AVAYA

communication

DEFINITY®
Communications System

Generic 3 Version 4, Issue 1.0
Change Description

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DEFINITY Communications System Generic 3 Version 4, Issue 1.0 Change Description 555-230-462, Issue 1, August 1995, Comcode 107723835

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HIGHLIGHTS

1. FUNCTIONALITY AVAILABLE WITH G3V4 AS A MAINTENANCE LOAD FOR G3V1.1/G3V2/G3V3

This change description document describes the changes incorporated in AT&T DEFINITY® Communications System G3V4, Issue 1.0. Some of the new enhancements and features are described next.

1.1 PLATFORM ENHANCEMENTS

1.1.1 Increased AAR/ARS Dialed Digit String Length

The Automatic Alternate Routing (AAR) / Automatic Route Selection (ARS) maximum acceptable digit string is increased from its current value of 23 to 28. This is a result of the increase in the inter-carrier exchange code from 5 to 7 digits, as well as the international telecommunications union (ITU-T) [previously known as CCTTI] numbering planned increase to 15 digits for European countries in 1996. The 28-dialed digit maximum should prevent the need to increase this dial length in the near future. The following is an example of a long international dial string:

1234	**1234567**	**011**	**123456789012345**
Trunk access code (TAC) or feature access code (FAC) can be from 1 to 4 digits	Inter exchange carrier code can be from 5 to 7 digits	International access code	Potential 15-digit international number

<div align="center">

Call Detail Recording (CDR) Impact

</div>

No change. Not stored as part of the dialed digit string.	No change. Not stored as a part of the dialed digit string.	No change. Stored as part of the dialed digit string.	A 3-digit increase. Stored as part of the dialed digit string. For any dialed digit strings that are larger than 18 digits, the first 18 digits are recorded in the CDR record.

1.2 MAINTENANCE ENHANCEMENTS

1.2.1 V4 Switch-Based Bulletin Board

The Switch-Based Bulletin Board utility designed for G3V3 is modified. The changes to the existent Bulletin Board feature are to:

- Reserve the first 10 lines on page 1 for Services' use only
- Change the login banner page to reflect that high-priority messages are entered
- Notify logged in users that new high-priority messages are entered

1.2.2 Additional External Alarming

Currently, two pairs of leads in the processor port network (PPN) and in each of the expansion port networks (EPNs) are provided for external device/adjunct alarms; one pair for major alarms and the other for minor alarms. Because many installations are equipped with numerous adjuncts and other devices (for example, UPS) that require Technical Service Center (TSC), ITAC, or international direct-channel or distributor notification, additional external connections are required. In G3V4, analog line ports are used for external alarm connections and software to alarm based on administration and the state of the line port. Services can administer the alarm level and adjunct type for each port.

1.2.3 DS0 Loop Around (U.S./Canada only)

On previous releases of DEFINITY G3, before installing Vistium systems, a GBCS system technician was sent to the DEFINITY site to connect a high speed link (HSL) data module to a digital communications protocol (DCP) port and administer a line number to the line port. Network Systems was then contacted to perform their facility testing at the DS0 level using the HSL data module in the loop around mode. After Network Systems completed their testing, the system technician removed this equipment and translation.

With DEFINITY G3V4, new capability in software allows a remote technician/engineer to administer a line extension associated with a digital DS0 loop around. The loop around is implemented by connecting the transmit and receive ports of the channel to the same switching network time slot. Special hardware is not required to perform the testing.

1.2.4 Fix PREC Command Enhancements (for use by AT&T TSC/ITAC and Product Support organizations)

Following are enhancements to fix prec for use by the TSC/ITAC and Product Support organizations:

- **Support change on certain precs.** The user supplies the prec name and the key, and the existing data for the prec is displayed on the screen. Then, data entry fields are displayed that default to the displayed data. The data entry fields are one field per byte or one field per word. Prec keys cannot be changed.

- **Support add on certain precs.** Given a prec type, the appropriate number of data entry fields pop up to enter data in HEX.

Support is given to more prec types based upon which areas the TSC/ITAC determines need the most help.

1.2.5 Mini Core Dump (for use by AT&T TSC/ITAC and Product Support organizations)

This capability is being provided on the G3r platform so problems in the field can be analyzed and rectified sooner. When the switch experiences an "event" that the customers, distributors, and AT&T Services recognizes as a switch problem, a limited amount of information is saved in the kernel and/or maintenance logs. Typically, the level of detail provided in these logs is not sufficient for the analysis and correction of the problem. A "Mini Core Dump" automatically saves more information regarding specific switch "events" that are known to be undesirable customer problems or outages. This feature is a means for quickly analyzing and correcting these problems.

1.2.6 TCM Enhancements (for use by the AT&T TSC/ITAC and Product Support organizations)

Following are the TCM/Message Sequence Tracer (MST) enhancements included in G3V4:

- Incorporate a command line editor that incorporates the TCM history to TCM.

- Add an MST generic filter capability to MST.

- Enhance the existing process record (PREC) tracing to log in to the MST buffer.

- Add more port locations to the ccms filtering page for **change mst**.

- Change the Gemini agent on the MIPS target format so its read command output is similar to the format that one sees when using Optics at the Sat (OATS) on the Intel model.

1.3 CALL CENTER ENHANCEMENTS

1.3.1 Call Vectoring

The route-to step is modified to include an option for :coverage y/n. Previously, a call routed to an extension from a route-to step remained at the extension, potentially leaving the incoming call ringing at an unattended station. The "coverage y/n" option will allow a call to follow the coverage path of the extension that the call is routed to. The default for the option is "coverage m," which will remain with the previous operation. R3V3 Call Management System (CMS) is required to administer the "coverage y" option, and vectors that include the "yes" option will not be accessible for users with R2V3 or earlier CMS systems.

R3V3 CMS users will not be able to administer the "coverage y" option, and will not have access to any vectors where the "coverage y" option has been administered. They will be able to administer any vectors that retain the "coverage n" option, however, the previous format for the route-to steps will be displayed (the user will not see the word "coverage" and its related options of yes and no.

1.3.2 BCMS Reports Format Changes

The layout of several Basic Call Management System (BCMS) reports have been changed to make them consistent with report standards. The changes include page header layouts, data column alignment, and one field name. Automated applications designed to use this data may experience failures, errors, or unexpected results. **These changes may result in failures, lost data or unexpected results from automated packages or software applications that interface with and use BCMS data.**

1.3.3 ISDN Gateway Not Supported

Support for the 3B2 Integrated Services Digital Network (ISDN) Gateway is removed in G3V4. Alternative configurations, such as ISDN Gateway Release 2 or the adjunct switch application interface (ASAI) must be installed to support CTI applications.

1.3.4 DEFINITY LAN Gateway Interface

The DEFINITY LAN Gateway provides the functionality of the ASAI using an EtherNet transport instead of a basic rate interface (BRI) transport. Projected availability for this board and functionality is in the fourth quarter of 1995.

1.3.4.1 Background

For background information, see the document *G3 ASAI EtherNet Installation, Administration, and Maintenance*, 555-230-223, Issue 1.

1.3.4.2 DEFINITY LAN Gateway Technical Description

The DEFINITY LAN Gateway assembly is supported in a single configuration of the ED-1E546-70 Multi-Function Board Platform with a combination of the following groups: G1, G8, G13 (TN2170), G16 (TN2208), G30, GA and accompanying J58889VA-1 L50 application software. This assembly provides interfaces to the DEFINITY TDM and LAN busses and an external EtherNet LAN, a mass storage system with tape drive and hard disk drive, and associated cabling. Like DEFINITY AUDIX, which uses similar hardware from this platform, this assembly requires five contiguous port slots.

This hardware and software supports the ASAI application with a direst connection to an EtherNet LAN. Previously, ASAI was only supported with a TN556B BRI circuit pack connection to an external BRI interface in a server which, in turn, had an interface for ASAI applications.

Advantages gained by this implementation of ASAI are:

- Increased ASAI hyperactivity thresholds

- Increased ASAI hyperactivity thresholds

- Ability to connect directly to a LAN because many vendors of BRI interfaces in service are planning to discontinue these products

The CallVisor PC application is also being enhanced to support this new interface.

This also allows future DEFINITY-to-LAN applications to be developed.

1.3.5 Inspect Button Physical Station Lookup for Expert Agent Selection (EAS) Agents

EAS is enhanced to allow users talking to EAS agents to use the Inspect button on a station with an alphanumeric display to determine the physical station (the administered name for the station) that an EAS agent is logged in to. Pushing the Inspect button when a call is received from an EAS agent, or pushing the Inspect button after an outgoing call is made to an EAS agent, changes the current station display from showing the name of the EAS agent, to showing the name of the station that agent is logged in to.

1.3.6 VDN of Origin Announcement (VOA)

The Enhanced VOA feature provides the following improvements over the previous VOA feature:

- All audio cross-talk between an incoming caller and an answering Automatic Call Distribution (ACD) agent is eliminated. This includes both "electronic" audio cross-talk (associated with the DEFINITY hardware) and "mechanical" audio cross-talk (due to sound being acoustically transmitted through an agent's handset or headset).

- Incoming callers no longer hear "dead air" after their call is answered (when formerly an agent was listening to a VOA announcement) because the playback of the VOA announcement is always complete before the caller is cut through to the agent.

- On calls that require VOA treatment, an auto-answer agent now has complete assurance about when to begin speaking because they hear zip tone just before the playback of a VOA announcement, then they hear the VOA announcement followed by more zip tone to indicate cut-through to the incoming caller.

1.4 INTERNATIONAL ENHANCEMENTS

1.4.1 Modified Alarms (France)

When 25 percent of trunks (analog, digital, and ISDN-PRI) are out of service the French Type Approval authorities wish to see an external relay closed. We currently support a CUST-ALM external relay that can be administered to activate on specific alarm levels, but there is no system-wide alarm raised based on percentage of out-of-service trunks. This feature raises a major alarm under appropriate conditions and, in turn, activates the aforementioned relay. Alarms based on this modification are only raised when the Base Tone Generation Set is set to country code 12 (France).

1.4.2 Enhanced Attendant Display and Misoperation (France)

Type Approval regulations mandate that the attendant can visually determine the type of call via the display. The type of call refers to the special French call types that follow. The attendant is alerted to calls on hold when the system enters into Night Service for any reason. The misoperation feature is activated by an independent per-system flag, and the attendant display modification also becomes active with this same flag. However, the visual message is only displayed momentarily when the attendant depresses a new console button. The Attendant Display is activated based on the administration of a new attendant console button.

1.4.3 ISDN-PRI VN4 Including Charge Advice and Transgroupe Numbering (France)

DEFINITY supports the French ISDN protocol (VN4) with the provision of Call Charging information to be included in the Call Detail Recording (CDR) records. France ISDN PRI is activated based on country code per-DS1/E1 Interface.

1.4.4 Incoming Automatic Number Identification (ANI) on R2MFC

Incoming R2 Multifrequency-Compelled (MFC) calls can now request ANI collection from the originating end point. Calls to stations, data modules, and other DEFINITY PBX endpoints request ANI based on a system-wide parameter. Tandem R2 MFC calls through Automatic Alternate Routing (AAR)/Automatic Route Selection (ARS) can request ANI based on the routing. If incoming ANI is requested, it is recorded by CDR in the calling party number field. Incoming ANI also appears on display terminals if the system wide parameter is active.

Incoming ANI on R2MFC is not available in all R2MFC countries. It is available only in those countries that have Group II signals in their MFC signaling scheme. The incoming ANI cannot be used for call center features like Vector ANI Routing or other ASAI type applications. ASAI and other call center features require incoming ANI over Integrated Services Digital Network (ISDN) links to work correctly.

1.4.5 Tandem R2 MFC

Incoming R2 calls can be tandemed to outgoing trunks via AAR/ARS. The routing can request that ANI be collected so that it can be passed on to the outgoing trunk, if necessary. The outgoing trunk can be another R2 MFC trunk, but it is not required. The outgoing trunk can be any other trunk type, therefore calls can be tandemed off-net as well.

1.4.6 Expanded Support of China

The enhancements for support of China are:

- Complex impedance on the TN2183 Analog Line and the TN465C Analog central office (CO) trunk with periodic pulse metering (PPM).

- A new country code is added for China (18). This country code is used to choose the complex impedance, described above, through the "Analog Transmission" and "Trunk Group" country fields.

- Software support for particular transmission requirements using the Digital Loss Plan country code 18.

- China #1 signaling on the TN464F DS1 Interface for basic E1 connectivity along with necessary MFC interregister signaling enhancements to provide basic call setup.

1.4.7 Increased Support of United Kingdom (UK). ISDN Protocol

AT&T-GBCS in the UK discovered that the new Q.931 ISDN-PRI service to be offered by Mercury did not support the use of "RESTART" messages.

Without this message, the current DEFINITY Q.931 implementation takes the trunks out of service until an incoming call is received. No outgoing calls can be made.

The existing U.K. Country protocol 10 is split into 10a and 10b, where one of the two represents British Telecom (which supports restart messages) and the other represents Mercury.

This has an additional benefit of working for Ireland as well. According to the Irish ISDN-PRI specifications, some of their central offices support RESTART messages, while others do not.

1.4.8 ETSI DS1 Protocol Administration

The DS1 administration form includes a new value for the Country Protocol field that allows the administration of the ETSI DS1 default protocol that is supported in G3V2 and G3V3 as country code 4 (Italy).

1.4.9 Australian Digital Trunk Signaling (E1) [Australia]

In G3V4, support for Australian P2 E1 trunk signaling is supported. This modification included software administration and firmware enhancements on the TN464F, vintage 5 or greater.

1.4.10 DIOD Digital Trunk Signaling (Thailand)

G3V4 adds support for Direct Inward and Outward Dialing (DIOD) trunks for Thailand. This service is provided through Centralized Attendant Service (CAS) signaling on the TN464 circuit pack. This implementation required modification of call processing software, administration software, and firmware on the TN464F, vintage 5 or later.

For ease of administration, a new country code (20) is implemented to support this enhancement.

1.4.11 PPM Support (Macedonia)

Firmware on the TN464F, vintage 5 or later, and call processing software in G3V4 is modified to support the periodic pulse metering (PPM) bits from the local central office (CO). This enhancement also supports the Yugoslavian states.

For ease of administration, a new country code (21) is implemented to support ths enhancement.

1.4.12 Busy Tone Forward Disconnect Modification

G3V4 modified this feature to allow either busy tone, intercept tone, or silence to be used for forward disconnect indication. The feature name is changed from Station Busy Tone Forward Disconnect to Tone Forward Disconnect.

The original field allowed for a y (for yes) or n (for no) entry, where n is the default. The new field allows for one of three possible values: busy tone, intercept tone, or silence. Silence is the default value for this new field.

All systems that are upgraded to or maintenanced with G3V4 software have this field changed. Previous systems with the "Station Busy Tone Forward Disconnect" field set to n (for no) have the new default set to silence. Systems with the previous field set to y (for yes) have the new field set to busy.

1.4.13 Generalized Multifrequency-Compelled (MFC) Open Numbering Plan Enhancement

The generalized MFC feature is enhanced to allow, through software administration, the ability to support an open numbering plan. This is required for use in Luxembourg, where there are no fixed dial plans. Otherwise for the purposes of administration, the Luxembourg MFC should be administered identically to the Belgium requirements.

1.5 NEW HARDWARE CAPABILITIES

1.5.1 TN750C Announcement Circuit Pack

The TN750C Announcement circuit pack is a replacement for the existing TN750B circuit pack. It also supports the new Multiple Integrated Announcement Circuit Packs feature that requires G3V4 or later software. See the section, *Multiple TN750C Announcement Circuit Packs*, for details on this feature.

When the TN750C circuit pack is used in systems with G3V3 or earlier software, or G3V4 software in G3V1/V2/V3 bug fix mode, several differences will be seen when compared to the existing TN750B circuit pack.

The TB750C circuit pack has FLASH memory (not removable) that allows backup of announcements and related translation information on the circuit pack itself. Therefore, the existing procedure of downloading this information to the system's mass storage is no longer required. This option is still available though, for *one* announcement circuit pack. In addition, when a system is restarted, the TN750C circuit pack will not automatically upload announcements from the mass storage system if they are already present in the FLASH memory. Instead, it will upload the information from the FLASH memory. This is a much faster operation and is completed in about 5 minutes rather than the 40 to 50 minutes of the mass storage upload. The system will then report availability of announcements much sooner after a system restart.

