

## ACD Systems

This Product Survey presents the major characteristics of Automatic Call Distribution (ACD) Systems marketed for the management and control of incoming telephone calls. All systems are standalone units, and can also function as a PBX or key system in conjunction with a total communications operation. ACDs and similar systems are very sophisticated tools, and with proper understanding and effective management, can be an important component in a company's revenues and profits.

Three different types of incoming call distribution systems are covered in this survey. The most complex, and costly, is the **Automatic Call Distributor (ACD)**. It answers incoming calls, scans all available telephone agents, and either completes the calls immediately to an agent or places them in a **queue**. A **true ACD** completes calls to agents based on **the length of time the agent has been idle**. This technique requires a high degree of sophistication, because calls can be routed in different directions within a system. It provides the most even distribution of work among agents.

Next is the **Uniform Call Distributor (UCD)**. It answers incoming calls, connects them to available agents directly, or places them in a queue until an agent frees up. The major difference between a UCD and an ACD is the call routing method. In a UCD, calls are completed according to a **consistent routing scheme**, rather than an ACD, which routes calls based on agent activity. Routing is usually 1 of 2 approaches: **round-robin** or **top-down**. In round-robin, **calls are completed in a circular pattern, with the system always returning to the starting point and continuing around until an available agent is found**. The top-down approach has the system always attempting to complete a call **starting from the same initial agent line and following through a discrete pattern**. UCDs are generally less expensive than ACDs, and provide essentially the same critical features of call

answering, queuing, message announcement, and call routing.

The third type of system covered in this Survey is **Automatic Call Sequencers (ACS)**. These systems answer calls, place them in a hold/queue condition, and provide a visual and audible alerting function for agents using key telephone equipment with multiple incoming lines. In a typical operation, a call enters the system and is automatically answered by the ACS. It is then put on hold for subsequent answering by an agent. Special visual lamps on the agent's telephone or mounted prominently on a wall are made to flash at different rates, indicating the length of time the call has been on hold. Sometimes lights can be made to flash in different colors as a further indication. The next available agent answers the call simply by depressing the line button associated with it. ACS systems are the least expensive method of handling incoming calls.

This edition of the Product Survey presents specifications and pricing on **30 ACD/UCD/ACS Models manufactured by 17 vendors**. Listings are arranged alphabetically by vendor, then by specific product name. Each model entry is further divided into **13 logical categories**, defining function, trunks/agents/supervisors, voice equipment, data equipment, applications supported, standard features, optional features, date of first delivery, number of systems installed, average system size installed, average cost per line/system installed, method of distribution, and installation/maintenance/training. Specific topic areas within each section are further identified with a solid dot (\*). The ACD 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 ACD/UCD/ACS systems.

## ACD Systems

### ACD OUTLINE

| COMPANY                           | FUNCTION<br>Automatic Call Distributor<br>Uniform Call Distributor<br>Automatic Call Sequencer<br>Digital Switching | TRUNKS<br>1 to 20<br>21 to 100<br>101 to 1,000<br>Over 1,000 | TRUNK GATES<br>1 to 10<br>11 to 20<br>Over 50 | AGENT POSITIONS<br>1 to 20<br>21 to 100<br>101 to 1,000<br>Over 1,000 | AGENT STATION EQUIPMENT<br>Proprietary Set<br>Single-Line Telephone Set<br>Key Adjunct<br>Call Display Unit | FEATURES<br>Dynamic Lead Balancing<br>Intracall/Interflow<br>Management Reports<br>Multiple Announcements<br>Night Service<br>PBX Features |
|-----------------------------------|---|--|---|---|---|--|
| AT&T Information Systems          | ● ● ● ●   | ● ● ● ●  | ● ● ● ●                                       | ● ● ● ●   | ● ● ● ●   | ● ● ● ● ● ●  |
| Automation Electronics Corp       | — ● ● ●   | ● ● ● ●  | ● ● ● ●                                       | ● ● ● ●   | — ● ● ●   | — ● ● ● ● ●  |
| C-5 Division of Metro Tel         | — ● ● ●   | ● ● ● ●  | ● ● ● ●                                       | ● ● ● ●   | — ● ● ●   | — ● ● ● ● ●  |
| Conversational Voice Technologies | — ● ● ●   | ● ● ● ●  | ● ● ● ●                                       | ● ● ● ●   | — ● ● ●   | — ● ● ● ● ●  |
| Dacon Electronics                 | — ● ● ●   | ● ● ● ●  | ● ● ● ●                                       | ● ● ● ●   | — ● ● ●   | — ● ● ● ● ●  |
| Code-A-Phone Corp                 | — ● ● ●   | — ● ● ●  | ● ● ● ●                                       | ● ● ● ●   | — ● ● ●   | — ● ● ● ● ●  |
| Data Plus, Inc                    | — ● ● ●   | ● ● ● ●  | ● ● ● ●                                       | ● ● ● ●   | — ● ● ●   | — ● ● ● ● ●  |
| Digital Transmission, Inc         | ● ● ● ●   | ● ● ● ●  | ● ● ● ●                                       | ● ● ● ●   | ● ● ● ●   | ● ● ● ● ● ●  |
| Dytel Corporation                 | — ● ● ●   | ● ● ● ●  | ● ● ● ●                                       | ● ● ● ●   | — ● ● ●   | — ● ● ● ● ●  |
| Homaco, Inc                       | — ● ● ●   | ● ● ● ●  | ● ● ● ●                                       | ● ● ● ●   | — ● ● ●   | — ● ● ● ● ●  |
| Ring Group                        | ● ● ● ●   | ● ● ● ●  | ● ● ● ●                                       | ● ● ● ●   | ● ● ● ●   | ● ● ● ● ● ●  |
| Rockwell International            | ● ● ● ●   | ● ● ● ●  | ● ● ● ●                                       | ● ● ● ●   | ● ● ● ●   | ● ● ● ● ● ●  |
| Solid State Systems               | ● ● ● ●   | ● ● ● ●  | ● ● ● ●                                       | ● ● ● ●   | ● ● ● ●   | ● ● ● ● ● ●  |
| Startel Corp                      | ● ● ● ●   | ● ● ● ●  | ● ● ● ●                                       | ● ● ● ●   | ● ● ● ●   | ● ● ● ● ● ●  |
| Teknekron Infoswitch              | ● ● ● ●   | ● ● ● ●  | ● ● ● ●                                       | ● ● ● ●   | ● ● ● ●   | ● ● ● ● ● ●  |
| Telcom Technologies               | ● ● ● ●   | ● ● ● ●  | ● ● ● ●                                       | ● ● ● ●   | ● ● ● ●   | — ● ● ● ● ●  |
| Telephonic Equipment Corp         | — ● ● ●   | ● ● ● ●  | ● ● ● ●                                       | ● ● ● ●   | — ● ● ●   | — ● ● ● ● ●  |

