

## SPATIALnet™ / Power Electric Power System

SPATIALnet is the next generation network information management system that quickly and cost-effectively manages the network spatial information of a service provider's organization.

SPATIALnet provides complete and timely access to network facilities data for planning, design, construction, and maintenance of both Inside and Outside Plant.

All data created and maintained by SPATIALnet can be distributed to all parts of the organization and externally over the web using the companion SPATIALweb™ product.

### Integration of IT Industry Standards

SPATIALnet integrates industry standard CAD applications (e.g. AutoCAD®) as its graphics editing engine while using a commercial RDBMS (e.g. Oracle®, Microsoft SQL Server®) as the relational data store for all graphics, attributes, and network connectivity.

### Object-Based Architecture

SPATIALnet's object-based architecture accurately models the location, extent, and behavior of real-world network for both Inside and Outside Plant and land-base features including floor plan details. All aspects of SPATIALnet are configurable.

### Open Systems – Non-Proprietary

SPATIALnet enables users to access data from other corporate systems or to develop applications external to SPATIALnet that utilize its spatial and textual database.

SPATIALnet's modular architecture complies with open systems and de-facto standards to accommodate independent application development.

### Relational Database Storage

SPATIALnet's innovative RDBMS preprocessor provides the following RDBMS benefits:

- Enterprise wide access to *all* data
- Large volume, multi-user access
- Fast retrieval and processing
- Very large spatial databases
- Distributed databases
- Mature technology
- Powerful utilities
- Standard application development tools
- Technology independence
- Client/Server compatibility
- Efficient database maintenance

SPATIALnet employs the full set of RDBMS facilities available in the commercial RDBMS, including security, integrity, concurrency, locking and multi-user access, transaction management, journaling, and backup and restoration.

### Eliminate Persistent CAD Files

Unlike other facilities design and management systems, SPATIALnet eliminates the need to manage map tiles or store individual persistent graphics files separate from the RDBMS. All graphical and textual data are stored in the RDBMS.

### Familiar Powerful User Interface

Standard CAD applications can be readily integrated as the graphical interface to the RDBMS is the familiar environment of the experienced CAD and Windows® user. Intuitive functionality provided by SPATIALnet further minimizes the learning curve and provides consistency in "look and feel" across projects.

### Job Management

SPATIALnet contains a unique version management engine, called Job Management System (JMS), which operates within the RDBMS for spatial and textual data.

JMS provides a global version management system that all the utility provider's applications can access. JMS supports "change management" by providing tools that allow areas of data to come under change management control for a particular project without impacting the master database. After changes have been made and approved, JMS provides the necessary tools to make the data available to the master database.

The SPATIALnet job management approach has the following advantages:

- The master database is protected from unauthorized edits to fully support the QC process.
- Simultaneous access is available to the same geographic area for multiple users.
- Conflicts can be resolved during modification of the same plant by multiple users.
- Alternate proposals for the same area can be developed.
- Proposals remain private until the design has been completed, approved, and published for use by other designers.

## SPATIALnet /Power Model Functionality

The SPATIALnet/Power model provides electricity network facility and inventory management functions, including the following:

- Design
- Facilities and Land-base Management
- Work Print Creation
- Forecasting and Planning
- Job Management

## Network Management

SPATIALnet is a complete AM/FM application for electrical utilities and provides support for network management from power generation, through to distribution. The Power model supports multiple voltage networks in both three and single phase environments. The model also supports multiple network assignments to accommodate pending job-on-job engineering designs.

## Circuit Trace and Reporting

SPATIALnet/Power offers a graphical circuit trace function that traces and highlights connected plant from a user-designated junction point in the network. A trace can be designated from the selected point back to the source or from the selected point out to the field. A textual report can be easily generated from the trace results using any industry standard reporting package (e.g. Crystal Reports, Excel). This type of reporting is highly useful for planning and outage management activities.

## Cabling Display and Edit Panels

The SPATIALnet/Power configuration includes a graphical cable detail and an interactive cabling edit panel to present the user with detailed "in" and "out" cable and circuit information at any selected junction or end point within the network. Drag and drop functionality within the panel allows the user to manipulate circuit connections while a ripple function allows the user to "throw" or reassign circuit designations to the field.

## Map Production Functions

SPATIALnet's map production system supports the creation of presentation quality maps and provides tools that allow tailoring, viewing, and plotting of map sheets according to user needs. Map and sheet definitions can be recalled from a saved list, or generated on an ad hoc basis.

## Work Print Detailing Functions

SPATIALnet allows users to add construction notes to a job at all stages of the design. These details are retained as part of the job and not published through to the model database. SPATIALnet also enables users to add, edit, and delete graphics when producing work prints for field staff use during construction.

The SPATIALnet work print detailing system is a CAD environment tailored for producing network construction drawings that use existing network and landbase data as a starting point. To create the work print, existing data is extracted from the RDBMS as a separate drawing. This drawing is then enhanced using standard CAD tools. The user can optimize the content of the final plan before it is issued for construction.

## Web Access - SPATIALweb

SPATIALweb is a sophisticated web application capable of displaying complex combinations of accurate CAD/GIS map data as vector graphics, network information and raster images on the Internet using a standard web browser like Internet Explorer®. SPATIALweb is the ideal solution for placing graphical network intelligence on the desktop of every member of an organization. SPATIALweb is fully integrated with SPATIALnet, so that network designs modeled and maintained in SPATIALnet databases will be visible on the web. The entire SPATIALweb application is a self-configuring application that is simple to set up and maintain.

## For more information

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