**Average System Cost** • \$12,500 to \$14,000.

**Distribution** • authorized distributors.

**Installation/Maintenance/Training** • AT&T-IS; OEMs.

#### NES (Network Expansion System)

**Function** • SMDR; least cost routing (pollable) in uniform 7-digit network.

**Configuration** • multiple Z80; 128K-byte RAM; 1M-byte diskette; voice response unit • maximum call records: 15,000 • maximum trunks: 53 • maximum trunk groups: 30 • maximum routing patterns: 11.

**Associated Telephone System Configuration** • AT&T-IS Horizon, Dimension, System 75; other PBXs with tone dialing; RJ11C interface; 6 to 12 ports supports over 400 stations.

**Software** • operating system: proprietary • application software: proprietary • management reports produced: 11 for SMDR; 1 for traffic.

**Standard Features** • same as XL150; used in multipoint networks.

**Optional Features** • same as XL150; used in multipoint networks.

**First Delivery** • 1984.

**Systems Installed** • undisclosed.

**Average System Size Installed** • undisclosed.

**Average System Cost** • \$14,000 to \$16,000.

**Distribution** • authorized distributors.

**Installation/Maintenance/Training** • AT&T-IS.

### ■ ROLM CORPORATION

4900 Old Ironsides Drive, Santa Clara, CA 95050 • 408-988-2900.

## Call Accounting Systems

### Resale Manager, CallCost Manager

**Function** • SMDR for business, hotel/motel, resale.

**Configuration** • Insite computer; 16-bit CPU; 512K-byte RAM; floppy disk; hard disk; printer; RS-232C • maximum call records: 10,000 to 150,000 (Resale Manager); 20,000 to 160,000 (CallCost Manager).

**Associated Telephone System Configuration** • Rolm CBX, CBX II with CDR feature; 9600-bps (Resale); HOBIC interface (Resale); 1200-bps (CallCost); up to 100 trunks; 2,000 stations.

**Software** • operating system: proprietary • application software: proprietary • management reports produced: over 15, both systems, user selectable/configurable.

**Standard Features** • compatible with Rolm CBX products only; account codes; traffic management reports; system failure alarm; storage overflow alarm; printer.

**Optional Features** • disk storage units.

**First Delivery** • December 1983.

**Systems Installed** • over 150 (both models).

**Average System Size Installed** • 25 trunks; 200 stations.

**Average System Cost** • \$19,000 to \$31,000

**Distribution** • Rolm.

**Installation/Maintenance/Training** • Rolm.

### ■ SUMMA FOUR, INC

2456 Brown Avenue, Manchester, NH 03103 • 603-625-4050.

### MCX-6000

**Function** • trunk-connected active business call accounting system.

**Configuration** • microprocessor; system touchpad; printer; loop/ground start trunk cards; power supply; battery backup • maximum call records: 24,000.

**Associated Telephone System Configuration** • all types supported using tip and ring connections on trunk side; up to 16 trunks; 250 users.

**Software** • operating system: proprietary • application software: proprietary • management reports produced: 8.

**Standard Features** • annual subscription service; battery backup; database updates; direct computer entry; incoming call management; international rate tables; network analysis; on-site programmable; remote diagnostics; remote maintenance; remote rate table updates; resale of service; system status indicators.

**First Delivery** • 1982.

**Systems Installed** • 4,000 (all models).

**Average System Size Installed** • 8 trunks.

**Average System Cost** • \$3,500 to \$12,000.

**Distribution** • RCA Service Company; UCS; Telecom Plus; BOCs; over 130 regional distributors.

**Installation/Maintenance/Training** • distributors.

### MCX-7000 Models 7000 & 7100

**Function** • SMDR.

**Configuration** • microprocessor; system touchpad; printer; power supply; battery backup • maximum call records: 20,000 (7000); 40,000 (7100) • maximum remote units polled: 72 per hard disk using Summalink program for IBM PC, PC-Xt, and PC-compatibles.

**Associated Telephone System Configuration** • all PBX/Key systems with SMDR and RS-232C; Model 7000—99 trunks; 256 stations; Model 7100—256 trunks, 1,024 stations.

**Software** • operating system: proprietary • application software: proprietary • management reports produced: 16.

**Standard Features** • same as MCX-6000.

**First Delivery** • November 1983.

**Systems Installed** • 4,000 (all models).

**Average System Size Installed** • 250 stations.

**Average System Cost** • \$3,500 to \$12,000.

**Distribution** • same as MCX-6000.

**Installation/Maintenance/Training** • distributors.

### MCX-7700

**Function** • SMDR.

**Configuration** • microprocessor; system touchpad; printer; power supply; battery backup • maximum remote units polled: 72 using Summalink • maximum call records: 800.

