TYPES OF MINICOMPUTER SYSTEMS
MINICOMPUTER MAINTENANCE AND OPERATIONS CENTER
COMPUTER SYSTEM MEASUREMENT
INFORMATION SYSTEMS

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1. GENERAL

1.01 This section is issued to describe the types of minicomputer systems that the Minicomputer Maintenance and Operations Center (MMOC) personnel maintain. This section renumbers Section 190-020-567.

1.02 Whenever this section is reissued, the reason for the reissue will be listed in this paragraph.

2. CENTRALLY DEVELOPED OPERATIONS SUPPORT SYSTEMS (OSSs)

2.01 Centrally developed OSSs are designed by Bell Telephone Laboratories (BTL) for use with general trade supplier hardware and are distributed by the Western Electric Company (WE). Support for these systems is provided by WE Regional Technical Assistance Centers (RTAC), WE Product Engineering Control Centers (PECC) and BTL development organizations. Also included in this category are systems developed under the Business Information Systems (BIS) agreement which are supported by AT&T Data Systems and BTL.

2.02 A general description of each centrally developed OSS, including type of processor, and AT&T and BTL contact personnel are listed in the glossary titled, ***Bell System Information and Operations Systems.*** This document is provided to the Operating Telephone Company (OTC) minicomputer coordinator. Additional copies can be obtained by following the ordering instructions contained in the glossary.

3. LOCALLY DEVELOPED OSSs

3.01 Locally developed OSSs are designed by the OTC or by an outside vendor for specific application within a particular Telephone Company. Hardware support for these systems is normally provided by vendor through a service contract. The Telephone Companies provide software support for OTC developed programs.

4. CRITICAL OSSs

4.01 Each OTC should conduct an impact analysis (of each installed OSS) as specified in Section 077-590-302 (Computer Center Physical Security and Disaster Recovery) to determine the relative criticality of system loss to the company.

4.02 Generally, a critical OSS provides a vital function to the daily operation of an OTC and has significant impact on the business when failure occurs. These functions would include providing basic service, assuring revenue, and maintaining the integrity of the core network.

4.03 Most critical OSSs are designed with redundancy or backup of the computer subsystem and have duplexed or triplexed minicomputer configurations. A 24-hour maintenance coverage is required for critical OSSs.

5. CLUSTERED OSSs

5.01 Clustered OSSs are located in a computer center housing more than one minicomputer. These OSSs are colocated with systems of similar or diverse hardware and can consist of from 2 to 50 systems spread over an entire floor of a building. (Refer to GL 78-01-033.)

5.02 The clustered OSS concept provides an opportunity to share the cost of environmental conditioning and power equipment, and improves the utilization of operating personnel. Operations functions of a cluster are performed by a designated work force within the MMOC, and, is normally separate and distinct from the user organization. See Section 190-020-550 for a description of the operations functions.

5.03 The maintenance of minicomputers at a clustered site has the following advantages:

(a) Response time of maintenance personnel to trouble conditions is decreased when the cluster is large enough to justify the designated on-site staff.

(b) Trouble diagnostic time can be reduced if the maintenance personnel work with the same systems each day.

(c) Stocking of spare parts on-site can be more readily cost justified.

(d) A warm spare system (where it can be justified) can signifcantly reduce lost user time caused by routine hardware failures, preventive maintenance, and system hardware changes. It can also act as a "test bench" for new or repaired equipment.

(e) Direct and administrative expense of transporting parts and personnel to the computer sites is decreased.

6. NONCLUSTERED OSSs

6.01 The minicomputer of a nonclustered OSS is normally located within or close to the MMOC because of major limiting factors. Some of these limitations may be:

(a) Multiple inputs to the system

(b) Output lead length limits to display boards, interactive user groups or printers

(c) Lack of clear separation of the functions of the persons operating the OSS computer subsystem and the users of the system's output

(d) High physical interaction between the user groups and computer equipment. (Refer to GL 78-01-033.)

7. CUSTOMER PREMISES MINICOMPUTERS

7.01 In the past, the Bell System's use of minicomputers has been primarily with OSS located on the Telephone Company's premises. Systems such as Automatic Call Distribution—Electronic Switching System Management Information System (AEMIS) and Customer Network Control Center (CNCC) have been designed with the minicomputer located at the customer premises rather than a OTC central office or a data processing center. This arrangement has created unique considerations and problems associated with the maintenance of the telephone system where it involves the minicomputer hardware or software.

7.02 It is recommended that until minicomputer maintenance becomes cost effective for the customer premises organization, those processors should be maintained by existing Minicomputer Maintenance Groups (MMGs) in the network organization.

7.03 The reasons for self-maintenance at customer premises minicomputers include cost reduction improved system reliability, operational integrity, and improved utilization of personnel. An added factor with the customer premises system is that the minicomputer is an integral part of the total service offering for which the OTC has overall maintenance responsibility. Support for these

systems is provided by the same structure as other centrally developed OSS.

7.04 Close coordination will be required between the customer premises organization and the OTC minicomputer support group when planning for self-maintenance. Minicomputer support group resources should be utilized for planning the support of customer premises minicomputer systems. (Refer to RL 78-12-227.)