

NETWORK SUPERVISOR—COMBINED EQUIPMENT

Personnel assigned as Network Supervisor—Combined Equipment will generally be responsible for optimum loading, balancing, assignment, 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; protection of service during equipment additions and/or rearrangements; and all activities related to translation administration for stored program control offices.

Additionally, this position is responsible for all activities related to scheduling, collection, validation, and provision of network data, but may have a reporting data supervisor directly supervising these activities for electromechanical offices.

This position is responsible for all Network Administration responsibilities—service, data, and assignment—for stored program control offices and service and data only for electromechanical offices. Assignment activities are the responsibility of the Assignment Supervisor. This combination of equipment types would be found mostly in outstate areas when No. 2 and No. 3 ESS systems are serving customers.

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

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

NOTICE

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JOB TITLE: NETWORK SUPERVISOR—COMBINED EQUIPMENT

DEPARTMENT: NETWORK

SUPERVISOR: NETWORK MANAGER—ADMINISTRATION

JOB SUMMARY

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

The area of responsibility for this position would usually encompass more than four entities of local switching equipment in an outstate area. This equipment would be both stored program control and electromechanical types and include combinations of step-by-step, crossbar and electronic switching equipment. The amount of main stations served by these entities would range between 15,000 to 70,000. This depends on the complexity of the job in the area.

20% 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, E to E visitation rate, (No. 1 ESS) or percentage of periodic deferrable time (No. 2 ESS), blocked dial tone queue and matching losses.
- (2) Reviews maintenance busy data to identify equipment and/or service circuits 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 and data for trunk groups. Analyzes other available data that relates to efficient equipment utilization, (e.g., quarter hourly and daily traffic summaries, line and trunk load balance results, daily maintenance summaries, customer report summaries and signal distributor load factors).
- (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 where data indicate that the equipment is operating incorrectly, or where an equipment imbalance or excessive maintenance outage situation is evident.
- (8) Monitors load balance results, and any other imbalance indications, to identify service problems caused by imbalance. Coordinates with Assignment Supervisor or directs assignment activities to correct imbalance.

Note: The following responsibilities apply to electromechanical switching entities only.

- (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).

- (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 these 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 transfer and cutovers.
- (14) Reviews and endorses data on intercept requirements, administrative factors, and percent usable lines and terminals received from Assignment Supervisor. Cooperates with the Assignment Supervisor in establishing main station capacities for line and terminal equipment.

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

- (1) Directs the monitoring of quarter hourly, hourly, daily, weekly and monthly service results. Studies these service results for possible problem indications.
- (2) Studies network data, phase action printouts, service observation failure summaries, plant data summaries, and all other related data and investigates to identify cause of service problem. Cooperates with central office maintenance supervisor in investigating cause, if necessary.
- (3) Originates corrective action plan and reviews progress of plan. Cooperates with and coordinates activities of other departmental groups to implement plan and remove the problem cause.
- (4) Investigates and studies all available data to identify possible 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 that could be caused by abnormal 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 or dynamic service protection (DSP). (Coordinates with Network Management Center).
- (7) Coordinates with central office maintenance supervisor to identify service impact of any service affecting phase actions.
- (8) Supervises preparation of and maintenance of good quality recorded announcements.

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15% C. Reviews and studies proposed equipment orders, analyzes data and calculates capacities to insure that adequate central office equipment and capacity is scheduled to be provided in the future. Administers call store, program store, spare word, and all other capacities and maintains surveillance of these capacities.

- (1) Calculates capacities of the quantities of all traffic sensitive items and evaluates these versus the capacity of the installed equipment. (This includes calculating switching path capacities, line and number fill, program store translation capacity, call junctor capacity, customer digit receiver and other service circuit capacities). Oversees maintenance of capacity records and evaluates changing capacities and trends. Determines limiting or sensitive item(s). Detailed procedures in the form of TFPs and DFMPs must be followed in capacity determination activities. Oversees maintenance of a local demand and facilities charts. Advises Network Manager regarding capacities and recommends courses of action. Plans with Network Design Engineer and negotiates to insure that adequate central office equipment and capacity is scheduled for installation.
- (2) Studies proposed equipment arrangements and coordinates with Network Design Engineer and/or Equipment Engineer to effect change of an unacceptable arrangement and/or inadequate provision of office equipment and capacities.
- (3) Calculates projected office characteristics for engineering and oversees development of load-service relationships. Analyzes results and advises Network Manager of results.
- (4) Calculates capacities to 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 and scheduling.
- (5) Analyzes current office data to detect changes in office characteristics. Identifies situations where these changes will effect office capacities and/or exhaust date. Advises Network Manager and negotiates with Network Design and/or Plant Extension Engineer for relief.
- (6) Analyzes commercial forecast to identify changes in forecast, changes in growth of multiline hunting groups, 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 change of limiting item, and potential change in office exhaust date. Advises and 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 cooperates with central office maintenance supervisor in insuring that the requirements are met.