### ACD FEATURES

#### ■ FUNCTION

This Feature Section identifies the type of system—ACD, UCD, or ACS—and describes the system's basic functional characteristics, such as the switching technology, architecture, and type of hardware used.

#### ■ TRUNKS/AGENTS/SUPERVISORS

This Feature Section describes the maximum configuration limits for incoming/outgoing trunk lines, agent positions, supervisor positions, trunk groups or gates, announcement messages and, if available, the number of PBX lines the system can either support on its own or can interface with from an associated PBX system.

#### ■ VOICE EQUIPMENT

This Feature Section identifies the voice station equipment supported by the ACD/UCD/ACS system. ACD systems typically can support either standard 2500-type telephones or proprietary agent/supervisor terminals designed for efficient call handling.

**Vendor Supplied** • telephones, proprietary terminals for agents and supervisors supplied by the vendor.

**Equipment Supported** • nonproprietary telephones and voice equipment that can be attached to the system generally available from telephone companies and other sources.

#### ■ DATA EQUIPMENT

This Feature Section identifies data equipment supported by the ACD/UCD/ACS system.

**Vendor Supplied** • data interfaces, modems, terminals, and other devices supplied by the vendor.

**Equipment Supported** • data communications equipment that can be connected to the system.

#### ■ APPLICATIONS SUPPORTED

This Feature Section identifies the principal applications supported by the ACD/UCD/ACS system. There are several applications ideally suited for ACDs, such as reservations, credit card verification, and customer service. These, and others are covered in this section.

#### ■ STANDARD SYSTEM FEATURES

This Feature 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. Also covered are features associated with agent/supervisor terminal equipment.

#### ■ FIRST DELIVERY

This Feature Section presents the date the first system was installed in the field for customer use.

#### ■ SYSTEMS DELIVERED

This Feature 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 Feature Section discloses the average number of trunks and agent positions that have been installed for a specific model. It has nothing to do with the maximum line capacity, but with the actual size of the existing customer base utilization.

#### ■ AVERAGE COST PER LINE

This Feature Section presents the average purchase price or price range of a single system agent station, and is provided only as a

## ACD Systems

**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. The user should also be advised that installation may drive up the total system cost by as much as 50 percent of the cost of the system for installations that require new wiring. Users with existing wiring can realize significant savings if the installed system accommodates the existing wiring. In some cases, **cost per line** could not be determined, and **cost per system** is given instead.

### ■ DISTRIBUTION

This Feature 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

This Feature Section describes who provides maintenance (upkeep) and installation of the ACD/UCD/ACS 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.

## ACD LISTINGS

### ■ AT&T INFORMATION SYSTEMS

100 Southgate Parkway, Morristown, NJ 07960 • 201-898-8000.

#### □ 80/5 Management System

**Function** • automatic call distributor (ACD) • TDM/PCM switching • nonblocking • centralized architecture • multiple microprocessors; RAM; ROM; RS-232C.

**Trunks/Agents/Supervisors** • up to 192 trunks; up to 144 agent positions; up to 7 supervisor positions • up to 16 trunk gates • up to 12 announcement messages • up to 192 PBX station lines; interchangeable with ACD position lines.

**Voice Equipment** • vendor supplied: proprietary agent set with 4-character LED display; supervisor position uses CRT plus agent set • nonvendor equipment supported: none.

**Data Equipment** • vendor supplied: printers; CRTs • nonvendor equipment supported: printer; CRTs with RS-232C; modem; multiplexers.

**Applications Supported** • airline reservations • hotel/motel reservations • credit card verification • public utilities • travel agencies • customer service • telemarketing.

**Standard Features** • comprehensive reporting; routing patterns; dynamic load balancing; system intraflow; system interflow; networking; multiple announcements; incoming call answering; queuing; call transfer; call conference; calls waiting indication; call park; outgoing calling; PBX features; after-call wrap-up; speed dialing; emergency alert; last number redial; night service; automatic call hold; diagnostics.

**Optional Features** • music on hold; power failure transfer; battery backup; multiple announcements; feature phones; expanded report package.

**First Delivery** • 1982.

**Systems Installed** • over 20.

**Average System Size Installed** • 35 trunks, 35 agents.

**Average Cost Per Line/System Installed** • \$1,200 to \$2,000 per agent.

**Distribution** • AT&T-IS.

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

#### □ Dimension Call Management System (CMS)

**Function** • automatic call distributor (ACD) • standalone system, connects to Dimension 600/600SN/2000 with Feature Package 8 Issue 3 • space division switching • uses AP-16 application processor.

**Trunks/Agents/Supervisors** • up to 255 trunks; up to 144 agent positions; up to 8 supervisor positions • up to 30 trunk gates • 1 announcement message per gate • up to 2300 PBX station lines (with Dimension 2000).

