CENTRALIZED AUDIT, PARAMETER AND ERROR RECONCILIATION (CAPER) CENTER ADMINISTRATION

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1. GENERAL

1.01 This section provides guidelines and procedures for administering the LMOS data base maintenance. While titles used in this section may vary, they shall apply to employees who have supervision over a particular function of the data base maintenance effort described in this section or to employees who have been assigned to perform the duties described.

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

1.03 The LMOS data base is a valuable corporate asset which must be accurately and efficiently maintained. Creation of a CAPER center in each section will cause the migration of the data base maintenance function from one of relatively low priority, in an Automated Repair Service Bureau (ARSB), to the number one priority in the CAPER center.

1.04 The primary goals of the CAPER center are to:

(1) Reduce the maintenance expense required to maintain and manage the LMOS data base by reducing Automatic Line Record Update (ALRU) errors.

(2) Improve LMOS data base accuracy.

(3) Improve productivity of the Input/Output (I/O) clerical work force in the CAPER center and in the CRSAB.

1.05 To facilitate work force flexibility, the CAPER group should be co-located with the Centralized Repair Service Attendant Bureau (CRSAB). This will permit effective utilization of Repair Service Attendants to assist in performing the CAPER functions during low call volume periods. If local conditions dictate, the CAPER center may be located away from the CRSAB. In this case, the CAPER center can be used for an emergency back-up if the CRSAB were to be evacuated.

1.06 The LMOS data base should contain a complete and accurate line record for every telephone and circuit number billed by Customer Record Billing (CRB) or Customer Record Information System (CRIS). This includes all intrametro private lines. A mechanized procedure for loading intermetro and interstate circuits is being researched by General Headquarters (GHQ) staff.

2. CAPER CENTER RESPONSIBILITIES

2.01 Listed below are CAPER Center Responsibilities, they include:

(a) Correct Automatic Line Record Update (ALRU) errors. This includes all Service Order Reader, Packet Processor, and Interface errors. Refer to Section 660-168-230 for details on error message processing.

(b) Input cable throws, load balance transfers, reconcentrations (recons), and line or station transfers (LST), except transfers required for changes on service orders. Changes in service order assignments must be passed to the Service Order Completion Center by the technician or the Loop Assignment Center (LAC) prior to the order being typed "complete" into SORD. Service order clearance cuts must be input on the due date of the service order.

(c) Schedule and request Data Base Audits from Comptrollers. A complete Data Base Audit is required at least once a quarter. The discrepancies must be corrected in a timely manner.

(d) Process class of service changes using the Class of Service/Line Count (CA101) monthly report. The working numbers with a service order date, which is after the run date of the previous CA101 report, should be verified to insure that the line records contain the correct class of service. The correct class of service will be shown on the CA101 report under the column headed class of service (CLASS SVC). The CA101 monthly report will be sent to the CAPER Center Manager direct from Comptrollers.

(e) Verify LMOS line records and correct any discrepancies found using Form BS-225, Loop Assignment Center Record Quality to MDF-Work Sheet. The LAC Records Quality Exercise is required for each LAC once a quarter. Form BS-225 will be sent to the CAPER Center by the LAC. Refer to Section 680-800-900SW for details. This BSP should be available in the first quarter of 1982.

(f) Load telephone numbers and circuits which are missing from the data base. These are identified from Clipper/ Stuffer program rejects, COSMOS to LMOS rejects, and other program rejects which compare other data bases with LMOS.

(g) Coordinate the updating of Cable and Office Equipment (OE) parameter files. The parameter changes are required prior to the additional facilities being assigned. Notification of parameter changes is received from LAC, RSC, PSC, BSC, LNAC, and CAC. Changes must be reviewed for correctness and format and then sent to Comptrollers for input to LMOS.

(h) Update the data base for area transfers if corrections are not made via service orders.

(i) Correct line record discrepancies detected by ARSB forces during trouble report processing.