10% D. Directs and coordinates all activities related to assignment of stored program control equipment and maintenance of records of these assignments. Administers overall translation activity, and supervises maintenance of these records (These responsibilities apply to the assignment activities for stored program control switching entities only.)

- (1) 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 narrative description of assignment instructions in each entity, a description of office limitations, concentrator loading charts, separate demand and facilities charts).
- (2) Provides loading plan to Network Manager for approval, directs loading plan implementation.

- (3) Monitors effectiveness of loading plan by monthly review of working main station forecast and by continuing evaluation of the loading plan's effect on the office and its components.
- (4) Supervises the assignment of special hunting arrangements (series completion, multiline hunt, remote make busy, stop hunt, etc.) and the assignment of CENTREX CO facilities (if required).
- (7) Supervises the assignment of special services and special arrangements and features (WATS, ground start, TWX, TOUCH-TONE®, custom calling features, test lines, signal distributor numbers, scan points, etc.) Coordinates all assignments with marketing, network design engineering, central office maintenance supervisor, plant assignment supervisor and any other involved departments. This is especially important with new services such as ESSX.
- (8) Receives listing of essential service customers from commercial. Directs clerks in insuring that essential service assignments are properly made and that essential service records are maintained.
- (9) Coordinates and administers assignment activity with plant assignment supervisor (adequacy of assignments, arrangements for delivery, timely return of used assignments, special arrangements).
- (10) Prepares line equipment selection preference guidelines in compliance with short jumper concept. Monitors load balance data. Initiates plan to insure assignments are made that satisfy both balance and main frame considerations. Coordinates with central office maintenance supervisor, and plant assignment supervisor for efficient use of assignment plan. Supervises clerks in the implementation of assignment plan.
- (11) Verifies need (indicated by load balance data) for subscriber line usage studies. Coordinates study schedule with central office maintenance supervisor. Analyzes study results and supervises clerks in preparing corrective action (frame transfers).
- (12) Monitors load balance data for high concentrator loads. Identifies any long jumpers that may be in frame zone. Directs and oversees clerks in issuing line transfers to remove unnecessary long jumpers.
- (13) Originates and conducts plans for clerical observation (representative sampling) to assure adherence to prescribed practices and policies. Reviews service order processing, assignments of lines and numbers, adherence to loading plan, essential service assignments, proper use of special features and options, proper service observing loop assignments, efficient hunting group structure and ringing code assignments.
- (14) Cooperates with plant assignment supervisor, central office maintenance supervisor, business office supervisor, and accounting supervisor in conducting sample checks of records accuracy. Supervises further checks of assignment records versus actual working central office equipment in accordance with local policy.
- (15) Coordinates with plant assignment supervisor to maintain party line fill objectives. Provides summaries of party line customers that are receiving private service to plant assignment supervisor for reassociation.
- (16) Supervises all activities and negotiates all obstacles related to efficient assignment of central office equipment and maintenance of all records related to the assignment of this equipment. Oversees and controls activities of reporting clerks.

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10% E. Controls, plans, and coordinates activities related to data scheduling and collection, and data validation and provision for stored program control switching entities.

