APPENDIX B

GLOSSARY

Access: The manner in which files of data sets are referred to by the computer.

Access Line (AUTOVON): A four-wire circuit between a station console or local PBX/EPBX to the AUTOVON switching network center. Separate pairs are used for transmission in both directions.

ACD: Automatic Call Distribution. A system feature allowing a group of people to exist who do nothing but answer telephones. These people are in an ACD Group which is accessed by a pilot number.

ACD Group: A group accessed by a pilot number and containing from 1-110 extension numbers.

ACOS: The AUTOVON Class of Service has five features that are configurable according to each station user's needs.

AIOD: Automatic Identification Of Outward Dialing - Provides the means of billing individual stations of a PBX for outgoing calls.

Alerting Signal: A specific E&M lead signal that is applied to subscriber access lines to indicate an incoming Routine or Precedence above Routine call. This signal activates the telephone's electronic ringer or ringer circuit.

All Trunks Busy (ATB): In CBX networks, a condition in which all trunks in a trunk group have been seized. This condition causes the calling party to receive a fast busy tone.

Alphanumeric: A character set that contains letters, digits, and control characters.

Alternate Routing Outgoing: See Route Optimization.

Amplitude: The magnitude (height) of a variable wave form.

Amplitude Modulation (AM): A form of modulation in which the amplitude of a carrier wave is varied in accordance with the instantaneous value of the modulating signal. See Pulse Code Modulation.

AML (Actual Measure Loss): AML is the actual measured loss between two points in reference to 1004 Hz (1 kHz or milliwatt tone).

ANAFL: Assigned Night Answer Flexible - Similar to ANAFX except that additional extensions or pilot numbers may be assigned/changed.

ANAFX: Assigned Night Answer Fixed - A mode of night answer providing a fixed extension or Hunt/Distribution group pilot number for night calls.

Analog: Data in the form of continuous variable signals, such as voice or light signals (in contrast to digital).

Analog/Digital (A/D) Converter: A device that senses an analog signal and converts it to a proportional representation in digital form.

AND: Automatic Network Dialing.

Answer Supervision: An off-hook signal transmitted toward the calling end of a connection when the called party answers.

Appearance: Location of wires and equipment on switch frames and switching boards, for example, subscriber lines or wires appearing on a line-relay frame or a jack on a switchboard panel.

Area Code Exception: A table used to differentiate between office codes which are the same as, and appear to be, area codes.

ASCII: American National Standard Code for Information Interchange consisting of a 7-bit coded word. Allows information interchange among data processing systems.

Assigned Mode: Calls which are immediately assigned to an ATC currently involved in the lowest number of new or recalling calls.

Assigned Night Answer (ANA): A system feature that allows assigned extensions (Commercial trunks--Night Service; AUTOVON trunks--Night station) to answer incoming calls from specified trunks when the Attendant's Console is in the night mode.

Asynchronous: Without regular time relationship; unexpected or unpredictable execution of a program's instruction.

ATB: All Trunks Busy.

ATC: The system operator's station which uses pushbuttons for all control and call-connecting functions.

ATC Group: An ATC may be a member of more than one group up to 48. Each group is given 1-4 extension numbers which will route a call to that particular group. Each group extension number is assigned a Class of Service.

ATC Service Group: A group of users having the same COS. A single ATC then provides service to a specific user group.

Attenuation: A decrease in magnitude of current, voltage, or power of a signal in transmission between points.

Attendant's Console (ATC): The system operator's station, which uses pushbuttons for all control and call-connecting functions.

Audible Ringing Tone, Also Ringback Tone: An audible signal heard by the calling party during the alerting or ringing interval of the called party.

AUTODIN: AUTOmatic DIgital Network. A worldwide automatic communications system that provides message-switched data service for the Department of Defense and certain subscribers. It is part of the Defense Communication System (DCS) and shares the use of certain AUTOVON facilities.

Auto-Program Load (APL): The process of automatically loading the system's program.

Automatic Callback: A system feature that rings the user when a camped-on extension is free.

Automatic Camp-On: A feature that permits a party to automatically camp on to a busy station by remaining off hook. The busy tone is replaced by music, and

the called party hears a call-waiting tone. When the called extension becomes idle, the call will ring through.

Automatic Conference Arranger (ACA): Equipment, located at a switching machine, used to set up automatic pre-set conferences. Each ACA has the capability to set up different conference patterns with a maximum of 17 primary conferees in each conference. A maximum of 20 conferees can be programmed into a single ACA.

Automatic Message Accounting (AMA): An arrangement of equipment for continuously recording and processing data required to compute toll call charges and to provide a sample of special trunk group calls.

Automatic Network Dialing: A feature that provides automatic dialing of on-net calls for ROLM switches in existing PBX tandem tie-line networks.

Automatic Number Identification (ANI): Equipment that automatically records the calling number of a completed call or special trunk group (AUTOVON, WATS, FTS, etc.). This is normally a part of AMA.

Automatic Traffic Overload Protection (ATOP): A dynamic form of line load control that denies customers the ability to get dial tone from the CBX for short periods of time.

AUTOSEVOCOM: The Department of Defense Automatic Secure Voice Communications Network.

AUTOVON: An acronym meaning **Auto**matic **V**oice **N**etwork. The worldwide switched communications system of the Department of Defense. The network is administered by the Defense Communications Agency (DCA). The principal long-haul voice communications network within the Defense Communications Systems (DCS) providing nonsecure direct distance dialing service worldwide through a system of Government owned and leased automatic switching facilities. It handles essential command and control, operations, intelligence, logistics, and administrative traffic in accordance with the established precedence criteria.

AUTOVON Access Code: The preliminary digit(s) users must dial to be connected through their CBX/PBX to the serving AUTOVON switching center (usually 8).

Auxiliary Equipment Access: A system's ability to interface with auxiliary equipment such as a paging system or dial dictation system.

Backplane: An assembly of motherboards with PCA connectors and printed circuit traces into which plug-in PCA's are placed.

Balanced Line: A two-conductor transmission line that is electrically symmetrical with respect to ground.

Band: A range of frequencies between upper and lower limits.

Band Filter: A filter that attenuates frequencies within its band but passes frequencies above and below this band.

Bandwidth: The difference, expressed in Hz, between the highest and lowest frequencies in a band.

Barge-In: The action of interrupting an established call connection.

Battery Backup: System power furnished by standby batteries. If commecial power fails, the batteries maintain service for a limited period of dc systems and preserve memory in ac systems.

Baud: A unit of signaling speed equal to the number of discrete conditions or shortest signal events per second.

Bay: Each vertical section of a two- or three-section equipment cabinet.

Binary Number System: A number system employing the digits 0 and 1 with the base 2, just as the decimal system uses 10 digits with the base 10.

Bit: An acronym for binary digit. A single digit in a binary number. The bit can have only one of two values 0 or 1.

Bit Rate: The speed at which bits are transmitted, usually expressed in bits per second.

Boot Strap: An overlay of the initial program with additional instructions within.

BOTH: An Attendant's Console pushbutton for connecting called and calling parties.

Buffer: An isolating circuit used between high-speed and low-speed circuits or between high-impedance and low-impedance circuits. In call storage, it is a register used to store information until such information can be used during call-processing operations.

Buried Cable: A communication cable installed under the ground in such a manner that it cannot be removed without disturbing the soil.

Bus: A major electrical path consisting of one conductor or multiple conductors connected in parallel.

Bus Ties: A major electrical path consisting of one conductor of a series of multiple conductors connected in parallel.

Busy (BSY): A condition encountered when a station is off hook or is in the Do-Not-Disturb mode. A busy tone indicates the busy condition.

Busy Hour/Peak Calling Time: The peak 60 minutes during a business day when the largest volume of communications traffic is handled.

Bypass Unit, CBX: A feature that automatically connects specified extensions to trunks in the event of a system failure.

Callback Queuing: A system option that allows outgoing calls to be queued when trunk groups are busy. When a nonbusy trunk is available, the user's phone rings and the call may be placed.

Call Detail Recording (CDR): A system feature that identifies outgoing calls from internal stations and records such data as start time, elapsed time, number dialed, trunk used, and date. Account codes can be entered by the attendant or by station users. This feature can also record data on incoming calls from trunks.