(j) Coordinate with the following groups to obtain necessary source information to correct data base errors: Central Office, Loop Assignment Center, Business, Residence and Public Service Centers, ESS Recent Change Memory Administration Center (RCMAC) and ARSB's. A locally developed office log should be maintained to insure that all investigation requests needed to properly maintain the data base are returned in a timely manner.

(k) Maintain and update defective pair information from the following input sources received from the LAC, ARSB, and MMC:

1. Form SW-6180, Report of Defective Cable Pairs
2. Form E-6414, Conformance Testing
3. Form E-6253, Bulk Defective Pair Dispatch Ticket

Refer to Sections 620-050-020, 660-101-303, and Defective Pair Recovery Plan (V61.308) for details.

(l) Correct line record discrepancies detected by the Data Base Consistency program. The discrepancies listed on Form E-4680-D-2 must be corrected on a monthly basis. Form E-4680-D-2 will be sent to the CAPER Center each month from Comptrollers or by General Headquarters (GHQ) staff.

(m) Determine the cause (work group) of recurring ALRU errors and coordinate interdepartmental quality reviews. A review of 25 ALRU errors will be required when the percent service orders in error is in the L or U Band or the six month trend is a negative trend. Refer to parts 10 and 11 for details.

(n) Maintain the LMOS I/O Position Manual which defines the various LMOS audits, ALRU error messages, Data Base Consistency and also lists the proper methods of researching and correcting these error messages. This is the primary source of information for day to day maintenance activity. The position manual should consist of the latest issue of the following BSP's:

Section 660-168-230
Automatic Line Record Update (ALRU) Error Message Processing

Section 660-168-121
Automated Repair Service Bureau - Receive and Process Line Record Update Inputs - Position Practice

Section 660-168-132
Automated Repair Service Bureau - Description of Customer Line Record Fields - User Guide

Section 660-168-162 or
Section 660-168-262
Automated Repair Service Bureau - Update Cable Data - Position Practice

Section 660-168-163
Automated Repair Service Bureau - Guide for Identifying Conflicts - User Guide

Section 680-500-902SW
Service Order Routine Loop Assignment Center

Other BSP's referenced in this practice should also be maintained in the CAPER center.

(o) Provide temporary access to cathode ray tubes (CRT) for other work

groups to make manual corrections to LMOS data base, when required for other system conversions. e.g., taper codes needed for LCRIS conversions.

3. LOOP ASSIGNMENT CENTER (LAC) RESPONSIBILITIES

3.01 Some of the responsibilities performed by the LAC are as follows:

(a) Comply with the latest issue of Section 680-800-010, Resistance Zoning and Section 680-500-902SW, Service Order Routine.

(b) Comply with the latest issue of Section 620-050-020, Cable Transfer Administration. The Report of Defective Cable Pairs, Form SW-6180, should be attached to the Cable Transfer, Form SW-6572.

(c) Notify the CAPER center of all cable parameter changes 30 days in advance of the change. This is essential to permit orders using the new cable pairs to properly post to the data base.

(d) Verify entries in the Exchange Customer Cable Record (ECCR) at the request of the CAPER center. The volume of work to be handled daily may be negotiated locally. They should be handled in a timely manner to prevent the volume of requests from becoming too large.

(e) Forward the Test Center copy of all line or station transfers (LST) to the CAPER center at the same time it is distributed to other work groups. The cable trouble ticket number (CTTN) and defective condition should be shown on the LST per Section 680-550-900SW.

(f) Notify the Service Order Completion Center of all line or station transfers (LST), including all central office initiated corrections, prior to the order being typed "complete" into SORD.

4. AUTOMATED REPAIR SERVICE BUREAU (ARSB), MAINTENANCE MANAGEMENT CENTER (MMC) AND CONSTRUCTION MANAGEMENT CENTER (CMC) RESPONSIBILITIES

4.01 The ARSB, MMC, and CMC's responsibility requires compliance with the latest issue of Section 620-050-020, Cable Transfer Administration. The ARSB responsibilities may be locally delegated to other work groups with documentation and tracking by the Cable Transfer Committee. The delegated work groups (ARSB, MMC, CMC, LAC) should forward the completed transfer or recon forms to the CAPER center within one working day of field completion. On large throws or recons the completed sheets must be sent to the CAPER center each day. The report of Defective Cable Pairs, Form SW-6180, should be attached. Other responsibilities include:

(a) The processing of all temporary denial and restoral lists by the ARSB.