1.5.2 TN2182 Tone-Clock Board and the TN744C Call Classifier-Detector

TN2182 and TN744C were introduced with DEFINITY G3V3 Issue 3.0. TN2182 provides all of the functionality of the existing TN768 and TN780 Tone-Clock circuit packs plus the Call Classifier and Tone Detection functionality of TN420C, TN748D, and TN744B. TN744C provides the Call Classifier and Tone Detection subset of the TN2182.

Because of this consolidation of existing circuit packs, TN2182 can provide all "tone-plant" functions for each port network. It provides eight general-purpose ports for call classifier or tone detector functions. When additional ports are needed, TN744C circuit packs can be added.

For upgrades, existing tone-clock, tone detector, and call classifier packs can be used. However, the TN768 and TN780 Tone-Clock circuit packs cannot be paired with a TN2182 Tone-Clock circuit pack in a high or critical reliability system.

There are several exceptions to the above information. For example, systems in France must use TN2182, and, if needed, TN744C. Also, TN2182 does not support the Stratum-3 clock. For additional information, see *DEFINITY G3 System Description, 555-230-206.*

1.5.2.1 Tone Generation Functionality

The following functions are supported by the TN2182 and the G3V4 software.

- All United States and international tones currently supported by TN780 V6 or later including A-law and u-law companding.

- Generation of all MFC, MFE, and MFR tones currently supported by TN744B V2 or later.

- The TN780 allows software to select pairs of frequencies plus levels of tones from a fixed set. The TN2182 allows software to independently set frequencies and levels from a wide range of values.

- Six simultaneously-customized tones are added, making a total of twelve.

- Frequency level pairs are added to meet France and Hong Kong Type Approval requirements.

1.5.2.2 Tone Detection Functionality

The TN2182 tone detector ports service circuits used to connect to time slots on the system's bus. The dial, dual tone multi-frequency (DTMF), and modem tone detection capability are essentially the same as that provided by the TN744, TN748, and TN420C circuit packs. The following new features are added:

- Support of DTMF tone detection for all current target countries, including France.

- Support of eight ports of tone detection.

- Support of A-law and u-law companding.

- Detection of all multifrequency code (MFC), multifrequency Espanol (MFE), and multifrequency Russian (MFR) tones currently supported by the TN744B V2 and later boards.

- Support of Answer Machine Detection (AMD) provided on the TN744B V2 and later boards.

The TN2182 circuit packs do not fully replace the existing tone detector circuit packs because the following features are not supported:

- A port network in an unduplicated switch cabinet cannot hold multiple TN2182s circuit packs, while it can hold multiple tone detectors circuit packs. The TN2182 circuit pack contains a system clock and cabinets cannot operate with multiple competing clocks.

- Precise identification of Italian, United Kingdom, and Australian ringback, busy, and most other call progress tones. In these countries, the broadband tone detection of the TN2182 is sufficient for most purposes. The TN420C is needed only if customers need precise tone detection for call classification during data terminal keyboard dialing.

1.5.2.3 Clock/Synchronization Functionality

The following functions are supported:

- An oscillator that controls the stability of system clocks to an accuracy of +/- 10 ppm for a period of ten years.

- The capability of accepting a reference timing signal from a DS1 circuit pack or expansion interface (EI) via backplane wiring.

- PPM detection algorithms on the TN2182 circuit pack to detect when the network timing reference is inaccurate or missing.

The following function is not supported:

- A T/R port for connection to an external reference source, for example, Stratum-3. Therefore, the TN780 continues to be required for systems requiring an external clock reference source.

1.5.3 TN465C Central Office (CO) Trunk with Periodic Pulse Metering (PPM)

The TN465C circuit pack is a 2-wire CO trunk interface that supports both 12- and 16-KHz PPM. This circuit pack meets the DC loop start signaling requirements for the following countries. It replaces TN465B.

- Australia

- Belgium

- Czech Republic and Slovakia

- China

- Greece

- Hungary

- Italy (to replace TN2138 except for 50-Hz PPM applications)

- Mexico

- Russia

- Spain

- Venezuela

This circuit pack will also work in the United States and other countries that use the TN747B. However, there are no plans to specify TN465C for use in these countries.

1.6 ADJUNCT SUPPORT

1.6.1 Support of Line Side DS1 Announcements

Support is given to Line Side DS1 (LSDS1) analog announcement ports by revising Announcement/Audio Sources administration to add "analog-DS1FD" type. This is required to support use of the CONVERSANT Voice Information System (VIS) [and other voice response unit (VRU) or announcement devices with LSDS1] providing analog port announcements. Use of analog port devices that are non-DS1 cause a click to be given to the caller at the completion of the announcement (when the announcement device hangs-up).

Changes have been made to the Announcement/Audio Sources form to add the different analog-DS1 types. In general, there are three different types: DS1FD, DS1SA, or OPS. Each type needs to set up a different set of options to the DS1 board port location specified. The CONVERSANT VIS only requires (supports) the DS1FD type.

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2. FUNCTIONALITY AVAILABLE WITH G3V4

2.1 PLATFORM ENHANCEMENTS

2.1.1 Distributed Communications System (DCS) Call Coverage

DCS Call Coverage allows calls to be covered by coverage points on remote systems if there is a DCS signaling link (BX.25 or ISDN PRI) for the trunk groups to which the covered calls are routed. Therefore, this enhancement can be thought of as a new, DCS-transparent feature. (All switches involved in DCS configurations must be optioned G3V4).

2.1.2 World Class Core (WCC) Basic Rate Interface (BRI)

WCC BRI extends the existing Integrated Services Digital Network (ISDN) BRI standards on DEFINITY to allow interworking with terminals not designed to AT&T BRI standards. The enhancements focus on providing switched digital access via BRI for non-voice applications such as video conferencing and data. Accordingly, WCC BRI covers basic call control for data and for voice. A- law / u-law companding is supported via system-wide administration. No supplementary services (Conference, Transfer, Hold, Drop, etc.) are supported.

The existing BRI protocol software is modified to provide a core BRI protocol platform. Country/implementation specific protocol versions are accessed by country option administration on a per port basis.

WCC BRI allows switched digital access via BRI to be offered in Europe, Japan, Australia, and other countries with existing BRI standards. In particular the interface is compliant with the following basic call control standards and TRs:

COUNTRY	STANDARD/PROTOCOL SPECIFICATION	
US	Bellcore	TR 268 and related TRs
Europe	ETSI	ETS 300 102-1 ISDN User Network Spec.
Australia	Telecom Australia	TPH 1962 Australian Basic Rate Interface
Japan	NTT	BRI Specification
Singapore	FETEX 150	TIF 218 ISDN Specification

Enhancements to the Station and Data Module Administration forms accommodate the additional terminal initialization procedures, a new WCC BRI terminal type, and country code selection.

All of the features available to AT&T BRI terminals continue to be provided.

2.1.3 Incoming Ring Answer/No Answer/Busy CDR Record

Each trunk group has the option of recording the ring time to answer or abandon for incoming calls from the trunk group on a separate Call Detail Recording (CDR) record. When a trunk group is administered for the CDR "(r)ing-intvl" option, a record is printed showing the time that the call was ringing before being abandoned or answered. This record is separate from the normal call duration record printed for an answered call. If the destination of an incoming trunk group call is busy, a record is printed showing a condition code of "I" (busy) and a duration of 0.

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2.1.4 ISDN PRI CDR Feat-Flag Value Changes

When a new "interworking feat-flag" feature is active, the feat-flag bit on the CDR record reflects whether an ISDN call was interworked. Previously, interworked calls were treated as if no network answer was received. If this option is active, the feat-flag indicates that the call received network answer, but was interworked. In addition, the call duration is started at the point of receiving the network answer, not when the Answer Supervision Timer expired.

2.1.5 CDR Customized Record Field — Duration in Seconds

A new customized CDR form option allows the call duration to be reported in hours/minutes/seconds format, in addition to the hours/minutes/tenths of minute format. The DEFINITY PBX keeps track of the call duration in a granularity of seconds, and this option allows a customer to get the exact call duration with no truncation to tenths of minutes.

2.2 MAINTENANCE ENHANCEMENTS

2.2.1 Additional External Alarming

In G3V4, analog line ports can be used for additional external alarm connections and software to alarm based on administration and the state of the line port. Services can administer the alarm level and adjunct type for each port.

The number of external alarms are:

- G3i - 32

- G3r - 90

2.3 CALL CENTER ENHANCEMENTS

2.3.1 Move Extensions Between Splits/Multi-Agent Skill Change

This feature allows up to 32 agents to be moved while they are staffed. In an EAS environment, the Multi-Agent Skill Change feature allows for the addition, deletion, or change of a single skill for up to 32 agents. The requested changes, if valid, are effective as soon as an agent is in a noncall related state, that is — AUX or AVAIL. Changes remain pending for agents until they are in an appropriate state.

Similarly, the Change Agent Skills operation is changed to allow up to four skills for a single agent to be changed while the agent is staffed. The changes adhere to the same rules as the Multi-Agent Skill Change operation.

In a non-EAS environment, up to 32 agents can be moved between splits with the Move Extensions Between Splits feature. These changes will also remain pending until the agent is in an appropriate state.

Agents can receive notification that their split/skills have changed with the "alrt-agchg" button lamp, which flashes when a move has been made.

R3V4 Call Management System (CMS) is required for this feature, and provides status information for all dispositions of move requests: successful, failed, or pending. For pending moves, CMS provides information to indicate that the change has actually completed.

2.3.2 Multiple Audio/Music Sources for Vector Delay

The Call Vectoring music during delay capability is enhanced to support multiple audio/music sources, so that the audio/music source can be tailored to the type of service provided or stage of vector processing for the call. Capability to administer audio/music ports (aux, trunk, and/or analog lines) as extensions is provided. In addition, the vector command is changed so that a specific audio/music source can be assigned. These vectoring enhancements are supported in the Centre Vu CMS, R3V4.

NOTE: The source for music-on-hold is separate from the sources used for vector delay when more than one is equipped. When only one is equipped, that source applies to both.

2.3.3 V4 Enhanced Vector Routing

Call Vectoring conditional routing capabilities are enhanced to allow routing calls based on the current average speed of answer (ASA) for the service being handled [vector directory number (VDN) or split], current expected wait time (EWT), the number of active calls for the VDN, and received II Digits. Conditional threshold checking will allow use of wild cards (+ and ?) for matching collected digits or ANI/II digit strings and allow use of equals (=) and not equals (<>) operators in addition to the < and > operators for all types of comparisons. These conditional routing enhancements involve expanding the capabilities of the goto commands (goto step and goto vector) and check backup (for ASA and EWT) and administration structure to add the relevant conditionals, comparators, and thresholds. In addition, the with/without coverage parameter will be added to the route-to vector command.

2.3.4 Vector Routing on ANI/II Digits

ANI/II Digits Routing allows making vector routing decisions based on incoming ISDN PRI provided calling party number (CPN), billing number (BN), and/or information indicator (II) digits. When available, II digits indicate the type of originating line (for example, hotel, prison inmate, payphone, etc.) and are provided along with ANI (when available) to subscribers of the CPN/BN network service at no additional charge. ANI routing also functions with internal caller identity (internal extension number or DCS-provided caller ID).

Vector routing tables are provided to allow comparing ANI, II-Digits or collected Call Prompting digits against a table of digit strings. Each table can have up to 100 entries of 16-digit strings.

New conditionals ("ani," "ii-digits") for the goto step and goto vector commands are defined that can be used to test against a maximum 16-digit (ten for domestic ANI, two for II-Digits) string or table of digit strings. All vectoring capabilities and the G3V4 enhancements (including wildcards) interwork with these conditionals.

The II-Digits routing capability also provides software support of the originating line information (OLI) information element (IE) as part of the ISDN PRI SETUP message for immediate CPN/BN delivery or in the FACILITY ACKNOWLEDGE message for CPN/BN on request. The II-Digits capability is included with ISDN PRI tandemed calls in the same manner as ANI CPN/BN tandeming. No hardware or firmware changes are required.

II-Digits is not displayed on the answering station terminal directly like ANI (branching to different VDNs can provide equivalent display or origin announcement), passed to CDR, passed over ASAI, or passed via the **converse** vector command as part of this development.

ANI/II-Digits Routing, passing II-Digits to CMS, and vector routing tables are supported on R3V4 CMS. The "ani" and "ii-digits" vector conditionals require the Vectoring (ANI/II-Digits Routing) customer option to be set. Vector routing tables require the G3V4 Vectoring Enhancements customer option. Software support of the ISDN PRI OLI IE storage and tandeming is included in the general G3V4 software release.

2.3.5 Vector Initiated Service Observing

Service Observing may be initiated from a vector step. The feature access code (FAC) for Service Observing can be included in a vector **route-to** or **adjunct routing** command. The extension to be observed may be included in the vector step, or the user may be prompted for it.

2.3.6 Multiple Call Handling (MCH-Forced)

The MCH feature is enhanced in G3V4 to support forced options that automatically delivers ACD calls to agents who are currently active on other calls. This feature allows important or urgent calls to be delivered immediately to agents. The conditions under which these calls will be delivered is administerable per split/skill.

An agent in a "forced" MCH split/skill may receive a new ACD call whenever the agent is idle, active on a call, or has held calls, if an unrestricted line appearance is available. The option selected (on-request, forced, none) will determine the circumstances that will cause a call to be routed to the agent. Only one ACD call will be ringing at any given time. Forced MCH allows important or urgent calls to be delivered immediately to agents.

2.3.7 Multiple TN750C Announcement Circuit Packs

The capacity of one integrated announcement circuit pack for a system has been increased to up to 10 in G3r and 5 in G3i, and in G3vs/s the capacity remains at 1 announcement board. The increased circuit pack support utilizes the new TN750C circuit pack, which replaces the TN750B circuit pack. Equipping 10 integrated announcement circuit packs provides a total capacity of 2560 seconds (42 minutes) at the 32-Kbps compression rate and 160 ports (160 announcements can be playing simultaneously). The maximum of 256 announcements on the G3r can then be spread over the up to 10 circuit packs as desired.

In addition to multiple circuit pack support, the announcement management capabilities are improved to allow erasing TN750C circuit packs, moving announcement translations from one board location to another, and an announcement boards display function showing circuit pack ID information and the number of recordings and time remaining on each board. Also, a **list announcements** command shows the announcements recorded on a circuit pack, the time of each, and the extensions assigned. The Move Translations capability allows equipping hot standbys within the maximum board capacity limitation (with G3r 5 active circuit packs, it leaves a capacity for five standby circuit packs). The existing Save/Restore capabilities are retained to be used with "C" or "B" circuit packs to allow copying announcements from one circuit pack to another for use on the same or other DEFINITY G3 switches and to continue automatic Restore for existing TN750 and TN750B circuit packs.

2.3.8 Enhanced Vector Administration

The vector screen is enhanced to support insert and delete editing functions. Insert allows the addition of a vector step anywhere on the vector screen. Delete allows the deletion of a single vector step or multiple vector steps.

The insert/delete capability is provided by function keys. On the vector form, the insert/delete capability replaces the direct paging function key. Vector editing is a feature for G3V4 and later versions.

The format for vectors is modified to support the increased size of some vector steps. The changed format will be effective for customers using G2V4 as a maintenance load.

2.3.9 ASAI Enhancements

2.3.9.1 ASAI Send DTMF Signals (SDS)

The ASAI SDS feature provides new capabilities to DEFINITY adjuncts by allowing DEFINITY to provide the service of generating DTMF tones on a talk path when requested to do so by an ASAI adjunct application. Besides allowing DEFINITY to offer enhanced services to a client application, this feature removes a shortfall in DEFINITY's ability to comply fully with version 2 of the CSTA standard (which includes a DTMF-generating service specification).

Through such a tone sequence, an adjunct application is able to interact with far-end applications, such as automated bank tellers, automated attendants, various databases, paging services, etc. An application could provide certain convenience features such as automated entry of passwords or service-access sequences, by causing DEFINITY to transmit DTMF signals after an active call has been established. Adjunct applications are able to utilize the ASAI SDS service to control and provide information to far-end devices and applications that have been reached over PNTs or via analog line extension ports. The ASAI SDS feature is designed to be compatible with the T-Server CSTA implementation. The DTMF sequence to be generated may contain any digit as well as the pound sign (#) and asterisk (*) characters. A maximum string of 32 characters may be sent from the adjunct to DEFINITY in a single service request message.

This feature allows an adjunct application, communicating with DEFINITY G3V4 via an ASAI protocol, to cause the DEFINITY to issue a sequence of DTMF tones on a currently active talk path. The DTMF tone sequence to be generated is conveyed from the adjunct to the DEFINITY switch in an ASAI message. The cadence and levels at which the tones are generated are controlled by DEFINITY, rather than by the adjunct.