**Associated Telephone System Configuration** • all PBX/Key systems with SMDR and RS-232C; up to 24 trunks; 50 stations.

**Software** • operating system: proprietary • application software: proprietary • management reports produced: 8.

**Standard Features** • same as MCX-6000.

**First Delivery** • January 1985.

**Systems Installed** • 4,000 (all models).

**Average System Size Installed** • 35 stations.

**Average System Cost** • \$3,500 to \$12,000.

**Distribution** • same as MCX-6000.

**Installation/Maintenance/Training** • distributors.

### MCX-8000 Models 8000 & 8100

**Function** • call accounting using tip and ring connections.

**Configuration** • microprocessor; system touchpad; printer; battery backup; power supply; rotary/tone line cards • maximum remote units polled: 72 using Summalink • maximum call records: 20,000 (8000); 40,000 (8100).

**Associated Telephone System Configuration** • electromechanical PBX; Centrex; up to 250 stations using connections across tip and ring.

**Software** • operating system: proprietary • application software: proprietary • management reports produced: 16.

**Standard Features** • same as MCX-6000.

**First Delivery** • January 1985.

**Systems Installed** • 4,000 (all models).

**Average System Size Installed** • 100 to 200 stations.

**Average System Cost** • \$3,500 to \$12,000.

**Distribution** • same as MCX-6000.

**Installation/Maintenance/Training** • distributors.

### PCX-2000 Models 2000 & 2100

**Function** • hotel/motel call accounting using tip and ring connections.

**Configuration** • microprocessor; system touchpad; power supply; battery backup; printer; rotary/tone line cards • maximum remote units polled: 72 using Summalink • maximum call records: none (2000); 24,000 (2100).

**Associated Telephone System Configuration** • electromechanical PBX systems using tip and ring connections; unlimited trunks, up to 1,000 stations configured.

**Software** • operating system: proprietary • application software: proprietary • management reports produced: 3 audit reports.

**Standard Features** • administrative call tracking; annual subscription service; audit reports; tracks room status, wake-up calls; automatic report cycles; battery backup; international rate tables; on-site programmability; polling; property management system interface; remote maintenance; remote database updates; resale of service; system diagnostics; status indicators; weekend call costing.

## Call Accounting Systems

**First Delivery** • September 1982.

**Systems Installed** • 4,000 (all systems).

**Average System Size Installed** • 200 stations.

**Average System Cost** • \$3,500 to \$12,000.

**Distribution** • same as MCX-6000.

**Installation/Maintenance/Training** • distributors.

**PCX-2500 Models 2500 & 2600**

**Function** • hotel/motel call accounting and resale using tip and ring connections.

**Configuration** • microprocessor; system touchpad; printer; power supply; battery backup; rotary/ tone line cards • maximum remote units polled: 72 using Summalink • maximum call records: none (2500); 500 (2600).

**Associated Telephone System Configuration** • electromechanical PBX systems using tip and ring connections; unlimited trunks; up to 125 stations.

**Software** • operating system: proprietary • application software: proprietary • management reports produced: 3 audit reports.

**Standard Features** • same as PCX-2000.

**First Delivery** • September 1983.

**Systems Installed** • 4,000 (all models).

**Average System Size Installed** • 80 stations.

**Average System Cost** • \$3,500 to \$12,000.

**Distribution** • same as MCX-6000.

**Installation/Maintenance/Training** • distributors.

**PCX-3000 Models 3000 & 3100**

**Function** • SMDR for hotel/motel resale.

**Configuration** • microprocessor; system touchpad; printer; power supply; battery backup; RS-232C • maximum remote units polled: 72 using Summalink • maximum call records: none (3000); 24,000 (3100).

**Associated Telephone System Configuration** • all PBX/Key systems using SMDR and RS-232C; unlimited trunks; up to 9,999 stations.

**Software** • operating system: proprietary • application software: proprietary • management reports produced: 3 audit reports.

**Standard Features** • same as PCX-2000.

**First Delivery** • May 1983.

**Systems Installed** • 4,000 (all models).

**Average System Size Installed** • 200 stations.

**Average System Cost** • \$3,500 to \$12,000.

**Distribution** • same as MCX-6000.

**Installation/Maintenance/Training** • distributors.

**Summa Scan System**

**Function** • tip and ring line scanner.

**Configuration** • microprocessor; power supply; rotary/ tone line cards; optional printer • maximum remote units polled: 72 using Summalink • maximum call records: none; system prints in real-time.

**Associated Telephone System Configuration** • electromechanical PBX using tip and ring connections; up to 1,000 stations.

**Software** • application software: proprietary • management reports produced: none; system prints calls in real-time.

**Standard Features** • system generates call detail that can be printed out as continuous record, or can send to other SummaFour SMDR system for report generation.