Called Station (Party): The party to whom a call is directed.

Called Party: The party receiving a telephone call.

Calling Party: The party placing a telephone call.

Calling Sequence: An arrangement of instructions, and in some cases data, that is necessary to perform a call.

Call Pick Up: A feature enabling the user of any other telephone in the system to answer a call ringing on a particular telephone. Available on single-line as well as key telephones.

CAMP: An Attendant's Console pushbutton that allows a calling party to be placed in a holding (waiting) position for a busy called party.

Camp On: An attendant feature that permits a party to be placed in a waiting position for a busy internal party; a waiting tone is generated and heard by the party receiving the camp on. A station feature that allows the user to place himself in a waiting position after having dialed a busy number; a tone is heard by the called party only if the call was placed over the called party's COM line. See Automatic Callback.

CANCEL: An Attendant's Console pushbutton for disconnecting from a called party.

Card: See Printed Circuit Assembly.

Card Cage: The assembly contained in each bay of the equipment cabinet capable of holding motherboards, plug-in PCAs, and the like.

Carrier: A continuous frequency capable of being modulated by an information carrying signal.

Carrier System/CXR: A means of obtaining a number of channels over a single path by modulating each channel on a different carrier frequency and demodulating at the receiving point to restore the signals to their original form.

Cathode-Ray Tube (CRT): A device that presents data in visual form by means of controlled electronic beams.

CBX: Computerized Branch Exchange, the name given to the ROLM product family.

CBX MA: ROLM Computerized Branch Exchange for Military Applications.

CCIS: Bell System's Common Channel Interoffice Signaling.

CCS: A unit of traffic measurement (100 call seconds).

CCSA: Common Control Switching Arrangement. A private switch service network (usually a large nationwide company) providing direct station-to-station inward and outward dialing along with other features normally found in the public telephone network. **CCSA access** refers to the ability to connect to such private networks via trunk circuits.

CDQ: A network device that provides an interface between tie trunks and a customer-provided Private Automatic Branch Exchange (PABX).

CDR: A feature identifying outgoing calls from internal stations and/or incoming calls from external trunks and recording such data as start time, elapsed time, number dialed, trunk used, and date.

CDR Exclude Table: A table listing the local office codes not monitored by the Outward CDR feature.

CDR Account Code: A user feature allowing a CDR call record for a particular call to be appended with coded information representing a client billing number or other data.

Central Office: A switching system that connects lines to lines, lines to trunks, and trunks to trunks. The term sometimes refers to a telephone company building in which a switching system is located and sometimes includes other equipment (such as transmission system terminals) that may be located in the building. A Class 5 office serves as a network entry point for customers who called a local or end office switch. A Class 4 office has tandem trunking capability. A Class 4/5 is a combination of both office types, local and tandem.

Central Office Line: A circuit between a telephone company Central Office and a protector on a subscriber's premises that provides subscriber access to the telecommunications network.

Central Processing Unit (CPU): The central unit of a computer system, exclusive of memory input/output logic, that controls and accomplishes arithmetical manipulations.

CENTREX: Service package providing direct inward dialing to individual PABX extensions, bypassing the attendant. Requires specialized CO or CU equipment.

Channel: The smallest subdivision of a carrier system by which a single type of communications service is provided, for example, voice channel, teletypewriter channel, and data channel. A path for electrical transmission between two or more points. Also called a circuit, facility, line, link, or path.

Circuit: A configuration of electrically connected components on devices used for the transmission of electrical energy when furnishing telecommunications service. In the case of battery circuits and generator circuits, each pair of wires, or fraction thereof, is a separate channel.

Circuit, Four-Wire: A circuit using two one-way transmission paths that may be two carrier paths or two pairs (four wires) of metallic conductors.

CLASS: A digital display on the Attendant's Console that indicates the Class of Service of a calling station.

Class Mark: A two-letter designation representing the calling privileges assigned to an AUTOVON access line, for example, geographic calling area originating precedence, any type of service--voice or data.

Class of Service DOD/Military Installations: Military class of telephone service, (A, AVR, AVP, B, C, and D) that defines each extension's ability to place or receive AUTOVON calls.

Class A -- Telephone Service authorized for official Government business on Department of Defense/military installation. For the proper conduct of official business, it requires access to the commercial telephone company Central Office and toll trunks.

Class AVR --Telephone authorized for Government business on DOD/military installation requiring access to trunking features terminated within a system to include routine access to AUTOVON.

Class AVP -- Telephones authorized for official Government business on DOD/military installations requiring access to trunking features terminated within a system to include routine and precedence access to AUTOVON.

Class B -- Unofficial telephone service on or near a DOD/military installation served by a military PBX or CENTREX system through which personal or unofficial business may be conducted. This telephone service has access to commercial telephone company Central Office and toll trunks.

Class C -- Restricted telephone service authorized for Government business on a DOD/military installation. This service is without access to telephone company Central Office or toll trunks.

Class D -- Special telephone service installed on DOD/military installations for official Government business and restricted to special Classes of Service such as fire alarm, guard alarm, and crash alarm.

Class of Service (COS): A numerical index (0 through 63) assigned to each CBX extension that determines the features and trunk accesses available for the user.

CLD: An Attendant's Console pushbutton for connecting to a called party.

CLD#: An Attendant's Console legend indicating that the number displayed is that of the calling party.

Clock: A device that generates periodic signals used for synchronization.

CMOS: A static-sensitive "chip" used in electronic circuits.

Coder: An Analog-to-Digital (A/D) Converter that changes analog voice signals to digital equivalents.

COM Control Redundancy: Duplicate sets of PCAs for memory, computer, Expander, etc.

COM Group: Persons in a common department or work group able to call each other by dialing fewer digits than the extension number.

Command and Control: An arrangement of personnel, facilities, and means of information acquisition, processing, and dissemination used by a commander in planning, directing, and controlling operations.

Computer: A data processor that can perform substantial computation, including arithmetic or logic operations without intervention by an operator during the run.

Common Channel Signaling (CCS): A signaling system, developed for use between stored program switching systems, in which all of the signaling information for a group of trunks is transmitted over a dedicated high-speed data link, rather than on a per-trunk basis. CCS compared with individual trunk signaling can reduce call setup time and save money.

Common Control Switching Arrangement (CCSA): A private switch service network. Users gain access to a CCSA network associated with their customer group by dialing an access code. They may then dial the CCSA number of the desired party (a seven-digit number) or an off-network number using the CCSA network (ten digits). Features available for servicing incoming calls from the CCSA network and outgoing calls to the CCSA network are similar to those available for incoming and outgoing exchange network calls.

Common Control System: An automatic switching system that uses common equipment to establish a connection. The common equipment then becomes available to establish other connections.

Communications (COM) Line Service: A system feature that allows members of a defined group to call each other by two-digit codes, thereby causing a distinctive ringing to occur. Available on single-line telephones.

Complement: A binary number formed from another binary number by changing each bit from either 0 to 1 or 1 to 0.

Computer Common Control: Programmable processor and memory that provides automatic supervisory and control functions for the CBX system.

Conference Bridge Group: This group contains Conference Bridge 1 and Conference Bridge 2 cards. The group is capable of handling either 16 four-party or 8 eight-party simultaneous conference calls.

Conference Call: A call in which more than two parties can speak together.

Configuration Limits: Maximum quantities available for each item in the VLCBX.

Configuration: A hardware and software arrangement that defines a system and thus determines system functional characteristics and operation.

Configuration Table: Software data tabulated to define system operation.

Configure: To determine the equipment cabinet contents and the location of each card, as well as Classes of Service and other software parameters unique to a particular system.

Connect: To join a call that has been on hold, camped on, or queued. The Connect feature is invoked by an access code (*1).

Connection: Path between terminations that allows the transmission of speech and supervisory signals.

Connection Table: An electronic array of registers in the TDM Network Control section of a ROLM switch that establishes the connection between the calling and the called parties.

Control Group: A group consisting of up to 200 extensions identified and accessed by a pilot number. When a Control Of Station imposes restrictions on the pilot number, those restrictions apply to all associated extensions in the Control Group.