- (1) Oversees preparation of "traffic map" or traffic work table for data collection schedule. Reviews accuracy of collection schedule and initiates any changes required. Coordinates and negotiates with central office maintenance supervisor to overcome any obstacles that develop in data collection process.
- (2) Plans, supervises, and conducts busy hour studies and selection of busy hours. Determines office data requirements. Endorses and provides data collection schedule to Network Manager for approval.
- (3) Supervises preparation of, and approves, the layout of the register assignments for various data schedules. Coordinates with central office maintenance supervisor and Network Design Engineer to overcome obstacles. Reviews network design order to insure adequate arrangements are made for traffic measurements.
- (4) Originates procedures for an annual translation verification of the stored program control traffic register assignment data. (Consists of a comparison of assignment records versus program store memory. Cooperates with central office maintenance supervisor in trouble correction.
- (5) Receives requests for data from departmental representatives with special data requirements. Directs and supervises scheduling, collection and validation of these data. Provides summarized data to Network Manager for distribution.
- (6) Controls and supervises scheduling and collection of data required for load balance, monthly peg counts, and other recurring data requirements.
- (7) Originates a plan for data validation which enables the clerks to identify obvious data troubles. Oversees clerical activities related to identifying these troubles using validation techniques. Coordinates with central office maintenance supervisor for correction.
- (8) Coordinates all activities related to the generation of central office network data utilizing PATROL (Program for Administrative Traffic Reports On-Line). This involves supervising initial file establishment, scheduling data, overseeing maintenance of the file and updating of equipment amounts and main station information, administering teletype use and logs, authorizing and supervising removal of data from files, and administering time-share procedure changes and time-share costs.
- (9) Analyzes all network data printouts and summaries and supervises preparation of records of these data and other key data items.
- (10) Supervises activities and negotiates for elimination of obstacles related to scheduling, collection and processing of all data requirements. Oversees and controls activities of reporting clerks responsible for data activities.
- (11) Plans, controls and supervises changes in traffic measurement assignments originated by traffic teletype (General Purpose Registers and H & C Schedule changes).
- (12) Plans, controls and coordinates with the central office maintenance supervisor any changes in traffic measurement assignments originated by the MCC teletype (selected customer line usage, line concentrator usage, multiline hunting group studies, etc).
- (13) Initiates procedures for clerical monitoring of machine performance to identify an abnormal machine operation condition that could affect data output and data validity. Consists of a daily review of plant measurement data to identify a "phase" and, upon identification of a data-affecting phase, coordination with the central office maintenance supervisor to identify which data were affected.

Establishes procedures for reestablishing traffic schedules after a reinitialization required by a phase action.

10% F. Controls, plans and coordinates activities related to traffic measuring device administration, data scheduling and collection, and data validation and provision for electromechanical switching entities. (Assumes lower level Data Supervisor is reporting and supervises 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 studies 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 problems.
- * (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 to 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 engineering. Distributes data to Network Design Engineer 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 TND5 Alternatives "B" and "C".

10% G. Studies and investigates planned central office equipment additions and/or rearrangements. Supervises preparation of required plans for efficient utilization of new equipment and services and for protection of service during the transition. Studies and interprets network data relating to office before, during and after equipment addition.

- (1) Studies documents and capacity data relating to proposed growth job and schedule. Advises and cooperates with Network Manager and with Network Design Engineer, Plant Extension Engineer, and Equipment Engineer in final network design order preparation and growth job scheduling.
- (2) Originates schedule for provision of cross-connections and/or translations. Oversees the preparation of these items. Reviews items with Network Manager and distributes actual cross-connections and/or translation to appropriate groups.

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- (3) Studies transition management study data. Prepares and recommends a plan for making equipment and trunks available to WECO that are involved in rearrangements or modifications. Informs Network Manager, who will approve plan. (Plan must be coordinated with central office maintenance supervisor and trunking engineer to allow for trunk order preparation and completion).
- (4) Originates a plan for balancing of any new equipment. Coordinates efforts to relocate or rearrange equipment when necessary. Distributes and coordinates plans with central office maintenance supervisor, WECO supervisor, and other departmental groups involved. Evaluates load data before, during, and after changes.
- (5) Directs and oversees preparation of capacity and any load-related documents. Reviews these documents with Network Manager, who will approve them. Distributes documents and any other information required by job contact committee. (These documents should reflect loads and capacity for periods of WECO activity. Load estimates are matched against periods of time to show equipment removal preference).
- (6) Supervises clerks or Data Supervisor in data activities 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 transition, and coordinates with all related departmental groups to effect a resolution of the service problem.
- (8) Administers overall Network Administration involvement on 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 Network Administration responsibilities related to the addition are met.
- (9) Coordinates placement of new equipment into service, and/or new services into operation, with central office maintenance supervisor, WECO supervisor, trunk engineer, accounting (if necessary) and any other involved departmental groups.
- (10) Supervises any required update of records, traffic register assignments, and traffic measurement schedule.
- (11) Analyzes any parameter changes made to insure that associated translations have been changed. (Head Table Capacity - ESS 1500A in No. 1 ESS; or General Information Table - ESS 2500 in No. 2 ESS). Coordinates with Network Design Engineer, if necessary.
- (12) Supervises the update of the TRUST program. Administers update of trunk translations records and coordinates activities accordingly.