**Voice Equipment** • vendor supplied: Dimension ECTS set for agent; supervisor uses ECTS • nonvendor equipment supported: standard 2500 telephones.

**Data Equipment** • vendor supplied: printers; CRTs; modems • nonvendor equipment supported: terminal using RS-232C.

**Applications Supported** • airline reservations • hotel/motel reservations • credit card verification • public utilities • travel agencies • customer service • telemarketing.

**Standard Features** • comprehensive reporting; routing patterns; dynamic load balancing; system intraflow; system interflow; networking; incoming call answering; queuing; call transfer; call conference; calls waiting indication; call park; outgoing calling; PBX features; after-call wrap-up; speed dialing; emergency alert; last number redial; automatic call hold; diagnostics.

**Optional Features** • music on hold; power failure transfer; battery backup; night service; announcements; feature phones; expanded report package.

**First Delivery** • 1983.

**Systems Installed** • over 25.

**Average System Size Installed** • 50 trunks, 40 agents.

**Average Cost Per Line/System Installed** • \$1,200 to \$2,000 per agent.

**Distribution** • AT&T-IS.

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

#### □ Horizon Call Management System (CMS)

**Function** • standalone system, connects to Horizon system • space division switching • proprietary CPU; RAM; ROM.

**Trunks/Agents/Supervisors** • 44 to 88 trunks; 24 to 48 agent positions; 1 supervisor position • 6 trunk gates • 3 announcement messages • 79 PBX station lines.

**Voice Equipment** • vendor supplied: modified Horizon MET set with LED display • nonvendor equipment supported: standard 2500 telephones.

**Data Equipment** • vendor supplied: printers; CRTs; modems • nonvendor equipment supported: printer; terminals using RS-232C.

**Applications Supported** • reservations • credit card verification • public utilities • travel agencies • customer service • telemarketing.

**Standard Features** • comprehensive reporting; routing patterns; dynamic load balancing; system intraflow; system interflow; networking; multiple announcements; incoming call answering; queuing; call transfer; call conference; calls waiting indication; call park; outgoing calling; PBX features; after-call wrap-up; speed dialing; emergency alert; last number redial; night service; automatic call hold; diagnostics.

**Optional Features** • music on hold; power failure transfer; battery backup; multiple announcements; feature phones; expanded report package.

**First Delivery** • 1983.

**Systems Installed** • over 30.

## ACD Systems

**Average System Size Installed** • 15 trunks, 15 agents.

**Average Cost Per Line/System Installed** • \$750 to \$1,000 per agent.

**Distribution** • AT&T-IS.

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

### ■ AUTOMATION ELECTRONICS CORPORATION (AEC)

344 40th Street, Oakland, CA 94609 • 415-652-6675.

#### □ 1101 CMS

**Function** • automatic call sequencer (ACS); used with 1A2 key; electronic key; PBX; hybrid systems • space division switching • standalone unit • stored program control • centralized architecture • RS-232C; printer; interfaces to phone system port of package; cassette drive for announcements.

**Trunks/Agents/Supervisors** • 2 to 64 trunks; unlimited agent positions; 1 supervisor position • 4 trunk gates • 1 announcement message • 2 to 64 PBX station lines.

**Voice Equipment** • vendor supplied: 20-character alphanumeric display • nonvendor equipment supported: standard 2500 telephones.

**Data Equipment** • vendor supplied: printers • nonvendor equipment supported: RS-232C-based terminals.

**Applications Supported** • reservations • credit card verification • public utilities • travel agencies • customer service • telemarketing.

**Standard Features** • queuing; night service; announcements; self-diagnostics; call screening; management reports; alarm for unanswered calls.

**Optional Features** • music on hold; management reports provided by AEC TMIS system.

**First Delivery** • 1981.

**Systems Installed** • over 300.

**Average System Size Installed** • 25 trunks, 20 agents.

**Average Cost Per Line/System Installed** • \$750 to \$1,000 per agent.

**Distribution** • AEC; authorized distributors.

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

#### □ 1101 CMS jr

**Function** • automatic call sequencer (ACS); used with 1A2 key; hybrid/electronic key; PBX • space division switching • standalone unit • stored program control • centralized architecture • RS-232C; printer; interfaces to phone system port of package; cassette drive for announcements.

**Trunks/Agents/Supervisors** • up to 6 trunks; unlimited agent positions; 1 supervisor position • 1 trunk gate • 1 announcement message • up to 6 PBX station lines.

**Voice Equipment** • vendor supplied: control console with cassette player; LED display • nonvendor equipment supported: standard 2500 telephones.

**Data Equipment** • vendor supplied: printers • nonvendor equipment supported: RS-232C-based terminals.

**Applications Supported** • reservations • credit card verification • public utilities • travel agencies • customer service • telemarketing.

**Standard Features** • queuing; night service; announcements; self-diagnostics; call screening; management reports; alarm for unanswered calls.

**Optional Features** • music on hold; management reports provided by AEC TMIS system.

**First Delivery** • third quarter 1984.

**Systems Installed** • over 100.

**Average System Size Installed** • 4 trunks, 10 agents.

**Average Cost Per Line/System Installed** • \$2,995 per system.

**Distribution** • AEC; authorized distributors.

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

### ■ C-5 DIVISION OF METRO TEL CORPORATION

P.O. Box 698, 15 Burke Lane, Syosset, NY 11791 • 516-364-3377.

#### □ Model 918

**Function** • automatic call sequencer (ACS); used with key telephone systems • standalone unit • space division switching • stored program control • centralized architecture • RS-232C; printer; interfaces to key systems.

**Trunks/Agents/Supervisors** • 8 to 32 trunks; 8 to 32 agent positions; 1 supervisor position • 1 trunk gate • 2 announcement messages • station lines.

**Voice Equipment** • vendor supplied: control unit; 5-character LED display • nonvendor equipment supported: standard key systems.