Control Station: A feature that allows an ATC or station to control station forwarding and inward call restrictions for other extensions.

COS: Refer to Class of Service.

CPU: Central Processing Unit.

CRIT. ELEC. Redundancy: Duplicate sets of PCAs for critical system components (DTMF Register, Tone Generator, Rotary Register, etc.).

Critical Electronics: Functional units (exclusive of Common Control electronics) common to system operation, any one of which, if malfunctioning, impairs or inhibits operation. These units are DTMF Register, Rotary Register, Rotary Sender, Tone Generator, and Conference Bridge.

Cross-talk: The unwanted energy that is transferred from one circuit to another circuit.

Customer-Provided Equipment (CPE): Equipment provided by a customer.

Cut-over: The universally accepted term that defines the time when a new telephone system will be placed in service. Also, the term applied to the transfer of service from an existing telephone system to a new system.

Cut-through: The direct connection of a station to a trunk. The trunk is not controlled by the system for Toll Restriction or Route Optimization.

Data: Facts, concepts, or instructions represented in a formalized manner suitable for communication, interpretation, or processing.

Data Communications: Transfer of information between two locations via a data line.

Data Interface Card: Allows data from customer-provided equipment to be interfaced directly to the VLCBX backplane.

Data Terminal: A piece of auxiliary equipment used during moves and changes or service procedures.

dB: decibel (one tenth of a bel). A unit for measuring transmission gain or loss: ratio of two powers. A relationship that can be used to compare voltages across or currents through equal impedances by taking 20 log of the voltage or current ratio.

dBm: Power level in decibels with reference to a power of 1 milliwatt.

dBmO: Power in dBm (with reference to a point of zero relative transmission level).

dBr: Decibel relative level. The standard telephone test power in dBm that should be applied to, or measured at, a specific transmission level point to obtain standard test levels at other points in the same circuit. Hence, zero dBr is considered to be at the 1000-Hz, 1-milliwatt (zero dBm) source of test power.

DCS: Defense Communications System.

DCEC: Defense Communications Engineering Center.

Decoder: A Digital-to-Analog (D/A) Converter that changes a pattern of binary bits into an equivalent analog signal.

Deconfiguration: Revises and updates a dump of an existing program.

Dedicated LPS Button: An LPS key assigned the same special function on each ATC.

Dedicated Trunk: A trunk that will ring directly through any internal station, Hunt group, or Distribution group.

Default Table: The button default configuration for an ETS 100.

Defense Metropolitan Area Telephone System (MATS): Consolidation of DOD telephone services and facilities under a single management authority. It provides telephone services to DOD users for official Government business.

Demodulation: The process of retrieving data from a modulated carrier wave; the reverse of modulation. This technique is used in data sets to make communication signals compatible with business machine signals.

Destination Code Cancellation (DCC): A network management control that will not permit certain specified calls to be processed past the CBX that has implemented the control.

Diagnostic Programs: Not a part of the system software. Separate routines are used to determine the source of faults in the common control or subtle problems elsewhere in the system.

DI Clock Cable: Short cable connecting the Master Clock Motherboard to the Digital Intertie Motherboard on Shelves 1 and 2 of the VLCBX.

DID (Direct Inward Dialing): Allows an incoming call from the public telephone network to reach a specific CBX MA station line without attendant assistance. Usually this facility includes vacant number intercept to the attendant.

Digital: Data represented in the form of digits; opposite of analog.

Digital/Analog (D/A) Converter: See Analog to Digital; this is the reverse process.

Digital Cassette Unit (DCU): A device used to record or play back information in digital form, contained on a magnetic tape cassette.

Digital Intertie: Enables the connection of voice communications between the nodes.

Digital Link: The data connection that employs the DI card and connects the TDM networks of the nodes together to provide inter-node switch paths.

Digital Signal: A signal that has a limited number of discrete states prior to transmission. This may be contrasted with an analog signal, which varies continuously and has an infinite number of states.

Digit Translation: The deletion of unneeded call digits, or addition of required digits for VLCBX operation.

Direct Trunk Access: A feature that allows the attendant to directly select specific trunks from the various trunk groups. Thus, an attendant may select a particular idle trunk to place a call.

Direct Trunk Group Access: A feature that allows the attendant to directly access an outgoing trunk by operating a key associated with the desired trunk group.

Direct Ties: Ties enabling direct communication from one node to another.

DISA: A service allowing a person to call the VLCBX from any off-system location which has a DTMF keypad and use system features and capabilities.

Disconnect Supervision: Determines whether a Central Office releases when a calling party/called party hangs up the telephone.

Distribution Group: A group made up of stations arranged to share the call load. Each group is assigned a dummy extension number known as a pilot number.

Do Not Disturb (DND): A feature that allows a user to make his or her extension appear to be busy to incoming calls. An exception is when someone else in the same COM group dials the user's COM line; in that case, the call will ring through.

Drop, Subscriber's: The line from a telephone cable to a subscriber's building.

DSA Switchboard: Dial Service Assistance Switchboard. A switchboard associated with the AUTOVON switching center equipment that provides operational services such as information, interception, random conferencing, and precedence-calling assistance.

DTMF: Dual-Tone Multifrequency. A generic term used to describe the signaling from a touch-dial key pad in a telephone to the serving Central Office. It is used to indicate telephone address digits, precedence ranks, and end-of-signaling; sometimes referred to as TCMF.

DTMF to Dial Pulse Conversion: The capability to convert 6he signals from standard pushbutton stations (DTMF signaling) to signals that would normally be produced by rotary dial stations (dial pulses). This capability is necessary when the serving Central Office cannot receive DTMF signals.

Dual Homing: The connection of an AUTOVON terminal so that it is served by either of two switching centers. This service uses a single directory number.

Dump/(Data): Writing contents from storage onto an external medium for a backup program or debugging.

Duplex: Pertaining to a simultaneous two-way, independent transmission in both directions (sometimes referred to as full duplex). Contrast with half duplex, which is one-way transmission.

Duty Cycle: Ratio of operating time to total elapsed time of a device which operates intermittently. The ratio is expressed in %.

DX Signaling Unit: Direct Current Duplex Signaling Unit. A signaling unit that applies the E&M lead signals to a cable pair over A and B leads. These signals are transmitted on the same cable pair that transmits the message age.

Dynamic Tables (Memory): A location in memory containing information that can be changed or moved.

E&M Lead Signaling: An arrangement in which communication between a trunk circuit and a spearate signaling unit is accomplished over two leads: an M lead, which transMits battery or ground signals to the signaling equipment, and an E lead, which receives open or groun signals from the signaling unit.

ECC: Error Correcting Code. A feature that appends error correcting bits to each word stored in memory and uses them to detect and correct errors when the memory contents are read.

Echo: The effect of a wave that, having been derived by reflection or some other means from a primary wave, arrives at either end of the same circuit with sufficient magnitude and delay to be distinctly recognized.

Echo Return Loss (ERL): A measured amount of loss introduced into a loop to reduce echo.

Echo Suppressor: A device that detects signals (such as speech transmitted in either direction on a four-wire circuit) and as a result introduces loss in the other direction to suppress undesired echoes. A split suppressor detects in one direction of transmission and suppresses in the other. A controlled suppressor is switched in or out by a control circuit to enable or disable its normal func-

tion, as required. A fixed suppressor is enabled at all times; therefore, it does not require a control circuit arrangement.

Enable Pulse: Any current or voltage pulse that enables a circuit to become operative.

Encode: Process of converting data by use of a code or coded characters so that the data can be converted back to its original state.

Encrypted Voice: See Secure Voice.

End of File (EOF/Flag): A code that means the last record of the file has been read.

EPBX: Electronic Private Branch Exchange. The EPBX provides the same services as a PBX; manual operations are accomplished by cordless consoles instead of switchboards using cords. EPBXs are electronic processor common control systems with either space division or time division switching.

Equipment Cabinet: A unit of the system that contains the PCAs required for system operations. A system may use one, two, or three equipment cabinets.

ESC: Echo Suppressor Control Lead.

Exchange: A telephone switching center.

