

NETWORK SUPERVISOR—ELECTROMECHANICAL

Personnel assigned as Network Supervisor-Electromechanical will generally be responsible for optimum loading, balancing, and utilization of installed equipment; daily analysis of local switching network performance; analysis of future local switching configurations and capacities; identification, investigation and resolution of service problems; and protection of service during equipment additions and/or rearrangements. Additionally, this position is responsible for all activities related to the scheduling, collection, validation, and provision of network design data, but may have a reporting Data Supervisor responsible for directly supervising these activities.

This position is responsible for the service and data activities for electromechanical switching entities **only**. This specialization is most practical in metropolitan areas, but is not precluded from use in outstate areas.

In addition to reporting data clerks (or a data supervisor), there are clerks reporting directly to this position. These clerks perform the nonmanagement duties and prepare reports and data summaries. A significant part of this position's responsibility involves the analysis of data, loading plan preparation, and other relatively technical functions.

Coordination between the incumbent and others within the Network Administration Organization, Network Department and other departmental groups is essential if the responsibilities of this position are to be discharged effectively.

DUTIES AND RESPONSIBILITIES	PERCENT OF TOTAL TIME
A. Equipment Utilization	30
B. Office Status Evaluation/Capacity Determination	20
C. Service Problem Analysis	15
D. Data Administration	15
E. Transition Management	10
F. Trunk Network Adequacy	5
G. Miscellaneous	5

NOTICE

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JOB TITLE: NETWORK SUPERVISOR—ELECTROMECHANICAL

DEPARTMENT: NETWORK

SUPERVISOR: NETWORK MANAGER—ADMINISTRATION

JOB SUMMARY

This position is responsible for the optimum loading, balancing, and utilization of installed equipment; the daily analysis of local switching network performance; the analysis of future local switching configurations and their capacities; and the identification, investigation, and resolution of all service problems. Additionally, this position is responsible for the protection of service during the installation of new equipment in the central offices within the area.

The area of responsibility for this position would usually encompass between two or four entities of local switching equipment in a metropolitan area. This equipment is electromechanical only and could be any one or a combination of panel, step-by-step, or crossbar types. The amount of main stations served by these entities would range between 30,000 to 70,000. This depends on the complexity of the job in the area.

DUTIES AND RESPONSIBILITIES

30% A. Analyzes data to insure that installed central office equipment is being efficiently utilized.

- (1) Analyzes data records to identify adverse trends of peg count, overflow, usage and/or holding time.
- (2) Reviews Central Office Maintenance Log to identify equipment out of service.
- (3) Analyzes data trends for all components versus the appropriate engineering criteria.
- (4) Analyzes data within and between groups of common control equipment for reliability.
- (5) Combines analysis of above items (1 through 4) and identifies adverse equipment operation and utilization situations.
- (6) Authorizes the distribution of network data trouble tickets to the central office maintenance supervisor for identified data troubles. Monitors activity to insure timely trouble correction and negotiates to remove obstacles.
- (7) Cooperates with the central office maintenance supervisor in investigating incidents wherein the data indicates that the equipment is not operating correctly, or where an equipment imbalance or excessive maintenance outage situation is evident.
- (8) Monitors load balance results to identify service problems caused by imbalance. Coordinates with Assignment Supervisor to correct imbalance.
- (9) Receives and analyzes network data, commercial forecasts, current plans, capacities and other load-related data. Studies various alternatives and develops a loading plan (consists of a description of assignment instructions in each entity, a description of office limitations, and separate demand and facilities charts for each entity). (This activity is coordinated with other network supervisors in multientity buildings with both electromechanical and ESS equipment).

- (10) Provides loading plan to Network Manager for approval. Upon approval, advises Assignment Supervisor in loading plan implementation.
- (11) Monitors effectiveness of loading plan by monthly review of working main station count versus the main station forecast and by continuing evaluation of the loading plan's effect on the office and its components.
- (12) Receives class-of-service assignments from Assignment Supervisor. Reviews and endorses the class-of-service assignments for new frames and monitors class-of-service balance.
- (13) Administers central office loading activities for area transfers and cutovers. Participates in meetings related to the serving and assigning of large orders and/or special demands. Cooperates with Assignment Supervisor in developing procedures to effect area transfers and cutovers.
- (14) Reviews and endorses data on intercept requirements, administrative factors, and percentage of usable lines and terminals received from Assignment Supervisor. Cooperates with the Assignment Supervisor in establishing main station capacities for line and number equipment.

20% B. Reviews and studies proposed equipment orders, analyzes data, and calculates capacities to insure that adequate central office equipment is scheduled to be provided in the future.

