

NETWORK ADMINISTRATION RESPONSIBILITIES AND ORGANIZATION MANAGEMENT RESPONSIBILITIES

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1.03 References in this section to methods, planning data requirements, service levels and equipment quantities are based on American Telephone and Telegraph Company recommendations, and are generally contained in the Dial Facilities Management Practices available on standing orders from the Western Electric Co., Inc.

1.04 Any reference to Bell System product names may be substituted by outside vendor names, if applicable. All recommendations should apply with minimal modification when using other vendor products.

1.05 Included in this section are responsibilities directly related to the Network Administration job functions of Local Office and Toll/Tandem Administration, Total Network Data System, and Network Management.

1.06 Responsibilities related to No. 4 ESS Toll Tandem Administration and Trunk Administration will be included in future updates of this section.

1.07 Throughout this section, the term "Administrator" is used to identify that management supervisor who maintains responsibility for the activity being discussed.

2. EVOLUTION OF NETWORK ADMINISTRATION

2.01 The nature and scope of the Network Administration responsibilities have changed significantly in evolving to the present day responsibilities. A review of the development of the Network Administration job may help in understanding these responsibilities.

2.02 For this purpose, an appendix is attached which briefly summarizes the "Evolution of Network Administration Job Responsibilities".

3. NETWORK ADMINISTRATION RESPONSIBILITIES

LOCAL

A. Data Administration

3.01 The local Network Administrator is responsible for the scheduling, recording, posting and validity checking of data required to properly administer, evaluate and design the switching system(s). This data may be obtained using various

methods, to include: manual register reading, recording on film and automated data systems. Some of the specific activities are listed in the following paragraphs.

3.02 *Traffic and Service Measuring Devices*

- (a) Review the arrangements of installed measuring devices to determine if their features are being completely utilized and that required data measurements are being obtained.
- (b) Develop and/or evaluate cross-connection of service, usage and peg count measurement and storage devices to associated facilities.
- (c) Establish controls to insure proper operation of measuring devices.
- (d) Administer trouble detection routines and obtain resolution using specific measuring device procedures.
- (e) Review maintenance routines relating to measuring device integrity.
- (f) Review data section of network design order and compare with actual data available for the office.

3.03 *Data Collection*

- (a) Identify and obtain data required for:
 - Network Administration
 - Network Design Engineering
 - Trunk Servicing and Forecasting
 - Network Control
 - Division of Revenue
 - Marketing
 - Business Services
 - Service improvement activities
 - Other special requirements
- (b) Determine and verify office, network, and component busy hours.
- (c) Publish for all involved groups the schedule for collection of data and measuring device operation.
- (d) Administer collection, transcribing, processing and distribution of data.

3.04 Data Validation

- (a) Validate the basic network data before providing to users.
- (b) Coordinate with maintenance force to resolve situations where data do not reflect actual equipment operation and are, therefore, invalid.
- (c) Reconstruct any missing or invalid data through analysis of available data following accepted guidelines and procedures.

B. Equipment Utilization

3.05 The Network Administrator is responsible for optimum loading, balancing and utilization of installed equipment. The Administrator must use a variety of tools such as: load balance data, forecasts, official office capacities, loading plans, administrative data analysis, etc, to handle growth while maintaining objective levels of service. Provision of the required trunk network at the proper time is also a major responsibility of the Network Administrator. Some specific activities are listed in the following paragraphs.

3.06 Main Station Loading Plans

- (a) Develop detailed loading plan for use by assignment force.
- (b) Review official office capacity, growth forecast, class of service demand, etc.
- (c) Evaluate changes in growth and/or demand levels.
- (d) Evaluate load balance, present and future, considering demand by class of service, new services, capacity changes, etc.
- (e) Actively participate on all committees involved in servicing regular, large job order assignments or special demands.

3.07 Line and Number Administration

- (a) Ensure that accurate, up-to-date assignment records are available for customer service forces.
- (b) Follow prescribed line assignment practices and procedures.

- (c) Insure adequacy of advanced assignments.
- (d) Monitor ongoing assignment activity interdepartmentally to ensure equitable distribution of load (CCS).
- (e) Follow up on conformance to loading plan.
- (f) Develop percentage of usable lines and numbers due to reservations, class of service restrictions and in-out activity.