Executive Override (EOV): A user feature providing barge-in capability upon encountering a busy extension.

Expanded Traffic: A system feature package for obtaining detailed data on the traffic carried by the system.

Expected Digits Table: A table defining the number of expected digits and the Class Of Service restrictions for up to 32 combinations of the first 1-16 digits which will be dialed after an access code for a trunk group or for the Route Optimization selection process.

Extend: An Attendant's Console operation. The attendant answers a calling party and then extends the call to a called party.

Extension Number: An arbitrary number of one through seven digits that matches a station to a particular user. Compare with Station Number.

Extension Status: A group of indicators on the Attendant's Console that displays the current status of a called number.

Extension Telephone: Telephone instrument(s) in addition to the main station. Extension telephones may have features that are different from the main station.

Exterior Routing: In the CONUS AUTOVON polygrid network, a routing concept employed to route a call from one switching center to a destination switching center not located within the same home grid.

FAC: Forced Authorization Code - A feature requiring all or certain users to enter an authorization code before dialing external numbers. FAC codes are also used to identify calls from incoming facilities such as tie and DISA trunks.

Faceplate: A cover that fits around the pushbuttons or dial of a telephone.

Facimile Transmission: A service that provides instantaneous transmission of written messages or sketches by means of a private line or, when associated with data set, over the regular telephone network. The transmission of pictures, maps, diagrams, etc. The image is scanned at the transmitter, reconstructed at the receiving station, and duplicated on paper.

Federal Telecommunications System (FTS): A civil government communications system covering 50 states and administered by GSA; provides services for voice teletypewriter, facsimile, and data transmission.

Feeder Cable: House cabling from an IDF to an MDF. Acts as a concentrator for individual 3-pair station wiring.

FEP: Front End Processor - Interfaces with the TDM network and reports status information to the applications processor software.

Filter: A device used to suppress unwanted frequencies or noise or to separate channels in communication circuits.

Firmware: A ROLM program that implements desired software.

Flag: A character that signals a condition, such as the end of a word.

Flash: A momentary depression and release (off-hook to on-hook to off-hook) of the plunger on the handset cradle. Used to signal the CBX that a special access code is to follow. May also be accomplished using an operator recall button on a key telephone. Automatically provided by ETS telehphones.

Flash: The second highest ranking precedence. See Precedence Level.

Flash Override: The highest ranking precedence. See Precedence Level.

Flexible Station Numbering: A feature that allows stations to be numbered or renumbered without regard to physical location or number length.

Floppy Disk Unit: A piece of equipment that receives and records instructions on a magnetic floppy disk.

Flow Chart: A graphic representation of a solution of a problem using symbols to represent operations, data, equipment, etc.

Follow-Me: Progressive call forwarding initiated by a user.

Foreign Exchange (FX) Service: A service that permits a user to access a remote commercial telephone exchange area without incurring a toll charge for each call.

Forced Release/Disconnect: Certain automatic actions of an AUTOVON switching center occurring when the calling party fails to hang up promptly at the end of a conversation.

Four-Wire Line: A two-way transmission circuit utilizing four conductors.

Four-Wire Terminating Set: A piece of equipment with a hybrid balancing network used for connecting a four-wire line to a two-wire line.

Frequency: Rate of alternations expressed in cycles (kilocycles or megacycles) per second or Hertz.

Frequency Division Multiplexing (FDM): The transmission of two or more signals over a common carrier or path by using a different subfrequency band for each signal.

Full Echo Suppressor: An echo suppressor installed at one end of a circuit that can insert suppressor loss in either the transmit or receive leg of the circuit, thus suppressing echoes from either talker.

Full Register/Sender (FRS): A method of register/sender operation used on trunks that will always transmit a standard number of digits based on a universal numbering plan. The tone generator replaces internal dial tone with external dial tone when a CBX trunk is accessed on an outgoing call. Dialing informtion is then received by an appropriate register and transmitted over a trunk using a proper type of sender. Register and sender drop off when the predetermined number of digits have been dialed.

Gain (Transmission Gain): The increase in the power of an electrical signal. This increase is expressed in decibels.

Gateway Office: An AUTOVON switching center that provides access to or from other geographical areas where AUTOVON switching centers are located or provides access to or from other networks within the geographical area.

Global Data: Data which is fully distributed and completely replicated in each node. Data having system-wide meaning and use (Class Of Service).

Guarding: The process of holding a circuit busy for an interval after its release in order to guarantee that a necessary minimum disconnect interval will occur between calls.

Glare: The simultaneous seizure of a circuit by two switches.

Half-Duplex: An alternate one-way-at-a-time independent transmission (sometimes referred to as single). Contrast with Duplex.

Half-Limited Register/Sender (HRS): Similar to Limited Register/Sender (LRS), but the calling station-to-trunk connection is not made until after timeout or answer supervision.

Hard Copy: A printed copy of machine output in a visually readable form (listings, documents).

Hardware: Physical equipment used in data processing, as opposed to computer programs, procedures, rules, and associated documentation.

Hertz (Hz): International standard unit of frequency. Replaces and is identical to cycles per second.

Highway (Bus): One or more conductors used for transmitting signals or power.

HNPA: Home Numbering Plan Area.

HOLD: An Attendant's Console operation in which the calling party or conference is placed in a position waiting for an internal party or the attendant; a user feature that may be used from a single-line telephone allowing a party to be placed in a waiting position.

Holding Tank: A queue, the length of which is assigned by trunk group, in which a call is held until it can use its assigned route, or overflow to its next available route.

Home Grid: The CONUS AUTOVON polygrid network, a group of directly interconnected switching centers, usually nearest to and surrounding the destination switching center.

House Cable: Telephone cable within a building that provides communication and signal paths between station equipment and between station equipment and the switching system.

Howler Tone: An alternating or pulsating tone of mixed frequencies.

Hub: The means of computer connection between nodes in a VLCBX.

Hub Junction Box: See Junction Box.

Hub Manager: Translates user level messages to hardware level Hub messages and selects the best possible physical Hub for each message.

Hub Message System: Communication system allowing intercomputer communication between nodes.

Hub Network: Redundant data communications path between nodes in a VLCBX. It consists of up to 5 nodes co-located within 200 feet of each other, 2 Hub Interface circuits, and 2 separate junction points.

Hub Process: A collection of programs responsible for the transmission and reception of system level data messages between the nodes.

Hub-To-DI Interface: Connects 2 hub networks through DI channels. It is used in a VLCBX containing nodes located more than 100 feet from the Hub Junction Box; or when there are more than 5 nodes in a single VLCBX system.

Hunt Group: A group made up of stations, assigned to, and accessed by, a dummy extension number known as a pilot number.

Hunt, Station: A feature that routes incoming calls to the first idle station in a preselected group (Hunt Group). A selection is made by initially attempting to route calls to the first member of the group.

Hybrid Coil: A transformer used in a balancing network to connect a 4-wire line to a 2-wire line.

ICDR: Inward Call Detail Recording.

IDDD: International Direct Distance Dialing.

Idle Line Termination: An electronic network that is switch controlled to maintain a desired impedance at a trunk or line terminal when that terminal is in the idle state.

Immediate: The third highest ranking precedence. See Precedence Level.

Impulse Noise: A noise characterized by high amplitude and short duration, sometimes appearing as a group of impulses, or burst.

Input/Output (I/O): The process of transmitting information from an external source to a computer unit or vice versa.

Inside Plant (Switching Center): The inside plant includes all equipment and cabling extending inward from the protectors on the main distribution frames/combined distribution frames (MDF/CDF), as applicable. It also includes

the interface terminal equipment necessary for compatibility with integration into a larger system.

Instruction: A binary word or groups of binary words that cause the computer to perform a particular function.

Instructional Faceplate: A clear coverplate and instructional insert providing user instructions on the faceplate of telephones.

Integral: A part of a whole that cannot be separated from the rest.

Integrated Circuits (IC): A combination of interconnected circuit elements inseparably associated.

Intercept: A feature that automatically forwards a call to the attendant or a recorded announcement if the call station is vacant (unassigned), is down (out of service), and/or has a COS restrictuion on the use of a trunk.