**First Delivery** • September 1982.

**Systems Installed** • 4,000 (all models).

**Average System Size Installed** • 200 stations.

**Average System Cost** • \$3,500 to \$12,000.

**Distribution** • authorized distributors.

**Installation/Maintenance/Training** • distributors.

**SYKES DATATRONICS, INC**

100 Kings Highway, Rochester, NY 14617 • 716-266-4000.

**Comm-Stor SMDR**

**Function** • SMDR, remote operation.

**Configuration** • 6502 CPU; up to 80K-byte RAM; dual diskette; RS-232C • maximum call records: 96,000.

**Associated Telephone System Configuration** • all types using SMDR and RS-232C; up to 1,024 stations; up to 9600 bps.

**Software** • operating system: proprietary • application software: proprietary • management reports produced: over 10.

**Standard Features** • user-configurable; records and prints reports simultaneously; battery supply.

**Optional Features** • CRT; printer.

**First Delivery** • 1980.

**Systems Installed** • over 4,000.

**Average System Size Installed** • 30 trunks; 250 stations.

**Average System Cost** • \$8,400 and up.

**Distribution** • AT&T; Executone; authorized distributors.

**Installation/Maintenance/Training** • Sykes; distributors.

**Telemiser**

**Function** • SMDR.

**Configuration** • 6809 CPU; 128K-byte RAM; single or dual diskettes; RS-232C; printer; CRT • maximum call records: 8,000 to 32,000.

**Associated Telephone System Configuration** • all types using SMDR and RS-232C; up to 9600 bps; 200 to 600 stations.

**Software** • operating system: proprietary • application software: proprietary • management reports produced: over 10.

**Standard Features** • user-configurable; integral modem; records and prints reports simultaneously; battery backup.

**Optional Features** • CRT; printer; disks.

**First Delivery** • 1984.

**Systems Installed** • over 500.

**Average System Size Installed** • 25 trunks; 250 stations.

**Average System Cost** • \$5,500 to \$9,000.

**Distribution** • same as Comm-Stor.

**Installation/Maintenance/Training** • Sykes; distributors.

**Minimiser I & II**

**Function** • SMDR for business or hotel/motel; Model I prints in real-time; Model II stores/prints records.

**Configuration** • 6502 CPU; 42K-byte to 64K-byte RAM; printer; keyboard; RS-232C • maximum call records; none (Model I); 5,000 (Model II).

**Associated Telephone System Configuration** • most types using SMDR and RS-232C; small (100 lines) to medium (400 lines) configurations; up to 1200 bps.

**Software** • operating system: proprietary • application software: proprietary • management reports produced: 4 to 10.

**Standard Features** • Model I prints calls in real-time; Model II stores records for subsequent printing into reports; account codes; battery backup in Model II; Model I used for hotel/motel/resale.

**First Delivery** • April 1984.

**Systems Installed** • over 200.

## Call Accounting Systems

**Average System Size Installed** • 20 trunks; 150 stations.  
**Average System Cost** • \$1,000 to \$4,000.

**Distribution** • same as Comm-Stor.

**Installation/Maintenance/Training** • Sykes, distributors.

**Inn Voice**

**Function** • SMDR for hotel/motel/resale.

**Configuration** • 6502 CPU; 64K-byte RAM; dual diskettes; buffered; CRT; printer; RS-232C • maximum call records: 64,000.

**Associated Telephone System Configuration** • any hotel/motel system using SMDR and RS-232C; up to 2,500 stations; up to 9600 bps.

**Software** • operating system: proprietary • application software: proprietary • management reports produced: 4 to 10 depending on application.

**Standard Features** • user-configurable; full costing; profit margins; buffer supports simultaneous call recording and printing; battery backup.

**Optional Features** • diskettes; CRT; printers.

**First Delivery** • March 1982.

**Systems Installed** • over 250.

**Average System Size Installed** • 50 trunks; 450 stations.

**Average System Cost** • \$18,000 to \$36,000.

**Distribution** • same as Comm-Stor.

**Installation/Maintenance/Training** • Sykes; distributors.

**Small Property Systems**

**Function** • SMDR for hotel/motel/resale.

**Configuration** • 6502 CPU; 64K-byte RAM; floppy diskette; buffer; printer; RS-232C • maximum call records: 16,000.

**Associated Telephone System Configuration** • any hotel/motel system using SMDR and RS-232C; up to 400 stations; up to 9600 bps.

**Software** • operating system: proprietary • application software: proprietary • management reports produced: 4 to 10 depending on application.

**Standard Features** • user-configurable; full costing; profit margins; buffer supports simultaneous call recording and printing; battery backup.

**Optional Features** • CRT; printers.

**First Delivery** • February 1983.

**Systems Installed** • over 150.

**Average System Size Installed** • 25 trunks; 170 stations.

**Average System Cost** • \$8,900.

**Distribution** • same as Comm-Stor.

**Installation/Maintenance/Training** • Sykes; distributors.

■ **TDX SYSTEMS, INC**

1920 Aline Avenue, Vienna, VA 22180 • 703-790-5300.

**Telex 3000**

**Function** • SMDR; least cost routing.

**Configuration** • LCR controller on user premises; connects to tip and ring; connects via data link to TDX control center • maximum trunks: 1,000 • maximum trunk groups: 200 • maximum routing patterns: 100 • maximum call records: unlimited.

**Associated Telephone System Configuration** • any type using tips and ring connections on trunk side; system can also gather SMDR data for processing.