(b) When line record discrepancies are detected during the trouble report process, the ARSB will forward the hand corrected basic output report (BOR) to the CAPER center for input.

(c) The MMC or ARSB should forward corrected copies of Form E-6414, Conformance Testing and Form E-6253, Bulk Defective Pair Dispatch Ticket to the CAPER Center within one working day of field completion.

5. NETWORK MAINTENANCE RESPONSIBILITIES

5.01 The Frame Attendants will verify central office equipment and cable pairs at the request of the CAPER center. The volume of work to be handled daily may be negotiated locally. The requests should be handled in a timely manner to prevent the volume of verifications from becoming too large.

6. LINE AND NUMBER ADMINISTRATION CENTER (LNAC) RESPONSIBILITIES

6.01 The LNAC will notify the CAPER center at least 45 days in advance of changing office equipment (OE) ranges or issuing originating equipment assignment lists which contain a new range of OE.

7. CIRCUIT ADMINISTRATION CENTER (CAC) RESPONSIBILITIES

7.01 The routing supervisor in the CAC will notify the CAPER center at the same time that the other work groups are notified of new NNX's. This is normally 90 days before a new NNX is activated.

8. RESIDENCE, BUSINESS AND PUBLIC SERVICE CENTERS (RSC/BSC/PSC)

8.01 The RSC/BSC/PSC will process requests for verification of listed name, billing number, service address, etc.; within two working days of receipt. Under local agreement the CAPER center may be provided with current CRB/CRIS microfiche and/or a SORD terminal.

8.02 RSC/BSC/PSC will also be responsible for notifying the CAPER center 45 days in advance of issuing a new Special Billing NNX. This is very important since orders with invalid NNX's will fail to post to LMOS.

9. LMOS DATA BASE MAINTENANCE MEASUREMENT PLAN

9.01 CAPER centers will be measured on a monthly basis. For details on the measurement plan, refer to Section 660-168-902SW.

10. ALRU ANALYSIS ADMINISTRATION

10.01 The objective of a successful ALRU Analysis program is the reduction of ALRU errors and maintenance expense while improving the accuracy of the LMOS data base. The key to successful analysis is to concentrate your efforts on the most critical problem area first. As these are resolved, move on to the next critical area. The reduction of ALRU errors will improve the accuracy of the data base and reduce the expense required to maintain the data base.

10.02 Trend analysis used in conjunction with action levels enables the analyzer to quickly evaluate each element of the ALRU process and to identify the most critical areas. This analysis plan will enable the CAPER center to recognize and correct potential ALRU problems before they adversely affect service results.

10.03 The CAPER center shall monitor the ALRU results for each ARSB. The ARSB results can be obtained from the CAPER Error Percentage Report (CEPR) on a daily basis. Trend data should be posted on a monthly basis. Exhibit 1 should be used to post the CAPER center and ARSB trends. In addition to the percent service orders in error, the other data base indicators can be trended on this form.

10.04 Once trends are established, action levels can be determined for each ARSB. Establishing an action level is the quickest way for a CAPER center to be alerted when a particular bureau needs atten-

tion. This enables the center to be alerted of a potential service problem before it becomes a major problem. The established action level should be shown on the monthly trend form.

10.05 When an action level is exceeded, a detailed analysis should be made. The detailed analysis should reveal the type of error being received and the section of the service order causing the deterioration in service. Exhibit 2 should be used to document the detailed analysis. A minimum of three days errors should be analyzed in order to reflect the true problem. Appendix 1 can be used as a stroke sheet for this analysis.