Intercom: A feature that permits extensions to dial one another and converse internally.

Intercom Blocking: A feature by which stations with a particular COS are blocked from calling stations with the same or any other specified COS.

Interface: The specifications of the interconnection between two equipments or systems. The specifications include type and function of the interconnecting circuits, and the type and form of signals to be interchanged via those circuits.

Interior Routing: In the CONUS AUTOVON polygrid network, a routing concept employed to route a call from one switching center to the destination switching center with the same home grid.

Intermediate Distributing Frame (IDF): A frame that cross connects single-line stations to single-line circuits.

Inter-Node: Refers to communication paths that originate and terminate in another node.

Interoffice Trunk: A telephone channel between two Central Offices.

Interrogate: To determine the state of a device or circuit.

Interswitch Trunk: A circuit between two switching machines.

Intra-Node: Refers to communication paths that originate and terminate in the same node.

Intraoffice Trunk: A trunk, or path connection, within the same Central Office.

I/O: Input/Output device used to interface a computer and the outside world.

I/O Controller: Provides communications between the processor and external I/O devices.

IPM: Interruptions per minute.

ISB: Intershelf Bus - Connecting path between the TDC and all of its shelf expanders.

Jack: A receptacle used to connect a cord, a plug, an earphone, or a speaker.

Junction Box: A box used to connect a Hub Interface when a node is placed at a remote location.

Key Pulsing (also Keying DTMF): A pulsing system in which the digits are transmitted by operation of pushbuttons. Each pushbutton corresponds to a digit and generates a unique pair of tones.

Key Service Capability: A system feature providing standard key telephone features from the equipment cabinet rather than from supplemental key telephone control equipment.

Key Telephone: A telephone that provides access to multiple telephone lines by pushbuttons. It has more than one extension appearance and uses as many buttons as extensions appearing at the telephone.

Key Telephone Adapter (KTA): A multiplexing unit of the ROLM CBX MA system that interfaces a key telephone to a 3-pair cable.

Key Telephone Interface Group: A group that contains a Coder, Decoder, and one to four 4-Channel Key Telephone Interface cards on a 6-2 Motherboard.

kb/s: Kilobits per second. One thousand bits per second; used in specifying the modulation rate of a digital transmission system.

Light Emitting Diode (LED): A solid-state device that gives off light under certain electrical conditions and is generally used as an indicator lamp.

Limited Register/Sender (LRS): A method for outgoing calls in which the voice frequency path of the calling party is cut through to the trunk, and the trunk supplies dial tone to the local station. Dialing informtion is then received by an appropriate register and transmitted over a trunk using a proper type of sender. Register and sender drop off after a predetermined interval.

Line Adapter Circuit: A specific circuit that is used at the station end of a subscriber access line and connects to the four-wire telephone. The line adapter circuit performs the functions of a trunk circuit.

Line: A telephone line is an assigned telephone number and constitutes the number of lines in a system.

Line Load Control: Control equipment in the telephone system (generally activated by the attendant).

Loading: The addition of inductance to a line to improve its transmission characteristics throughout a given frequency band.

Local Data: Data which has meaning only in a single node (configuration of line interface cards).

Local Loop: The wires from a PABX to local stations.

Logic Circuit: A type of switching circuit such as AND, OR, NAND, etc.; gates that can perform various logic operations or represent logic functions.

Loop: The 2W/4W circuit formed by the customer's telephone set, cable pair, and other conductors that connect it to Central Office/CBX equipment.

Loop Select (LPS) Operation: An Attendant's Console operation for selecting calls arriving at the console from trunk or internal calls by means of pushbuttons that do not have a direct correspondence to a particular trunk or internal extension.

LRS: Limited Register/Sender.

Magnetic Disk (Floppy): A random access storage device consisting of magnetically coated disks accesible to read and write.

Main Distribution Frame (MDF): The MDF is located near the equipment cabinet and provides connections between the equipment cabinet, trunks, Intermediate Distribution Frames, auxiliary equipment, and individual stations. Cross connects the equipment to interfaces in the cabinet.

Maintenance: Action taken to retain equipment in a serviceable condition or to restore it to serviceability. It includes inspection, testing, servicing, classification as to serviceability, repair, rebuilding, and reclamation. Routine recurring work required to keep equipment or a facility in such condition that it may be continuously utilized at its original or designed capacity and efficiency, for its intended purpose.

Mask: A pattern of characters that is used to control the retain or eliminate a portion of another pattern of characters.

Master Clock: Synchronizes the entire VLCBX system.

Master/Slave System: A special computer configuration with the master system controlling all input/output information. The slave system performs tasks as directed from the master system.

MDF: Main Distribution Frame.

Mean Time Between Failures (MTBF): The mean value of the lengths of time between consecutive failures under stated conditions for a stated period in the life of a functional unit.

Memory: A portion of the computer common control that stores the system software.

Memory Module: A segment of electronic solid-state storage circuits capable of storing a definable number of computer words. Computer storage capacity is incremental by memory modules (such as 36K, 48K, 64K, and so on).

Memory Reserve Power: Provides reserve power to the memory modules when local power fails.

Message Unit: A call measurement distinguished from a toll call by the fact that it is a call within a local service area, but one for which charges are accrued.

Message Registration: A system feature that records the number of message units incurred by each station.

Metal Oxide Semiconductor (MOS): Solid state components used as computer memory.

MF: Multifrequency pulsing/signaling. An interoffice address signaling method in which ten decimal digits and five auxiliary signals are each represented by

selecting two frequencies out of the following group: 700, 900, 1100, 1300, 1500, and 1700 Hz.

Microcode Prom: Decodes instructions from the Processor when the Processor makes a request.

Microprocessor: A processing unit, or part of a processing unit, that consists of microcode.

Microsecond: One millionth of a second.

Microwave: All electromagnetic waves in the radio frequency spectrum ranging from approximately 1000 to 300,000 MHz.

Milliampere: One thousandth of an ampere. Denoted as mA.

Millisecond: One thousandth of a second. Denoted as ms.

Mixed Mode, Night Service: The provision for after-hours answering of incoming calls in which Assigned Night Answer (ANA) is specified for some trunks and Universal Night Answer (UNA) is specified for others.

Mobile Telephone Service: Telephone service between a fixed base station and mobile stations in vehicles, etc. Also telephone service from stations into the commercial telephone system.

Modem (Modulator/Demodulator): Permits remote access to the system for maintenance and moves and changes procedures by providing a means of transmitting and receiving digital data over a voice network.

Modulation: The process of varying some characteristic of the carrier wave in accordance with the instantaneous value or sample of the intelligence to be transmitted.

Module: An equipment unit capable of being combined with other similar units to form a large unit.

MOS: Metal Oxide Semiconductor.

Multilevel Precedence Pre-emption (MLPP): A system of pre-emption whereby selected customers may exercise pre-emption capabilities that seize facilities being used for calls assigned a lower level of precedence. The levels of precedence used on AUTOVON are: Flash Override, Flash, Immediate, Priority, and Routine.

Multiline Telephone: Key telephones and ETS telephones.

Multiple Console Operation: The use of more than one Attendant's Console to serve a particular PABX or CBX MA installation.

Multiplex: Use of a common channel to make two or more channels by splitting the frequency band transmitted by the common channel into narrower bands, each becoming a distinct channel.

Multi-Tenant: When more than 1 company is connected to the VLCBX.

Music On Camp-On: A feature that provides access to audio equipment when a party is camped on an extension by the attendant.

Music On Hold: A feature that provides access to radio equipment when a party is holding for an extension.

Nanosecond: One billionth of a second.

Narrowband: A communications channel with a bandwidth less than that of a voice grade channel.

Network: A system of nodes interconnected by communication channels reserved for the exclusive use of one customer (private network) or many customers (shared network).

Network Protection Device (NPD): A device such as a CDQ that provides isolation between PABX circuits and CO trunks or tie lines.

NID (Network Inward Dialing): Permits a party outside of a PBX/EPBX to reach a user served by the PBX/EPBX without attendant assistance.

Night Service: A feature for answering incoming calls via DID, tie, and CO trunks (Commercial trunks) when the Attendant's Console is unattended.