2.3.9.2 Redirect Alerting Call Service

A new ASAI service, Redirect Alerting Call, is provided. This service allows an ASAI adjunct application to direct the switch to move an already-alerting call away from the extension at which it is alerting to another extension. Before G3V4, such re-routing was possible only if switch features, rather than ASAI-provided services, were used (for example, Call Forwarding, Send All Calls, etc.). With this new service, for example, an application can determine, based on call- related information, whether to answer the call or re-route it to some other number.

Note that this service does not support removing a call from a queue. Only calls alerting at extensions can be manipulated by this service.

2.3.9.3 Query Names Database (QNDB)

A new ASAI service, QNDB, is provided to allow an ASAI adjunct to access and retrieve administered name-extension associations stored in the switch. QNDB allows retrieval of all administered names associated with station extension numbers, trunk groups, and VDNs. The application accesses this data via a new Value Query message containing the target extension. If a valid query message is submitted, the switch responds with a query response (consisting of one or more facility messages) containing the administered name associated with the specified extension.

2.3.9.4 New ASAI Event Report Capabilities

New ASAI enhancements in this section allow ASAI adjunct applications to receive event reports when specified events occur at monitored objects. In addition, new cause values are provided to specify reason for redirection in the existing alerting event report.

2.3.9.4.1 Agent Login ASAI Event Report ASAI event reporting is enhanced to provide an event report when an agent logs in to a monitored ACD group or EAS skill. In contrast to earlier versions, current OCM versions do not preclude agents from logging in or out manually (previously, logging in was done only through ASAI). Thus, notification of manual login events is needed if adjunct applications are to maintain accurate views of current agent login/out status. This event reporting resembles the currently-supported agent logout event report. Both agent extension and the work mode that the agent entered when logging in are reported. Backward compatibility is maintained for adjunct applications that do not support the new agent login event report.

2.3.9.4.2 Call Originated ASAI Event Report ASAI event reporting is enhanced to provide an event report when a call is originated from a domain-monitored station. This event report also provides the dialed digits to an application. Support of this feature is needed to achieve better compatibility with the CSTA Phase I service set. Backward compatibility is maintained for adjunct applications that do not support the new agent login event report.

2.3.9.4.3 New Reason for Redirection Cause Codes The existing ASAI alerting event report is enhanced by providing a new set of cause code values that map, one-to-one, to each existing G3V4 "reason for redirection" that appears on display-equipped stations when a redirected call is offered. These new cause codes are provided in an existing Information element of the alerting event report. An adjunct application is able to use this new information to provide an enhanced information display (for example, on a computer monitor) to called parties or to otherwise determine how to best handle an incoming call.

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2.3.10 MULTIQUEST Flexible Billing

ISDN PRI and the CallVisor ASAI interfaces are enhanced to allow a customer host to support MultiQuest Sponsor Flexible Rating (SFR) service, also known as Vari-A-BillSM Service, provided by AT&T 900-Services. SFR allows an ISDN PRI connected MultiQuest Interactive sponsor, the provider of the 900 number service, to change the rate at which the caller is charged at any point during a 900 call. The sponsor may change the rate to free for the duration, flat charge, new per-minute unit for the duration, or have a premium charge or credit added to the total call charge. Subsequent rate changes of the same type can be made but apply to the call beginning with the first rate change time stamp. Call center interaction with Vari-A-BillSM is implemented via CallVisor ASAI. The availability of Vari-A-BillSM for a call is reported to the CallVisor ASAI adjunct when processing starts for the call. The adjunct initiates the rate changes via CallVisor ASAI messages which are sent to the 900 network using the appropriate PRI messages.

The MultiQuest Flexible Billing feature has a limit to how many billing requests can be open (waiting for verification from the 4ESS) at one time. The limits are:

- G3vs = NA
- G3s = 25
- G3i = 100
- G3r = 1000

2.3.11 Sending DTMF C&D Feedback Tones to a VRU

A DTMF tone is used as an answer feedback signal and sent to the VRU when the VRU-to-ACD call is answered by an agent. Another DTMF tone is used as a disconnect feedback signal and sent to the VRU when the incoming call to the VRU disconnects before it is transferred by the VRU.

Analog stations that are connected to the VRU are administered as VRU sets. The new VRU set type has the functionality as the 2500 voice terminals.

The provision of the DTMF tones is administered on a per system basis because one type of VRU is normally connected to a given switch. The DTMF-tone set includes the digits 0 through 9, *, #, A, B, C, and D tones.

2.3.12 VuStats Enhancements

VuStats users can access internally measured historical data to view daily data up to the current time or to view the last x intervals of data up to the current time.

Conditions and thresholds can be set on most VuStats data items that, if true, cause the VuStats lamp to flash if that data item is currently being displayed. This can be used as exceptions alerting for VuStats user.

New data items are available for call rate (calls handled per hour) and ACD call time (talk time plus hold time

2.3.13 EAS Agent MWL Indication

G3V4 added a system option to allow the ability to have the message waiting lamp indicate the status of the agent's login ID mailbox instead of the station's mailbox whenever an agent is logged into that station.

2.3.14 Basic Call Management System (BCMS) Increased Capacities

The number of agents or login IDs that can be measured in BCMS in G3V4 is increased to 400 for G3i and 2000 in G3r. These capacities are consistent with the capacities for VuStats historical data.

2.4 INTERNATIONAL ENHANCEMENTS

2.4.1 Modified Misoperations (France)

DEFINITY is required to consider a misoperation to be any case when an external call is placed on-hold and the user goes on-hook. Modifications are made to misoperations for both single line analog and multiline digital sets. The

user is alerted or the call redirected after a misoperation.

2.4.2 Enhanced Attendant Queue (France)

G3V4 distinguishes between the different French call types to present the calls to the attendant in the appropriate priority.

2.4.3 Enhanced Attendant Display and Misoperation (France)

The attendant is alerted to calls on hold when the system enters into Night Service for any reason. The visual message is only displayed momentarily when the attendant depresses a new console button (type-disp). The Attendant Display is activated based on the administration of a new attendant console button.

2.4.4 Charge Advice (Australia, France, and Germany)

DEFINITY now supports receipt of Advice of Charge messages from the public network, and includes this information in the records sent to the CDR adjunct. DEFINITY G3V4 supports the European standard Advice of Charge protocol defined by ETSI, as well as the national Advice of Charge protocols defined by the French VN4, German 1TR6, and Australian TPH2001 protocol specifications.

2.4.5 ISDN PRI Private Networking QSIG Platform Enhancements

The following enhancements are made to the ISDN PRI QSIG Platform:

- Support for the "private" numbering plan encodings for Identification numbers when such numbers are encoded in basic Q.931 information elements.

- Support of notification information elements for interworking between QSIG and non-QSIG tandemed connections. This is also required for WCC BRI.

- Support of transit capabilities, that is — the ability to tandem QSIG information elements.

- Modifications are made to the platform to bring it into compliance with ISO specifications. These are upgrades to the specifications originally issued by ECMA.

2.4.6 ISDN Private Networking QSIG Supplementary Services

The following QSIG supplementary services are added:

- Support of Call Diversion (Call Forwarding) unconditional by forward switching. No reroute capabilities are provided.

- Support of Call Transfer by join. No path replacement capabilities are provided.

2.5 NEW HARDWARE CAPABILITIES

2.5.1 TN750C Announcement Circuit Pack

The TN750C Announcement circuit pack is a replacement for the existing TN750B circuit pack. It also supports the new Multiple Integrated Announcement Circuit Packs feature that requires G3V4 or later software.

When TN750C is used in systems with G3V3 or earlier software, or G3V4 software in G3V1/V2/V3 bug fix mode, several differences will be seen when compared to the existing TN750B circuit pack.

The TB750C circuit pack has FLASH memory (not removable) that allows backup of announcements and related translation information on the circuit pack itself. Therefore, the existing procedure of downloading this information to the system's mass storage is no longer required. This option is still available though. In addition, when a system is restarted, the TN750C will not automatically upload announcements from the mass storage system if they are already present in the FLASH memory. Instead, it will upload the information from the FLASH memory. This is a much faster operation and is completed in about 5 minutes rather than the 40 to 50 minutes of the mass storage upload. The system will then report availability of announcements much sooner after a system restart.

2.5.2 TN2183 Analog Line

This is a 16-port analog line circuit pack that supports programmable impedance and gain and loss settings via downloaded parameter-set selection codes. This circuit pack supports the following countries by a per-system country code assignment. In parenthesis after each country is the existing analog line circuit pack that TN2183 will replace for new systems and upgrades to G3V4. The existing packs will continue to be supported for pre-G3V4 systems.

- Australia (TN468B)
- Belgium (TN2144)
- China
- France
- Germany (TN2180)
- Italy
- The Netherlands (TN2149)
- Spain (TN2180)
- South Africa
- United Kingdom

This circuit pack will also work in the United States and other countries that use the TN746B. However, there are no plans to specify TN2183 for use in these countries. The following is a list of features supported by the circuit pack:

- Rotary digit 1 recall
- Ground-key recall
- Programmable flash timing
- Selectable ringing cadence
- LED message waiting (AT&T protocol only — Neon message waiting is not supported)
- Secondary lightning protection
- Balanced ringing (when configured for France)
- DTMF sending levels appropriate for the CONVERSANT Voice Information System (VIS)

2.5.3 TN2198 BRI (U-LT) Line

The TN2198 circuit pack, is supported in G3V4.

For general use of this pack, all applications currently supported by the TN556B BRI (S/T - NT) can be used. The TN2198 circuit pack also provides 12 ports. The ANSI T1.601 Specification defines the physical link for ISDN BRI at both the "S/T" and "U" reference points. At the "U" reference point, these lines operate at 80- Kbaud (160 Kb/s), and provide a bearer service over two 64 Kb/s B channels for voice or data. They also contain one 16 Kb/s D-channel for signaling and/or data.

ISDN BRI at the "U" reference point is defined between the network termination (NT) and the line termination (LT). The TN2198 circuit pack only operates in the LT mode and is the source of timing for data on the interface. The U interface is a 2 wire line where transmission and reception occur simultaneously. Only point-to-point connections are valid with the ANSI U-interface. In addition, there are no leads for transmission of -48VDC power to terminal equipment. Therefore, any terminals that are connected to this interface must be provided with auxiliary power.

Two key physical differences between the TN2198 and TN556B BRI Line circuit packs are:

- Support of a 2-wire versus a 4-wire interface

- Support of longer loop lengths up to 18,000 feet

For all applications of TN2198 circuit packs that require connections to 4-wire S/T reference point terminals (for example, AT&T 75xx and 85xx series), the 2- wire interface must be converted to a 4-wire interface. This can be accomplished with a NT1 converter. The NT1 is also used to bridge in auxiliary power onto the 4-pair modular cord that is connected to the terminals.

There may be some terminal equipment that can connect directly to the 2-wire U interface. However, none of this equipment has been certified for use with DEFINITY G3V4 at this time.

2.5.4 TN2202 Ring Generator (France)

The TN2202 Ring Generator provides 50-Hz Balanced Ringing for analog single line phones. It is required in France. It will be provided in each carrier with port slots. It only provides balanced ringing to analog line ports when the TN2183 Analog Line circuit packs are administered with the France country code (12) on a per-system basis. A one-lead modification is required on the backplanes in all carriers with port slots. The modification disconnects the inputs from the 20- or 25-Hz ring generators provided at the cabinet level.

2.5.5 122A Music-on-Hold Interface (France)

This unit is a circuit module that provides a "highly reliable music source." This module is an adjunct to the switch and can be wall mounted. It provides the correct electrical transformation between a port on the TN2183 Analog Line circuit pack (administered with the France country code) and a customer- provided music source. It monitors this source for presence of music. If music is not present, it switches to a "hold tone" generated by the interface itself.

2.6 SECURITY ENHANCEMENTS

2.6.1 Inhibit Customer Logins at INADS Port

This enhancement inhibits the customer from logging in to the INADS port. The system is initialized so that only AT&T logins can access the INADS port. When the customer wants INADS access AT&T is able, through administration, to allow customer login permission through the INADS port.

2.6.2 Status Remote Access

The **status remote access** command gives the customer information on the state of the Remote Access feature and each assigned barrier code. Information displayed for each barrier code includes its state (active or expired), and, if expired, the date, time, and reason it expired.

2.6.3 List Call Forwarding

The **list call forwarding** command provides the customer with the status of stations that have initiated Call Forwarding On Net and Off Net and Call Forwarding Busy/Don't Answer. The display includes the station initiating the Call Forwarding, and the destination address.

2.6.4 Increase the Size of the History Log

The number of stored records in the Status History log is increased from 250 to 500 for the Intel platform. The time of logins and logoffs is provided in the History Log.

2.6.5 Logoff Screen Modifications

A notification is provided on the Logoff screen that identifies when Remote Access is enabled and when the Facility Test Call FAC is administered. These notifications require acknowledgment by the user.

2.7 TENANT PARTITIONING

G3V4 provides Tenant Partitioning. Stations, trunks, hunt groups, and other endpoints can be assigned to a partition. Multiple attendant groups are provided that can be assigned to Tenant Partitions. Network routing pattern preferences also take into consideration the tenant partition assigned to trunk groups. There are up to 20 tenant partitions and 15 attendant groups for the Intel base and up to 100 tenant partitions and 27 attendant groups for the MIPS platform.

Tenant Partitioning on G3V4 also allows for multiple music on hold sources. Each partition has the option to provide for their own source for music on hold. This also permits the use of recorded advertisements, theme music, or whatever the tenant desires.

2.8 G2 TRANSITION FEATURES

2.8.1 Call Forwarding / Busy and Don't Answer Feature and Override

When the Call Forwarding / Busy and Don't Answer (CF / BY/DA) feature is activated for an extension, calls to that extension redirect to the designated alternative number (another specified extension number, the attendant group, a specified attendant, or an external (off-premises) number) only if the called extension is either busy or does not answer. If the called extension is busy, the call redirects immediately. If the called extension is not busy, the incoming call rings the called extension, then redirects only if it remains unanswered longer than the "coverage-don't answer interval for subsequent redirection" (minimum of 1, maximum of 99 ring cycles). The user selects the alternative number when activating the feature. The feature is activated by dialing an FAC or pressing the CF / BY/DA feature button and can be activated/deactivated by the voice terminal user, the attendant, or a voice terminal user with console permissions.

An extension can be assigned CF / BY/DA and Call Forwarding All Calls. Only one Call Forwarding feature can be active at a time for the same forwarded-from extension.

Voice terminal calls forward only once, double forwarding is not allowed.

When the CF / BY/DA button is used to activate the feature, the status lamp associated with the button remains lighted until the feature is deactivated.

When the feature is active at a voice terminal and a call for that voice terminal is forwarded, the terminal can (if administered to do so) receive a redirection notification signal that a call is being forwarded.

The feature interactions between the CF / BY/DA, Call Coverage, and Send All Calls (SAC) features are, in general, the same as those currently supported for the Call Forwarding All Calls feature in G3. That is, the criteria to determine whether an incoming call to a principal is sent to the forwarded-to terminal or redirected to the principal's coverage path, is the same.

In G2, the Call Forwarding Override capability (supported by the Call Forwarding / Follow Me feature) allows the forwarded-to extension to call the forwarded-from extension when a forwarding relationship exists. This arrangement allows the forwarded-to station to call the forwarded-from station for private consultation, conference in the calling party, or transfer the call to the forwarded-from station. The Call Forwarding Override capability is supported in the CF / BY/DA feature in G3V4. In addition, the Call Forwarding Override capability is added to the Call Forward All Calls feature currently supported in G3.

2.8.2 Enhancements to Abbreviated Dialing Feature

The following describes enhancements to the Abbreviated Dialing (AD) feature in G3V4. The maximum number of AD entries per system currently supported by G3V3 is not changed.

2.8.2.1 Manual Digit Entry

Manual Digit Entry is used when the caller wants (or it is necessary) to enter some of the digits (to be dialed) from the terminal dialing pad. This function is useful for entering a security, authorization, or access code in a stored number where it is not desirable to make the code a part of the stored number string. The maximum number of digits

that can be manually entered is 16. The digits can be entered manually after the stored digit string, or in the middle of the stored digits.

2.8.2.2 Maximum Number of Lists per Station

In G3V4, each station is able to access a maximum of three lists, which can be any combination of system, group, or personal lists.