**Software** • operating system: proprietary • application software: proprietary • management reports produced: up to 20.

**Standard Features** • SMDR and LCR; callback/hold-on queuing

in LCR; traffic/call accounting reports processed at TDX; mailed to user.

**First Delivery** • 1977.

**Systems Installed** • over 100.

**Average System Size Installed** • 30 trunks; 350 stations.

**Average System Cost** • \$500 per month and up.

**Distribution** • TDX.

**Installation/Maintenance/Training** • TDX.

■ **TECHTRAN INDUSTRIES**

200 Commerce Drive, Rochester, NY 14623 • 716-334-9640.

**501/501H Telephone Accountant**

**Function** • SMDR; can be polled.

**Configuration** • microprocessor-based; RAM; 2 ports (501); 3 ports (501H); printer • maximum call records: 4,700.

**Associated Telephone System Configuration** • all types using SMDR and RS-232C interface; 110 to 9600 bps; 501H includes HOBIC interface; no configuration size limit.

**Software** • application software: proprietary • management reports produced: 501—summary by station, summary by account; 501H—room summary report, system summary.

**Standard Features** • surcharge computation; storage overflow alert; system clock; reports generated on demand.

**Optional Features** • 501H—property management system interface.

**First Delivery** • January 1984.

**Systems Installed** • over 300.

**Average System Size Installed** • 30 to 100 stations.

**Average System Cost** • \$2,000.

**Distribution** • authorized distributors.

**Installation/Maintenance/Training** • distributors.

**515 Formatter**

**Function** • provides interface between Northern Telecom SL-1 or NEC NEAX-22 and Telephone Accountant Systems.

**Configuration** • microprocessor-based standalone unit; 2 RS-232C ports; installs between SL-1/NEAX-22 and Telephone Accountant • call handling for SL-1—2898 simultaneous calls; for NEAX-22—5096 simultaneous calls.

**Associated Telephone System Configuration** • Northern Telecom SL-1 (any size); NEC NEAX-22 (any size); RS-232C interface; 110 to 9600 bps.

**Software** • application software: proprietary.

**Standard Features** • unattended operation; requires Techtran Telephone Accountant; converts SL-1/NEAX-22 SMDR formats to Techtran formats.

**First Delivery** • 1984.

**Systems Installed** • over 30.

**Average System Size Installed** • 200 to 400 stations.

**Average System Cost** • \$2,000 to \$3,000.

**Distribution** • authorized distributors.

**Installation/Maintenance/Training** • distributors.

**9331/9331H Telephone Accountant**

**Function** • SMDR; can be polled.

**Configuration** • microprocessor-based; RAM; 5.25-inch diskette; 4 ports (9331H); 3 ports (9331); up to 4 DS-10 Desk Station units for hotels • maximum call records: 5,000.

**Associated Telephone System Configuration** • all types using SMDR and RS-232C; 110 to 9600 bps; no configuration size limit; 9331H includes HOBIC interface.

## Call Accounting Systems

**Software** • application software: proprietary • management reports produced: 5; automatic printout optional.

**Standard Features** • disk overflow warning; surcharge computation; account codes; battery backup.

**Optional Features** • 9331H—property management system interface; automatic report printout.

**First Delivery** • January 1982.

**Systems Installed** • over 500.

**Average System Size Installed** • 100 to 200 stations.

**Average System Cost** • \$5,000.

**Distribution** • authorized distributors.

**Installation/Maintenance/Training** • distributors.

### 9551/9551H Telephone Accountant

**Function** • SMDR; can be polled.

**Configuration** • microprocessor-based; RAM; 8-inch diskette; 4 ports (9551H); 3 ports (9551); up to 4 DS-10 Desk Station units for hotels • maximum call records: 20,000.

**Associated Telephone System Configuration** • all types using SMDR and RS-232C; 110 to 9600 bps; 9551H includes HOBIC interface; no configuration limit.

**Software** • application software: business hotel/motel, resale packages • management reports produced: 5; automatic printout standard.

**Standard Features** • disk overflow warning; report summary flexible selection; battery backup; surcharge computation.

**Optional Features** • 9551H—property management system interface.

**First Delivery** • June 1982.

**Systems Installed** • over 300.

**Average System Size Installed** • 150 to 250 stations.

**Average System Cost** • \$7,500.

**Distribution** • authorized distributors.

**Installation/Maintenance/Training** • distributors.

### System 61/61H Telephone Accountant

**Function** • SMDR.

**Configuration** • desktop integral keyboard/display system; Winchester disk; floppy diskette; 3 ports (61); 4 ports (61H) • maximum call records: 60,000.

**Associated Telephone System Configuration** • all types using SMDR and RS-232C; 110 to 19.2K bps; no configuration size limit.

**Software** • application software: business, hotel/motel, tenant sharing/resale packages • management reports produced: over 20 basic categories.

**Standard Features** • variable costing methods; international call costing; 60 department allocations; clock reports; programmable call exclusion; variable report mode; property management system interface; automatic program load; modem port for remote polling and rate table download.