**Data Equipment** • vendor supplied: printers • nonvendor equipment supported: async using RS-232C.

**Applications Supported** • reservations • travel agencies • customer service.

**Standard Features** • call answering; call hold; queuing; announcements; night service; management reports.

**Optional Features** • printers.

**First Delivery** • July 1981.

**Systems Installed** • over 500.

**Average System Size Installed** • 10 trunks, 10 agents.

**Average Cost Per Line/System Installed** • \$800 to \$1,000 per agent.

**Distribution** • C-5; authorized distributors.

**Installation/Maintenance/Training** • Bunker-Ramo Service Group.

### ■ CODE-A-PHONE CORPORATION

16261 SE 130th, Clackamas, OR 97015 • 503-655-8940.

#### □ Sequence V

**Function** • automatic call sequencer (ACS) • proprietary standalone unit; expansion unit; attendant monitor unit.

**Trunks/Agents/Supervisors** • 20 trunks; 20 agent positions; 20 trunk gates • 1 announcement message • 20 PBX station lines.

**Voice Equipment** • vendor supplied: control unit; expansion unit; attendant monitor • nonvendor equipment supported: 1A2 key equipment; electronic key systems.

**Applications Supported** • travel agencies • customer service • telemarketing • order service.

**Standard Features** • digitized speech recorded announcement; answer/hold function; answer-only function; prioritized call answering; dual track message; management information; delayed answering; diagnostics; battery backup.

**First Delivery** • 1982.

**Systems Installed** • over 1,000.

**Average System Size Installed** • 8 to 14 trunks.

**Average Cost Per Line/System Installed** • \$3,900 to \$6,900.

**Distribution** • authorized distributors.

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

### ■ CONVERSATIONAL VOICE TECHNOLOGIES COMPANY (CVTC)

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

#### □ ConMode

**Function** • uniform call distributor (UCD); answers calls; queues

## ACD Systems

callbacks • standalone system • proprietary configuration using 8085; PROM; RAM; system console.

**Trunks/Agents/Supervisors** • unlimited trunks; unlimited agent positions • unlimited announcement messages.

**Voice Equipment** • vendor supplied: proprietary LED-based console • nonvendor equipment supported: standard 2500 telephones.

**Data Equipment** • vendor supplied: printers • nonvendor equipment supported: RS-232C async terminals.

**Applications Supported** • reservations • customer service • telemarketing.

**Standard Features** • queuing; incoming calls; night service; diagnostics; management reports.

**First Delivery** • 1982.

**Systems Installed** • over 50.

**Average System Size Installed** • 15 trunks, 15 agents.

**Average Cost Per Line/System Installed** • \$1,995 to \$3,995 per system.

**Distribution** • CVTC.

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

### ■ DACON ELECTRONICS, INC

8 Industrial Avenue, Upper Saddle River, NJ 07458 • 201-825-4640.

#### □ ACS-46

**Function** • automatic call sequencer (ACS); used with PBX and key systems • standalone unit • space division switching • centralized architecture • printer; interfaces to key systems and PBXs.

**Trunks/Agents/Supervisors** • 4 to 6 trunks; up to 25 agent positions; 1 supervisor position • 1 trunk gate • 1 announcement message.

**Voice Equipment** • vendor supplied: add-on unit for use with standard telephones; used for both agents and supervisor • nonvendor equipment supported: none.

**Data Equipment** • vendor supplied: printers • nonvendor equipment supported: printers.

**Applications Supported** • reservations • travel agencies • customer service • telemarketing.

**Standard Features** • comprehensive reporting; incoming call answering; queuing; calls waiting indication; night service; automatic call hold; diagnostics.

**Optional Features** • music on hold; power failure transfer; battery backup.

**First Delivery** • May 1983.

**Systems Installed** • over 100.

**Average System Size Installed** • 3 trunks, 10 agents.

**Average Cost Per Line/System Installed** • \$1,995 to \$2,995 per system.

**Distribution** • Dacon; authorized distributors.

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

#### □ ACS-85

**Function** • automatic call sequencer (ACS); used with PBXs and key systems • standalone unit • space division switching • centralized architecture • printer; interfaces to key systems and PBXs.

**Trunks/Agents/Supervisors** • 2 to 64 trunks; unlimited agent positions; up to 8 supervisor positions • up to 8 trunk gates • up to 8 announcement messages.

**Voice Equipment** • vendor supplied: add-on unit for use with standard telephones; used for both agents and supervisor • nonvendor equipment supported: none.

**Data Equipment** • vendor supplied: printers • nonvendor equipment supported: printers.

**Applications Supported** • reservations • travel agencies • customer service • telemarketing.

**Standard Features** • comprehensive reporting; incoming call answering; queuing; calls waiting indication; night service; automatic call hold; diagnostics.

**Optional Features** • music on hold; power failure transfer; battery backup.

**First Delivery** • 1983.

**Systems Installed** • over 20.

**Average System Size Installed** • 25 trunks, 20 agents.

**Average Cost Per Line/System Installed** • \$3,900 to \$30,000 per system.

**Distribution** • Dacon; authorized distributors.

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

### ■ DATA PLUS, INC

7205E Lackport Place, Lorton, VA 22079 • 703-550-7914.

#### □ PLDPLUS Model DP 700

**Function** • automatic call sequencer (ACS); used with 1A2 key equipment only • standalone unit • centralized architecture • space division switching • based on 8080; RAM; ROM.

**Trunks/Agents/Supervisors** • up to 32 trunks; up to 32 agent positions; 1 supervisor position • up to 8 trunk gates • 2 announcement messages.

**Voice Equipment** • vendor supplied: none • nonvendor equipment supported: standard 1A2 key equipment provided by user; also supports AT&T Com Key; supervisor position users 40-character alphanumeric console with key set.

**Applications Supported** • reservations • health care • public utilities • travel agencies • customer service • telemarketing.