- (1) Studies proposed equipment arrangements and coordinates with Network Design Engineer and/or Equipment Engineer to effect changes of any unacceptable equipment arrangement.
- (2) Calculates main station capacities of lines, numbers, switching paths and of each component, including separate groups of dial pulse and multifrequency originating registers. Determines limiting item(s). Advises Network Manager regarding capacities and recommends courses of action. Negotiates with Network Design Engineer to insure that adequate central office equipment is scheduled.
- (3) Calculates projected engineering characteristics and oversees development of load-service relationships. Analyzes results and advises Network Manager of the results.
- (4) Calculates capacities to the exhaust of current office configuration. Analyzes results and recommends courses of action to Network Manager. Negotiates with Network Design Engineer and Plant Extension Engineer regarding growth size and scheduling.
- (5) Analyzes current office data to detect change in office characteristics. Identifies situations where these changes will affect office capacities and/or exhaust date. Advises Network Manager and negotiates with Network Design Engineer and/or Plant Extension Engineer for relief.
- (6) Analyzes commercial forecast to identify changes in forecast or the introduction of new services. Studies effect of these changes on current and future capacities. Advises Network Manager and negotiates with Network Design Engineer for relief.
- (7) Analyzes current data to identify effects of area transfers on both the "losing" and "gaining" offices. Studies data for possible changes in busy hours, effects on all components, potential changes of limiting item, and potential changes in office exhaust date; advises and recommends courses of action to Network Manager. Negotiates with Network Design Engineer, Planning Engineer and commercial in effecting the transfer.
- (8) Calculates busy season in-service requirements. Recommends to Network Manager for approval and coordinates with central office maintenance supervisor to insure that the requirements are met.

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15% C. Monitors and reviews all possible service problem indicators, investigates and studies data and other information to identify service problem cause and formulates and coordinates corrective action to remove or rectify the service problem cause.

- (1) Directs the monitoring of daily real-time service results. Studies selected daily service results for possible problem indications.
- (2) Studies network data, service observation failure summaries, and all other related data and investigates to identify cause of service problem. Directs the implementation of supplementary analysis techniques (event recorder, reorder trap circuit, etc) when necessary.
- (3) Originates corrective action plan and reviews progress of plan. Cooperates with and coordinates activities of other departmental groups to implement the plan and remove the problem cause.
- (4) Investigates and studies all available data to identify future service problems or weak spots. Advises Network Manager regarding these weak spots, develops interim relief plan and coordinates relief plan with other affected departmental groups.
- (5) Participates in the development of a local office or network control plan to minimize service impact caused by abnormal service conditions (disasters, telethons, elections, etc).
- (6) Analyzes office condition to identify a service condition that requires local network management action. Cooperates with Network Manager to determine required action and implements line load control procedures.

15% D. Controls, plans and coordinates the activities related to traffic measuring device administration, data scheduling and collection, and data validation and provision. (Assumes lower level data supervisor is reporting and supervising the data clerks).

- * (1) Receives network design order related problems concerning data measuring devices or traffic registration equipment from Data Supervisor. Negotiates with Network Design Engineer to resolve problems.
- * (2) Reviews assignments and input documents related to traffic measuring devices. Originates procedures to insure that devices are properly assigned initially and are updated as required.
- (3) Plans and controls busy hour study and selection of busy hours. Establishes method for checking possible shifts in busy hours. Endorses and provides data collection schedule to Network Manager for approval.
- * (4) Directs the overall data collection processes (including proper traffic measuring device operation). Cooperates interdepartmentally for the correction of data-related problem.
- * (5) Receives requests for data from departmental representatives with special data requirements. Oversees Data Supervisor to insure adequate and timely data collection and processing. Provides summarized data to Network Manager for distribution.
- (6) Oversees the monitoring of daily service results and coordinates with Data Supervisor to insure that data are collected for all potential high days. Establishes parameters for exception reporting (with mechanized systems).
- * (7) Analyzes network data and compiles summaries of data required for network design. Distributes data to design engineering upon Network Manager's approval.

* (8) Receives and reviews indications of data trouble (trouble tickets) identified by Data Supervisor. Distributes to central office maintenance supervisor for correction and monitors the prompt correction of data troubles.

* (9) Oversees and controls all activities and negotiates all obstacles related to data scheduling and collection and data validation and provision. Oversees and controls the activities of the Data Supervisor.

* Not applicable with TNDS Alternatives "B" and "C".

10% E. Studies and investigates planned central office equipment additions, arrangements and/or replacements. Supervises preparation of required cross-connections and translations. Plans for the efficient utilization of new equipment and the protection of service during the transition. Studies and interprets network data relating to the office before, during and after the equipment addition. Coordinates the Network Administration activities required for preparation of the method of procedure (MOP).

(1) Studies documents and capacity data relating to proposed growth job and its schedule. Advises and cooperates with Network Manager, Network Design Engineer, Plant Extension Engineer, and Equipment Engineer in final network design order preparation and growth job scheduling.

(2) Originates schedule for provision or cross-connections and/or translations. Oversees the preparation of these items. Reviews items with Network Manager and distributes actual cross-connections and/or translations to appropriate groups.

(3) Studies transition management study data. Prepares and recommends a plan for making equipment and trunks that are involved in rearrangements or modifications available to Western Electric Company (WECo). Reviews plan with Network Manager, who will approve plan.