3.08 Equipment Operation

- (a) Evaluate current network data using procedures such as comparisons with historical performance, designed specifications and average holding times. Review data regularly to insure that installed equipment is operating properly and in the most efficient manner.
- (b) Coordinate with maintenance force in correcting instances of improper or inefficient equipment operation that are found through data analysis.

3.09 Trunk Network/Administration

- (a) Determine adequacy and integrity of in-service trunking network as compared to routing guides, design trunk estimates, etc.
- (b) Coordinate with trunk servicing group and maintenance force to ensure trunks are in service prior to forecasted need.
- (c) Ensure that accurate trunk group and routing records are maintained.
- (d) Assist Trunk Engineer and Maintenance Supervisor in overcoming roadblocks to implementing required trunk network.
- (e) Monitor the trunking network in a real time mode and take appropriate action where required.
- (f) Monitor and evaluate special announcement or mass calling arrangements and request relief or rerouting if required.
- (g) Monitor network during periods of unexpected load from disasters, natural or man-made, and participate in local network control efforts.

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3.10 *Load Balance*

- (a) Maintain complete load balance (line and trunk) monitoring program following prescribed practices.
- (b) Evaluate balance in terms of objectives and possible capacity loss due to imbalance.
- (c) Determine need for and quantity of rearrangements to achieve desired balance.
- (d) Issue, or arrange for, transfers to correct imbalance.

3.11 *Other Balance Considerations*

- (a) Review and monitor balance within and between groups of common control equipment.
- (b) Request relief or rearrangement to correct imbalance when these conditions produce or have the potential of producing a service reaction.
- (c) Review future equipment orders and evaluate proposed equipment group layouts.

C. *Office Status Evaluation*

3.12 The Network Administrator is responsible for daily analysis of the switching network. System analysis incorporates the integrated review of measured service, load and volume. Office and component group capacities must be determined for frequent review of load versus capacity. Inherent in the evaluation of office status is protection of future service to be provided by the office. The Administrator monitors growth sizing and scheduling to insure sufficient switching capacity to meet forecasted demand. Some specific activities are listed in the following paragraphs.

3.13 *Switching System Capacity*

- (a) Compute main station capacities of lines, terminals, switching paths and each component of common equipment as required to evaluate actual performance of switching system.
- (b) Review official office capacities and resolve items of disagreement with design engineer, if required.

3.14 *Data Analysis*

- (a) Maintain trends on key items of office data (CCS/MS, Call Rate, Holding Times, etc).
- (b) Test actual or projected values against empirical data.
- (c) Evaluate actual office capacities and office characteristics on an ongoing basis and determine degree of change in exhaust of current office.

3.15 *Growth and Utilization Forecasts*

- (a) Assess growth and utilization actuals versus the forecasted growth and load.
- (b) Evaluate impact of change in forecast of new service on current and future capacity and/or exhaust.

D. *Service Problem Analysis and Corrective Action*

3.16 The Network Administrator is responsible for identification, investigation and resolution of all network service problems. Service problems are defined as any condition where established system or local service objectives or levels are not met, with or without justification. This area of job responsibility is broad and requires proficiency in all skills and tasks associated with the Network Administrator's assignment. Some specific activities are listed in the following paragraphs.

3.17 *Service*

- (a) Prepare and distribute reports (or provide selected input data):
 - Network Service Management Plans
 - Dial Line Index
 - Load Balance Index
 - Percent Crossbar Tandem or 4A Ineffective Attempts Report (where applicable)
 - Percent Ineffective Attempts
 - Specific switching system data for Maintenance indices
 - All other network service related reports
 - All other Company or local reports, as required.
- (b) Monitor service daily using near real-time service reports, manual or mechanized.

3.18 Diagnose Cause(s) of Service Problem

- (a) Evaluate all indications of service impairment and/or blockage, such as dial tone delay, incoming matching loss, overflow, tandem and end office ineffective attempts, etc, and compare against offered load and/or volume.
- (b) Initiate expanded analysis required for identification of service problems obtained from data analysis, service observations analysis, network call completion reports, customer reports and complaints, etc.
- (c) Coordinate service monitoring and service problem resolution with network service center(s).