**Standard Features** • queuing; night service; variable routing; self-diagnostics; outward dialing; conference calls; call waiting indication; common audible signals; external audible signals.

**Optional Features** • uninterruptible power supply.

**First Delivery** • second quarter 1982.

**Systems Installed** • 40.

**Average System Size Installed** • 16 trunks, 16 agents.

**Average Cost Per Line/System Installed** • \$500 per agent.

**Distribution** • direct; interconnect companies.

**Installation/Maintenance/Training** • interconnect companies.

### ■ DIGITAL TRANSMISSION, INC (DTI)

315 Eisenhower Lane South, Lombard, IL 60148 • 312-620-1170.

#### □ 580S ACD

**Function** • automatic call distributor (ACD); also functions on PBX • TDM/PCM switching • nonblocking • centralized architecture • multiple 8080 microprocessors; RAM; ROM; RS-232C.

**Trunks/Agents/Supervisors** • up to 92 trunks; up to 144 agent positions; up to 7 supervisor positions • up to 64 trunk gates • up to 12 announcement messages • up to 192 PBX station lines.

**Voice Equipment** • vendor supplied: proprietary agent position with 40-character LED; supervisor position same as agent • nonvendor equipment supported: standard 2500 telephones.

**Data Equipment** • vendor supplied: printers; disk/tape storage; CRT/keyboards, T1 interface • nonvendor equipment supported: async RS-232C terminals.

**Applications Supported** • airline reservations • hotel/motel reservations • credit card verification • public utilities • travel agencies • customer service • telemarketing.

## ACD Systems

**Standard Features** • comprehensive reporting; routing patterns; dynamic load balancing; system intraflow; system interflow; networking; multiple announcements; incoming call answering; queuing; call transfer; call conference; calls waiting indication; call park; outgoing calling; PBX features; after-call wrap-up; speed dialing; emergency alert; last number redial; night service; automatic call hold; diagnostics.

**Optional Features** • music on hold; power failure transfer; battery backup; multiple announcements; feature phone; expanded report package.

**First Delivery** • 1980.

**Systems Installed** • over 60.

**Average System Size Installed** • 50 trunks, 50 agents.

**Average Cost Per Line/System Installed** • \$1,500 to \$2,200 per agent.

**Distribution** • DTI; authorized distributors.

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

### ☐ 580M ACD

**Function** • automatic call distributor (ACD); also functions on PBX • TDM/PCM switching • nonblocking • centralized architecture • multiple 8080 microprocessors; RAM; ROM; RS-232C.

**Trunks/Agents/Supervisors** • up to 576 trunks; up to 432 agent positions; up to 24 supervisor positions • up to 127 trunk gates • up to 24 announcement messages • up to 960 PBX station lines.

**Voice Equipment** • vendor supplied: proprietary agent position with 4-character LED; supervisor position same as agent • nonvendor equipment supported: standard 2500 telephones.

**Data Equipment** • vendor supplied: printers; disk/tape storage; CRT/keyboards, T1 interface • nonvendor equipment supported: async RS-232C terminals.

**Applications Supported** • airline reservations • hotel/motel reservations • credit card verification • public utilities • travel agencies • customer service • telemarketing.

**Standard Features** • comprehensive reporting; routing patterns; dynamic load balancing; system intraflow; system interflow; networking; multiple announcements; incoming call answering; queuing; call transfer; call conference; calls waiting indication; call park; outgoing calling; PBX features; after-call wrap-up; speed dialing; emergency alert; last number redial; night service; automatic call hold; diagnostics.

**Optional Features** • music on hold; power failure transfer; battery backup; multiple announcements; feature phone; expanded report package.

**First Delivery** • 1980.

**Systems Installed** • over 30.

**Average System Size Installed** • 70 trunks, 60 agents.

**Average Cost Per Line/System Installed** • \$1,800 to \$2,500 per agent.

**Distribution** • DTI; authorized distributors.

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

### ■ DYTEL CORPORATION

721 West Algonquin Road, Arlington Heights, IL 60005 • 312-593-8520.

### ☐ ACD/Auto Attendant

**Function** • automatic call distributor (ACD) • space division switching • distributed architecture • stored program control multiple Z-80As; EPROM; EEPROM; RAM; RS-232C; printer.

**Trunks/Agents/Supervisors** • 24 trunks; 24 agent positions; 1 supervisor position • 4 trunk gates • 8 announcement messages • PBX station lines: handled through automated attendant function.

**Voice Equipment** • vendor supplied: proprietary telephone for agent; CRT plus telephone • nonvendor equipment supported: 2500 telephones for supervisor.

**Data Equipment** • vendor supplied: none • nonvendor equipment supported: RS-232C-compatible; up to 9600 bps asynchronous.

**Applications Supported** • reservations • banks • customer service.

**Standard Features** • prioritized distribution; overflow with programmable delays; automatic ring-in delay; automatic hold; remote alarm; multiple messages/management reports; night service, call transfer, outward dialing.

**Optional Features** • power failure transfer; music on hold; expanded digit translation; handset operation; proprietary feature phone.

**First Delivery** • planned for 1986.

**Systems Installed** • none.

**Average System Size Installed** • not available.

**Average Cost Per Line/System Installed** • undisclosed.

**Distribution** • interconnect companies.

**Installation/Maintenance/Training** • interconnect companies.

### ■ HOMACO, INC

1875 West Fullerton Avenue, Chicago, IL 60614 • 312-384-5575.

### ☐ CDS-1

**Function** • uniform call distributor (UCD) • space division switching • standalone unit • 8080-based; 32K RAM; 32K ROM; printer; RS-232C.

**Trunks/Agents/Supervisors** • 4 to 44 trunks; up to 26 agent positions; up to 2 supervisor positions • 10 trunk gates • 10 trunk groups • up to 2 announcement messages • 4 to 44 PBX station lines.