2.8.2.3 Enhanced Abbreviated Dialing (EAD) Feature

In G3V4, the maximum number of entries is:

- G3vs (PBP) = 2000

- G3s (PBP) = 2000

- G3i and G3r = 10000

2.8.2.4 System List

The maximum number of AD entries is changed from 90 to 100 and is administered in groups of five.

2.8.2.5 Group List

The maximum number of group lists per switch currently supported by G3V3 does not change in G3V4. The following changes are made in G3V4:

- The maximum number of AD entries per group list changes from 90 to 100 (administered in groups of five)

- In addition to the system administrator, each group list allows one specified voice terminal user (for example, a department secretary) or individual attendant to change the AD entries in the list.

2.8.2.6 Personal List

In G3V4, the maximum number of AD entries per list changes from 10 to 100 (administered in groups of five by the station user or the system administrator). The maximum number of personal lists per system does not change in G3V4.

2.8.2.7 System Capacity Display

In G3V4, a new field, AD entries per system, is added to the "system capacity" display to show the system limit, percentage used, and percentage available.

2.8.2.8 Automatic Dialing Buttons

Currently, the AD feature allows access to lists of stored numbers either via dial access code (DAC) or via AD buttons.

The automatic dial buttons (auto-dial) allow an AD number to be associated with a button without being associated with any list. The maximum number of digits that can be stored for each AD button is 16. The maximum length of an AD list entry remains 24 digits.

2.8.3 Ringing / Abbreviated and Delayed

The Ringing / Abbreviated and Delayed feature currently supported in G2 is supported in G3V4. In G3V4, the ringing, no ringing, delayed, and abbreviated ringing options are provided, via administration, on a per-appearance basis. In addition to these ringing options, manual or automatic transfer of ringing is added to permit the user to direct the ringing to any other voice terminal(s) sharing an appearance (for example, bridging) with the user's terminal.

The abbreviated ringing option can also be assigned to principal call appearances that do not have a bridged call appearance. With this arrangement, the principal call appearance rings for a specified number of ringing cycles (ringing stops, visual alerting continues). This limits the audible disturbance to an active call until the second call is

either redirected to coverage, answered by the called party, or abandoned by the calling party.

2.8.4 Bridging Enhancements

These enhancements allow a voice terminal to be administered with only bridged appearances and zero (0) call appearances of its own extension number.

2.8.4.1 Executive Suite Arrangement

An executive can have, for example, two identical multifunction voice terminals with the principal's voice terminal (for example, extension 75062) configured as a multifunction set with three appearances of x75062. The second multifunction set has a "station identifier" as an extension number (for example, x74304) and only bridged appearances of x75062. The second multifunction set has "zero" call appearances of its own extension number (x74304). Characteristics of the second multifunction set include:

- The extension number, x74304, is not required to be a call appearance on x75062, or any other, set (including the set x74304 is assigned to).

- Calls to x74304 can be redirected to busy tone or the Call Coverage path associated with x74304.

- It can be an analog set.

- It can function as a bridged appearance of the executive's set (x75062).

- The extensions associated with Message Waiting lamps can be administered for zero call appearance stations, that is — the Message Waiting lamp on zero call appearance stations can track bridged extension numbers.

2.8.4.2 Executive Suite/Secretary Arrangement

The executive suite arrangement is as described above and a secretary can have bridged appearances of the executive's extension (x75062). In this scenario, calls to x75062 appear at the secretary's set as a bridged appearance and, if the Call Coverage enhancement is optioned for the secretary's set, as a redirected call.

2.8.4.3 Call Coverage Enhancements

As an option in G3V4, a call can cover to a coverage point that has a bridged appearance of the principal.

2.9 TERMINAL SUPPORT

2.9.1 Support for 8400 Expansion Module, 8510, and 8520

Native support is added for the 8400 Expansion Module ZE801A, 8510TAD, 8510TMD, and 8520TAD.

2.9.2 94xx and Swing Terminals (France)

The 94xx series terminals are functionally identical to corresponding 84xx terminals except for the physical styling of the terminal. In addition, the 9410 terminal only supports a 2-wire DCP connection. 94xx terminals are aliased as 84xx terminals for system administration.

The Swing set is a single-line analog telephone with European styling. It is also manufactured by AT&T GBCS Barphone. This set is enhanced to add the proprietary AT&T protocol supported by DEFINITY analog line circuit packs for controlling a message-waiting LED. The enhanced set is called the Message Swing.

2.10 ADJUNCT SUPPORT

2.10.1 Support for DEFINITY AUDIX 3.2 16-Port Line Emulation

DEFINITY AUDIX 3.1 and earlier versions support up to 16 voice ports when emulating a TN746B Analog Line circuit pack, but are restricted to 8 voice ports when emulating a TN754B Digital Line (4-wire DCP) circuit pack.

A key new feature of DEFINITY AUDIX 3.2 is Digital Networking. This feature allows larger networking involving DEFINITY AUDIX and therefore a need for a larger number of digital line emulation AUDIX ports. Emulation of the TN2181 Digital Line (2-wire DCP) has been added and allows up to 16 digital ports.

Native support for this emulation mode is added by DEFINITY G3V4. New DEFINITY AUDIX hardware, ED-1E546-70 G15 (TN567), is required for this emulation mode. This new circuit pack provides increased performance relative to the existing ED-1E546-70 G14 (TN566B) circuit pack used by DEFINITY AUDIX.

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CUSTOMER DESCRIPTIONS

The following problems are corrected and addressed in AT&T DEFINITY® Communications System G3V4, Issue 1.0

1. Primary rate interface (PRI) endpoints often were duplicated when saving translations. This caused a problem when the user upgraded to load G3V4 35 or later, requiring Technical Service Center (TSC) intervention to be able to save translations after the upgrade occurs. Now, endpoints are properly saved (duplicates are not written). If duplicates are encountered using older translations, they are gracefully handled so that the TSC does not have to intervene.

2. A second TN750B board could be inserted and used after it was administered, when only one B board should be inserted. Now, the second TN750B board is marked by maintenance as an extra board and is not allowed recording or playback, even though it may be administered on the announcement form.

3. A user could delete an announcement on a board when an announcement was being recorded on the board using the change announcement form. Now, the delete procedure is blocked until the board is not being used to record announcements.

4. Malicious Call Trace (MCT) controllers could be hung in the active state Now, they can dial the MCT deactivate code to clear the condition.

5. When the **erase announcements** command was executed for a TN750C board, it did not clear the data for the board if it was the second or greater board listed on the display integrated announcement form.

6. Abbreviated Dialing (AD) personal list button dial codes displayed as single digits even if the software version was G3V4. Enhanced list button dial codes were being truncated to two digits.

7. On the system-parameters customer-options form, when the field "grp/sys list start at 01" was set to y, when the Abbreviated Dialing (AD) list access feature access code (FAC) and list entry number were dialed to access a group or system list member, the initial display on the originating station showed an incorrect destination number. If the number was an outgoing trunk call with outgoing display turned off for that trunk group, the incorrect number remained on the display for the duration of the call.

8. A basic rate interface (BRI) station optioned for Continuous Ring when Active could be left ringing even when no calls were alerting the station. Now, this is masked by reverting back to suppressing Active Station Ringing after a single ring cycle.

9. A **save announcement** command issued on a system with one TN750C board displayed a message stating that the board was not inserted if the command line did not specify the board location. Now, the board location is not needed for a system with only one TN750C board.

10. If Expert Agent Selection (EAS) was enabled, **list bcms** trunk commands caused the MEAS_M process to trap with a possible escalation to a warm start.

11. When a call was transferred to an observed vector directory number (VDN) and answered by an observable agent, the agent's extension was not displayed on the observer's phone.

12. When a station listening to music from a vector put the call on hold and then returned to the call or when the agent answered, no music was played.

13. When setting the software version to V4, the Program Group AD Lists feature could be administered on two different forms (system- parameters special-applications and system-parameters features). Now, if the software version is less than G3V4, the Program Group AD Lists feature is administerable on the systems-parameters special-applications form. Otherwise, it is administerable on the system-parameters features form.

14. There was no error log entry for a port board ring blockage for analog lines. Now, when a ring blockage occurs (more than four ports on a single port board are attempted to be rung simultaneously), an error is

entered into the error log for the fifth port that was attempted to be rung, with an error type of 1 and an AUX data of 40960.

15. For World Class (WC) basic rate interface (BRI) stations, the station administration form on page 1 showed y as the default for the "XID?" field. Now, the default for "XID?" is set to n.

16. World Class (WC) basic rate interface (BRI) sets [with national Integrated Services Digital Network (ISDN) firmware] were not receiving trunk access code (TAC) calls or routed calls over the primary rate interface (PRI) or distributed communications system (DCS)+ for both voice and data connections.

17. France country option 12b was behaving like the European Standards Telecommunications Institute (ETSI). Now, country option 12b behaves as "modified ETSI" VN4 protocol as described in the French spec P 10-20.

18. If an European Standards Telecommunications Institute (ETSI) World Class (WC) basic rate interface (BRI) station called to an ATT 8510 BRI station, the 8510 station did not ring audibly.

19. If one or more expansion port networks (EPNs) were down, a software upgrade could escalate to a system reset 2 (COLD 2), dropping all calls and causing a service outage.

20. If a call was made to a vector directory number (VDN) and then routed to a station with Call Forwarding — Busy Don't Answer active, the call did not forward after the time out.

21. When an adjunct switch application interface (ASAI) domain control request was received when a station was receiving dial tone, if the station received a Third Party Drop request, the application received a drop event report, instead of an acknowledgement.

22. If a call was made to a listed directory number (LDN) Night Service station with Call Forwarding — Busy Don't Answer active, the call forwarded immediately and did not wait for the time out.

23. If a call was made to a station with Call Forwarding — Busy Don't Answer active and the Call Forwarding destination was a trunk group with a queue and the all the members of the trunk group were busy, the call did not stop ringing. Now, busy signal is returned to the caller, in the same way it does with conventional Call Forwarding.

24. When a duplicate dial string was entered in a group or system Abbreviated Dialing (AD) list and the form was submitted, a duplicate entry error message was displayed but the cursor was not moved to that duplicate entry.

25. Calls were dropped when Lookahead Interflow (LAI) was enabled and a vector call routed over a primary rate interface (PRI) trunk to a Northern Telecom central office (CO) via a route-to vector step.

26. The call-appearance button that had bridged appearances assigned to it could be removed. Now, the removal is blocked until all bridged appearances have been removed.

27. If a member of a hunt group received a call that was directed to the hunt group, put the call on hold and while the call was on hold another party who had a bridged appearance of the hunt group member tried to used their bridge appearance to originate a call, they would drop the party that called into the hunt group. Now, the party who has a bridged appearance user receives busy signal and the hunt group caller is not dropped.

28. A **display abbr group XX print** command of a one-page abb group done after the same command of a four-page group resulted in the one-page print command printing with four pages. The additional three pages only had header information. Now, the one-page group correctly prints on only one page. The print option correctly prints the right number of pages for Abbreviated Dialing (AD) group, personal, system, and enhanced lists.

29. Adding and removing fibers could lead to corruption and other side-effects.

30. If software upgrade detected translation corruption while loading translation on the standby switch processing element (SPE) [new software load], the upgrade was allowed to proceed normally even though some translation would be lost because of the corruption. Now, the software upgrades correctly report the translation load failure and abort the software upgrade.

31. If you picked up the handset of some World Class (WC) basic rate interface (BRI) voice endpoints, you did not hear the dialtone generated by DEFINITY.

32. The **list usage extension** command generated many software errors if the extension being listed was a uniform dialing plan (UDP) extension not assigned to a station or similar object.

33. When using a TN750C announcement board and the contents of the flash were being copied to RAM, the user did not receive a denial when deleting or playing announcements. Now, the user receives a busy tone for five minutes after the TN750C board is inserted.

34. During upgrades, the "hear VOA" field of the COR form could not be preserved.

35. The message waiting lamp indicated status for an Automatic Call Distribution (ACD) agent's login ID rather than for the station, by default. Now, the default is to indicate status for the station.

36. A bridged appearance button could be administered to track a button that was not a call-appearance button. Now, the administration of a bridged appearance button that points to a button that is not a call-appearance button is blocked.

37. When a vector wait step used "continue" for the then clause and subsequent vector processing caused an announcement to be played, the announcement being played by the continue clause was not disconnected. Now, the announcement being played by the then "continue" clause of the wait step is disconnected before connecting a subsequent announcement.

38. Code calling ports were becoming locked and the switch did not detect the problem. Now, when code calling ports become locked, the switch detects the problem and fixes it via a software audit.

39. With Display Language set to Italian, Spanish or "user-defined," the ~s character to suppress display of Abbreviated Dialing (AD) digits only suppressed one digit. Now, for all Display Languages, the ~s character causes all succeeding digits to be suppressed (meaning displayed as the language-specific suppress character, "s" in English).

40. Under very heavy call processing and the VuStats load, some VuStats users saw the wrong data displayed.

41. VuStats users who used the "polled" update interval option did not always see the correct data displayed.

42. In an Expert Agent Selection (EAS) environment, if an agent did not have a name administered using the agent login-id form, the agent name displayed on BCMS agent reports was not correct. The name should be derived from the agent's login ID, for example, ID 55555.

43. When Service Observing was activated on an agent and the agent logged out, the observer heard busy tone. But if the observer did not hang up (or released the line), when there was another call came to the agent's station, the observer still observed the call.

44. Bringing up a hunt-group form on the system access terminal (SAT) generated a software error.

45. With extremely heavy call processing and the VuStats load, the system did not detect the overload condition. A warm start occurred instead when low priority processes failed to respond to the process sanity audit requests.

46. The DEFINITY Communications System did not support 3.2 Enhanced Transfer over the control link.

47. Under very heavy call processing and the VuStats load, multiple timeout requests might be requested for the same VuStats user, causing a slightly higher load on the system and unexpected VuStats updates.

48. With the inclusion of the multiple integrated announcement board capability, an announcement data extension with an odd number of digits was not found during the **save announcements** operation.

49. Invalid Abbreviated Dialing (AD) entries were displayed on the fourth page of the Abbreviated Dialing System list form if the list size was set to 100.

50. If Tenant Services was enabled and a station in partition X called the attendant group, the attendant (who served partition X) transferred the call to a station in partition Y (who was served by a different attendant group), and the attendant group who served partition Y was in Night Service (with no night console or night stations), when the return call timer expired, the call did not return to the original attendant who extended the call.

51. When using a basic rate interface (BRI) phone to observe a station or an agent, if the warning tone was not active, the observer was able to observe the first call, but when the next call came to the agent, the observer could not hear the call. Now, under the same circumstances, the observer is able to observe all calls coming to the agent/station.

52. The system parameter cdr form allowed the customer to enter y for Enhance or ISDN for lsu-expand output types. Now, an error message is generated if an output type is lsu-expand and ISDN or Enhance is y.

53. When two calls are put on hold and one comes off hold no music was played.

54. If terminal translation initialization (TTI) was enabled in the voice mode, it was not possible to move an analog Music-on-Hold port from one source number to another.

55. Personal central office (CO) trunks that were placed on hold heard the wrong music source.

56. If a DS1 converter was incorrectly added via the circuit-pack form to a port slot and then a different port board was physically inserted in that slot, a conflict existed that could not be undone, even if the port board was physically removed. Now, the conflict can be undone by physically removing the inserted port board, undoing the circuit pack administration of the DS1 converter.

57. If a basic rate interface (BRI) set had two appearances bridged to two other sets, the BRI set received calls on those two appearances, the first appearance was answered by the bridge and that bridge hung up, the display on the BRI went blank. Now, the display on the BRI continues to show the call on the second appearance.

58. If a **save announcement** command was executing, and the user dialed the announcement feature access code (FAC) and the announcement extension, busy tone was returned and subsequent calls to the announcement received busy tone until the announcement FAC and the announcement extension were dialed again.

59. When a converse call was put on hold, the digits were not outpulsed to the voice response unit (VRU).

60. If a party called the attendant and the attendant split the call off to a X-port station that covered via remote call coverage, the call was dropped. Now, the call routes to the remote call coverage point.

61. If a call was made to a vector with a collect digits step and the agent pushed the q-calls button just before pressing auto-in and answering the call, the collected digits sometimes disappeared from the display.

62. A user could change the "Group Extension:" field of a hunt-group or term-ext-group while the extension was present on the intra-switch-CDR form, causing corruption. Now, the user is blocked from making the hunt-group or term-ext-group change and the following error message is displayed: "Extension must be removed from intra-switch CDR before change or removal."

63. If Expert Agent Selection (EAS) agents were doing an **add skill** operation it was possible for the switch to reach a condition in which agents could not log in.