Night Station: The AUTOVON ANA to handle incoming calls when the ATC is unattended.

Night Chime: An auxiliary ringer, usually wall mounted, used to indicate a ringing trunk during night operations or used as a "phantom" extension for overflow (forwarding, busy, and do not answer) applications.

Nine One One (911): The universal three-digit emergency telephone number adopted by the telephone industry as the nationwide emergency number. The three major advantages in using 911 for the person seeking emergency aid are: (1) It relieves doubt about the proper emergency response agency or equipment; (2) It is easier to remember and is universal throughout the state; and (3) It is easier and faster to dial under adverse conditions. Dialing 911 alerts the closest available aid to the caller. Calling 911 at any activity alerts a central dispatch at that activity. The existing specific emergency numbers for police and fire, etc., also remain.

NNX Code: The first three digits of a seven-digit telephone number used for routing a call to the destination switching center (Office Code).

Node: One independent 3-cabinet VLCBX group with its own redundant VLCPU and continuous TDM network.

Node Redundancy: Two levels of redundancy within a node (Critical Electronics and Common Control).

NOD/RNOD (Network Outward Dialing): Permits a PBX/EPBX user to place a Routine Precedence call without assistance from the attendant. ACOS 0-3 calls must be originated via the attendant.

Noise: Any random disturbance in a communication system that tends to obscure the clarity and validity of a signal in relation to its intended use.

Noise, Idle: Noise that exists in a communication system when no signals are preset.

Noise, Impulse: Intermittent or spasmodic noise consisting of high level pulses of short duration or of other transients with steep wave fronts. It is the result of crosstalk, dial pulses, or other switching transients.

No Search: A special application of FAC (Forced Authorization Code). All users have an authorization code with an associated Class Of Service.

Number: A digital display on the Attendant's Console that indicates the calling or called number.

Numbering, Flexible Station: Flexible station numbering.

Numbering Plan: The method of assigning NNX codes to provide a unique telephone address for each subscriber, special line, or trunk destination in CONUS or Overseas. Indicates the Classes Of Service having access to special dialing codes.

Trunk Group Name: Four-character name assigned to each trunk group for access, translation, and other functions.

Off-Hook: The condition that indicates a closed loop or the active state of a customer's line.

Office Code: The first three digits of the seven-digit local telephone number (directory number).

Off Line: Equipment or devices not under direct control of the Central Processing Unit. May also be used to describe terminal equipment that is not connected to a transmission line.

Off-Premise Extensions (OPX): A term used to describe station sets not located on customer premises where the switching equipment or main station is located.

On-Hook: The condition that indicates the idle state or open loop of a customer's line.

On-Line: The direct interface between applications progress and terminals for data entry and output.

On/Off Net: An On/Off Net call can be placed by the ATC or designated AUTOVON night station (ANA). "On" designates the AUTOVON network and "Off" refers to the commercial network with no internal parties involved.

Operating System Programs: A part of the system software; the system operating instructions and algorithms that are stored in memory of the computer common control; executed, when required, during system operations for controlling connections and features.

Optional Features: Nonstandard features that can be incorporated in the system operating program (software) and may require additional hardware.

OPX: Off-Premise Extension.

Outpulsing: The process of transmitting address information over a trunk from one switching center to another.

Outside Plant: The outside plant includes all cables and wires extending outward from the protectors on the main distribution frame, supporting structures, and other associated apparatus necessary to connect the terminal equipment to the outside plant.

Programmable Read Only Memories (PROM): A type of memory used in stored program systems. The memory cannot be altered through normal use. Data input functions must be used to change the memory.

PROM I/O PCA: Contains microcode PROMs and I/O Controller.

Pulse: A short signal used to transmit or control information. Generally transmitted in groups of one or two to represent dialed digits or as a pair of unique tones to represent a keyed-in digit.

Pulse Width Modulation: A method of carrier transmission in which the duration of a pulse is varied. Also known as pulse-duration modulation.

Punch-Down Block: See Quick-Connect Block.

Pushbutton: A switch activated by pressing, similar to a typewriter key. Some pushbuttons light to indicate the state of the switch.

Push-To-Talk/Listen: A button on the handset that, when pressed, enables your voice to be heard.

Quantize: To divide the range of a variable into a finite number of nonoverlapping intervals that are not necessarily equal and to designate each interval an assigned value within that interval.

Queue: An area in memory used to record a waiting list for some particular function, for example, the waiting list for dial-pulse receiver circuits.

Queued Mode: Calls which wait in a queue for an ATC and are presented, one at a time, to an idle ATC in a group.

Quick-Connect Block: Provides for the connection of wiring at points distant from the equipment cabinet in the Main Distribution Frame (MDF) and Intermediate Distribution Frame (IDF). Also called punch-down block. Cross-connects are made between quick-connect blocks at the MDF.

RAC: ROLM Analysis Center&tm..

RADIX: A base of a number system.

Random Access Memory (RAM): A type of computer memory organization in which each location can be accessed as an independent storage location. The access time is independent of the location.

RDI: Receive Digital Intertie - Used to receive voice communications.

Read Only Memory (ROM): A computer memory that cannot be altered in normal use. Usually a small memory that contains often-used instructions such as microprograms or system software.

Real Time: The actual time an event occurs.

Recorded Intercept: Allows calls to non-existent extensions, downed extensions, and Class Of Service violations, to be routed to a recorded announcement device telling the caller that the call cannot be completed.

Redundancy: The use of additional equipment to provide service during power outages or equipment malfunctions.

Redundant Computer Common Control: The provision for a backup Computer Common Control for a CBX MA system.

Register: A binary word repository or device for temporarily storing binary words in control units.

RELEASE: An Attendant's Console pushbutton used to disconnect the attendant from the calling and/or called parties.

REMS: ROLM Electronic Message System&tm.. A system that can send and receive messages electronically.

Reorder Tone: A tone transmitted to the calling station when switching paths, trunks, or other communication equipment (except station numbers) are unavailable for use during a call attempt.

Repeat Number Dialed: A user feature used when a busy outside number is dialed. The number is stored and can be redialed with a two-digit code at a later time.

Repeater (VF): A combination of one or more amplifiers together with their associated equipment.

Repeating Coil: A transformer used to provide inductive coupling between two sections of a line for such purposes as impedance matching and dc isolation.

Reserve Power: The system is backed up by a standby rechargeable battery. Reserve power normally provides one to eight hours of emergency telephone service.

Reset: To restore a storage device, such as a flip-flop, to a prescribed state that is opposite to the set state.

Return Loss: A measure of the dissimilarity between two impedances, expressed in decibels.

Ringdown: Indicates that a station will be routed to a fixed destination number when going off-hook.

Ringing: Signal used for ringing telephone bell.

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ROLM+: Registered trademark of ROLM Corporation.

ROM: Read Only Memory.

Route Advance: The capability within a VLCBX that when a trunk access code has been dialed, and all of the trunks in a group are busy, the call can attempt to use 1 of 3 predetermined overflow groups. The groups are searched sequentially by the trunk group number as with Hunt Groups and within the trunk group as configured for the group.

Route List: Sequence of trunk groups that can be searched for a particular route. This list is composed of trunk groups and configurable attributes (e.g., Class Of Service) governing the use of a particular trunk group.

Route Optimization: A system feature that automatically selects the most economical of available circuits over which to make an outgoing call.

Routine: Lowest precedence level of access in the AUTOVON network.

Sampling: A technique of system analysis whereby traffic usage is estimated based on a representative sample.

SAP: Service Alarm Panel.

Satellite Power Block: Part of an IDF; provides connections between an ac power source and the power pair of station and/or Attendant's Console/step-down wiring. Usually contains a step-down power supply.

Scan: Switched Circuit Automatic Network. A tariff arrangement by AT&T providing interstate private line services for two U.S. Government agencies--the Department of Defense and the General Services Administration.

SCBX: A ROLM system that supports 48 to 200 lines.

SCES: Split-Controlled Echo Suppressor--See **Echo Suppressor.**

Search Sequence Table: A table containing the three-to-four character name assigned to each Service Area List.