**Voice Equipment** • vendor supplied: proprietary unit with LED display; same unit plus CRT/keyboard for supervisor • nonvendor equipment supported: standard 2500 telephones.

**Data Equipment** • vendor supplied: printers; disk; tape • nonvendor equipment supported: RS-232C-compatible units.

**Applications Supported** • reservations • credit card verification • public utilities • travel agencies • customer service • telemarketing.

**Standard Features** • comprehensive reporting; routing patterns; system intraflow; multiple announcements; incoming call answering; queuing; call transfer; call conference; calls waiting indication; call park; outgoing calling; PBX features; after-call wrap-up; speed dialing; emergency alert; night service; automatic call hold; diagnostics.

**Optional Features** • music on hold; power failure transfer; battery backup.

**First Delivery** • 1981.

**Systems Installed** • over 50.

**Average System Size Installed** • 15 trunks, 15 agents.

**Average Cost Per Line/System Installed** • \$750 to \$1,000 per agent.

**Distribution** • Homaco; authorized distributors.

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

### ■ RING GROUP OF NORTH AMERICA, INC

230 Community Drive, Great Neck, NY 11021 • 516-487-0250.

### ☐ DCD 600

**Function** • automatic call distributor (ACD) • TDM/PCM switching • nonblocking • centralized architecture • minicomputer-based; RAM; ROM; RS-232C; interfaces to associated PBX systems.

**Trunks/Agents/Supervisors** • 32 to 240 trunks; 32 to 240 agent positions; up to 15 supervisor positions • 15 trunk gates • 3 announcement messages per trunk group • unlimited PBX station lines.

## ACD Systems

**Voice Equipment** • vendor supplied: agent terminal with 12-button dial pad, 9-button control pad, 7-character LED display; supervisor position includes agent set plus 16-character LED status module; master supervisor position uses CRT/keyboard • nonvendor equipment supported: none.

**Data Equipment** • vendor supplied: printers; remote units; disk/tape units; additional CPUs • nonvendor equipment supported: async using RS-232C.

**Applications Supported** • airline reservations • hotel/motel reservations • credit card verification • public utilities • travel agencies • customer service • telemarketing.

**Standard Features** • comprehensive reporting; routing patterns; dynamic load balancing; system intraflow; system interflow; networking; multiple announcements; incoming call answering; queuing; call transfer; call conference; calls waiting indication; call park; outgoing calling; PBX features; after-call wrap-up; speed dialing; emergency alert; last number redial; night service; automatic call hold; diagnostics.

**Optional Features** • music on hold; power failure transfer; battery backup; multiple announcements; feature phone; expanded report package.

**First Delivery** • 1982.

**Systems Installed** • over 50.

**Average System Size Installed** • 35 trunks, 30 agents.

**Average Cost Per Line/System Installed** • \$1,000 to \$1,750 per agent.

**Distribution** • Ring; authorized distributors.

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

### 911/ACD (also called ACD 5000)

**Function** • automatic call distributor (ACD) • space division switching • nonblocking • centralized architecture • minicomputer-based; RAM; ROM; RS-232C; printers; interfaces to associated PBX systems.

**Trunks/Agents/Supervisors** • 10 to 320 trunks; 10 to 320 agent positions; up to 15 supervisor positions • 99 trunk gates • up to 4 announcement messages • unlimited PBX station lines.

**Voice Equipment** • vendor supplied: agent terminal with 12-button dial pad, 9-button control pad, 7-character LED display; supervisor position includes agent set plus 16-character LED status module; master supervisor position uses CRT/keyboard • nonvendor equipment supported: none.

**Data Equipment** • vendor supplied: printers; remote units; disk/tape units • nonvendor equipment supported: async using RS-232C.

**Applications Supported** • reservations • emergency reporting 911 service • credit card verification • public utilities • travel agencies • customer service • telemarketing.

**Standard Features** • comprehensive reporting; routing patterns; dynamic load balancing; system intraflow; system interflow; networking; multiple announcements; incoming call answering; queuing; call transfer; call conference; calls waiting indication; call park; outgoing calling; PBX features; after-call wrap-up; speed dialing; emergency alert; last number redial; night service; automatic call hold; diagnostics.

**Optional Features** • music on hold; power failure transfer; battery backup; multiple announcements; feature phone; expanded report package.

**First Delivery** • 1980.

**Systems Installed** • over 50.

**Average System Size Installed** • 75 trunks, 75 agents.

**Average Cost Per Line/System Installed** • \$1,100 to \$1,700 per agent.

**Distribution** • Ring; authorized distributors.

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

### ■ ROCKWELL INTERNATIONAL SWITCHING SYSTEMS DIVISION

1431 Opus Place, P.O. Box 1494, Downers Grove, IL 60515 • 312-960-8000.

#### Galaxy Models GVS-150/300/450/600/750D-3

**Function** • automatic call distributor (ACD) • TDM/PCM switching • nonblocking • centralized architecture • DEC PDP-11/44 with 128K to 256K words; 4M-byte Dataram per CPU; CRTs; printers; power supply; magnetic 9-track tape.

**Trunks/Agents/Supervisors** • up to 1,536 trunks; up to 512 agent positions; up to 26 supervisor positions • up to 255 trunk groups/32 trunk gates • up to 180 announcement messages • up to 1,200 PBX station lines.

**Voice Equipment** • vendor supplied: 19-button/6-lamp membrane agent console for agent; 22-button/9-lamp console/CRT for supervisor; displays status for up to 55 agents • nonvendor equipment supported: standard 2500 telephones.

**Data Equipment** • vendor supplied: asynchronous (RS-232C) CRT; teleprinters; line printers • nonvendor equipment supported: asynchronous terminals.

**Applications Supported** • airline reservations • hotel/motel reservations • credit card verification • public utilities • travel agencies • customer service • telemarketing.