3.19 Corrective Action

- (a) Coordinate departmentally and interdepartmentally to implement corrective action plan.
- (b) Develop and/or institute switching system and network control plan to minimize service impact in connection with abnormal service situations; such as, natural disasters, elections, telethons, strikes, etc.
- (c) Frequently evaluate and update predicted service problems, such as forecasted weak spots or minor overloads, and review interim relief plans.

E. Transition Management

3.20 The Network Administrator is responsible for analysis of plans for equipment additions, replacements, removals, and/or rearrangements. The Administrator must evaluate the impact this type of activity will have on service and must insure that Methods of Procedure (MOP) for transition result in required equipment configurations with minimum equipment outages and service deterioration. Some specific activities are listed in the following paragraphs.

3.21 Equipment Transition and/or Additions

- (a) Participate in network design order activities and provide input on any items for consideration by design during detailed job layout.

- (b) Review equipment order and job specifics in detail.
- (c) Input specific data and service considerations during developmental stage of transition procedures.
- (d) Determine by definite time frame the maximum allowable quantity of equipment (by type and group) that may be removed from service for maintenance and/or transition activity during additions or rearrangements.
- (e) Evaluate proposed transition Method of Procedure (MOP) and insure that desired equipment configuration is realized within allowable equipment out-of-service guidelines, with consideration for time of day, day of week, and time of year.
- (f) Participate on the interdepartmental job contact committee involved in acceptance and approval of installation or transition activities.
- (g) Provide all translation, cross-connection and assignment information specified as administration responsibility.

3.22 Transition Administration

- (a) Monitor customer load, service and equipment out of service, during busy and non-busy periods, while transitions or additions are in progress.
- (b) Issue job status-service reports prior to, during, and after major additions.
- (c) Monitor availability of turnover and/or acceptance tests and maintain a complete set of related records covering new or rearranged equipment.
- (d) Monitor trunk and routing network during major transitions (office replacements, etc) to insure adherence to cutover plan.

F. Personnel Administration

3.23 The Network Administrator is responsible for coaching, developing and evaluating subordinates, management and nonmanagement, in administrative and technical aspects of their jobs. The Network Administrator determines work force requirements, training needs, and administers

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personnel practices and policies. Some specific activities include:

- (a) Apply Company policies and objectives concerning personnel matters (eg, absence, leaves of absence, disabilities, etc).
- (b) Identify job responsibilities of subordinates and jointly set objectives and targets for productivity.
- (c) Review and appraise subordinates' work performance on a regular basis.
- (d) Recommend or administer salaries and wages.
- (e) Evaluate changes that affect present and future job responsibilities of those people supervised, such as organizational changes and introduction of new switching equipment.
- (f) Participate in planning adequate work force.
- (g) Determine training requirements and plans for individuals in the work group and follow up to see that this training is given.
- (h) Review and evaluate organization for efficiency of operation.
- (i) Maintain positive interdepartmental working relationships.
- (j) Review and maintain safe working conditions
- (k) Ensure that records, etc., are maintained for security.

TOLL/TANDEM

A. Data Administration

3.24 The Toll/Tandem Network Administrator is responsible for the scheduling, recording, posting and validating the data required to administer, evaluate and engineer the toll and tandem switching systems. These data may be obtained using various methods, to include manual register readings, recording on film and automated data systems. Some of the specific activities are listed in the following paragraphs.

3.25 Traffic and Service Measuring Devices

- (a) Review installed measuring devices to determine if their features are completely utilized and required data measurements are obtained.
- (b) Develop and/or evaluate cross-connections for service, usage and peg count measurement and storage devices.
- (c) Establish controls to insure proper operation of measuring devices.
- (d) Administer trouble detection and resolution using specific measuring device routines and procedures.
- (e) Review maintenance routines relating to measuring device integrity.
- (f) Review data section of network design order and compare with actual data available for the office.

3.26 Data Collection

- (a) Identify and obtain data required for:
 - Network Administration
 - Network Design Engineering
 - Trunk Servicing and Forecasting
 - Network Management
 - Division of Revenue
 - Business and Customer Services
 - Service improvement activities
 - Other special requirements
- (b) Determine and verify tandem switch and component busy hour.
- (c) Publish schedule for collection of data and measuring device operation.
- (d) Administer collection, posting, processing and distribution of data.