Search With Default: A special application of FAC (Forced Authorization Code) to limit calling privileges of all but a select few people.

Default Table: The button default configuration for an ETS 100.

Security Call Group: A group of 8 station extensions, assigned to and accessed by, a dummy extension number known as a pilot number. When the pilot number is called, all idle extensions in the group ring simultaneously.

Self-Test: A system feature that uses stored programs in the CBX MA computer, provides for the automatic sequencing of tests, and allows the results to be interrogated through software. Tests are performed during normal operation of ROLM systems.

Self-Test Programs: A part of the system software that provides for routine testing during normal operations, stores the results in a software table maintained in the system memory, and allows the results to be interrogated locally or remotely through the use of the Service Teleprinter.

SER CALL: Serial call. An Attendant's Console pushbutton used to initiate a series of calls for one party.

Serial Transfer: A data transfer in which elements are transferred in succession over a single line.

Serial Transmission: Processing the bits that form a character one at a time using a single bus.

Service Order: To order to install, remove, or rearrange a subscriber's communication service.

Service Teleprinter: A typewriter-type device used during local or remote maintenance and move and change operations.

Set: To place a storage device in a prescribed state that is the opposite of the reset state.

SF: Single Frequency Signaling Unit--Converts dc supervisory and control signals into 2600 Hz tone signals. These tone signals are transmitted on the carrier channel or cable pair that transmits the message.

SFES: Split-Fixed Echo Suppressor--See **Echo Suppressor.**

Shelf: Horizontal division of a card cage used to hold Printed Circuit Assemblies.

Shielded Cable: A communication cable with a metallic layer applied over insulation covering a cable core, composed of woven, braided, or served wires, foil wrap or metal tube, which acts to prevent electromagnetic or electrostatic interference from external fields.

Shielded Pair: A paired insulated wire surrounded by an electrostatic shield consisting of braided copper wires or a wrapped metallic foil.

Shift: The process by which each bit of a binary word is moved either to the right or to the left by a specified number of bit positions. Bits that pass through the end of the word are not retained. Vacated bit positions are filled with zeros.

SI: Single Interrupted.

Single-Line Telephone: A telephone that provides access to one telephone line and has one extension appearance; on the ROLM SCBX MA or CBX MA may also have a COM line identification number.

Single-Line Interface Group (Standard): This group contains a Coder, Decoder, and one or two 8-Channel Interface cards.

Signals, Supervisory: Used to convey information on a state or condition of a trunk or an access line.

Singing Return Loss (SRL): A loss introduced into a loop to cancel any singing caused by instability of the circuit.

Slave Clock: Driven by the Master Clock.

Sleeve: Designation for the circuit supervisory lead associated with the switchboard station or trunk cord plug, hence tip, ring, and sleeve.

SLNT: Silent. An Attendant's Console pushbutton for turning off the console's audible signal for incoming and recalled calls, as well as the audible system alarm.

Slot: Shelf location of Printed Circuit Assemblies. There are 33 slots per shelf.

Software: The programs and routines used to extend the capabilities of computers, such as compilers, assemblers, narrators, routines, and subroutines. Contrast with HARDWARE.

Solid-State: Denoting the use of semiconductors, such as diodes and transistors, instead of vacuum tubes.

Source: A group of indicators on the Attendant's Console that identify the source of calls arriving at the console.

Speaker Phone: A microphone (transmitter) and loudspeaker (receiver) associated with a telephone. This permits a telephone conversation without using the handset.

Special Digit Table: A table containing exceptions to the Numbering Plan or the Expected Digits Table.

Special Grade (Access Line) of Service (GOS): An access line specially treated (usually by providing amplitude and delay equalization) to give it characteristics for handling special services; for instance, medium speed data (600 to 2400 bits per second). An AUTOVON access line allowed to transmit voice and data.

Speed Calling: A feature that allows frequently dialed numbers to be dialed with abbreviated codes (System Speed Calling and Station Speed Calling).

Split Echo Suppressor: An echo suppressor that can insert suppressor loss only in the transmit leg of a circuit. The split echo suppressor operates only for the talker at the far end of the circuit.

ST (Start Pulse): A pulse used to signal the end of the pulsing to the receiving switching center equipment for inter-office signaling.

Standby Queuing: A feature that permits callers to remain off hook and listen to music while waiting for an outgoing trunk to become available.

Star Arrangement: Hub network with six or fewer co-located nodes that terminate in a junction box.

Start Supervision: A signal provided by the connecting feacility allowing outpulsing to begin.

Static Tables (Memory): Fixed information in memory.

Station: Any building location that is wired to accept a telephone or other communication apparatus.

Station Forwarding: A feature that permits a user to temporarily forward calls to another extension.

Station Number: A number used to identify the location of a particular station (station numbers are usually consecutive in a building). Compare with Extension Number.

Station Plant: The station plant includes all terminating equipment used by the telephone system user and such devices as key telephone systems, station instruments, recording/answering devices, facsimile equipment, autodialers, speakerphones, and building wiring.

Submaster Clock: A backup to the Master Clock.

Subroutine: A sequence of programmed instructions for performing a particular function that is common to several programs.

Subscriber Access Line (also Four-Wire Subscriber Line): A four-wire circuit connecting an AUTOVON subscriber (individual, installation, or activity) directly to an AUTOVON switching center.

Super Test PCA: A PCA used to check the data bus system integrity of the TDM motherboard. Provides a test pattern and diagnostic routines for testing the VLCBX system.

Switchboards: Switching equipment operated manually by attendants to initiate and complete calls.

Switching Center (AUTOVON): An installation in which switching equipment interconnects circuits on a circuit-switching basis.

System: A collection of operations/procedures/equipment that accomplishes a specific objective. A telephone system as a minimum consists of the basic switching equipment, telephones, other station equipment, trunks, tie lines, and interconnecting loops.

System Alarm: An audible signal and visual diaplay on the Attendant's Console that indicates self-test has detected a fault or there is a power distribution malfunction.

System Clock: A PCA located in each node which synchronizes the timing of a VLCBX.

System Clock Group: A group of PCAs used to synchronize DI groups in each node in the VLCBX (Master Clock, System Slave Clock, and System Synchronization Motherboard).

System Forwarding: A system feature that automatically forwards a call to the ATC, a pre-assigned extension, or a Hunt or Distribution group when the extension called is busy or does not answer.

System Option: A feature that requires additional hardware and/or software (see Optional Features).

System Redundancy: System divided into two sections: nodes and hub(s). Nodes contain all of the lines and trunks and their own computer. The hub is the link which connects all of the computers together.

System Software: The system operating program, self-test programs, and configuration tables that reside in the memory of the computer common control. Diagnostic programs are not a part of the system software but are loaded into memory as required.

System Speed: Numbers accessed by #6 allowing the user to call telephone numbers with up to 16 digits (local, long distance, or international).

System Status: A group of indicators on the Attendant's Console that display the system, trunk group, and Attendant's Console status.

T1 Carrier: A completely transistorized 24-channel PCM system designed to provide an economical facility for short-haul trunks, primarily in large metropolitan areas. In T1 carrier equipment, 24 voice channels are combined into a single Pulse Amplitude Modulated (PAM) wave by Time Division Multiplexing (TDM). The sampling rate for each channel is 8000 samples per second. The PAM signal is compressed and encoded into a Pulse Code Modulated (PCM) signal for transmission over the line. A seven-digit code is used to represent each PAM. The signal to be transmitted over the repeatered line consists of a train of pulses. The pulse position repetition rate is 1.544 megabits per second.

Tandem: A term meaning one after, or behind, another; working in conjunction with each other.

Tandem Call: A call processed by three or more switches. Tandem call is also used to designate this type of call at a switch where a connection is established from one trunk to another (tandem trunking).

TACL&tm.: Telecommunications Analysis Center Library&tm.. Software package offering traffic analysis capabilities.

TAFAS: Trunk Access From Any Station. See also UNA and Call Pick-Up.

Tariff: The published schedule of rates, regulations, and descriptions governing the provision of communications services. Tariffs are filed with the appropriate regulatory agency.

TCMF: Touch-Call MultiFrequency--Commercial term copyrighted by AECO; functions the same as DTMF.