**Optional Features** • telephone directory; state directory; international rate tables.

**First Delivery** • January 1985.

**Systems Installed** • 10.

**Average System Size Installed** • 200 to 300 stations.

**Average System Cost** • \$8,000.

**Distribution** • authorized distributors.

**Installation/Maintenance/Training** • distributors.

### System 71/71H Telephone Accountant

**Function** • SMDR.

**Configuration** • desktop integral keyboard/display system; dual CPUs; 15M-byte hard disk; 5.25-inch diskette; 3 ports (71); 4 ports (71H); printer • maximum call records: 120,000.

**Associated Telephone System Configuration** • all types using SMDR and RS-232C; 110 to 19.2K bps; no configuration size limit.

**Software** • application software: business; hotel/motel; tenant sharing/resale packages • management reports produced: over 20 basic categories.

**Standard Features** • variable call costing methods; international call costing; 60 department allocations; clock; reports; programmable call exclusion; variable report mode; property management system interface; automatic program load; modem port for remote polling and rate table download.

**Optional Features** • telephone directory; state directory; international rate tables.

**First Delivery** • January 1984.

**Systems Installed** • over 90.

**Average System Size Installed** • 200 to 600 stations.

**Average System Cost** • \$15,000.

**Distribution** • authorized distributors.

**Installation/Maintenance/Training** • distributors.

### ■ TEKNEKRON INFOSWITCH CORPORATION

1784 Firman Drive, Richardson, TX 75081 • 214-644-0570.

### Infoswitch SMDR/LDCS

**Function** • SMDR; least cost routing (LDCS).

**Configuration** • Datapoint CPU; 2 to 4 hard disks; CRT; printer; keyboard; tip and ring; RS-232C • maximum trunks: 90 • maximum trunk groups: 90 • maximum routing patterns: 15 • maximum call records: 200,000.

**Associated Telephone System Configuration** • all types using connection to trunk/stations by tip and ring; stations by SMDR/RS-232C.

**Software** • operating system: proprietary • application software: proprietary • management reports produced: up to 20.

**Standard Features** • turnkey system; simulation; authorization codes; account codes; hold-on queuing; diagnostics; battery backup; speed dialing.

**Optional Features** • printers; tape drives (9-track).

**First Delivery** • 1976.

**Systems Installed** • over 700.

**Average System Size Installed** • 50 trunks; 400 stations.

**Average System Cost** • \$150,000 to \$400,000.

**Distribution** • Teknekron Infoswitch.

**Installation/Maintenance/Training** • Teknekron Infoswitch.

### ■ TEKNO INDUSTRIES, INC

795 Eagle Drive, Bensenville, IL 60106 • 312-766-6960.

### CDP-241A

**Function** • SMDR.

**Configuration** • CPU; 64K- to 2M-byte RAM; printer; RS-232C • maximum call records: 120,000.

**Associated Telephone System Configuration** • any system using SMDR and RS-232C; up to 1,920 inputs (trunks, stations).

**Software** • operating system: proprietary • application software: proprietary • management reports produced: 12.

**Standard Features** • 12 standard business reports; 4 standard hotel/motel reports; on-site and remote diagnostics.

**Optional Features** • call costing with V and H tables; interface to property management system; HOBIC merge for integrating a printer; battery backup.

## Call Accounting Systems

**First Delivery** • July 1983.

**Systems Installed** • 150.

**Average System Size Installed** • 300 inputs.

**Average System Cost** • \$5,000 to \$8,000.

**Distribution** • authorized distributors.

**Installation/Maintenance/Training** • distributors; Tekno.

**CMS-240A**

**Function** • SMDR; tip and ring scanner.

**Configuration** • CPU; 32K- to 2M-byte RAM; printer; tip and ring scanner; trunk/station inputs • maximum call records: 120,000.

**Associated Telephone System Configuration** • all types; up to 1,920 inputs (trunks, stations).

**Software** • operating system: proprietary • application software: proprietary • management reports produced: 12.

**Standard Features** • 12 standard business reports; 4 standard hotel/motel reports; on-site and remote diagnostics.

**Optional Features** • call costing with V and H tables; interface to property management system; ringback detection; HOBIC merge for printer; battery backup.

**First Delivery** • July 1981.

**Systems Installed** • 550.

**Average System Size Installed** • 150 inputs.

**Average System Cost** • \$10,000 to \$14,000.

**Distribution** • authorized distributors.

**Installation/Maintenance/Training** • distributors, Tekno.

**TELCO RESEARCH CORPORATION**

1207 17th Avenue South, Nashville, TN 37212 • 615-329-0031.

**TRU**

**Function** • SMDR; polling.

**Configuration** • IBM PC, PC-XT, PCjr; 128K- to 256K-byte memory; 2 to 16 RS-232C ports; floppy disk storage; hard disk drives; 9-track tape drives; async/SNA/SDLC transmission • maximum remote units polled: 15 • maximum call records: 1,000,000.