10.06 Once the major problem is identified, an Interdepartmental review should be conducted to determine the cause.

11. INTERDEPARTMENTAL LMOS/ALRU QUALITY REVIEW

11.01 The primary purpose of the review is to assist all involved departments in reducing errors and improving the quality of work. The review is a guide to encourage local interdepartmental cooperation in a mutually beneficial objective: error reduction.

11.02 The review must be a team effort to be successful. The Team should be staffed by experienced, knowledgeable key people from the following segments as necessary: CAPER Center, Loop Assignment Center, Residence Service Center, Business Service Center and Public Service Centers. Representation for the review should be determined from the detailed analysis.

11.03 A review of 25 actual ALRU errors should be made to determine the cause of the problem identified by the detailed analysis. The completion service order (the BEFORE order on the side by side ALRU printout) should be compared to the PR or CC copy of the originating service order to determine what caused the error. Once the cause of the problem is identified, the Team can recommend the corrective action required. The corrective action project should then be assigned to the persons who can carry out the recommendation. The results of the review and the recommendations of the Team must be documented. Exhibit 3 can be used for this documentation.

11.04 Initiating corrective action based on the analysis and review is essential to the success of the program. It is the responsibility of the Team to insure that corrective actions are implemented and completed in a reasonable time frame. A successful analysis and review process will assure that corrective action projects are properly planned and implemented so that the programs do not result in the misdirection of available upkeep funds and personnel.

11.05 Trend data should be monitored after the corrective action project is completed to assure that the project achieved its objective.

11.06 Proper corrective action must be the end result of the ALRU analysis process. Successful corrective action projects will benefit all segments in reduced costs, better accuracy, and fewer frustrations. The success of the corrective action project will vary directly with the emphasis and follow up by local managers in all segments.