**Standard Features** • comprehensive reporting; routing patterns; dynamic load balancing; system intraflow; system interflow; networking; multiple announcements; incoming call answering; queuing; call transfer; call conference; calls waiting indication; call park; outgoing calling; PBX features; after-call wrap-up; speed dialing; emergency alert; last number redial; night service; automatic call hold; diagnostics.

**Optional Features** • music on hold; power failure transfer; battery backup; multiple announcements; feature phones; expanded report package.

**First Delivery** • April 1974.

**Systems Installed** • 280.

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

**Average Cost Per Line/System Installed** • \$4,500 to \$6,000 per agent.

**Distribution** • direct; sales office in New York City, Washington, DC, Atlanta, Dallas, Chicago, Costa Mesa, CA.

**Installation/Maintenance/Training** • Rockwell International.

### ■ SOLID STATE SYSTEMS

1990 Delk Industries Boulevard, Manetta, GA 30067 • 404-952-2414.

#### STS-16 ACD

**Function** • automatic call distributor (ACD); also functions as PBX • TDM/PAM switching • nonblocking • centralized architecture • proprietary CPU; RAM; ROM; RS-232C; printers; CRT/keyboard.

**Trunks/Agents/Supervisors** • 16 to 256 trunks; up to 200 agent positions; up to 12 supervisor positions • up to 16 trunk gates • up to 255 trunk groups • up to 12 announcement messages • up to 1,024 PBX station lines.

**Voice Equipment** • vendor supplied: proprietary agent position using 4-character LED; same unit for supervisor • nonvendor equipment supported: standard 2500 telephones.

**Data Equipment** • vendor supplied: printers; disk; tape; CRTs • nonvendor equipment supported: async RS-232C terminals, modems.

**Applications Supported** • airline reservations • hotel/motel reservations • credit card verification • public utilities • travel agencies • customer service • telemarketing.

## ACD Systems

**Standard Features** • comprehensive reporting; routing patterns; dynamic load balancing; system intraflow; system interflow; networking; multiple announcements; incoming call answering; queuing; call transfer; call conference; calls waiting indication; call park; outgoing calling; PBX features; after-call wrap-up; speed dialing; emergency alert; last number redial; night service; automatic call hold; diagnostics.

**Optional Features** • music on hold; power failure transfer; battery backup; recorded announcements.

**First Delivery** • 1978.

**Systems Installed** • over 300.

**Average System Size Installed** • 40 trunks, 40 agents.

**Average Cost Per Line/System Installed** • \$750 to \$1,100 per agent.

**Distribution** • Solid State; authorized distributors.

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

### □ CEO ACD

**Function** • automatic call distributor (ACD); also functions as PBX • TDM/PAM switching • nonblocking • centralized architecture • 68000-based CPU; RAM; ROM; RS-232C; printers; CRT/keyboard.

**Trunks/Agents/Supervisors** • 4 to 384 trunks; up to 512 agent positions; up to 32 supervisor positions • up to 32 trunk gates • up to 383 trunk groups • up to 12 announcement messages • up to 1,792 PBX station lines.

**Voice Equipment** • vendor supplied; proprietary agent position with 4-character LED; same unit for supervisor • nonvendor equipment supported: standard 2500 telephones.

**Data Equipment** • vendor supplied: printers; disk; tape; CRTs • nonvendor equipment supported: async RS-232C terminals, modem.

**Applications Supported** • airline reservations • hotel/motel reservations • credit card verification • public utilities • travel agencies • customer service • telemarketing.

**Standard Features** • comprehensive reporting; routing patterns; dynamic load balancing; system intraflow; system interflow; networking; multiple announcements; incoming call answering; queuing; call transfer; call conference; calls waiting indication; call park; outgoing calling; PBX features; after-call wrap-up; speed dialing; emergency alert; last number redial; night service; automatic call hold; diagnostics.

**Optional Features** • music on hold; power failure transfer; battery backup; multiple announcements; feature phones; expanded report package.

**First Delivery** • 1982.

**Systems Installed** • over 50.

**Average System Size Installed** • 75 trunks, 75 agents.

**Average Cost Per Line/System Installed** • \$900 to \$1,500 per agent.

**Distribution** • Solid State; authorized distributors.

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

### ■ STARTEL CORPORATION

2802 Alton Avenue, Irvine, CA 92714 • 714-863-9292.

#### □ Series 1000

**Function** • automatic call distributor (ACD) • standalone system • space division switching • 64K ROM; 84K RAM; printer; RS-232C.

**Trunks/Agents/Supervisors** • up to 127 trunks; up to 32 agent positions; 1 supervisor position • 4 trunk gates • 1 announcement message.

**Voice Equipment** • vendor supplied; proprietary agent position with 4-character LED; supervisor position uses CRT plus agent set • nonvendor equipment supported: standard 2500 telephones.

**Data Equipment** • vendor supplied: printers; disk; tape • nonvendor equipment supported: RS-232C-compatible units.

**Applications Supported** • reservations • credit card verification • public utilities • travel agencies • customer service • telemarketing.

**Standard Features** • comprehensive reporting; routing patterns; system intraflow; incoming call answering; queuing; call transfer; call conference; calls waiting indication; after-call wrap-up; emergency alert; last number redial; night service; automatic call hold; diagnostics.

**Optional Features** • music on hold; power failure transfer; battery backup.

**First Delivery** • June 1983.

**Systems Installed** • over 70.

**Average System Size Installed** • 25 trunks, 20 agents.

**Average Cost Per Line/System Installed** • \$750 to \$1,000 per agent.

**Distribution** • Startel.

**Installation/Maintenance/Training** • Startel.

### ■ TEKNEKRON INFOSWITCH CORPORATION

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

#### □ Infoswitch ACD 86

**Function** • automatic call distributor (ACD) • TDM/PAM switching • distributed common control • distributed architecture • microcomputer with 64K memory; minicomputer with 256K memory; 20M-byte to 130M-byte hard disk; printer.

