5ESS® SWITCHING EQUIPMENT
ENHANCED 911
SERVICE ADJUNCT
(ESA)
CIRCUIT

CHANGES

D. Description of Changes

D.1 Changed existing Central Office Version to reflect the final configuration.

D.2 Added information to allow the E911 to be used in a Non-Central Office application.

D.3 Updated ED5D729 to include E911 in a Non-Central Office application.

D.4 Updated ED5D729 to reflect the final Central Office configuration.

AT&T BELL LABORATORIES

DEPT 55535-JAP-FNG

CIRCUIT DESCRIPTION

CD-5D503-01
ISSUE 1
APPENDIX 1M
DWG ISSUE 2M
DIST CODE BT13

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CHANGES

D. Description of Changes

D.1 Changed "406188342" cable to "406199836."
Changed "406188086" cable to "406188094."
Changed "406188359" cable to "406188342."
Changed "406188193" cable to "406187914."
Changed "ED-1P123-30, G3A" cable to "M25B-87."
Changed "ED-5D500-21, G59 to ED-5D500-21, G56."
Added the "INMAC Null Modem 334-3" connectors.
Added the "INMAC Null Modem 303-3" connectors.

D.2 Added "(See Note 1)." Added note 1.
Added "(See Note 2)." and "(See Note 3)." Added notes 2 and 3.
Changed "J3" to "J2" and "J4" to "J3."

D.3 Updated the drawing to reflect the latest information.

D.4 Added sheets 17 and 18, and updated information for ED-5D729-01.

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SECTION I - GENERAL DESCRIPTION

1. PURPOSE OF CIRCUIT

1.01 911 is intended as a nationwide universal telephone number which provides the public with direct and immediate access to a Public Safety Answering Point (PSAP). A PSAP is an agency or facility that is designated and authorized to receive and respond to emergency calls requiring one or more public services such as police, fire, medical, etc.

2. BACKGROUND

2.01 Enhanced 911 (E911) service provides several improvements over the current service:

1.   The PSAP is provided with calling station's Automatic Number Identification (ANI).

2.   The PSAP is provided with the calling station's address.

3.   Selective Routing of a 911 call to a PSAP is based on a caller's ANI.

4.   By configuring one E911 5ESS Switch tandem office in a central location to serve multiple end offices, the local end offices need not be equipped with additional E911 features.

2.02 The 5ESS® Switch with a StarSever™ Fault Tolerant (FT) computer provides the following E911 capabilities:

1.   Routing Features

    - Selective Routing - with an ESA (optional)
    - Non-Selective Routing - without an ESA
    - Alternate Routing
    - Default Routing
    - Office Handoff

2.   Transfer Features

    - Selective Transfer
    - Fixed Transfer
    - Manual Transfer

3. PSAP Control Features

   - Forced Disconnect

4. Display Feature

   - Flash Calling Display

3. PRODUCT OVERVIEW

3.01 The ESA platform includes the AT&T StarServer™ FT computer system with Triple Modular Redundant (TMR) CPUs, duplexed memory, IOPs, buses, power, and SCSI disk drives. Tape devices include a 1600/6250 BPI 9-track tape drive and one-quarter inch cartridge tape. Both synchronous and asynchronous communication interface boards are used to support the various ESA interfaces. The system also includes UNIX® (SVR3.1.1 with BSD extensions and reliability enhancements) as the operating system, X.25 Communications software for the Adjunct Processor Interface (API) Links, and ESA Application software developed using "C" Language. Maintenance features of the StarServer™ FT include on-line diagnostics, remote administration, and fault location software. The ESA provides the ANI-to-ESN Translator for the 5ESS Switch Selective Routing feature and maintenance functions of the database.

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There are interfaces to the Switching Control Center System (SCCS), Automatic Location Identification/Database Management System (ALI/DMS), and 5ESS Switch via an API link. During E911 "call setup" if selective routing is used, the 5ESS Switch sends a query to the ESA using the subscriber's ANI and the ESA responds with an Emergency Service Number (ESN). This ESN is used as an index to the data on the 5ESS Switch containing the Primary PSAP Dialing Number (DN), two alternate PSAP DNs, and up to six Selective Transfer DNs. The Release 1 ESA Application software supports five million subscriber ANIs across four Numbering Plan Areas and 500 office codes configured on one 5ESS Switch with a StarServer™ FT computer.

SECTION II - REFERENCE DATA

1. CONNECTING CIRCUITS

1.01

(a) 5ESS Application Schematic - SD-5D014-02

(b) 5ESS AC Power Distribution Circuit - SD-5D004-01

(c) 5ESS DC Power Distribution Circuit - SD-5D005-01