EXHIBIT 1

CAPER CENTER ADMINISTRATION

MONTHLY TREND

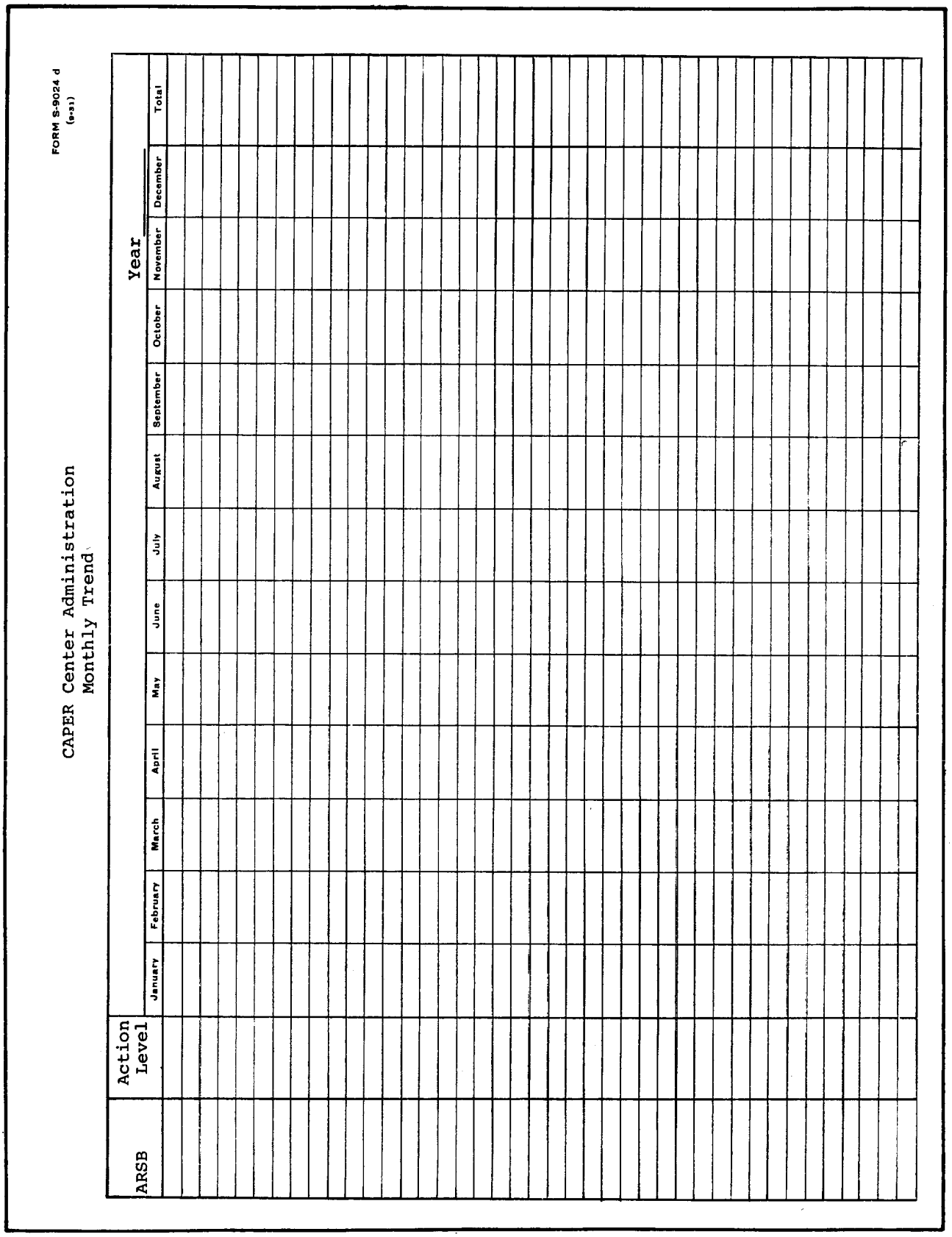

EXHIBIT 2

ALRU ANALYSIS

ALRU ANALYSIS

SECTION: _____ DATE: _____
ARSB: _____ PREPARED BY: _____
PERIOD COVERED: _____

HISTORICAL DATA (3 mo. avg. - CEPR Report)
SERVICE ORDER READER ERRORS: _____
PACKET PROCESSOR ERRORS: _____
SERVICE ORDERS WITH ERRORS: _____
PERCENT SERVICE ORDERS IN ERROR: _____

ALRU ERRORS BY SERVICE ORDER SECTION

Section	# of Errors	Percent of Errors
I. ID and Listing		
II. Traffic		
III. Billing		
IV. Remarks		
V. Service and Equipment		
VI. Assignment		
VII. Statistics		
VIII. LMOS Tables		
IX. TOTAL		

MAJOR CONTRIBUTING ERROR MESSAGE: _____

REMARKS: _____

DATE REVIEW SCHEDULED: _____

EXHIBIT 3

LMOS/ALRU

INTERDEPARTMENTAL REVIEW

LMOS/ALRU INTERDEPARTMENTAL REVIEW

SECTION: _____ DATE: _____
ARSB REVIEWED: _____ % S.O. IN ERROR: _____
LAC REVIEWED: _____ RSC/BSC REVIEWED: _____
DATE OF REVIEW: _____

1. TEAM MEMBERS DEPARTMENT

A. _____ _____
B. _____ _____
C. _____ _____
D. _____ _____
E. _____ _____

2. OBJECTIVES OF REVIEW: _____

3. SERVICE ORDER SECTION (WORK OPERATION) REVIEWED: _____
_____

A. NO. OF ERRORS REVIEWED: _____
B. NO. OF SERVICE ORDERS REVIEWED: _____

4. CAUSES DETECTED:

A. _____
_____
B. _____
_____
C. _____
_____

5. RECOMMENDATIONS OF TEAM FOR CORRECTIVE ACTION (PROJECTS):

A. _____
_____
B. _____
_____
C. _____
_____

6. CORRECTIVE ACTION PROJECTS

	PROJECT ASSIGNED TO	SCHEDULED COMPLETION DATE
A.	_____	_____
B.	_____	_____
C.	_____	_____

7. WERE THE OBJECTIVES OF THE REVIEW ACHIEVED: _____
_____