3.27 Data Validation

- (a) Validate the basic network data before providing to users.

- (b) Coordinate with maintenance force to resolve situations where data do not reflect actual equipment operation and are, therefore, invalid.
- (c) Reconstruct any missing or invalid data through analysis of available data following accepted guidelines and procedures.

B. Equipment Utilization

3.28 The Toll/Tandem Network Administrator is responsible for optimum loading, balancing and utilization of installed toll and tandem equipment. The Administrator must use a variety of tools such as load balance data, forecasts, official office capacities, administrative data analysis, etc, to service growth while maintaining objective levels of service. Some specific activities are listed in the following paragraphs.

3.29 Trunk Network Administration

- (a) Monitor adequacy and integrity of in-service trunking network as compared to routing guides, design trunk estimates, etc.
- (b) Coordinate with Trunk Engineer and Maintenance Supervisor to insure trunks are in service prior to forecasted need.
- (c) Maintain accurate trunk group and routing records.
- (d) Assist Trunk Engineer and Maintenance Supervisor in overcoming roadblocks to implementing required trunk network.
- (e) Monitor the outgoing trunk field in a real-time mode and take appropriate action where required.
- (f) Monitor arrangements made for tone and announcements and coordinate with Maintenance Supervisor in effecting required changes.
- (g) Monitor network performance and coordinate with Network Manager during periods where toll, tandem or local network control efforts are in effect.
- (h) Evaluate network call completion results and all other service reports. Evaluate, coordinate, and direct others as required to overcome obstacles and improve completions in the area served.

3.30 Assignment Administration

- (a) Coordinate with Network Manager—Trunking the development of an assignment plan for each toll or tandem office.
- (b) Monitor ongoing assignments to insure adherence to balance program.
- (c) Complete network administration portion of toll office trunk translations.
- (d) Receive, review, and file all pending and completed trunk orders, routing changes, and form codes. Provide follow-up to insure completion on required service date.
- (e) Provide source documents to update the number of trunks in each trunk group contained in the TNDS data base.

3.31 Equipment Operation

- (a) Evaluate current network data in depth (using established procedures) to insure that installed equipment is operating properly and in the most efficient manner.
- (b) Coordinate with maintenance force in correcting instances of improper or inefficient equipment operation that are found through data analysis.

3.32 Load Balance

- (a) Maintain complete incoming and outgoing trunk balance monitoring program following prescribed procedures.
- (b) Evaluate balance in terms of objectives and possible capacity loss due to imbalance.
- (c) Determine need for and quantity of rearrangements to achieve desired balance.
- (d) Issue, or arrange for, trunk transfers to correct imbalance.

3.33 Other Balance Considerations

- (a) Review and monitor balance within and between groups of common control equipment.
- (b) Request relief or rearrangement to correct imbalance when these conditions produce or have the potential of producing a service reaction.

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C. Office Status Evaluation

3.34 The Toll/Tandem Network Administrator is responsible for daily analysis of the switching network. System analysis incorporates the integrated review of measured service, load and volume. Trunk and equipment component group and switching capacities must be determined for daily review of load versus capacity. Inherent in the evaluation of office status is protection of future service to be provided by the office. The Administrator monitors growth sizing and scheduling to insure sufficient switching capacity to meet forecast demand. Some specific activities are listed in the following paragraphs.

3.35 Circuit and Equipment Capacity

- (a) Compute call-carrying capacities of switching equipment, each component of common equipment and all trunk groups as required to evaluate actual performance of switching system.
- (b) Review official office and network capacities with Network Design Engineer and resolve items of disagreement, if required.
- (c) Project both equipment and circuit capacities to exhaust of current office using actual data and growth patterns.

3.36 Data Analysis

- (a) Maintain trends on key items of office data (Percent Occupancy, Call Rate, Holding Times, etc).
- (b) Test actual or projected values against empirical data.
- (c) Evaluate actual equipment and circuit capacities and office characteristics on an ongoing basis and determine degree of change in exhaust of current office.