**Associated Telephone System Configuration** • all systems using SMDR and RS-232C; no configuration size limit.

**Software** • operating system: PC-DOS; MS-DOS; concurrent DOS • application software: over 20 Telco Research products available • management reports produced: minimum 20 for each package.

**Standard Features** • multiple concurrent operations; online search/inquiry; equipment inventory; traffic analysis; network optimization; graphics; automatic alarms; battery backup; system backup; color monitor.

**Optional Features** • various printers; plotters; communications devices; various storage options.

**First Delivery** • 1984.

**Systems Installed** • over 150.

**Average System Size Installed** • 40 trunks; 300 stations.

**Average System Cost** • \$13,000 to \$75,000.

**Distribution** • Telco Research; authorized distributors.

**Installation/Maintenance/Training** • Telco Research; authorized distributors.

**TELECOMMUNICATIONS SERVICE BUREAU**

1134 Tower Lane, Bensenville, IL 60106 • 312-860-5000.

**TSB-1W**

**Function** • SMDR polling unit; service bureau.

**Configuration** • 16-bit microprocessor; bubble memory; hard

disk; 4 ports • maximum remote units polled; unlimited • maximum call records; 200,000.

**Associated Telephone System Configuration** • all types using SMDR and RS-232C; no configuration size limit.

**Software** • operating system: MPE (HP-3000); MVS (IBM) • application software: proprietary • management reports produced: 14.

**Standard Features** • remote system polling; battery backup.

**First Delivery** • February 1980.

**Systems Installed** • 196.

**Average System Size Installed** • 90 trunks; 700 stations.

**Average System Cost** • \$7,400 (hardware); monthly polling/processing fees from \$200.

**Distribution** • direct; Centel Business Systems.

**Installation/Maintenance/Training** • direct; Centel Business Systems.

**TELEMATIC PRODUCTS, INC**

P.O. Box 1038, Redmond, WA 98073-1038 • 206-882-5000.

**RBC-2**

**Function** • SMDR.

**Configuration** • standalone unit; Z80-based with EPROM cartridge memory; RS-232C or parallel port; impact or thermal printer • maximum call records: 4,000, 8,000, or 12,000.

**Associated Telephone System Configuration** • all types with SMDR and RS-232C; up to 100 trunks; 250 stations; 250 account codes.

**Software** • operating system: not applicable • application software: proprietary • management reports produced: over 10; system also prints in real-time.

**Standard Features** • hotel/motel, resale capabilities; account codes; V and H call costing; surcharge programming; call removal; prints in real-time; incoming call processing.

**Optional Features** • tip and ring scanners; battery backup.

**First Delivery** • January 1984.

**Systems Installed** • over 1,000.

**Average System Size Installed** • 100 stations; also installed in hybrid key systems.

**Average System Cost** • \$3,700 to \$6,200.

**Distribution** • GTE Supply; North Electric Supply; Graybar; Famous Telephone Supply; telephone companies.

**Installation/Maintenance/Training** • dealers; telcos with factory support.

**TELEPHONE BUDGETING SYSTEMS, INC**

Empire State Building, Suite 6903, New York, NY 10118 • 212-947-7737.

**TMS/PC**

**Function** • SMDR; polling.

**Configuration** • IBM PC-XT; 512K-byte memory; 10M-byte disk; keyboard; monitor; printer • maximum call records: 500,000.

**Associated Telephone System Configuration** • all types with SMDR and RS-232C; unlimited configuration.

**Software** • operating system: PC-DOS; MS-DOS • application software: proprietary • management reports produced: 8 report modules.

**Standard Features** • comprehensive call pricing; functions as intermediate storage facility; online access of call data.

**Optional Features** • dBase III interface; telephone directory module; traffic analysis module; traffic optimizing module; equipment inventory module; service bureau capability.

**First Delivery** • June 1984.

## Call Accounting Systems

**Systems Installed** • 46.

**Average System Size Installed** • 100 trunks; 1,000 stations.

**Average System Cost** • \$12,000 to \$15,000 (\$7,500 for software).

**Distribution** • direct sales; distributors.

**Installation/Maintenance/Training** • Telephone Budgeting Systems, Inc.

### ■ TELESCIENCES, INC

351 New Albany Road, Moorestown, NJ 08057 • 609-235-6227.

#### SRS-3000 Series, HBX 400

**Function** • SMDR for business (SRS) or hotel/motel (HBX).

**Configuration** • CPU; memory; 9-track tape (SRS); diskette/hard disk drive (HBX); RS-232C; tip and ring scanners; printer • maximum call records: 200,000 (SRS); 300,000 (HBX).

**Associated Telephone System Configuration** • all types using SMDR and RS-232C; up to 9600 bps; up to 8,000 stations (SRS); up to 400 stations (HBX).

**Software** • operating system: proprietary • application software: proprietary • management reports produced: up to 15.

**Standard Features** • battery backup; supports all trunk group types; buffer storage available on SRS-3000; HOBIC supported on HBX-400.