5% H. Analyzes trunk group data, monitors trunk group data, monitors trunk network usage and activity and coordinates with trunk administrator and/or engineer to insure adequacy of trunking network.

- (1) Supervises the processing of trunk orders and maintenance of trunk network records by clerks.
- (2) Reviews trunk network configuration to insure that in-service network is in agreement with design trunk estimate (received from trunk engineer) and routing guides (received from central office maintenance supervisor).
- (3) Analyzes trunk records to insure trunks are in service prior to need. Coordinates with trunk administrator and/or central office maintenance supervisor for order initiation, trunk turnup and to overcome any obstacles that are preventing implementation of required trunk network.

- (4) Analyzes trunking data to identify trunk groups that are beyond capacity and coordinates with trunk administrator for additional trunks or routing changes.
- (5) Analyzes trunking data to identify suspected trunk group troubles and coordinates with central office maintenance supervisor for trouble identification and correction.
- (6) Determines if call volumes require mass calling arrangements and negotiates for relief or rerouting with trunk administrator. Supervises the monitoring of local office and special announcements.

5% I. Miscellaneous

- (1) Represents Network Administration activities at any meetings related to service offered in the offices.
- (2) Chairs translation subcommittee and supervises maintenance and updating of specific translations records. Maintains accountability for translations accuracy and office records upkeep.
- (3) Administers teletype activity (input, output, monitoring, tape cutting, logs, etc) and insures proper provision of teletype equipment, features, and emergency power.
- (4) Establishes procedures for maintaining all recommended ESS related documentation. Instructs and/or oversees training. This recommended documentation for No. 1 ESS includes:

TG-1A	Translation Guide
PA 591001	Office Parameters
PA 591003	Translation Output Configuration
IM 1A001	Input Manual
OM 1A001	Output Manual

Various BSPs, TFPs, DFMPs, GLs/ELs, TEGs, and PATROL procedures.

The recommended documentation for No. 2 ESS includes:

TG-2H	Translation Guide
PK 2H231-01	Administrative Operations Manual
PD 2H201	Program System Description
IM 2H200-01	Input Manual
OM 2H200-01	Output Manual

Various BSPs, TFPs, DFMPs, GLs/ELs, and PATROL procedures.

- (5) Oversees preparation of and receives all reports related to Network Administration activities. Reviews, endorses (or approves) and distributes reports accordingly. Reports required are the dial service index, load balance index and various counts of equipment.

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- (6) Administers personnel-related activities for reporting supervisor and clerical force (Company policy and objectives, subordinates' performance, evaluations, salary administration, training, safety, absences, etc.).
- (7) Develops procedures to insure adequate work force, adequate training, organizational efficiency, and management development.
- (8) Maintains positive relations with the vocational representative groups.
- (9) Maintains positive interdepartment 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 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 activities in most areas. Incumbent is a very important member of team that is responsible for engineering, administering, and maintaining the local office. The Network Supervisor is given responsibility and accountability for the service rendered by the local switching entity. Interdepartmental coordination and participation in the "team" approach is highly significant.
- (3) Guides for the job include the Translation Guides, DFMPs, TFPs, TSOPs, Input and Output Manuals, GLs, ELs and local policy statements. Most of this available documentation is related to stored program control switching equipment. Additionally, there are local procedures, union contracts, and mutually agreed-upon procedures available to the Network Supervisor. Some of the documentation and guides for this position are quite technical and experience is a factor in using these guides. Although many of these procedures are detailed, there are many decisions that are controlled by precedent or experience.

IMPLEMENTATION OF ALTERNATIVE TND'S ORGANIZATIONS

With implementation of either *Alternative B* or *Alternative C* data organizations, duties and responsibilities concerning "*Data Administration - E&M*" are reassigned to another Network Supervisor—Data (Alternative "B") or to the centralized staff organization (Alternative "C"). Although it was possible to increase the number of entities assigned to the Network Supervisor—Electromechanical under similar circumstances, this is not recommended in the case of the Network Supervisor with combined stored program control and electromechanical responsibilities. This mixture is considered too complex for further expansion encompassing additional entities.