3.37 Growth and Utilization Forecasts

- (a) Assess growth and utilization actuals versus the forecast growth and load.
- (b) Evaluate impact of change in trunking forecast or new service offering on current and future capacity and/or exhaust.

D. Service Problem Analysis and Corrective Action

3.38 The Toll/Tandem Network Administrator is responsible for identification, investigation and resolution of all service problems. Service problems are defined as any condition where established system or local service objectives or levels are not met, with or without justification. This area of job responsibility is the most broad and requires proficiency in all skills and tasks associated with the Network Administrator's assignment. Some specific activities are listed in the following paragraphs.

3.39 Service

- (a) Prepare and distribute reports (or provide selected input data):
 - (1) Ineffective Machine Attempts report
 - (2) Specific load and service reports as required
 - (3) All other toll and tandem, Company or load reports, as required
 - (4) Division of Revenue Traffic Separations Reports
- (b) Monitor service daily using near real-time service reports, manual or mechanized.

3.40 Diagnose Cause(s) of Service Problem

- (a) Evaluate all indications of service delay and/or blockage such as sender attachment delay, incoming matching loss, trunk overflows, ineffective machine attempts, incoming trunk service observations, etc, and test against offered load and/or volume.
- (b) Initiate expanded analysis required for identification of service problems obtained from data analysis, service observation analysis, network call completion reports, customer reports and complaints, etc.
- (c) Coordinate service monitoring and service problem resolution with network service center(s), and/or network management center.

3.41 Corrective Action

- (a) Coordinate departmentally and interdepartmentally in implementing corrective action plan. If independent telephone companies are involved in any problem(s), coordinate corrective action with their appropriate representatives.
- (b) Develop and/or institute switching system and network control plan to minimize service impact during abnormal service situations such as: natural disasters, elections, telethons, strikes, etc. Coordinate with Network Management Center.
- (c) Evaluate programs to alleviate predicted service problems such as forecasted weak spots or minor overloads.

E. Transition Management

3.42 The Toll/Tandem Network Administrator is responsible for analysis of plans for equipment additions, replacements, removals and/or rearrangements. The Administrator must evaluate the impact this type of activity will have on service and must insure that Methods of Procedure (MOP) for transition result in desired equipment configurations with allowable equipment outages and service deterioration. Some specific activities are listed in the following paragraphs.

3.43 Equipment Transition and/or Additions

- (a) Participate in network design order activities and provide input on any items for consideration by the engineer during detailed job layout.
- (b) Review equipment order and job specifics in detail.
- (c) Input specific data and service considerations during developmental stage of transition procedures.
- (d) Determine maximum allowable quantity of equipment (by type and group) that may be removed from service for maintenance and/or transition activity during additions or rearrangements.
- (e) Evaluate proposed transition Method of Procedure (MOP) and insure that desired equipment configuration is realized within

allowable equipment out-of-service guidelines, with consideration for time of day, day of week, and time of year.

- (f) Participate on the interdepartmental job contact committee involved in acceptance and approval of installation or transition activities. Participate in joint operational check of all data measurement provisions for new equipment.
- (g) Provide all translation, cross-connection and assignment information specified as administration responsibility.

3.44 Transition Administration

- (a) Monitor office load, service and equipment or circuits out of service, during busy and non-busy periods, while transitions or additions are in progress.
- (b) Issue job status-service reports prior to, during, and after major additions.
- (c) Monitor availability of turnover and/or acceptance tests and maintain a complete set of related records covering new or rearranged equipment.
- (d) Monitor trunk and routing network during major transitions (office replacements, etc.) to insure adherence to cutover plan.

F. Personnel Administration

3.45 The Toll/Tandem Network Administrator is responsible for coaching, developing and evaluating subordinates, management and non-management, in the administrative and technical aspects of their jobs. The Administrator determines work force requirements, training needs, and administers personnel practices and policies. Some specific activities include:

- (a) Apply Company policies and objectives concerning personnel matters (e.g., absence, leaves of absence, disabilities, etc.).
- (b) Identify job responsibilities of subordinates and jointly set objectives and targets.
- (c) Review and appraise subordinates' work performance on a regular basis.