64. Customers who used an aux trunk announcement with the queuing option set to "barge-in" only heard silence when the barge-in operation took place. Also, for the GAZ environment, a software trap occurred after the barge-in attempt.

65. If the dial plan form was submitted with the "Local Node Number" field set to blank, the system displayed 1 in that field upon reentry of the form. Now, if the Local Node Number field is set to blank, the form displays a blank in that field whenever the form is displayed.

66. After 16 maximum Malicious Call Trace (MCT) traced calls, the 17th call to be traced resulted in the call being dropped.

67. A reset system 3 was required to clear up the Malicious Call Trace (MCT) records in the system. Also the 100th extension on the mct-extension-group form could not deleted. Now, a reset system 2 is sufficient to free up the old MCT records for future MCT calls. Also, the 100th extension on the mct-extension-group form cannot be deleted properly.

68. A Call Detail Recording (CDR) record was not generated if a local fax connected to an analog board called a remote fax.

69. An off-premise station could enter the terminal translation initialization (TTI) merge/unmerge feature access codes (FACs), resulting in translation corruption. Now, the user receives intercept tone if the TTI merge/unmerge FACs are entered because TTI does not support off-premise stations administered through DS1 connectivity.

70. If 100 or more stations were tracking hunt group status, the switch could warm start.

71. If the meas-selection coverage table of measured coverage paths was changed so that the 99th entry was deleted or changed when 100 coverage paths were measured, switch performance was affected in a significant way and eventually the measurement process restarted.

72. In load 056.1, a change was added to support Leave Word Calling (LWC) from a multiappearance set while attempting a conference or transfer. This caused LWC to not work for analog sets when they had the party on soft hold. Now, analog sets can invoke LWC by placing the party to get the LWC message on soft hold and dialing the LWC-store feature access code.

73. If a G3r machine was installed with no DS1 circuit packs and no DS1 translation, synchronization was not set up correctly. Executing status synchronization resulted in the error message "still switching synchronization source; please try later." This was worked around by adding a DS1 and then removing it. Now, a plain vanilla G3r with no DS1s establishes synchronization between cabinets correctly and shows a PPN clock board as the on-line reference.

74. The "Average speed of answer" and "Percent in service level" fields on the Basic Call Management System (BCMS) split/skill and vector directory number (VDN) reports could have incorrect information if calls were answered by an agent who was being service observed.

75. Central offices (COs) outside the United States can notify DEFINITY that an outgoing public-network Integrated Services Digital Network (ISDN) - primary rate interface (PRI) call is being routed over a non-ISDN facility, that is — interworking, at several points during call establishment. Previously, DEFINITY rejected this interworking notification if it arrived after the alerting message was received. This caused errors to be logged by the CO, and ultimately caused the ISDN / PRI link to be reset. Now, DEFINITY allows interworking notification to occur any time before the call is answered, eliminating this as a reason for a link reset.

76. The trunk identification information element (IE) carried within the Call Offered, Alerting, and Connected event reports, as well as in the Route requests, calling party information was not available, reported only the trunk group over which an inbound call was received. Now, the trunk identification IE provides the trunk member number and the trunk group number.

77. When Service Observing was in process on a simple user (a station, an agent, etc.) via a primary rate interface (PRI) trunk remotely, if an observed call lasted long enough that the periodic maintenance ran, the observer was cut off.

78. When a call was active on a measured trunk, and another trunk was added to be measured, the "oldest call waiting" data was erroneously copied into the newly added trunk data. This only happened if the new trunk was inserted before the old trunk in the table.

79. If Expert Agent Selection (EAS) agents were logged in to analog stations, and they activated Send All Calls (SAC) but the Coverage path said that SAC was not allowed, and if Direct Agent calling was set to n, a personal agent call went to Coverage.

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80. A move agent from the Call Management System (CMS) could cause data corruption if the from and to splits did not have the same value in the measured field, that is — one split measured external and the other measured both.

81. Some Automatic Call Distribution (ACD) calls were not measured correctly by the Basic Call Management System (BCMS) if the call center had splits and skills measured externally and both internally and externally. The first measured split or skill had to be measured both internally and externally and the call center had to use BCMS/VuStats login IDs or Expert Agent Selection (EAS). In addition, a call to an externally measured split or skill had to be placed on hold while the first agent in the first measured split or skill was active on an ACD call, and that call had to be terminated before the call to the first agent in the first measured split or skill was terminated.

82. If a trunk group was administered in the 18th position of the meas-selection trunk group form, the trunk group type value that appeared on the trunk group hourly measurements output was corrupted, i.e. a question mark appeared as the trunk group type. Now, when a trunk group is administered in the 18th position of the meas-selection trunk group form, the trunk group type data that appears on the trunk group hourly measurements report is not corrupted.

83. Changing basic rate interface (BRI) stations with "X" in the "port" field to non-BRI stations resulted in the message "Error encountered; cannot complete request."

84. When the Automatic Exclusion feature was active and an Exclusion call went to coverage, the principal could not bridge onto the call when it was answered by coverage. Now, a Coverage/Hold option appears on the system-parameters special-applications form that allows a principal to bridge onto an Exclusion call that has been answered by a coverage point or a Call Pickup group member.

85. If a direct inward dialing (DID) trunk routed to the attendant and the attendant extended the trunk to a station (who did not answer and did not have Coverage), and all attendants were active on calls when the return call timer expired, the DID trunk was eventually lost and never routed to anyone. Now, the DID trunk stays in the attendant queue until an attendant becomes available.

86. A Call Detail Recording (CDR) record was not generated on the second transfer of a station on a trunk call.

87. The init password had a common default value across all releases of DEFINITY software. Now, the init password is changed for each EDI release of DEFINITY software. This change applies not only to new installations of the software, but also to upgrade situations, and in cases in which the software is used in a bugfix capacity. This means that whenever the EDI version of the software is installed, the init password is automatically changed to the new password as a result of the software upgrade. In all cases, new installations, upgrades from pervious versions/releases and in bug fix situations, the new password supersedes any password stored on a translation storage device.

88. It was possible to hold an Automatic Route Selection (ARS) call in the middle of dialing. This caused touch tone receivers to lock up and allowed Automatic Call Distribution (ACD) agents to get out of working.

89. When large numbers of domain control associations were active for an adjunct switch application interface (ASAI) link, and the link came down, the switch warm started.

90. The **list toll** command displayed SMDR in the heading, Now, the **list toll** command displays CDR in the heading.

91. The **list extension** command caused an "Error encountered; cannot complete request" message and a system reset if executed three times on an Intel with a complicated dial plan that contained at least five "misc" first digits.

92. A logoff entry was added to the list history log following completion of a system printer job.

93. Changing a station type to 8434D without an expansion module, and then attempting to readminister button values that no longer appeared on the form could result in a confusing "Duplicate button" error because buttons on the nonexistent expansion module page were not being properly handled.

94. It was not possible to administer more than 100 q-calls or q-time buttons tracking a single hunt group queue, more than 100 atd-qcalls and atd-qtime buttons, or more than 100 busy-ind/dtgs/rtgs buttons tracking the same extension or trunk access code (TAC) on either the G3V4vs/s/i or G3V4r switches. Now, on G3V4r only, a maximum of 500 q-calls and q-time buttons tracking a single hunt group queue, a maximum of 500 atd-qcalls and atd-qtime buttons, and a maximum of 500 busy-ind/dtgs/rtgs buttons tracking a single extension or TAC can be administered. The limit for these buttons remains 100 on G3V4vs/s/i.

95. The "init" login permissions could become wiped out making the login inoperative after an upgrade from R1V2 of system 75.

96. Removal of a call-appearance button while adding a new station was blocked and the error message "Identifier not found" was displayed.

97. When changing a vector step from one type using skill indirection (1st, 2nd, 3rd) to another type not using a skill number, the skill number was converted to skill indirection.

98. If an invalid board location was specified for an integrated announcement, and a valid announcement was then provided, system administration complained about duplicate entries, and if an invalid compression rate was entered, the same error occurred. Now, the compression rate is validated when the form is submitted rather than when the value is entered in the field.

99. Errors occurred when the "Message Lamp Extension" field was administered to have the extension of a vector directory number (VDN). Now, a VDN extension can successfully be administered.

100. When submitting the vector form, procedure errors overflowed the Intel, causing a warmstart.

101. If an agent in the auto-in or manual-in work mode put a call on hold or a call dropped from an agent station, the switch did not always report the correct agent state to the Call Management System (CMS).

102. Agents could appear to be available with calls in queue during the interval in which an agent was moved from one split to another using the CMS Move Agent While Staffed feature. Now, agents are shown as "other" in this situation.

103. In France, if a call was originated by a non-basic rate interface (BRI) endpoint over an Integrated Services Digital Network (ISDN) - primary rate interface (PRI) trunk group (Protocol 12a) to an old VN3 central office (CO), the far-end was permitted to treat the call as a pure ISDN call and could reject it if it considered the destination to be incompatible. Now, DEFINITY includes additional information to mark these calls as originated by a non-ISDN endpoint, therefore preventing the far-end from misinterpreting the type of call and rejecting it.

104. The command **display internal-data callr** did not contain all the vector data that exists in vector B of the call record. Also, TCM (MIPS only) did not contain all the data. Now, both commands display all the data in the vector block of the call record.

105. The Agent Logout event report did not include the logical extension of the agent logging out when in the Expert Agent Selection (EAS) environment. Now, the Agent Logout event report includes not only the physical extension of the agent, but also the logical extension.

106. When moving a logged-in agent from a many-forced Multiple Call Handling group to a one-forced Multiple Call Handling group, the move could fail.

107. When a station was assigned as a type World Class (WC) basic rate interface (BRI) and was added to a terminating extension group, the station was not directed to audibly ring for calls processed through the terminating extension group.

108. If aux-trk-m announcements were administered on the announcements form, the form did not come up, causing all announcement administration to be broken.

109. The INADS message could exceed the 200-character limit when more than seven SYS-LINK alarms had occurred before the INADS message was sent to report 8 of the alarms in one message. Now, the INADS message is limited to 7 alarms to keep the total message length under the 200-character limit.

110. Attendant consoles could not be administered with Abbreviated Dialing (AD) program or AD special character buttons.

111. The brdg-appr and abrdg-appr buttons contained "Ring" field default data that was inconsistent with respect to the "Bridged Call Alerting" field administration. Also, set types DS1SA, DS1FD, VRUSA and VRUFD were allowed to administer the ring type of its button to something other than ring. Now, The above mentioned buttons contain "Ring" field data that is consistent with the "Bridged Call Alerting" field administration and the DS1SA, DS1FD, VRUSA and VRUFD station types have "Ring" field set to r and is display-only.

112. When an attendant user in autostart mode was programming an Abbreviated Dialing (AD) group list entry, they only had ten seconds after entering the program feature access code (FAC) to enter the rest of the digits. Confirmation tone was received ten seconds after entering the program access code. Now, the interdigit timer is reset after each digit is entered when in autostart mode, so that the attendant user has 10 seconds after each digit is entered to enter the next digit before timing out and receiving confirmation.

113. Using the exit button to perform normal button operations on 8520 basic rate interface (BRI) stations did not work. Now, using the exit button to perform normal button operations on 8520 BRI stations works. The exit button should be optioned as button 21 on BRI stations using the craft programmable parameters.

114. With "Per Button Ring Control" enabled, the default ring value associated with new brdg-appr and abrd-appr buttons appeared to be "r," but would in fact be set to "n." Also, the Btn subfield associated with a brdg-appr button had a blank default on some pages and a "0" on others. Now, the default Ring value is preserved unless changed by the user and the Btn field always defaults to blank.

115. When trying to download PASTE from an attendant console working as the operator (reached by dialing "0"), intercept tone was heard, and download was denied.

116. The **list usage extension** command did not show extensions in a vector wait step.

117. It was possible to administer more than 100 q-calls or q-time buttons tracking a single hunt group queue, more than 100 atd-qcalls and atd-qtime buttons, and more than 100 busy-ind/dtgs/rtgs buttons tracking the same extension/TAC. Now, a maximum of 100 q-calls and q-time buttons tracking a single hunt group queue, a maximum of 100 atd-qcalls and atd-qtime buttons, and a maximum of 100 busy-ind/dtgs/rtgs buttons tracking a single extension/TAC can be administered. Attempting to add too many of these buttons results in the error "No space available to add data."

118. When an adjunct switch application interface (ASAI) adjunct requested to log in an agent and it provided an invalid work mode, the switch denied the request, as expected; however, it also sent Logout event reports for the agent, which was an unexpected action. Now, the switch denies the login requests that carry invalid work mode values, but it does not send logout events for the agent attempting to log in.

119. If the auto-selection of any Idle Appearance feature was on and a station was out of call appearances, when the user pressed the Conference or Transfer button, an idle bridged appearance was not selected.

120. When a system administrator changed the "Per Button Ring Control?" field from y to n, and then back to y after viewing other pages of the station form, the values for the "Ring:" and "Auto-A/D?" subfields (at the time invisible), may be changed without warning. Now, the values are not changed, even when the subfields are invisible, until the station form is submitted. An administrator can change "Per Button Ring Control?" back and forth between y and n and access other pages of the form, but the effect of the change on these subfields is not imposed until the administrator presses the submit button.

121. Tracking buttons on other sets might not be updated. Now, both Call Forwarding — Busy Don't Answer and Call Forwarding — All buttons tracking the call forward status of another station are updated.

122. The brdg-appr and abrdg-appr buttons contained "Ring" field default data that was inconsistent with respect to the "Bridged Call Alerting" field administration. Also, set types DS1SA, DS1FD, VRUSA and VRUFD were allowed to administer the ring type of its button to something other than ring. Now, these buttons contain "Ring" field data that is consistent with the ""Bridged Call Alerting" field administration and the DS1SA, DS1FD, VRUSA and VRUFD station types have "Ring" field set to "r" and are display-only.

123. The wrong login name could be stored in the Message Sequence Tracer (MST) record for PREC tracing.

124. When a station was assigned with the "Per Button Ring Control?" field set to y, the station's line selection moved away from a silently alerting call, even when the "Select Last Used Appearance?" field was set to y. Now, "Select Last Used Appearance?" overrides this operation, allowing the silently alerting call to remain selected on the station.

125. The vector form contained the conditional "asa." Now, it is renamed to "rolling-asa."

126. In G3V4, it was possible to assign an analog station with the "Ring:" subfield set to n or the like such that when that station hung up with a held call, the ring of the realerting call was suppressed because of the "Ring:" value. Now, such realerting calls are allowed to audibly ring an analog station independent of the assigned "Ring:" subfield value.

127. Automatic Call Distribution (ACD) calls to basic rate interface (BRI) stations were not reported as ACD calls.

128. If three or more agents with pending move agents requests completed calls simultaneously, only the first two were moved. Now, all agents are moved.

129. If an incoming central office (CO), WATS, foreign exchange (FX), or release link trunks (RLTs) trunk required remote access or authorization code processing before terminating to a busy station on another node over a primary rate interface (PRI) trunk, the originator did not hear busy tone, but instead, heard silence.

130. It was not possible to display the internal-data associated with administration without hardware (AWOH) stations. Now, two new commands, **display internal-data susr_rec** and **display internal-data bept_rec** allow the user to display the internal data associated with AWOH nonbasic rate interface (BRI) and BRI stations, respectively.

131. When a logged-in Expert Agent Selection (EAS) agent made an outgoing call using an Integrated Services Digital Network (ISDN) trunk, the calling party name associated with the call was always the login ID name of the calling EAS agent (independent of the setting of the "LoginID for ISDN Display?" field on the agent login ID form). Now, DEFINITY customers who use EAS are able to choose whether a logged-in EAS agent's login ID name, or the name of the physical station where the agent is logged-in, is used for the calling party name for an outgoing ISDN call. This choice is made by administering the "LoginID for ISDN Display?" field on the agent login ID form to y or n.

132. TN2147 ports in a central office (CO) trunk group with the country code of Netherlands (5) did not quite work when connected to an Ericcson AXE-10 switch; the calls were dropped. Now, a new field called "Version" is provided on CO, foreign exchange (FX), and WATS trunk groups when the "Country" field is Netherlands. This field applies only to TN2147 ports, and defaults to "a," which gives the current TN2147 operation; to connect to the Erriccson switch, change "Version" to the value "b." This causes Netherlands transmission to be used, but signaling is be set to the United States. (The general international initialization downlink to the port, the 0x8A CCMS message, is set to the United States, but the DSLAC downlink for transmission characteristics [0x8C CCMS] is still the Netherlands.) Note that this new "Version" field requires the "Country" field to be moved to the left 12 spaces from its current location.

