



Bentley® Inside Plant V8i (SELECTseries 3)

Comprehensive Design, Documentation, and Management of Inside Plant Assets

Bentley Inside Plant is an engineering application for designing and documenting the inside plant of communications networks found in head-ends, points of presence, central offices and other sites. When used with Bentley® Fiber, end-to-end network connectivity from outside to inside plant is maintained, allowing the network to be traced from port to customer. Bentley Inside Plant allows users to define, configure, and place equipment in racks and floor plans that visually depict the precise layout of the facility.

Ensure Consistency and Data Integrity Throughout Projects

Administrators can define a library of frames (racks), cards, and equipment used in the design process along with their associated properties. Equipment in racks and slots can be pre-configured within the equipment. Rules defining valid card-to-slot relationships and jumper cable-to-port type validation can also be defined. Racks and equipment are displayed on floor plans created with MicroStation® or imported from other sources. These can be as simple as the building footprint, or a detailed architectural drawing.

With the introduction of Oracle Spatial into the Bentley Communications applications, all of the geometry in Bentley Inside Plant is persisted in the database. Bentley Communications applications also employ Oracle Workspace Manager, giving the ability to create and manage versions 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 Inside Plant supports MicroStation and all of the functionality that comes with Bentley Map®.

Pre-Configured Templates Help Reduce Design Time

Engineers use pre-configured templates to place a rack or frame on a floor plan. Elevation views are automatically created. Equipment can be moved within the rack by dragging and dropping. Connections are established by selecting the equipment and the associated ports, which allows the user to assign a jumper cable length, type, and color. The user can also assign this jumper a "service" name, which is then automatically rippled throughout the entire facility. Schematic representations can be generated automatically by service name. When connecting to fiber outside the building, users can view optical system names or sheaths, and select the fiber and port to connect or disconnect. Users can easily copy

connected racks or groups of racks. All connections are automatically maintained, which significantly reduces the time to document multiple facilities with similar equipment.

Ability to Generate Advanced Reports Saves Time

Bentley Inside Plant can generate several time-saving reports. The Equipment Specifications Report provides details of equipment used in the design. The Bill of Materials Report includes all racks, equipment, and associated costs. The Connection Report displays the port level connections of the selected equipment. Wire Run and Circuit Trace Reports and logical schematic drawings are automatically created.



Front rack elevation view created in Bentley Inside Plant.



Rack Manager allows placement and configuration of equipment.



Connect equipment according to specified connection rules.

Workstation System Requirements

Processor:

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

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

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 Communications supports 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

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Global Office Listings

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Bentley Inside Plant At-A-Glance

Setup and Configuration

- Includes easy-to-use GUI for equipment definition
- Includes a pre-configured library
- Ensures use of engineering standards in design
- Configure frames, equipment, slots, and ports
- Copy frame/rack assemblies for easy replication of equipment
- Validation rules
- Properties
- Card in proper equipment
- Card in proper slot
- Equipment placement in racks
- Air spaces between equipment
- Port mapping through equipment
- Connection rules
- Jumper cable-to-port consistency
- Port-to-port consistency

Design and Layout

- Work organized by project or work order
- Design or import floor plans in MicroStation
- Drill down through progressive levels of floor plan detail
- Simple drag and drop equipment placement

- Edit equipment properties
- Generate rack elevations (front and back views) automatically
- Use MicroStation to add additional work instructions or details
- Depict equipment state and port connectivity graphically by color
- Actively establish connections inside building or to outside plant
- Generate connections report
- Maintain connections while copying or moving equipment and frames

Engineering Documentation

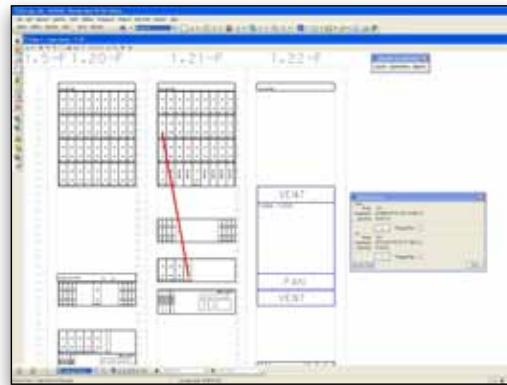
- Wire run reports
- Circuit trace reports
- Automatically generated schematics
- Rack elevation views (front and back)
- Connectivity reports by service
- Equipment properties such as noise level, power consumption, and HVAC requirements

Reports

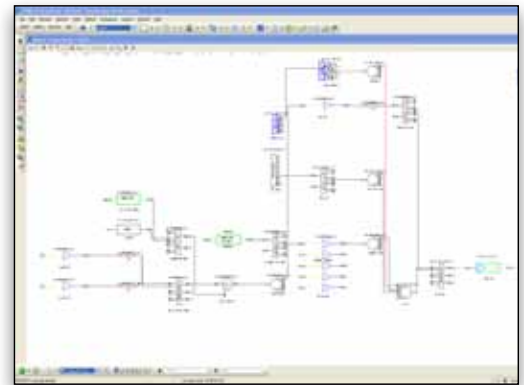
- Equipment specifications
- Bill of materials
- Connection report through entire facility to customers served
- Rack requirements for power and HVAC

Engineering Calculations

- Engineers define parameters
- Specification file may be saved for re-use
- Loss budget analysis
- Optical coupler optimization
- Laser, splitter definition
- Splice, cable, and connector loss definition
- Parameters defined by device or globally
- Calculations performed on one or all nodes
- Reports
- Laser loss budget
- Laser connections
- Node levels
- Node connection
- Engineering calculations BOM



A view of a physical circuit trace generated by Bentley Inside Plant.



Bentley Inside Plant enables automatic generation of schematics.