(4) Originates a plan for the efficient use of any new equipment. Coordinates efforts to relocate or rearrange equipment when necessary. Distributes and coordinates plans with the central office maintenance supervisor, the WECo supervisor, and other departmental groups involved.

(5) Directs and oversees the preparation of load service, capacity and other load-related documents. Reviews these documents with Network Manager, who will approve them. Distributes the documents and any other information required by the job contact committee.

(6) Directs Data Supervisor to insure that service and load monitoring data are available for all required periods.

(7) Reviews and studies data gathered during period of transition. Determines if there is a deterioration of service due to the transition and coordinates with related departmental groups to effect a resolution of the service problem.

(8) Administers overall Network Administration involvement on the job contact committee. Analyzes all requests made upon Network Administration in relation to the addition and negotiates with central office maintenance supervisor, WECo. supervisor, Equipment Engineer and Network Manager to insure that the Network Administration responsibilities related to the addition are met.

(9) Coordinates the placement of new equipment into service with Assignment Supervisor, Data Supervisor, central office maintenance supervisor, WECo supervisor, trunk engineer, accounting (if necessary) and any other involved departmental group.

5% F. Analyzes trunk group data and monitors trunk network usage and activity. Coordinates with trunk administrator and/or engineer to insure an adequate trunking network.

(1) Supervises the processing of trunk orders and maintenance of trunk network records by clerks.

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- (2) Reviews trunk network configuration to insure that the in-service network is in agreement with the design trunk estimate (received from trunk engineer) and routing guides (received from central office maintenance supervisor).
- (3) Analyzes trunk records to insure that trunks are in service prior to perceived need. Coordinates with trunk administrator and/or central office maintenance supervisor for order initiation, placement of trunks in service and to overcome any obstacles preventing the implementation of the required trunk network.
- (4) Analyzes trunking data to identify trunk groups that are beyond capacity. Coordinates with trunk administrator for additional trunks or routing changes.
- (5) Analyzes trunking data to identify suspected trunk group troubles. Coordinates with central office maintenance supervisor for trouble identification and correction.
- (b) Determines if call volumes require mass calling arrangements and negotiates relief or rerouting with trunk administrator. Supervises the monitoring of local office and special announcements.

5% G. Miscellaneous

- (1) Represents the Network Administration activities at any meetings related to the service offered in the office.
- (2) Oversees preparation of and receives all reports related to the Network Administration activities. Reviews, endorses (or approves) and distributes reports accordingly.
- (3) Administers personnel-related activities for reporting supervisor and clerical force (Company policy and objectives, subordinates' performance, evaluations, salary administration, training, safety, absences, etc.)
- (4) Develops procedures to insure adequate work force, adequate training, organizational efficiency, and management development.
- (5) Maintains positive relations with the vocational representative groups.
- (6) Maintains positive interdepartmental working relationships.

SCOPE AND NATURE OF SUPERVISION

- (1) Incumbent reports to Network Manager along with two or three other network supervisors and an assignment supervisor. Reporting to this position are a data supervisor (with five to nine reporting clerks) and three to five specialized "service" clerks that report directly.
- (2) Immediate supervisor is involved in the setting of the overall goals and policies. However, most of the activities of this position are not subject to supervisory review and the Network Manager is able to provide only broad review of the activities in most areas.
- (3) Guides for the job include DFMPs, TFPs, TSOPs, company policy, job aids, union contracts, and mutual agreements between the Network Manager and incumbent. Several of these procedures are detailed but there are many decisions made that are controlled by precedent or experience.

IMPLEMENTATION OF ALTERNATIVE TNDIS ORGANIZATIONS

When **Alternative "B"** is implemented, most of the functions assigned under **Data Administration** (as well as several other related ones) are removed from the Network Supervisor—Electromechanical and divided between a local Network Supervisor—Data and the centralized staff organization. (These are designated with an asterisk (*) in the detailed job function list). Exact functions retained by the Network Supervisor—Electromechanical must be defined by the local Network Administration Organization. Generally, control of busy hour selection and monitoring of daily service results are related to the service function and would be retained by the network supervisor responsible for a specific central office entity. On the other hand, the local Network Supervisor—Data would coordinate all data requests, schedules and data base updates for entities under the jurisdiction of the Network Manager—Administration. Under **Alternative "B"**, there is a possibility for increasing the number of entities assigned to a Network Supervisor—Electromechanical. However, it should be recognized that reduction in the number of reporting subordinates will be partially offset by the complexity of those data analysis functions which are retained.

As with Alternative "B", when data administration is concentrated in a centralized staff organization, (**Alternative "C"**), the data provisioning and data base functions assigned to the Network Supervisor—Electromechanical are removed and assigned to the Network Supervisor—TNDIS and the Network Supervisor—Data, who are located in the central data organization. The span of control is reduced since with full mechanization there is no longer a requirement for data supervisor and clerks assigned to schedule, update and summarize data. Loss of these activities is partially compensated for by the complexity of those data functions which are retained - the analysis of real time surveillance information and full utilization of downstream reports. However, concentration on user applications for processed data should make it possible to increase the number of electromechanical entities administered by a local network supervisor to six.