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- (d) Recommend or administer salaries and wages.
- (e) Evaluate changes that affect present and future job responsibilities of those people supervised, such as organizational changes and introduction of new switching equipment.
- (f) Participate in planning adequate work force.
- (g) Determine training requirements and plans for individuals in the work group and follow up to see that this training is given.
- (h) Review and evaluate organization for efficiency of operation.
- (i) Maintain positive interdepartmental working relationships.
- (j) Review and maintain safe working conditions.

TOTAL NETWORK DATA SYSTEM

3.46 The Engineering and Administration Data Acquisition System (EADAS) and the interfacing Traffic Data Administration System (TDAS) as well as many downstream processes combine to make up the Total Network Data System (TNDS). This computer-based system allows near real-time surveillance of measuring apparatus and equipment operation while providing downstream programs to validate and summarize network data. Those responsibilities which differ from the traditional Data Administration responsibilities are summarized below:

3.47 Data Base Integrity:

- (a) Provide initial input records for data base generation.
- (b) Update and verify all changes to EADAS, EADAS/ICUR and TDAS/CU Master Records.
- (c) Review "Data Base Output Reports" to detect errors in the input data; generate corrections.
- (d) Coordinate update activity of Individual Circuit Analysis program.
- (e) Solve problems of inaccurate output caused by improper scheduling and/or maintenance of data collection devices.

- (f) Coordinate or direct the maintenance of data collection devices.

3.48 Central Control Unit Activities:

- (a) Supervise operation of EADAS Central Control Unit (CCU).
- (b) Coordinate maintenance of the CCU computer and computer operations.
- (c) Oversee real-time data generation and processing of data on magnetic tape for downstream processing.
- (d) Administer the EADAS System Definition data base and Individual Circuit Usage Recording (ICUR) transactions.

3.49 User Applications:

- (a) Administer data collection apparatus to insure proper adequate equipment provisioning, layout, assignment, and verification.
- (b) Supervise preparation of assignments and cross-connections for all measuring equipment.
- (c) Determine meaningful threshold levels for calculated results.
- (d) Review exception report data and downstream data quality reports for identification of data quality errors.
- (e) Oversee initiation of data trouble reports.
- (f) Interpret and analyze data outputs.

NETWORK MANAGEMENT

A. Surveillance and Control

3.50 The responsibility of the Network Manager is to effectively and efficiently manage the flow of messages across the telephone network. The following activities permit the Network Manager to develop, organize, and maintain the capability to provide surveillance and control of a defined network cluster.

Data Base

3.51 Establish and maintain the data base required to perform the monitoring and control functions:

- (a) Incorporate data base for offices within the network center.
- (b) Modify and update the data base as changes occur in the amounts of equipment and trunks.
- (c) Revise network exception or display board.

Parameters and Thresholds

3.52 Establish and update average business day (ABD) parameters and threshold values.

- (a) Determine thresholds for exception reporting of critical machine data to include:
 - (1) Sender attachment delay (SADR)
 - (2) Marker peg count
 - (3) Ineffective machine attempts (IMA)
 - (4) Percent no circuit intertoll (NCIT)
 - (5) Percent no circuit toll connecting (NCTC)
 - (6) Speed of dial tone (SDT)
 - (7) Incoming matching loss (IML)
 - (8) Maintenance usage.
- (b) Determine ABD thresholds for exception reporting of critical trunk group data to include:
 - (1) Peg count
 - (2) Overflow
 - (3) Percent overflow
 - (4) Attempts per circuit hour in/out (ACH)
 - (5) Connections per circuit hour in/out (CCH)
 - (6) Percent occupancy.

- (c) Determine the most critical trunk groups which are to be part of the exception reports and those that should be available on demand.

Network Performance

3.53 Monitor average business day (ABD) network performance.

- (a) EADAS/NM—Monitor status board and use cathode-ray tubes (CRTs) to interrogate system for further details as required.
- (b) Conventional System—Monitor teletype or computer output for exception data and/or reports.
- (c) Communicate with other Network Managers, Network Administrators, Maintenance Managers, and Managers—Operator Services.
- (d) Use news media including newspapers, radio and television to forewarn of potential network problems.

Abnormal Conditions

3.54 From analysis of data—such as sender delay, no circuit conditions, ineffective machine attempts and common equipment data—detect abnormal conditions.

