



Bentley® Copper V8i (SELECTseries 3)

Design and Management of Outside Plant Copper Networks

Bentley Copper is a comprehensive solution for designing, documenting, and maintaining copper outside plant networks. The software accommodates all copper architectures in a geospatial environment. Bentley Copper is a part of Bentley's suite of communications products and is fully integrated with Bentley® Fiber and Bentley® Inside Plant to provide a complete and connected model from subscriber to Central Office.

Complete Network Documentation and Design

Bentley Copper uses a graphical routing process based on existing landbase and strand map information such as poles, pedestals, manholes and duct to build an intelligent geospatial model of the copper and related outside plant facilities. Bentley Copper enables you to place equipment, layout, edit and design the copper network and document copper pairs. Drawing and engineering standards are configurable and users can easily assign complements as well as identify terminals with owner information and status. Bentley Copper provides a user interface focused on increasing engineering productivity and reducing the steps and effort to engineer copper networks. It is designed specifically to automate the process of feeding other applications and to eliminate data re-entry. This seamless, feature-oriented work environment means productivity for the engineer.

Oracle Spatial

With the introduction of Oracle Spatial Bentley's communications products, all of the geometry in Bentley Copper is persisted in the database. Bentley's communications applications also make use of the Oracle Workspace Manager, giving Bentley Copper the ability to create and manage versioning in an optimistic or pessimistic mode. Bentley Fiber, Bentley Copper, Bentley® Coax and Bentley Inside Plant functionalities can be used simultaneously during one session. Bentley Copper supports MicroStation® and all of the functionality that comes with Bentley Map®.

Reap the Benefits of an End-to-End Network Model

The connected model allows for detailed engineering calculations. In addition, Bentley Copper is fully integrated with Bentley Inside Plant, a product for the design and documentation of inside plant found at Central Offices, points-of-presence and other sites. End-to-end network connectivity from outside to inside plant is maintained allowing the network to be

traced all the way from the customer to the port(s) that feeds them. Connectivity between inside plant and outside plant allows termination points of any inside or outside device to be queried. For example, all outside plant cabinets being fed by a specific device in a central office may be queried or an OSP engineer might use the model to determine the specific rack, row, shelf, slot and port in the inside plant where a pair terminates.

Integration with Bentley Fiber allows for documenting any type of FTTx architecture (fiber-to-the-curb/node). Connectivity is maintained from the CO through the fiber network to a cabinet and then, through the copper network to the subscriber.

The network model facilitates working hand-in-hand with existing OSS systems. Operations personnel benefit from integration with network monitoring when copper faults are visually located on the detailed maps created by Bentley Copper. They can also take advantage of the readily available, detailed, up-to-date network information found in the copper database. The information may be used in field applications such as work force management or in any of the upstream processes, such as network provisioning.

Manage and Publish Critical Network Information

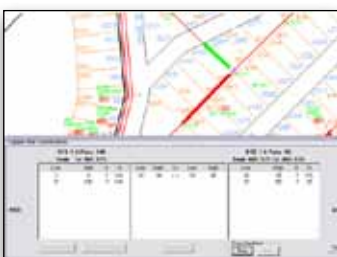
Bentley Copper embraces Bentley's Geospatial Managed Environment, allowing any associated engineering documents or drawings to be managed in a geospatial context that spatially relates them to the network model. Using Bentley Geo Web Publisher for Communications, information created by Bentley Copper may be queried and published through a web browser to internal and external users, who require varying levels of access to the network information. For example, complement ranges and other information can be reviewed by personnel that require detailed system information or copper routes, and customer locations may be queried and viewed by individuals requiring more general information.



Easily route copper cable and place poles.



Review detailed information pair and sheath information.



Copper pair connections.

Workstation System Requirements

Processor:

Intel or AMD processor 3.0 GHz or greater dual-core or multiple-processor architecture is strongly recommended.