133. A duplicate adjunct switch application interface (ASAI) alerting event was sent for calls to announcements.

134. When changing a set type from analog to digital, "call-appr" was displayed as the value of button number 6. Now, when changing a set type from analog to digital, "blank" is displayed as the value of button number 6.

135. The public network in France dropped an incoming Integrated Services Digital Network (ISDN) - primary rate interface (PRI) call, if it was forwarded off-switch to certain public-network destinations via ISDN / PRI. The caller heard no ringback tone before the call dropped. Now, the calls are not dropped and callers hear ringback tone even if the far-end is busy.

136. When an incoming Primary Rate Interface (PRI) trunk terminated at a station that had a coverage path to another station that had a bridged appearance of the first station, a software error was logged against the DP_MGR. Additionally, the call did not cover even if the field "Terminate to Coverage Pts. with Bridged Appearances?" was set to y on the coverage path form.

137. A query for internally measured data (IMD) required the domain information element (IE) with the ID of the specific object queried to be the second domain IE in the message. The domain IE specifying that the query was for IMD, and the type of object, was required to be first. Other domain IEs followed these two. Now, the domain IE specifying that the query is for IMD and giving the type of the queried object is still required to be first, but there is no restriction on the order of the following domain IEs.
,IN "Internally Measured Data (IMD)"

138. A Data Communications Protocol (DCP) station could not break dial tone when originating a call from a abrg-appr of a analog station with a hotline if more digits were needed to complete the call.

139. It was possible to change the "Skill" field on the hunt group form from y to n (and therefore the "ACD" and "VECTOR" fields from y to n while the hunt group was referenced in one or more vectors.

140. On a Intel 386 duplex system, the **list config soft long** command did not show the correct PI boards memory-resident FW vintages.

141. If a measured trunk dropped from a conference, the Call Management System (CMS) might not track the call correctly.

142. The Call Management System (CMS) could abort processing of a call in a trunk glare situation.

143. When a remote Call Coverage call covered to an Automatic Route Selection (ARS) number and all the trunks in the trunk group were busy, the caller heard busy tone and the called party could not answer the call. The call remained at the called parties' set. Now, the caller hears ringback and the called party can answer the call. If the called party is a station without hardware the caller hears busy tone.

144. With distributed communications system (DCS) Call Coverage, a caller could hear two ringback tones being played back to the caller. Now, the caller hears only one tone.

145. If an attendant conferenced a call to a station that covered to a remote point and the attendant dropped out of the call, the call failed. Now, the call covers to the remote point.

146. When a reset system 3 was done without the vectors saved, the "name" field on the vector forms cleared out, but the vector steps did not.

147. The Automatic Numbering Identification (ANI) category and ANI information was not transmitted correctly over trunks having the Russian country code. Now, this information is correctly transmitted and the ANI category is obtained from the calling trunk's class of restriction (COR) translation.

148. When administering a Send All Calls or Call Forward button in a button location that preceded a bridged appearance button and the software version was set to G3V3 or less, the button number subfield of the bridged appearance button disappeared.

149. If a basic rate interface (BRI) set programmed its call appearances to be ring continuous, the set was active on a call, a second call came in, the second call rang only once. Now, DEFINITY does not instruct BRI phones to stop ringing after one cycle. Ring control is left up to the set.

150. The cancel key could not cause the **list mst continuous** command to exit.

151. A bridged-appearance button could be administered for an analog station. Also, an analog bridged-appearance button could be administered for a multi-button station.

152. When a Remote Access user dialed the Expert Ease Selection (EAS) login feature access code (FAC) followed by an EAS login ID, the system returned intercept tone. However, even though the EAS login attempt failed, the EAS agent information associated with this login attempt was not removed [for example, if a Remote Access user dialed in over a direct inward dialing (DID) trunk to attempt an EAS login, the system showed an EAS login ID associated with the DID trunk.] The only way to clear the EAS login ID association for a Remote Access user was to do a cold-start. Now, a DEFINITY customer using both the EAS and Remote Access features does not have the potential problem of a Remote Access user being able to attempt the EAS login operation. When a Remote Access user dials the EAS login FAC, the Remote Access user immediately hears intercept tone.

153. If the software version was set to G3V3 or less, set types ASAI and ADJLK were blocked from being added while displaying the error message "No call appearance buttons have been assigned." Now, these set type are added successfully.

154. In-line errors did not appear in the burn-in log.

155. If a call covered via distributed communications system (DCS) Call Coverage, the data communication link was down, and the coverage user did not answer the incoming call, the coverage user's set rang as long as the subsequent redirection interval timer was set plus an additional eight seconds for the link timer. Now, the coverage user's set rings for approximately three ring cycles overall.

156. If a called principal was active on a call and another call came in to the principal and then covered via distributed communications system (DCS) Call Coverage and the DCS Call Coverage user did not answer, the call did not cover to the next coverage point assigned on the coverage path form.

157. For customers with more than 140 DS1 boards, the system was unable to load translation on a reset system 3, 4, or 5. This caused escalating restarts until the switch was in the switch processing element (SPE) down mode.

158. When a trunk was seized out of a maintenance-busy state the Basic Call Management System (BCMS) could abort the call.

159. If DEFINITY received a message with a comprehension required information element (IE), it was sending either a release complete or a status message (based on the message type received) with the cause IE set to QPRS_CMPR (not a valid cause value for Q.931). Now, DEFINITY sends release complete or status messages with cause 96 (mandatory IE is missing).

160. For Call Center customers who have the G3V4 00.1.036.0 release, their non-auto-answer Automatic Call Distribution (ACD) agents who received calls in which a VDN-of-origin (VOA) was played, did not hear zip-tone after the VOA playback was completed. Now, customers hear zip-tone after the VOA playback is completed. This provides a positive indication when the agent is cut through to the incoming caller because (as opposed to the previous VOA implementation) the agent can speak to the incoming caller while the VOA playback is in progress.

161. When observing an agent remotely through an Integrated Services Digital Network (ISDN) trunk, if the observer was dropped in the middle of an observed call and re-observed the same agent again, the agent's station call appearance lamp was still on instead of idle. On the other hand, if the observed agent made a Conference call, and the observer dropped out and re-observed the agent again, the observer could not cut-through to the same call. Now, under the same circumstances, first, when the caller hangs up, the agent's

station call appearance becomes idle. Second, the observer can re-observe the same call, even if the call is a Conference call.

162. On a G3R with multiusers, two stations with personal Abbreviated Dialing (AD) buttons could not be changed at the same time.

163. A software error was logged every time a Transfer Out of AUDIX was made to a station in another node in a distributed communications system (DCS) network if the terminating station did not answer and covered back to the host AUDIX in another DCS node. Now, the software error does not occur.

164. If a caller used the Last Number Dialed (LND) feature of many non-AT&T basic rate interface (BRI) voice stations to dial AUDIX over a trunk group, a pound sign (#) was outpulsed after AUDIX answered, causing the caller to hear the wrong AUDIX prompt. Now, the spurious pound is no longer outpulsed, and AUDIX responds properly.

165. Autodial buttons were allowed to be administered on button 1 of a station. If that station was ever terminal translation initialization (TTI) separated, half of the dial digits associated with that button were lost when the station was TTI merged to a port. Now, autodial buttons are not allowed on button 1 of a station.

166. Some Abbreviated Dialing (AD) calls over Integrated Services Digital Network (ISDN) - primary rate interface (PRI) trunks could not be made. These calls involved accessing the PRI trunk via the trunk's dial access code (DAC) and special characters [for example, pause, mark, and wait] were a part of the AD number.

167. When a converse agent was dropped out of a call due to a regular agent becoming available, ASAI was not sending the pertinent Drop event report over 3P Make Call and Event Notification associations, but only over 3P domain Control associations for the converse agent. Now, ASAI sends the Drop event report over all appropriate associations.

168. The "Please try measurements command again" error message was displayed when a DS1 **list/clear measurements** command timed out. This message was not complete enough to determine how to fix this problem. Now, a more descriptive error message, which leads the system technician to the Traffic Reports manual, is displayed.

169. While programming the autodial button, the dial string could become corrupt.

170. The "Prompting Timeout" field on the system-parameters feature-related form was fixed at 10 seconds. Now, it is administrable.

171. If translation corruption was detected, there was no user visible indication that it was there. Now, the following message is displayed on the copyright screen indicating that there is corruption: "WARNING: Translation corruption detected; call AT&T distributor immediately."

172. The last allowed measured trunk could not be added if it was to be added in the last administered measured trunk group in the system.

173. If an analog station was a member of an Automatic Call Distribution (ACD) hunt group, calls were queued for that hunt group, the analog station was active on a call, and then the party who the analog station was talking to dropped off and the analog station did not go on-hook for about nine seconds, when the analog station did go on-hook, a call in the queue was routed to the analog station but the station did not start alerting.

174. With a VDN of Origin announcement administered for a particular vector directory number (VDN), incoming callers could hear the playback of the VOA announcement (rather than just the agent who answered the call) when a call was routed through that VDN. Also, the agent who answered a VOA call or pushed the VOA-REPEAT button could not halt the VOA announcement playback.

175. Using G3MA to schedule a change from any kind of set to an analog set caused button corruption if there were buttons administered on buttons 4 through 10 of the principal page.

176. If a personal central office line (PCOL) call covered to a vector directory number (VDN), any collect vector steps were skipped. Now, the collect vector steps are executed correctly.

177. With calls queued for both the agents primary and secondary skills, an agent that went available sometimes received the call for the secondary skill. Now, the agent always receives the call for primary skill.

178. If a user made two data calls from a basic rate interface (BRI) data module over a trunk group, status data showed the data module as connected to only one trunk port, when in fact two trunk ports were in use.

179. Personal attendant calls (those calls placed or routed to the extension assigned to the attendant), that queued caused the "Qued" counter on the list measurements attendant group report to increment.

180. Whenever a Lookahead Interflow (LAI) attempt failed, the adjunct switch application interface (ASAI) sent a drop event report for the primary rate interface (PRI) trunk used for the LAI call. When the call was delivered to an agent in the original receiving switch, ASAI sent event reports containing the LAI vector directory number (VDN) as the called party number instead of the original called VDN. Now, ASAI does not send a Drop event report for the trunk used for the failed LAI attempt, and it sends the extension of the original called VDN in the called party number information element (IE) whenever an LAI attempt fails.

181. When an agent was on a personal call and another personal call came in that was then abandoned, all subsequent personal calls were receiving busy tone until a 30-second timer expired or until the agent was no longer on the first personal call. Now, the 30-second timer is cleared so callers do not receive busy tone.

182. The "Expected Call Handling Time" field on the hunt group form was fixed at 180 seconds. Now, it is administrable.

183. The standby switch processing element (SPE) alarm lamps went on after upgrading the software to G3V4. Now, the standby SPE alarm lamps are turned off shortly after the software upgrade is completed.

184. The **list usage extension** command provided an incorrect help message if the user back-tabbed to the **list usage** command and pressed the help key.

185. There was no VuStat format download in PASTE. Now, by entering 4 as the list number for VuStat formats, PASTE downloads all the display formats of the VuStat buttons assigned on the station. In addition, by entering 0 as the list number for download all, all the PASTE download data (including VuStat formats) is displayed.

186. On a system using TN2182 tone boards and with basic rate interface (BRI) station activity, collect digit steps in vectors could fail.

187. A call to voice mail displayed the ID and password digit entry. Now, dialed digits are not displayed.

188. Performing simultaneous **list usage extension** commands could cause the system to restart.

189. If service observing was set up to apply to a caller, the caller made a call that covered and the covering user is the last coverage point, and the covering user did not answer the incoming call until after the subsequent redirection interval expired, service observing was not applied to the call.

190. If a distributed communications system (DCS) call is covered to a DCS remote coverage point that has a hunt group containing a 7405VD terminal, the display of the 7405VD terminal is incorrect.

191. It was difficult to map an extension number to a UID. Now, a new command, **display internal-data ext-map** X can be used to map the UID associated with extension X. The output of this command is identical to that of the **display internal-data uid-map** command (which has been modified to include the UID). Like all the internal-data commands, the new command is available only to "init" and "inads" level logins.

192. The updated 94xx terminals did not pass the France type approval tests when administered for France. Now, the updated 94xx terminals pass both German and France type approval tests when administered for Germany or for France.

193. If a station without an administered name was forwarded over an ISDN SSB PRI trunk, the forwarded-to station saw the display of the forwarding station as "EXT xxxxx," where xxxxx is the local number of the forwarding station instead of blank.

194. If a basic rate interface (BRI) set that was a Malicious Call Trace (MCT) recipient tried to drop an active MCT call, the entire call was dropped. Now, BRI sets are like Data Communications Protocol (DCP) sets in that the call is put automatically on hold and it is not dropped.

195. If a Malicious Call Trace (MCT) recipient dropped an active MCT call, the call was put on hold and if music on hold or tone on hold was administered for the system, it was applied to the call. Now, music or tone is not applied to an active MCT call that goes into the held state because of the drop of the MCT recipient.

196. When a call was placed to a vector directory number (VDN) and put on hold by an agent, the caller was receiving the default music source instead of the VDN's music source.

197. With G3V4 connected to an R3V2 or earlier version, and a messaging step with "none," "latest," or "active," the step could not be sent to or received from the Call Management System (CMS).

198. The compression rates displayed on the change announcement form and the list integ-annc-boards forms did not display the same data when the compression rate was changed from the default value. Now, the values are the same.

199. Call Forwarding failed if the forwarded-to number was 16 digits and the maximum length for the number in the ARS analysis table was greater than 16. Now, Call Forwarding can be for up to 16 digits, counting the trunk access code (TAC) or the Automatic Route Selection (ARS) feature access code (FAC).

200. An "Error encountered cannot complete request" error could result when changing from a multifunction set type to 8410D/8434D.

201. It was possible for the user to assign an attendant personal number in the following fields on the system-parameters features form, then change or remove the attendant number, resulting in an "Error encountered..." message if the user attempted to bring up the system-parameters features form: Controlled Outward Restriction, Intercept Treatment, Controlled Termination Restriction (Do Not Disturb), Controlled Station to Station Restriction, ACA Referral Destination, System Printer Extension, and Emergency Access Redirection Extension. Now, an attempt to change or remove an attendant personal extension number assigned in any of the above fields results in the error: "Cannot remove; extension assigned on system-parameters features form."

202. Attempting to administer an invalid dial code in a system or group Abbreviated Dialing (AD) list resulted in an error message too long to be completely displayed: "System/Group list requires 2-digit dial codes. Pre-G3V4 (11-99 or 00), Post G3V4 (00-99)." Now, depending on which software versions are administered, one of two error messages are displayed: "System/Group list requires 2 digit (11-99 or 00) dial codes" or "System/Group list requires 2-digit (00-99) dial codes."

203. An incoming Integrated Services Digital Network (ISDN) test call could not be placed if the address digits of the ISDN test call extension were collected in-band via a touch tone receiver.

204. If an expansion port network (EPN) was connected via DS1C converters and the EPN went down, it did not recover on its own and stayed down forever. Now, the EPN recovers automatically.

205. When running G3V4 software optioned as V3, it was not possible to change a multifunction set with something other than call-appr buttons on buttons 1 and 2 to an analog set type. Also, changing between analog and nonanalog set types when abrdg-appr or brdg-appr buttons were administered could result in data corruption. Now, the change is allowed and the corruption should not occur.

206. The following problems occurred:

- Attempting to administer an invalid personal Abbreviated Dialing (AD) list dial code with V4 enabled resulted in the incorrect error: "Personal list requires 2-digit dial codes in range 01-09 or 00." Now, attempting to administer an invalid personal AD list dial code with V4 enabled results in the error: "Personal list requires 2-digit dial code in range 00-99." Attempting to administer an invalid personal AD list dial code with V1.1-V3 enabled results in the error: "Personal list requires one digit dial code in range 1-9 or 0"

- The "Code:" subfield title ran into the stroke-cnt button type field.

- Changing a 16-digit autodial button to a call-appr button with the "Per Button Ring Control" field set to y resulted in a ? in the "Auto-A/D" button subfield. Now, the "Auto-A/D" button subfield is set to "n."

207. When multiple integrated announcement boards were used, and the Remote Access extension was on the second board, the announcement did not play for the remote Security Violations Notification (SVN) violation.

208. The "Ans Delay" column on trunk member pages could not be blanked out.

209. The error message "Record length must be less than 135" could be received when you entered between 136 and 151 character positions on the customized Call Detail Recording (CDR) form. Now, the error message: "Record length must be less than 152" when enter over 151 character positions" is received.