**Optional Features** • expanded record storage.

**First Delivery** • 1978 (SRS-3000); 1982 (HBX-400).

**Systems Installed** • over 100 (all models).

**Average System Size Installed** • 50 trunks; 450 stations (SRS); 25 trunks; 200 stations (HBX).

**Average System Cost** • \$15,000 to \$50,000 (SRS); \$15,000 to \$19,000 (HBX).

**Distribution** • TeleSciences.

**Installation/Maintenance/Training** • TeleSciences.

### ■ UNITED TECHNOLOGIES COMDEV

2006 Whitfield Industrial Way, Sarasota, FL 34243 • 813-753-6411.

#### Accountant Models ACT-1, ACT-2, ACT-3

**Function** • SMDR line scanner.

**Configuration** • Z80; RAM; diagnostic port; RS-232C port • outputs call records to SMDR unit.

**Associated Telephone System Configuration** • all types using RJ21X to tip and ring; up to 1,024 ports supported (trunks, stations).

**Software** • operating system: proprietary • application software: proprietary.

**Standard Features** • clock, remote alarm, diagnostics.

**First Delivery** • May 1976.

**Systems Installed** • 700.

**Average System Size Installed** • 500 stations.

**Average System Cost** • \$7,500 to \$27,500.

**Distribution** • telephone companies; interconnect companies.

**Installation/Maintenance/Training** • distributor provides installation and maintenance; ComDev provides training and backup.

#### SMDR Translator Unit Models STU-3, STU-5

**Function** • remote polling unit; supports up to 6 PBX systems.

**Configuration** • Z80; RAM; 2 PBX input ports; 1 monitor port; up to 9600-bps async • maximum call records: 35,000.

**Associated Telephone System Configuration** • all types using

SMDR and RS-232C; configuration limited only by call record storage.

**Software** • operating system: proprietary • application software: proprietary • management reports produced: none.

**Standard Features** • memory search capability; battery backup.

**Optional Features** • 300-bps modem.

**First Delivery** • March 1980.

**Systems Installed** • 500.

**Average System Size Installed** • undisclosed.

**Average System Cost** • \$3,000 to \$12,500.

**Distribution** • telephone companies; interconnect companies.

**Installation/Maintenance/Training** • distributor provides installation and maintenance; ComDev provides training and backup.

#### NP 9000 Network Poller

**Function** • polling unit.

**Configuration** • Z80; RAM; dual tape drives; 20 polling ports configured as async 300/1200 bps, direct or dial-up • maximum call records: 435,000 • maximum remote units polled: limited only by throughput of 15,000 records per port, per hour.

**Associated Telephone System Configuration** • works with SMDR Translator Unit (STU) that supports all system types; RJ45S connection to lines.

**Software** • operating system: proprietary • application software: proprietary • management reports produced: 10.

**Standard Features** • auto-dial capability; diagnostics; automatic polling of remote STUs.

**First Delivery** • February 1983.

**Systems Installed** • 20.

**Average System Size Installed** • 4 ports.

**Average System Cost** • \$75,000 and up.

**Distribution** • telephone companies; interconnect companies.

**Installation/Maintenance/Training** • ComDev.

#### 8200 Series

**Function** • SMDR.

**Configuration** • Z80; 256K-byte RAM; floppy or hard disk storage; up to 10 ports; async to 9600 bps • maximum call records: 400,000.

**Associated Telephone System Configuration** • all system types using SMDR and RS-232C; up to 2,000 stations.

**Software** • operating system: proprietary • application software: Callquest II, Hotel/Motel I and II • management reports produced: up to 20.

**Standard Features** • multitasking; self-diagnostics; remote diagnostics; account codes; facilities management.

**First Delivery** • September 1983.

**Systems Installed** • 500.

**Average System Size Installed** • 300 to 400 stations.

**Average System Cost** • \$6,000 to \$35,000.

**Distribution** • telephone companies; interconnect companies.

**Installation/Maintenance/Training** • distributor provides installation and maintenance; ComDev provides training and backup support.

#### Ratepro

**Function** • SMDR.

**Configuration** • 68008; RAM and EPROM; 3 ports—2 RS-232C, 1 parallel; printer • maximum call records; 32,000.

**Associated Telephone System Configuration** • all types using

## Call Accounting Systems

SMDR and RS-232C; up to 250 stations supported.

**Software** • operating system: proprietary • application software: Commercial; Billback; Resale I; Resale II • management reports produced: up to 15.

**Standard Features** • full call costing; system diagnostics; database updates; battery backup.

**First Delivery** • March 1985.

**Systems Installed** • under 10.

**Average System Size Installed** • 50 to 75 stations.

**Average System Cost** • \$3,000 to \$5,500.

**Distribution** • telephone companies; interconnect companies.

**Installation/Maintenance/Training** • distributor provides installation, maintenance, and training; ComDev provides backup.