**Trunks/Agents/Supervisors** • 7 to 400 trunks; 7 to 300 agent positions; 1 to 2 supervisor positions • 1 to 80 trunk gates • unlimited announcement messages.

**Voice Equipment** • vendor supplied; proprietary agent set; supervisor position uses same station plus CRT/keyboard • nonvendor equipment supported: standard 2500 telephones; compatible with key systems and Centrex.

**Data Equipment** • vendor supplied: data communications with leading mainframes.

**Applications Supported** • airline reservations • credit card verification • customer service • telemarketing • dispatch • insurance.

**Standard Features** • comprehensive reporting; numerous routing methods; dynamic load balancing; calls waiting indication; call transfer; call conference; call park; emergency alert; after-call wrap-up; speed dialing; dynamic answer; rapid redial; queuing; night service; diagnostics (on-site and remote).

**Optional Features** • voice announcements; music on hold.

**First Delivery** • 1978.

**Systems Installed** • over 500.

**Average System Size Installed** • 60 trunks, 50 agents.

**Average Cost Per Line/System Installed** • \$4,500 to \$6,000 per agent.

**Distribution** • direct.

**Installation/Maintenance/Training** • Infoswitch—training; Datapoint Customer Service—maintenance and installation.

### ■ TELCOM TECHNOLOGIES

3072 East G Street, Ontario, CA 91764 • 714-980-5000.

#### □ ECD-1000

**Function** • automatic call distributor (ACD) • space division switching • stored program control • distributed architecture • Z-80; RAM; ROM; battery backup; hard disk; printer.

**Trunks/Agents/Supervisors** • 2 to 20 trunks; 2 to 20 agent positions; up to 1 to 4 supervisor positions • 8 trunk gates • 4 announcement messages • 2 to 20 PBX station lines.

## ACD Systems

**Voice Equipment** • vendor supplied: proprietary agent set; CRT plus agent set for supervisor • nonvendor equipment supported: standard 2500 telephones.

**Data Equipment** • vendor supplied: none • nonvendor equipment supported: most industry-standard devices.

**Applications Supported** • airline reservations • hotel/motel reservations • credit card verification • public utilities • travel agencies • customer service • telemarketing.

**Standard Features** • comprehensive reporting; routing patterns; multiple announcements; incoming call answering; queuing; call transfer; call conference; calls waiting indication; call park; outgoing calling; PBX features; after-call wrap-up; speed dialing; emergency alert; last number redial; night service; automatic call hold; diagnostics.

**Optional Features** • music on hold; power failure transfer; battery backup; multiple announcements; feature phones; expanded report package.

**First Delivery** • December 1983.

**Systems Installed** • 100.

**Average System Size Installed** • 14 trunks, 10 agents.

**Average Cost Per Line/System Installed** • \$1,000 to \$1,500 per agent.

**Distribution** • Telcom Technologies; authorized distributors.

**Installation/Maintenance/Training** • Telcom Technologies.

### □ ECD-2000

**Function** • automatic call distributor (ACD) • space division switching • stored program control • distributed architecture • Z-80; RAM; ROM; battery backup; hard disk; printer.

**Trunks/Agents/Supervisors** • 2 to 48 trunks; 2 to 48 agent positions; up to 1 to 4 supervisor positions • 15 trunk gates • 4 announcement messages • 2 to 48 PBX station lines.

**Voice Equipment** • vendor supplied: proprietary agent set; CRT plus agent set for supervisor • nonvendor equipment supported: standard 2500 telephones.

**Data Equipment** • vendor supplied: none • nonvendor equipment supported: most industry-standard devices.

**Applications Supported** • airline reservations • hotel/motel reservations • credit card verification • public utilities • travel agencies • customer service • telemarketing.

**Standard Features** • comprehensive reporting; routing patterns; multiple announcements; incoming call answering; queuing; call transfer; call conference; calls waiting indication; call park; outgoing calling; PBX features; after-call wrap-up; speed dialing; emergency alert; last number redial; night service; automatic call hold; diagnostics.

**Optional Features** • music on hold; power failure transfer; battery backup; multiple announcements; feature phones; expanded report package.

**First Delivery** • November 1982.

**Systems Installed** • 300.

**Average System Size Installed** • 34 trunks, 28 agents.

**Average Cost Per Line/System Installed** • \$1,000 to \$1,500 per agent.

**Distribution** • Telcom Technologies; authorized distributors.

**Installation/Maintenance/Training** • Telcom Technologies.

### ■ TELEPHONIC EQUIPMENT CORPORATION (TEC)

17401 Armstrong Avenue, Irvine, CA 92714 • 714-546-7900.

### □ TEC/ACD

**Function** • automatic call sequencer (ACS); includes key equipment • standalone system • space division switching • proprietary microprocessor-based systems; RAM; ROM; 1A2 key equipment; RS-232C.

**Trunks/Agents/Supervisors** • 9 to 30 trunks; 2 to 30 agent positions; up to 4 supervisor positions • 1 trunk gate • 1 announcement message • up to 29 PBX station lines.

**Voice Equipment** • vendor supplied: standard 1A2 10-, 20-, or 30-button phones with visual indicators for call handling; supervisor position uses agent set plus special display • nonvendor equipment supported: standard 1A2 telephones.

**Data Equipment** • vendor supplied: RS-232C interface • nonvendor equipment supported: printers.

**Applications Supported** • reservations • travel agencies • customer service • telemarketing.

**Standard Features** • queuing; automatic call answering; automatic hold; night service; announcements; routing option; diagnostics.

**First Delivery** • January 1982.

**Systems Installed** • over 20.

**Average System Size Installed** • 10 trunks, 10 agents.

**Average Cost Per Line/System Installed** • \$11,000 per average system.

**Distribution** • TEC; interconnect companies.

**Installation/Maintenance/Training** • interconnect companies.

• END