210. The customized Call Detail Recording (CDR) format did not have the field option "clg-num/in-tac," that outputs the incoming trunk access codes (TAC) rather than blanks for certain incoming calls as does the "calling-num" field. Otherwise, it is the same as the "calling-num" field. Now, the customized format has a the field option "clg-num/in-tac.".

211. For G3V4 with the multiple integrated announcement board feature, the command to change multiple integrated announcement board locations from one administered location to another location administered location did not exist. Now, the **change integ-annc-brd-loc** command exists for version G3V4.

212. If an analog station was acting as a bridged appearance of a multifunctional set and the analog station had Send All Calls (SAC) set, the analog station would not ring-ping when a call came into the multifunctional set.

213. Warning tone was heard by the parties remaining in an observed call after the observer dropped from the call.

214. Changes to hunt groups that did not complete successfully could leave the internal data in an inconsistent state. For example, if a hunt group change could not be completed because agents were logged in or on a call, changes to the "Message Center AUDIX Name" or "Message Center MSA Name" fields **were** made, but the rest of the changed data for the hunt group was **not** made. The same inconsistent data resulted if the user tried to increase the number of queue slots for a hunt group, but then hit the system limit on queue slots. This case had one additional piece of damage: if the existing hunt group was being changed from nonvector controlled to vector controlled, the Call Forwarding destination (if any) had been removed. Hitting the system queue limit could also leave the announcement 1 and 2 delays partially corrupted. Now, if a change to the hunt group cannot be completed, **none** of the attempted changes are made.

215. If a user dialed an Integrated Services Digital Network (ISDN) trunk via a trunk access code (TAC) and then dialed the digits of a world class (WC) basic rate interface (BRI) station, that station did not ring and the call did not complete.

216. The low layer compatibility (LLC) information element (IE) was being tandemed to 1TR6 primary rate interface (PRI) [Germany]. There were not enough mappings from bearer capability (BC)/LLC IE to service indicator IE for World Class (WC) basic rate interface (BRI) endpoints to support data calls. Now, the LLC IE is not sent to 1TR6 PRI and DEFINITY is providing more mappings from BC/LLC IE to SI IE for WC BRI endpoints on a switch that is connected to the 1TR6 network. This prevents some potential connection failures for data calls.

217. Users of the **rd :serv_d scr** N command in TCM received the wrong "last_tone" information.

218. The **list mst** system access terminal (SAT) command listed no Message Sequence Tracer (MST) messages if there was only one message in the MST buffer. Now, it lists a single MST message correctly.

219. If an external call came into station X and station X had remote coverage to station Y, the call completed successfully, but, a **status trunk** operation done on station X's switch showed either "entry is bad" or showed a trunk connected that did not exist in the call. Now, status trunk displays the correct connected ports.

220. Agents appeared to be available with calls in queue during the interval in which an agent was moved from one split to another using the Call Management System (CMS) Move Agent While Staffed feature. Now, agents are shown as "other" in this situation.

221. When terminal translation initialization (TTI) stations were unmerged and a busy-indicator button pointed to the extension that had been associated with the station, the tracking station's busy-indicator button lit every time someone went off-hook on the now unmerged set.

222. When changing from a multibutton station to an analog station with the first button of the multi-button station a button other than a call-appr, brdg-appr or abrdg-appr (which are the only legal button types for an analog station), that button type was saved for the analog station, causing button corruption. Now, analog stations contain a valid button type (default call-appr) upon submittal regardless of what button type was in the first button of the multibutton station.

223. The Call Detail Recording (CDR) feature records only active calls or ineffective attempts. The feat-flag treats interworking Answer Supervision as timed Answer Supervision, and the duration was available in tenths of minutes. Now, CDR has the option of recording incoming ring intervals to answer, abandon, or go to a busy destination. The feat-flag can be optioned to treat interworking Answer Supervision as a separate condition, and the call duration is available in tenths or in seconds on the customized form.

224. When a Send All Calls (SAC), Call Forward of Call Forwarding — Busy/Don't Answer button was administered that monitored another station, the button did not display the status of the feature nor was it able to activate or deactivate the feature until another user with a functional button activated or deactivated the feature. Now, the button shows the status of the feature and is usable immediately after it is created.

225. The European Standards Telecommunications Institute (ETSI) has supported restart and restart acknowledgement messages. Now, when administering a DS1 circuit pack, country protocol ETSI with protocol version a still supports RESTART and RESTART ACK messages, or ETSI can be administered with protocol version b, which does not support restart and restart acknowledgement messages.

226. The ds1-fd and ds1-sa announcements did not send a forward disconnect when the call was abandoned.

227. When logging in, if an agent pressed the Last Number Dialed (LND) button to supply the login ID digits, the agent received intercept tone and the number of logged in members was still be incremented. Now, the agent receives intercept tone and the number of logged in members is not incremented.

228. An adjunct switch application interface (ASAI) adjunct could not access certain internally measured data.

229. If an administration without hardware (AWOH) extension was administered for the Trunk Answer From Any Station (TAAS) port, or for a hunt-group Call Waiting port or Time Warning Port, the extension could not be deleted or changed.

230. A generic error message was used when an unadministered PGATE board location was used. Now, a more specific error message is given.

231. Listed Directory Number (LDN) calls did not always route to the correct Night Service destination (when the system was in Night Service).

232. After a software upgrade was completed, shadowing was enabled in a duplicated system. Now, after a software upgrade is completed, shadowing is disabled in a duplicated system. This condition exists until the

standby switch processing element (SPE) software vintage is identical to the active SPE's software version. The standby SPE has to be "reset spe-stan 4" to make the memory resident software identical during the upgrade process.

233. If a wakeup request was pending and the time was set back on the PBX, the wakeup request was deleted.

234. Audits were tearing down calls who tried to term to a primary rate interface (PRI) trunk during vectoring, and that term was unsuccessful because no trunk members were available.

235. If a data user dialed an Automatic Alternate Routing (AAR) or Automatic Route Selection (ARS) number, an authorization code was required, and the user entered the code at the second dial prompt, the call failed. Now, the authorization code is collected and, if the code is correct, the call is allowed.

236. When dialing some digit strings requiring 28 digits and those digits required digit conversion, only two conversions were allowed. Now, up to seven digit conversions are allowed.

237. On MIPS systems, if the 15th member of a bridge group attempted to transfer a call, the completion of the transfer was unsuccessful.

238. The X.25 data module could be changed to another data module type, which sometimes led to corruption. Also, other data module types could be changed to X.25 data modules, which sometimes led to translation corruption. Now, the user has to remove and re-add the data module. If the user either tries to change the data module type to or from an X.25, the following error message is displayed: "Data Module must be removed and re-added to change type to or from X.25."

239. If a dialed Automatic Route Selection (ARS) or Automatic Alternate Routing (AAR) number was converted into a number that could match on a range of numbers after conversion, an extra pound sign (#) sign could be outpulsed out as part of the final number. Now, the only one pound sign is outpulsed, if a pound sign is required.

240. Performing a change station on an analog, hybrid, or digital station with an "X" in the "Port" field and making them a basic rate interface (BRI) set with a port led to translation corruption.

241. The "/" character could not be used within a name and be found by the directory command. Now, the "/" character can be used and is treated the same as the "-," "&," or "'" characters as far as searches and displays are concerned.

242. A basic rate interface (BRI) set that picked up a call on a bridged appearance sometimes did not have the correct information displayed.

243. On duplicated MIPS systems, with Integrated Services Digital Network (ISDN)-primary rate interface (PRI) using nonfacility associated signaling (NFAS) and using TN767 boards for B-channels, a software upgrade could put the B-channels on the TN767 boards out of service for an indeterminate amount of time.

244. Using pause or mark characters for on-switch dialing had unpredictable results. Now, either pause or mark characters can be used to wait for the call to be answered (mark is more correct).

245. The "disconnect info in FRL field" feature for Call Detail Recording (CDR) incorrectly reported far-end drops as local drops for non-Integrated Services Digital Network (ISDN) trunks.

246. A timing glitch could put 8410 sets out of service due to a problem with the TN2181 V2 and V3 boards.

247. When the last conferenced party covered to a measured split and was dropped from the call before an agent answered, the Call Management System (CMS) and the Basic CMS (BCMS) showed calls in queue and agents available. Now, the calls waiting count is decremented when the last added party is dropped.

248. Using scheduled bulk station administration of G3-MA sometimes led to basic rate interface (BRI) stations losing their buttons. This happened if G3-MA were used to change set types to and from the BRI.

249. Defective DS1 trunks were causing system crashes.

250. The MIS_AP process could trap with a possible escalation to a warm start when Basic Call Management System (BCMS)-measured agents entered the AUX mode.

251. If the alerting q-calls or q-time warning port answered and then the agent answered an Automatic Call Distribution (ACD) call, the agent could see "CONFERENCE" on the display instead of the expected split or vector directory number (VDN) display.

252. There was a remote possibility of creating a warm start if the primary rate interface (PRI) was traced by the Message Sequence Tracer (MST) and either level 2 activity occurred or unrecognized PRI messages were received.

253. The CP9530 cordless analog phone did not always work using the flash switchhook.

254. When either enabling terminal translation initialization (TTI) in the "data" mode or exceeding the maximum number of data-modules supported by the switch, the message "Error Encountered, can't complete request" was displayed to the user or the system restarted.

255. G3MA in scheduled transaction mode allowed certain transactions to complete during the validation phase. These transactions were as follows: 1. Adding/changing a station with "atd-qcall" atd-qtime" "q-call" q-time" buttons and the system maximum exceeded. 2. Backing out of a **remove vdn** command.

256. On a duplicated Intel system, the **list conf** (control, all) command displayed the wrong PI board (TN765) vintage. Now, this command displays the correct PI board vintage on the active and standby switch processing element (SPE).

257. When terminal translation initialization (TTI) was in the "suspended" mode, attempting to change a station from a port to "X" resulted in the message "Error Encountered, cannot complete request" being displayed. Now, the message "TTI suspended - cannot remove TTI port" is displayed.

258. A user could not remove a data extension that was associated with a modem pool. The user received the message "Object in use." The user received this error even after busying out the data module.

259. Agents could not add a skill using an analog station set.

260. Assume the following scenario. A service observer was observing a simple user (a station, an agent, etc.) on a call who had Service Observing permissions. The user conferenced in another user to join in on the call who did not have Service Observing permissions. Previously, if the first user hung up, the service observer could still observe the second user who did not have Service Observing permissions. Now, the service observer receives intelligible tone.

261. When a supervisor added a skill to an auto-in or manual-in agent, the Call Management System (CMS) and the Basic CMS (BCMS) reported the agent in the AUX work state until the state of some call on the agent station changed. Now, the agent is reported as auto-in or manual-in, as appropriate.

262. When the system-wide music-on-hold port was administered to be an analog port, the port was not initially counted as a station port and included in the display capacities screen station port data, but was counted and displayed once translations were saved and the switch rebooted. Now, the system-wide music-on-hold port (or music source 1 on the music-sources screen) is never counted/displayed as a station port.

263. If an agent was logged in and on a call and a call was made on an appearance that was a bridged appearance on the agent's set, error SUSER_M 17621 was logged. Because this is such a common occurrence, the error log was filled with spurious data. Now, this error is not logged when an agent is logged in on a call, and a call is made and dropped on a bridged appearance.

264. The Spanish translation for the display message, "END OF MESSAGES (NEXT TO REPEAT)" was "FIN DE MENSAJES (SIGUIENTE PARA REPITIR)." Now, the Spanish translation is "FIN DE MENSAJES (SIGUIENTE PARA REPETIR)."

265. When the user entered a DS announcement type in the "VOA" field of the vector directory number (VDN) form, the entry was disallowed with the error message "Cannot be an analog announcement." Also there was no check for integrated announcements with queue=barge-in. Now, the error message for DS1 announcements is "Cannot be a ds1 announcement." The error message for integrated announcements with barge in is "Cannot be an integrated announcement with queue barge-in."

266. Some scheduled Basic Call Management System (BCMS) report requests could be modified incorrectly during an upgrade from G3V2 to G3V4 or from G3V3 to G3V4.

267. The expected wait time (EWT) initialization value for splits was an average call handling time of four minutes. Now, it is set to three minutes.

268. The administered name for an announcement did not appear with the **list integrated announcement** command.

269. With the changes for multiple integrated announcement boards, systems with a 1-board maximum (pre-g3v4) did not have announcement boards inserted correctly when moving them from one location to another on the switch.

270. The expected wait time (EWT) for a split, in which all logged-in agents are in the AUX_WK mode, was not infinite.

271. When the restore announcement command was executed and there were announcements on the board, a warning message did not appear. Now, a warning message appears, and the user can cancel or continue with the command.

272. There was no ringback tone on a tandem multifrequency-compelled (MFC) call.

273. When calls were serviced from a split queue at a rate that exceeded one call every three seconds, the expected wait time (EWT) predictions for the split were inaccurate.

274. When the audit for the announcement ports was executed for maintenance object MO_AU_CDIP, it failed when more than one board was inserted and an announcement call was up.

275. When programming the auto dial button, if the user received intercept tone because of a mistake in programming, the next time the button was used, it was programmed with the incorrect information.

276. The TCM process trapped when the **go tcm** command was entered on the system access terminal (SAT).

277. Integrated announcement boards did not insert correctly following a software upgrade on the MIPS.

278. Following a reset level 2, the announcement data module administration became corrupted.

279. An analog station could be administered with a blank in the "Line Appearance" field. Now, the error message "Field cannot be blank" is displayed.

280. When a hotline destination of an analog station was administered with a group or system list and the "A/D Grp/Sys List Dialing Start at 01?" field was set to y on the system-parameters customer-options form, the hotline destination dial code pointed to the wrong list entry.

281. An adjunct switch application interface (ASAI) domain-controlled station belonging to the hunt/attendant group was not able to send dual-tone multifrequency (DTMF) tones to a calling party over the domain control association. Similarly, a bridged extension that was ASAI domain-controlled, could not sent DTMF tones to the calling party over the domain control association.

282. A bridged extension that was adjunct switch application interface (ASAI) domain-controlled could not send dual-tone multifrequency (DTMF) tones over the domain control association to a calling party.

283. DS1 trunks and related signaling groups could go out-of-service after a software upgrade, causing calls to be torn down, and new calls could not use the trunks.

284. If a trunk group was administered for Overlap Receiving, almost every unanswered incoming call caused hardware error "1" with Aux Data "1" to be logged against the signaling group(s) (ISDN-SGR) corresponding to the members of that trunk group. This primarily affected customers in Germany, where Overlap Receiving is required if the customer wishes to use Direct Inward Dialing (DID).

285. Tf agent A was on a vector directory number (VDN) call that was observed, and agent A transferred the call to agent B as a direct-agent call (both agent's class of restriction (COR) was set for direct-agent calling), the transferred call was still being observed even though agent B was not observable (agent B's COR was not set for being observed). Now, the transferred call is not observed.

286. A World Class (WC) basic rate interface (BRI) data terminal requiring Endpoint Initialization did not initialize if it was assigned as a data module of type WC BRI, but did initialize if it was assigned as a station of type WC BRI with a data module. Now, a WC BRI data terminal initializes even if it is assigned as a data module of type WC BRI.

287. A modem pool was not inserted to an incoming call that terminated at a DLC port. Now, a modem pool is inserted correctly if the baud rate options between the DLC port and the modem pool group are compatible.

288. The isdn public-unknown-numbering form (formerly known as the isdn cpn-prefix form) worked incorrectly in some circumstances if one tried to change entries in a fully administered (all 240 entries) form. For example, if a user tried to change 10 old entries to 10 new entries, the old entries would correctly go away but the new entries were not added, leaving only 230 entries. Now, any and all changes can be made to the form, even when it is fully administered.

289. If an analog phone was used to initiate service observing through a vector step, the confirmation tone was *not* heard, and the route-to-number step in the vector failed.

290. When transferring calls to an Automatic Alternate Routing (AAR) / Automatic Route Selection (ARS) variable length numbering plan and the transfer was made before entering the maximum number of digits, the party being transferred was hung. Now, the transfer is complete if the number dial is correct, or the transferring station receives the appropriate feedback.

291. With terminal translation initialization (TTI) on, an unmerged station with a Send All Calls (SAC) button ring-pinged, the call-appearance lit, and the display lit.

292. Some remote coverage situations returned intercept tone when they should route to the attendant, or route to the attendant when they should route to the remote endpoint.