Note: MicroStation V8i (SELECTseries 2) requires a CPU that supports SSE2

RAM:

Minimum 2 GB, more recommended

Hard Disk:

Minimum 2 GB of free hard disk space

Input Device:

Mouse or digitizing tablet

Output Device:

Most industry-standard devices are supported. Works with output devices supported by Windows

Video:

Graphics card supported by DirectX 9.0c. Multi-monitor configurations supported

Workstation Software Prerequisites

Operating Systems:

Windows XP PRO (32-bit and 64-bit), Windows Vista (32-bit and 64-bit), Windows 7 (32-bit and 64-bit)

Note: Bentley's communications products support the 3-tier Citrix/Terminal Services environment; also, clients do support connecting to UNIX/Linux-based Oracle Servers. Please refer to the Oracle website for operating systems that are supported by Oracle 11g R2

Find out about Bentley at: www.bentley.com

Contact Bentley

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Global Office Listings

www.bentley.com/contact

Bentley Copper At-A-Glance

Copper Design and Documentation

- Placement and edit of all facility items
- Connectivity maintenance during creation and edit
- Equipment model validation
- Automatic validation and cleanup tools to ensure model integrity
- Easy assignment of pair(s) to subscribers
- Full network connectivity between outside plant and inside plant documented with Bentley Inside Plant
- Configurable equipment standards
- Easy-to-use equipment GUI
- Define detailed database and graphical properties
- Spans/cable
- Cross-sections
- Sheath information
- Terminals
- Splice and cabinet enclosures

- Splices
- Central Offices/buildings
- Patch panels/FDP
- Slack

Integrated Strand Mapping

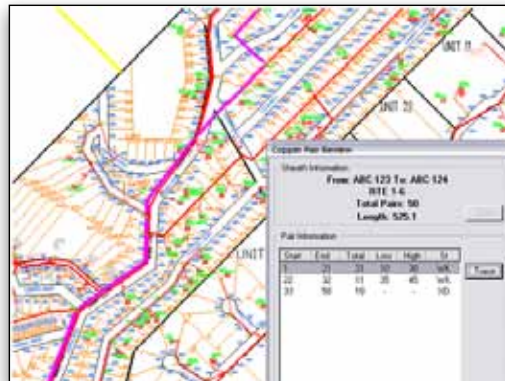
- Configurable specifications
- Landbase and structure creation
- Addresses automatically associated to structures
- Utilize address information from billing systems
- Support for multiple outputs
- Map products
- End-to-end tracing at sheath, cable and pair level
- Perform engineering calculations by area or entire network
- Fiber loss budget analysis
- Rippling/throwing of circuits
- Ability to route copper using the geometry of Bentley Fiber's duct or strand functionality

Operations Functions

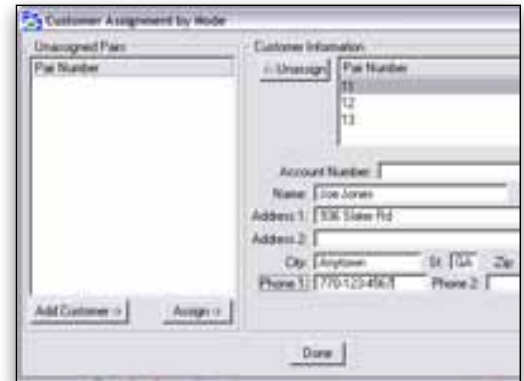
- Locate outage
- Locate device by unique ID or name
- Locate customer
- Locate slack
- Post as-built tick marks for actual segment length
- Integration with network monitoring, work force
- Management, and other OSS Systems

Reports and Splicing Diagrams

- Property records reports (fixed asset reporting by account code)
- Splice diagrams and associated reports
- Equipment report
- Device information report
- Device Bill of Materials
- Sheath Bill of Materials
- Reel Bill of Materials



Review copper pair information.



Assign customer information to pairs.