

IOWA DEPARTMENT OF ADMINISTRATIVE SERVICES ▼  
HUMAN RESOURCES ENTERPRISE  
**TELECOMMUNICATIONS ENGINEER SENIOR**

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**DEFINITION**

This job classification is used only by the Iowa Communications Network.

Performs advanced engineering and lead work in the design, provisioning, implementation and coordination of telecommunications systems, networks and services for the Iowa Communications Network (ICN); oversees construction relating to fiber cable placement, conducts network management of services and overall integration of equipment and services; or maintains the ICN as a node on the Internet and provides services for users of the ICN; performs related work as required.

**The Work Examples and Competencies listed are for illustrative purposes only and not intended to be the primary basis for position classification decisions.**

**WORK EXAMPLES**

Assists supervisor by performing such duties as instructing employees, answering questions, distributing and balancing the workload and checking work; may make suggestions on selections, promotions and assignments.

Analyzes plans and recommends alternatives to eliminate cable placement conflicts generated by contractors on various construction and construction project proposals, including review of road and right of way related construction plans and drawings; assists in producing and maintaining outside plant cabling records.

Designs circuit layout and equipment module additions to existing telecommunications network; drafts records to support customer service order requests, produces inventory transfer and work order detail documentation to support the installation of circuits; maintains records and files of circuit layout records and network facility assignments; forecasts equipment needs to meet customer delivery.

Configure and maintain ICN Internet router/switching; register and maintain Domain Name Service for ICN and state users, obtaining Internet address blocks and making assignments.

Acts as chief quality control inspector relating to aerial and buried fiber cable, during construction and as a part of ensuring system readiness; interfaces with and provides direction for the outside plant maintenance organization; develops alternative, recommended routes for new cable placement projects.

Maintains service levels for hardware and software configuration and maintenance of ICN Internet servers to meet user needs and advertised service schedules; keeps and updates Frame Relay records to maintain an up to date view of the network; provides support for systems development engineers and ICN marketing efforts.

Provides technical support for installation groups, maintenance contractor and marketing staff.

Works with the general public, public officials, and technical individuals to resolve ICN related complaints and cable damage incidents; maintains communications and supports efforts of peers and co-workers.

Orders materials for network maintenance and upgrades in conjunction with the Internet service; assists the ICN help desk and educational help desks with Internet problems or issues; supports LAN administrator with Tier II help desk.

Adapts new technology to network; maintains Sun Sparc 20 hosting the Internet News Server; maintains Internet Mail Hub server.

**COMPETENCIES REQUIRED**

Knowledge of the ICN product and services assigned.

Knowledge of Telephony, Digital Theory and Digital Hierarchy.

Knowledge of Voice and Data Circuit and Video Technology.

Knowledge of electronic and physical principals of telecommunications systems.

Knowledge of packet switching and Virtual circuit theory.

Knowledge of protocols, topologies and technologies. (HTIP, SNMP, SMTP, TCP/IP, FTP, TDM, SONET, WAN, LAN, Ethernet, Token Ring, Lane, ATM, etc.)

Ability to use Microsoft Windows 95, Access, Excel, Word, Visio and unit as well as spreadsheets and databases.

Ability to create engineering documentation package.

Ability to read and understand engineering plans and specifications.

Ability to interact with state employees and private contractors and maintain a positive relationship.

Ability to perform detailed work with a high degree of accuracy.

Ability to meet customer needs in a consistently helpful and courteous manner.

Ability to lead others and to work cooperatively with others in a team environment.

Ability to keep own emotions under control and restrain negative behaviors when provoked or when working under conditions of stress.

Skill in the use of cable locating equipment and equipment associated with civil engineering for outside plant calling projects.

Displays high standards of ethical conduct. Refrains from dishonest behavior.

Works and communicates with all clients and customers providing quality professional service.

Displays a high level of initiative, effort, attention to detail and commitment by completing assignments efficiently with minimal supervision.

Follows policy, cooperates with supervisors and aligns behavior with the goals of the organization.

Fosters and facilitates cooperation, pride, trust, group identity and team spirit throughout the organization.

Exchanges information with individuals or groups effectively by listening and responding appropriately.

**EDUCATION, EXPERIENCE, AND SPECIAL REQUIREMENTS**

Experience equal to eight years of technical communications engineering work in the telecommunications industry, network communications and application of fiber optic principles, or firewall or Internet management;

OR

an equivalent combination of education and experiences, substituting thirty semester hours of accredited post high school education with major coursework in telecommunications, computer networking, civil or electrical engineering for each year of the required experience to a maximum of four years.

Effective Date: 09/12 BR