### ■ WESTERN TELEMATIC, INC

2435 South Anne Street, Santa Ana, CA 92704 • 714-979-0363.

#### □ Pollcat

**Function** • SMDR recorder for data storage and polling; call record buffer prior to processing.

**Configuration** • 68B09 CPU; EPROM; 64K-byte to 512K-byte solid state pollable memory; RS-232C; battery supply • maximum call records; 16,000 to 17,000, depending on system record format.

**Associated Telephone System Configuration** • any system with SMDR and RS-232C; up to 9600 bps; no configuration size limit.

**Software** • operating system: proprietary • application software: proprietary • management reports produced: none.

**Standard Features** • built-in 300-/1200-bps auto-answer modem; call record compression; password security; remote commands; batch/interactive transmission; reads all PBX formats; retransmits exactly as received.

**First Delivery** • March 1984.

**Systems Installed** • over 100.

**Average System Size Installed** • 20 trunks; 150 stations.

**Average System Cost** • \$1,795 to \$3,395.

**Distribution** • Western Telematic; authorized distributors.

**Installation/Maintenance/Training** • Western Telematic.

#### □ MiniMate III

**Function** • SMDR recorder for data storage and polling; call record buffer prior to processing.

**Configuration** • 68B09 CPU; floppy diskette storage from 204K to 816K; 24K buffer option; RS-232C • maximum call records: 25,000.

**Associated Telephone System Configuration** • any system with SMDR and RS-232C; up to 9600 bps; no configuration size limit.

**Software** • operating system: proprietary • application software: proprietary • management reports produced: none.

**Standard Features** • built-in 300-/1200-bps auto-answer modem; call record compression; batch/interactive transmission; reads all PBX formats, retransmits exactly as received.

**Optional Features** • simultaneous read/write operation with 24K buffer.

**First Delivery** • May 1982.

**Systems Installed** • over 800.

**Average System Size Installed** • 30 trunks, 250 stations.

**Average System Cost** • \$1,475 to \$2,295.

**Distribution** • Western Telematic; authorized distributors.

**Installation/Maintenance/Training** • Western Telematic.

### ■ XIOX CORPORATION

1720 South Amphlett Boulevard, Suite 120, San Mateo, CA 94402 • 415-571-7911.

#### □ Pro-TIMES

**Function** • SMDR for Client Billing.

**Configuration** • IBM PC, PC-XT, PC-AT, PC-compatibles; 256K- to 512K-byte memory; RS-232C; printer • maximum call records: 32,000.

**Associated Telephone System Configuration** • all types using SMDR and RS-232C; up to 1,000 stations.

**Software** • operating system: PC-DOS, Concurrent PC-DOS • application software: Pro-TIMES • management reports produced: 75 to 100.

**Standard Features** • multitasking capabilities; real-time report display on CRT.

**Optional Features** • additional memory; expanded disk storage.

**First Delivery** • March 1984.

**Systems Installed** • 13.

**Average System Size Installed** • 200 stations.

**Average System Cost** • \$6,500.

**Distribution** • direct; distributors; dealers.

**Installation/Maintenance/Training** • dealers; distributors.

#### □ Tele-TIMES

**Function** • SMDR for General Business.

**Configuration** • IBM PC, PC-XT, PC-AT, PC-compatibles; 256K- to 512K-byte memory; RS-232C; printer • maximum call records: 500,000.

**Associated Telephone System Configuration** • all types using SMDR and RS-232C; up to 5,000 stations.

**Software** • operating system: PC-DOS; Concurrent PC-DOS • application software: Tele-TIMES • management reports produced: 75 to 100.

**Standard Features** • multitasking capabilities; real-time report display on CRT.

**Optional Features** • additional memory; expanded disk storage.

**First Delivery** • July 1984.

**Systems Installed** • 22.

**Average System Size Installed** • 200 stations.

**Average System Cost** • \$6,500.

**Distribution** • direct; distributors; dealers.

**Installation/Maintenance/Training** • dealers; distributors.

### ■ XTEND COMMUNICATIONS CORPORATION

171 Madison Avenue, New York, NY 10017 • 212-725-2010.

#### □ XTEND CDR

**Function** • SMDR.

**Configuration** • IBM PC-XT; 256K-byte memory; 10M-byte disk; RS-232C; CRT; printer • AT&T-IS PC 6300; 256K-byte memory; 10M-byte disk; RS-232C; CRT; printer • maximum call records: 3,000,000.

**Associated Telephone System Configuration** • all types using SMDR and RS-232C; up to 3,500 stations.

**Software** • operating system: MS-DOS • application software: proprietary • management reports produced: 12 basic types.

**Standard Features** • menu driven; help screens; real-time parameter changes; international call pricing; remote access; reports available on demand; search facility.

## Call Accounting Systems

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**First Delivery** • July 1982.

**Systems Installed** • 30.

**Average System Size Installed** • 1,200 stations.

**Average System Cost** • \$8,400 to \$20,000.

**Distribution** • direct.

**Installation/Maintenance/Training** • XTEND.

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