293. If a vector directory number (VDN) call queued to a skill and then entered a converse skill and picked up by a data restricted port, when the call was answered by an observed agent (whose port was not data restricted), the call was *not* observable.

294. When a customer with a vintage 3 or older disk drive tried to copy a coredump from disk to tape, the copy failed. This applied to all of the smaller disk drives.

295. Malicious Call Trace (MCT) was not allowed on Integrated Services Digital Network (ISDN) - primary rate interface (PRI) trunks if the activating station dialed the MCT activation code followed by an asterisk (*) followed by the equipment location of the PRI B-channel.

296. When a vector directory number (VDN) was used as the night destination in a Listed Directory Number (LDN) operation, the vector had a "messaging split" step, and the system was in Night Service, the call reached AUDIX but received the "Welcome to AUDIX" message instead of a mailbox. If a specific extension was used in the "messaging split" step, the same situation was observed. Now, if an extension is not used in the "messaging split" step, the mail box for the VDN is reached. If an extension is used, the mail for that extension is used.

297. An Automatic Circuit Assurance (ACA) referral call was generated to indicate that the short duration threshold had been met for an Integrated Services Digital Network (ISDN) - primary rate interface (PRI) trunk group if the same trunk member repeatedly routed to a busy station.

298. When the Automatic Route Selection (ARS) feature was not enabled, the system administrator could not administer the ARS analysis table, even though the table was required for trunk access code (TAC) calling via public network trunks. Now, the system administrator can administer the ARS analysis table, independent of whether or not the ARS feature is enabled. In addition, the default state of the ARS feature is now "y" (enabled).

299. On the system-parameters customer-options form, the default value of the "Multifrequency Signaling" field was "n." Now, the default value is "y."

300. Abbreviated Dialing (AD) enhanced list forms and button dial codes were displayed inconsistently. The button dial codes were always displayed as four digits regardless of the software version or the "Enhanced List Dial Code" length administered on the system-parameters features form.

301. If a customer encountered a race condition in Call Detail Recording (CDR) in which the link went down while a message was output, the CDR link became hung. Now, the link goes down briefly and if all is all right, goes back up.

302. When Abbreviated Dialing (AD) enhanced lists were used as a Hotline destination for analog stations, intercept was returned. Now, this will not happen.

303. Changing the Measured field of an AAS hunt group from internal to either external or both caused a warm start.

304. When a hotline destination was administered using an enhanced list entry, the dial code was changed to a nonusable number.

305. If an entry on the Automatic Alternate Routing (AAR) or Automatic Route Selection (ARS) forms had "Max" set to one more than "Min," and if the associated route pattern used an Integrated Services Digital Network (ISDN) - primary rate interface (PRI) trunk group, some calls using that entry became hung — that is, the call was never sent over the ISDN-PRI trunk group. For this to happen, the originator had to be one of the following: a non-AT&T basic rate interface (BRI) voice terminal, if the call was placed using the Abbreviated Dialing (AD) or the Last Number Dialed (LND) feature of the set, a non-AT&T BRI data terminal, or an incoming ISDN-PRI trunk that had Overlap Receiving enabled. Now, a call of the type described above does not hang, but routes correctly.

306. In an upgrade, the key value on the customer funded features form would not upgrade the key values if they were changed. The original default values for the keys were in effect following an upgrade. Now, the password keys are upgraded correctly to changed values.

307. There was no administration for Poland. Now, Poland is administered as country code 22.

308. If the meas-selection principal table of measured principals was changed so that the 99th entry was deleted or changed when 100 principals were measured, switch performance was affected in a significant way and eventually the measurement process restarted. Now, modification of the measurement selection table for principals, as described above, does not result in a significant degradation of system performance and the measurement manager does not restart.

309. No warning message was available that stated the integrated announcement would be deleted when the board location was changed.

310. When multiple announcement boards were inserted following an upgrade from G3V3 to version G3V4, the **save/restore announcement** command for the second announcement board incorrectly saved and restored announcements to the first board. Now, this command executes for the correct board.

311. For the MIPS processor only, the upgrade software command would, in some cases, not be call preserving when multiple announcement boards were in use.

312. Upgrades from releases that did not have OCW priority defaulted the priority field to "m." Now, it defaults to "l."

313. The assist and consult features could not be transferred after they were answered.

314. Resets 1 and 2 could result in inability to log in by incrementing the number of logged in Automatic Call Distribution (ACD) ACD agents incorrectly;

315. When an incoming trunk call was answered by AUDIX, and the caller transferred out of AUDIX to a Last Number Dialed (LDN) and there was no music source, but the music on the "Transferred Trunk Calls" option was set to yes, the ringback tone was not removed from the call when the attendant answered.

316. When administering a vector with G3V4 software on a 715 terminal, function key F6 was set to "EDIT." This was all right, but when the vector form was submitted or aborted, the function key remained set. Now, the F6 function key is cleared.

317. When an analog station was assigned as a bridged appearance of a digital set, and the analog station answered an incoming call, an attempted flash-transfer of the call left the bridged appearance in a hung state. Now, after the analog station flash-hooks, dials the extension to transfer the call to, and then disconnects, the transfer of the call is successful, and the bridge appearance is released properly so it may be used for another call.

318. Fifteen digits was the maximum number of digits allowed on the standard and customized Call Detail Recording (CDR) CDR output. Now, up to 18 digits may be specified on the customized CDR format. The standard CDR formats still display 15 digits truncating from the right of the digit string. The customized format displays up to 18 digits. The start of the digits displayed is 18 minus the number entered on the system parameter cdr form.

319. An intermittent short on a Data Communications Protocol (DCP) station/wiring could cause a system reset (reset level 1). Now, the proper alarm is raised, and no reset occurs.

320. When a user service observed a call that was put on hold and music was administered, no music was played.

321. When doing a software upgrade from V3 to V4 (dp12 or greater), data corruption occurred.

322. When the Misoperation feature was enabled, converse data return did not work (the data was never returned and the voice response unit (VRU) port kept being reconnected to the call, an infinite loop).

323. Expected Wait Time (EWT) vector events were logged even if the EWT capability was not optioned.

324. The default for the "Secondary Data Module" field on the system-parameters customer-option form was initialized to "no." Now, the default value is initialized to "yes."

325. Some print requests for the system printer output an error message, "Identifier command word(s) omitted; pleas press HELP" instead of the requested information.

326. Integrated Services Digital Network (ISDN) - primary rate interface (PRI) tandem type trunks did not produce any Ring Duration records with codes G, H, or I.

327. If a basic rate interface (BRI) user makes a call, pushes the transfer button and dials the Leave Word Calling Send a Message feature access code (FAC), no message was left for the party on hold. Instead, the BRI user heard dial tone. Only when the BRI user dialed the called party extension number is a message left and the BRI user hears confirmation tone.

328. MF trunks did not produce a busy Call Detail Recording (CDR) record (I). Now, MF trunks act as non-MF trunks when calls are to a busy destination.

329. It was not possible to administer two 7500 or two WC BRI data modules on the same port.

330. Traffic measurements reports occasionally aborted prematurely, providing the user with the message: "Please try measurements command again."

331. If a vector routed a call to a vector directory number (VDN) and tenant partitioning was enabled and the VDN routed the call to a Listed Directory Number (LDN), the call was routed to the attendant group serving the VDN (not the LDN). Now, the call is routed to the attendant group serving the LDN.

332. Interactions between Conference/Transfer and the phantom abandon call timer could cause some calls to be only partially measured by the Basic Call Management System (BCMS) resulting in a percent in service level greater than 100.

333. The init password had a common default value across all releases of DEFINITY software. Now, the init password is changed for each EDI release of DEFINITY software. This change applies not only to new installations of the software, but also applies in upgrade situations and in cases in which the software is used in a bugfix capacity. This means that whenever the EDI version of the software is installed, the init password automatically changes the new password as a result of the software upgrade. In all cases, new installations, upgrades from previous versions/releases and in bug fix situations, the new password supersedes any password on a translation storage device.

334. A codeset 6 facility information element (IE) containing an IE in a codeset not recognized with an invalid length caused a warm reset.

335. Following an **erase announcements** command, the **list integrated announcements** command still showed data for the erased announcement.

336. Following a reset system 2, the first announcement on the board was not accessible.

337. With a system with multiple integrated announcement boards, moving boards around could cause the **list integrated-annc** command to display incorrect compression rates.

338. A Lookahead Interflow (LAI) denial was treated as a lookahead acceptance, causing incoming calls to drop. Now, the LAI denial is treated as such, and the call is processed by subsequent vector steps.

339. When using the **change integ-annc** command, the compression rates for some announcements were not maintained when the change occurred.

340. On MIPS, the "Expected Call Handling Time" field was not saving correctly.

341. The **list station** command showed only one station. Now, the command shows all stations.

342. When an adjunct switch application interface (ASAI) login attempt failed, the logged in agent's value incremented.

343. For a G3r with duplicated switch processing elements (SPEs), a software upgrade would not continue if translation corruption was detected when translation was read in on the standby SPE.

344. Use of OCW vector conditionals caused corruption of data in the hunt group queues, with the result that the following features would not operate correctly: vector OCW conditional step operation, the expected wait time (EWT) [for the affected splits/skills], q-time lamp operation [for the affected splits/skills], and OCW information on the q-time and q-call button displays (for the affected splits/skills).

345. The Call Detail Recording (CDR) record for a tandem call was not reporting the charging for the outgoing leg of the call (either PPM or ISDN call charge).

346. On an Intel 386 with a CPP1 board, none of the administered circuit packs were displayed on page 1 (carrier A) of the circuit pack form.

347. The "Average Speed of Answer" field on the monitor bcms system report was not displayed correctly.

348. The Basic Call Management System (BCMS) average speed of answer and percent in service level could be measured incorrectly following a system time change.

349. Entering duplicate extensions in the "Originating Extension" fields for: SVN Login Violation Notification, SVN Remote Access Violation Notification, and SVN Authorization Code Violation Notification lead to the message "Extension already assigned" and the cursor was not placed on the offending field when the submit key was entered. Also, entering the same extension in the "Originating Extension" field and tabbing to the next field resulted in the message "Extension already assigned" being displayed. Now, the cursor is placed on the offending field and it is possible to type over a field with the same extension.

350. If the isdn private-numbering form was used to administer a private number address, and "private" was specified on the isdn-pri trunk group form for "Numbering Format," the private number sent for the Calling or Connected Party Number randomly contained garbage digits following the extension number if the extension number was less than five digits.

351. It was possible to lock up the system administration terminal (SAT) by executing a **list** or **status** command and immediately aborting the command by hitting the cancel key.

352. When system restart occurred, the process managing the integrated announcement board only allowed one board even though the G3 version allowed multiple announcement boards. Now, a system restart does not cause the system to only allow one announcement board when the system is version V4.

353. When a digital set (with local power) was disconnected and a short caused the port electronic power feed (EPF) to trip, because the maintenance script was in a suspended state, error messages were not serviced. The set did not come into service when plugged back in because there was no power to allow the link reset message. The only way to bring the set back to service was to do a busy/release operation on the port. Now, maintenance software responds to the EPF overcurrent message in this situation and the set returns to service when plugged in.

354. China dual-tone multifrequency (DTMF) detection failed some of the frequency deviation requirements.

355. If an off network call associated with the only remaining idle call appearance of a station was placed on hold on a switch administered to support Misoperation Alerting, the call was dropped and retermed. This was appropriate misoperation performance. However, when the call was finally dropped, the trunk associated with the call was left in a state of limbo until a periodic maintenance audit restored service. Now, misoperation is not performed and the call remains on hold.

356. Attendant agents did not always receive Automatic Call Distribution (ACD) calls in forced Multiple Call Handling (MCH) hunt groups when it was appropriate.

357. G3V4 software running in V1.1, V2, V3 or V4 software configurations displayed Abbreviated Dialing (AD) personal list dial codes in a 2-digit format. Now, if the software version is set to V4, these dial codes are in a 2-digit format, otherwise they revert back to a 1-digit dial code length.

358. Executing a **status trunk-group x** command (where x is an administered trunk group with members assigned) and aborting the command immediately after executing the command intermittently caused the system administration terminal (SAT) session to become insane. Now, at least one member of the trunk group is displayed on the SAT and the command aborts without causing the SAT session to become insane.

359. If a vector controlled hunt group had calls in the queue, the last member could not be removed.

360. On the Call Vector form, the defalut for the Messaging extension was "none."
Now, the defalut is "active," which has the same meaning.

361. The **display announcements** command incorrectly output the check sum value which overwrote the "board location" field.

362. The acceptable service level change indication did not display correctly on the Basic Call Management System (BCMS) Split report.

363. A VuStats display could be terminated as a result of a move agent request from the Call Management System (CMS). Now, the VuStats display continues to be updated.

364. An extraneous character could be displayed in the "Oldest Call" field on the MONITOR BCMS SPLIT report.

365. Abbreviated Dialing (AD) special character (abr-spchar) buttons didn't have a space between the title and subfield (Char).

366. Procedure errors CALL_P 2503 and DAP 8041 were very common and filled up the error logs. Now, calls that produced these error indications but were not erroneous do not produce these error indications.

367. There was no ringback tone when a group II multifrequency-compelled (MFC) call was tandemmed out to a nongroup II MFC trunk.

368. If an agent entered the manual-in work mode by dialing a feature access code (FAC) while a move agent request was pending, the pending move agent request was not processed.

369. Access to the G3V4 enhancements to the Multiple Call Handling (MCH) and VuStats features were not controlled by individual customer options.

370. When the External Device Alarm Feature was administered, the user had to type "list exten" to uniquely get "list extension-type" because of a conflict with "list external-device-alarm." Now, the External Device Alarm command object has been changed to "eda-external-device-alrm" to allow shortcut typing of "list ext" for the "list extension-type" command.

371. The vector routing tables were accessed with the commands: [add | change | display | remove | list] routing-table <x>. Now, they are accessed with the commands: [add | change | display | remove | list] vrt <x>.

372. An error was encountered on the GAZ target if an attempt was made to administer a new trunk group with 99 members.

373. Basic Call Management System (BCMS) historical data was not initialized when the system clock was changed.

374. A user could enter values that were not in increments of 20 in the "Ans Delay" fields associated with all trunk group members, only to receive the error "Entry invalid; please press HELP" when they attempted to submit. Now, if a user attempts to enter an "Ans Delay" value that is not an increment of 20, the error "Entry out of range" is immediately returned.

375. The expected wait time (EWT) for a call that is queued to a split/skill with all agents in the AUX_WK mode, was not infinite.

376. An "auto-icom" button could be administered with a dial code that was inconsistent with the dial length administered on the Intercom Group form. Now, as long as the intercom group being entered in the "auto-icom" button is administered, the dial code entry is checked against the administered dial code length for that intercom group. If the intercom group is not administered, the dial code is only checked to see if it is a valid number.

377. Trunk group country code 4 selected United States defaults for TN465C. Now, trunk group country code 4 selects Italy values for TN465C.

378. The **list announcements** command could not be blocked via change permissions by including "integrated-annc-boards" on the permissions form.

379. Automatic Callback failed when the "called voice terminal" had only one unrestricted call appearance (the "Restrict Last Appearance" field = n). Now, Automatic Callback is originated when the digital station hangs up on a single unrestricted call appearance.

380. The Customer Funded Features form displayed the Call Forward Override and Call Forwarding — Busy/Don't Answer features when the software version was G3V4 even though these features were made imported into the standard software features for G3V4.

381. The error message "Board does not support local, carrier-local, or remote option" was displayed when the **list measurements ds1 summary** command was executed with one of these options on a TN767E or TN464F DS1 board administered for D4 framing. Now, the new error message "local, carrier-local, or remote option valid only if DS1 uses ESF framing" is displayed instead. This lets the system technician know that the DS1 board itself is good, but its administration does not allow the selected option to be used on the command line.

382. On a G3V4r (MIPS platform) switch if one system access terminal (SAT) was changing a station with an Abbreviated Dialing (AD) list, a second **add** or **change** could not be done, the message "change station xxxx has data locked" was displayed to the second user.

383. The administered name for an announcement did not appear on the **list integrated announcement** command.

384. The **edit vector** command from within the vector did not work on the new third page of the vector form.

385. When the system was in Night Service, but no Night Service extension was specified for the trunk group, a call was placed to the trunk group that was shorter than the Automatic Circuit Assurance (ACA) short threshold, the ACA referral destination was the attendant, a phantom call was sent to the attendant that could not be handled, and then it was dropped but it couldn't be dropped because it wasn't real, a procedure error was generated.