- (a) Review data to determine whether it is valid.
- (b) Review valid data to detect abnormal traffic conditions.
- (c) If data is invalid, take action to insure validity of future data.

3.55 Investigate abnormal conditions.

- (a) Determine the extent of the problem(s).
- (b) Determine the probable cause(s) of the problem—switching machine congestion or facilities failure.
- (c) Assess the probable effect on the source machine, other machines and the network if abnormal conditions were allowed to continue.

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Preplanning

3.56 Preplan the means, actions and controls which may be required to minimize service degradation during periods of network overload.

- (a) Determine the type and availability of control features within the cluster.
- (b) Establish contingency plans for failure of major switching machines or facilities.
- (c) Plan reroutes and augmented trunk assignments for periods of predicted overloads (holidays).
- (d) Plan for and coordinate use of alternate facilities or reroutes during periods of known focussed overloads.
- (e) Coordinate activities with other network managers and/or independent company representatives as required.
 - (1) Develop subtending office preplans and coordinate with other machines in the cluster.
 - (2) Plan controls in connection with machine cutovers, rehomeing or office reclassification.
 - (3) Plan procedures for use of various network management communication systems.
- (f) Develop plans for restoration of facilities using approved Company and/or area administrative practices.
- (g) Coordinate critiques of network management action to determine the effectiveness of controls. Determine appropriate changes in future control plans.
- (h) Establish procedures for notification when control actions (protective or expansive) are initiated.

Controls

3.57 Initiate and coordinate controls as required to maintain the effectiveness of the network.

- (a) Determine the type of corrective action and/or control measures to use.

- (1) Decide where and when the corrective action and/or controls should be applied.
- (2) Establish the priorities for application.
- (3) Direct the application of corrective action and/or control.
- (4) Monitor data to assess effect of controls.
- (5) Release controls as soon as warranted.

(b) Coordinate the identification and correction of repeated network problems with departments and companies concerned:

- (1) Other Network Managers
- (2) Maintenance and other Operations personnel
- (3) Network Engineers
- (4) Maintenance and/or Administrative Managers for Switching Control Centers (SCC)
- (5) Superiors and Higher Management.

(c) Assist other network managers by supplying data available at the home Network Management Center.

B. Administration and Reporting Activities

3.58 The network management organization is responsible for the following administrative activities:

- (a) Maintain routing charts and associated records, i.e., automatic alternate routing (AAR) charts.
- (b) Prepare and distribute Network Management reports, i.e., evening report.
- (c) Analyze weak spots in the network cluster. Initiate and coordinate remedial action.
- (d) Plan and conduct tours of Network Management Center for personnel from regulatory commissions, other departments and/or companies as required.
- (e) Participate on cutover and transition management committees.

- (f) Coordinate updating of generic programs and the required documentation, as well as the maintenance of system and company policies and practices.

C. Personnel Administration

3.59 The Network Management Supervisor is responsible for training and development of subordinates in the administrative and technical aspects of their jobs. The supervisor determines work force requirements and scheduling, plans training, and administers personnel practices and policies. Some specific activities include:

- (a) Schedule personnel to meet requirements for average busy day and peak day work loads.
- (b) Apply company policies and objectives concerning personnel matters (e.g., absence, leaves of absence, disabilities, etc).
- (c) Identify job responsibilities of subordinates and jointly set objectives and targets.
- (d) Review and appraise work performance of subordinates.
- (e) Recommend or administer salaries and wages.

- (f) Evaluate changes affecting present and future job responsibilities of those people supervised, such as conversions to a 4A Peripheral Bus Computer System (PBC), a No. 4 ESS Machine, or the Engineering and Administration Data Acquisition System Network Management (EADAS/NM). Determine and schedule training and cutover activities.

- (g) Plan adequate work force for transitions and continuing activities.
- (h) Develop specialized local training programs for Network Management Center personnel and Network Administration and Maintenance personnel of cluster offices.
- (i) Review and evaluate organization for efficiency of operation.
- (j) Maintain positive interdepartmental working relationships.
- (k) Review and maintain safe working conditions.

TRUNK ADMINISTRATION

This part of the section will be furnished at a later date.