TDC: Time Division Controller - A single PCA which interfaces with an I/O Bus, System Clock, and Expander PCAs. It is used to generate TDM clock signals, to provide a data transfer path between the computer and the TDM network and to maintain a table of connections between channels.

TDI: Transmit Digital Intertie - Used to transmit voice communications.

TDM: Time Division Multiplexing.

TDM Network: The assembly of Interface cards and buses used to facilitate the connection of station apparatus to each other, to outside trunks, and the like and to certain shared electronics within the CBX.

TDM Switching: Switching technology used by the ROLM CBX family. See Time Division Multiplexing.

Telecommunications: Any transmission, emission, or reception of signs, signals, writing, images, and sounds or information of any nature by wire, radio, visual, or other electromagnetic systems.

Telephone: A station device for sending and receiving voice communications.

Terminal: A terminal of any equipment or circuit, the screws or soldering lugs to which an external circuit can be connected. A point at which information can enter or leave a system. An input/output device designed to receive or send source data in an environment associated with the job to be performed and capable of transmitting entries to and obtaining output from the system.

Terminal Block: This is differentiated from quick-connect block in that wires are usually fastened with screw connections. Used at stations to connect line cords to installation wiring.

Terminating Office: The switching center serving the called party. On an intra-office call, the terminating and originating offices are the same.

Tie Line: A private or leased voice grade communications line of the type provided by communications common carriers for linking two or more points.

Tie Trunk: A trunk connected between two branch exchange installations, used for off-premise extensions (OPX) or foreign exchange (FX) trunks.

Tie Trunk Interface Group: This group contains a Coder, Decoder, and one or two 8-Channel Tie Trunk cards. The group supports E&M signaling tie trunks; two-way, OPX, or FX.

Time: An Attendant's Console digital display that indicates the time of day and can indicate the Julian date.

Time Division: A method of serving a number of simultaneous channels over a common transmission path by assigning the transmission path sequentially to the various channels, each assignment being for a discrete time interval. Inter-

leaving several message channels that are separated from each other in time on a single transmission media.

Time Division Multiplexing (TDM): A system for transmitting a number of signals over a common path by sending portions of each signal at different instants.

Timeout Divert to Attendant: A feature that diverts a station that has been left off hook too long to the attendant.

Time Sharing: A method of operation in which a computer is shared by several users at (apparently) the same time. Although the computer actually services each unit in sequence, the high speed of the computer makes it appear that the users are handled simultaneously.

TLP: Transmission Level Point--The transmission level of any point in a transmission system is the ratio in decibels to the power of the test signal at that point to the power of the test signal at the reference point. The transmission level is relative only and does not specify absolute power.

Tone Disabling: A method of controlling the operation of communications equipment by transmitting a select tone over the communications path.

Toll Call: A call to a point outside of the local service area for which the charge is credited to toll revenue. A call beyond the local or multi-message unit calling area that is subject to a charge.

Toll Restriction: A feature enabling the customer to restrict certain station users from placing toll calls.

Toll Switch: A switching center where trunks are interconnected to serve toll calls. Toll offices are arranged in a hierarchical structure.

T, R--Tip and Ring: Designation for circuit transmission leads. May also be suffixed by letter or number (for example, T1, TA, R1, RA to indicate inputs from other outputs).

Traffic: The total information flow in a communications system. This includes data, written messages, facsimiles, and conversations.

Traffic Group: A group of extensions on which certain traffic statistics may be required.

Transfer: A user feature providing the ability to pass a call to another party.

Transfer Rate (Baud): The maximum rate at which information (the number of state changes per second) can be transmitted.

Translation: The conversion of a telephone address into routing instructions for automatic switching.

Transmission: The science dealing with the transferring of information in electrical signals over a distance without unacceptable attenuation, distortion, masking by noise, cross-talk, or echo, and without losing information content.

Transmission Facilities: The cable and radio facilities consisting of interswitch trunks and access lines. An element of physical telephone plant that performs the function of transmission; for example, a multipair cable, a coaxial cable system, or a microwave raido system.

Transmitter, Telephone: A transducer that uses voice sound pressure on a diaphragm to compress carbon granules between electrodes. The resulting resistance variation modulates a battery current flowing between the electrodes, translating the acoustic message into an analog electrical signal.

Transistor to Transistor Logic (TTL): Most common of IC logic, generally used for memory.

Treatment/Treated: Certain routing, conditioning, or precedence actions made by the switching equipment that are activated by class marks on the individual subscriber line or trunk.

Tributary PBX/EPBX: A PBX/EPBX that is within a main PBX/EPBX but has its own listed number.

Trunk: A message circuit between two points, both of which are switching centers and/or individual message distribution points. Also, a communications channel between two different offices or between groups of equipment within the same office.

Trunk Access Number: The number of the trunk over which a call is to be routed.

Trunk Circuit: The equipment directly connected to a trunk or PBX/EPBX access line at its terminals. Normally trunk circuits consist of relays and perform a variety of control functions associated with the processing of a call.

Trunk Group: Trunks of a particular type given an identity to distinguish between different types of connecting facilities.

Trunk Group Name: Four-character name assigned to each trunk group for access, translation, and other functions.

TTY: Teletypewriter.

TUR: Traffic Usage Recorder.

Two-Wire Line: A two-conductor circuit used for one-way or two-way transmission.

TWX: Teletypewriter exchange service.

UNA: Universal Night Answer - A mode of night answer providing a nondialable number (e.g., chime) when the attendant is not available.

Unbalanced Line: A two-conductor transmission line, which is not electrically symmetrical with respect to ground.

Uninterruptible Power Source (UPS): An auxiliary power unit using stored energy to provide continuous power within specified voltage and frequency tolerances. Usually consists of a Power Supply that charges a battery and an Inverter, which provides ac power from the battery. If the power fails, the Power Supply is inoperative, but the batteries and Inverter will provide power for a period of time.

Universal Night Answer: A system feature that allows trunks to be defined so that any station may pick up incoming calls on those trunks when the Attendant's Console is unattended. Typically, calls on UNA trunks ring a night chime or other auxiliary tone when the Attendant's Console is in night mode.

User: An individual, installation, or activity having access to the AUTOVON switch through a local switchboard (PBX), or console EPBX.

User Loop: A two-wire or four-wire circuit connecting a user to a PBX/EPBX.

VF: Voice Frequency--An audio frequency in the range essential for transmission of speech of commercial quality, from about 300 to 3400 Hz.

VF Patch Bay: An assembly of jacks that provides monitoring and patching facilities between the multiplexing equipment and terminal circuit equipment.

Video: Pertaining to the signal that carries a television picture.

VNL (Via Net Loss): The lowest loss at which trunk facilities can be operated limited by their inherent characteristics and achievable return loss.

Voice Grade (Access Line): An access line suitable for voice and low-speed data and telegraph service.

VLCBX: A distributed processing system that serves up to 4000 lines and is built on independent modules called nodes.

Voice Grade Channel: A channel suitable for the transmission of speech, digital or analog data, or facsimile, generally with a frequency range of about 300 to 3000 Hz.

Volume: A method of expressing the amplitude of complex nonperiodic signals such as speech. Volume is expressed in volume units (VU).

VU: Volume Unit--The unit of measurement for electrical speech power in communication work as measured by a VU meter in the prescribed manner. The VU meter is a volume indicator with a dBM scale and specified dynamic and other characteristics in order to obtain correlated readings of speech power. If a steady sine wave is suddenly applied to the meter, the pointer will move to within 99 percent of its steady state value in 300 ms and overswing the steady state value by 1.0 to 1.5 percent.

VSCBX: A ROLM telephone system that supports 24 to 144 lines.

WATS: Wide Area Telecommunications Service. A trunk line tariffed for wide area communication at measured monthly rates or at flat rates. This telephone service is available by geographic location.

Wideband: A term applied to facilities or circuits whose bandwidths are greater than that required for one voice channel.

Wink: A single supervisory pulse.

Word (binary word): A set of characters, such as binary digits (0 and 1), used to express information in an electronic switching system or computer.

Write: To insert information into a memory device.