Bentley OpenUtilities® Map

Drive efficiency with an intelligent utilities GIS

OpenUtilities Map allows you to map and manage your electric, gas, water, wastewater, or district energy network. Save time and money when you maintain your network model in an engineering-precision graphical environment with full-featured, utilities-specific GIS functionalities. Improve network management with reports and analysis, such as network tracing, cable pulling, and voltage drop calculations. Increase enterprise efficiency when you publish, manage, and view precise network maps using the embedded power of OpenCities® Map, Bentley's geospatial environment.

Accelerate layout with engineering-precision design tools

Speed brownfield and greenfield layout with smart tools that produce precise, high-quality designs. Leverage intelligent Bentley MicroStation®- based design tools from within the built-in OpenCities Map-based design editor. Save time with high-precision placement and editing. Achieve the quality you demand without the drawing inefficiency of traditional GIS-based applications.

Eliminate rework with construction-quality prints

Publish high-quality construction documentation directly from the mapping environment, avoiding the need to redraw layouts in a separate CAD application. Ensure compliance with your construction print standards with support for a variety of paper sizes, printers, plotters, and Adobe PDF files, as well as configurable plotting templates that

include imagery, legends, north arrows, plotting to scale, and interactively defined grids and graticules.

Improve operational tasks with network analysis and visualization

Create buffers, overlays, joins, thematic maps, dynamic labels, reports, and queries. Perform connected, upstream/downstream, and shortest path traces for flow, conduit, and cathodic protection networks. Analyze and report trace results for an area or for the whole network.

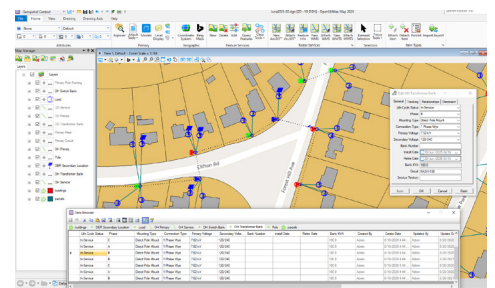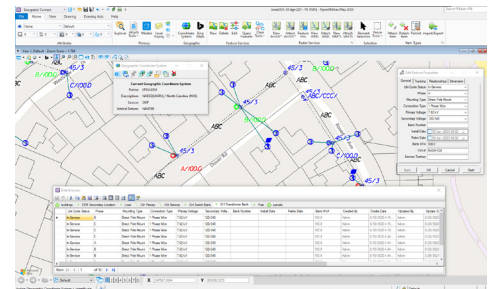### Lower deployment cost with pre-configured data models

Tailor out-of-the-box commodity-specific data models using simple metadata-based tools to create and manage data structures. Define symbology and rules to match your company standards. Reduce training, deployment, maintenance, and enterprise integration costs with one application for all commodities.

Promote data reuse and integrity with support for leading spatial databases

Manage large volumes of 2D and 3D spatial data with direct query from and write to standard Oracle Spatial, Microsoft SQL Server Spatial, or PostGIS databases. Share network data across your enterprise and integrate with other operational systems using native formats. Create new projects, study future projects, and consider alternatives while preserving data integrity with short and long transactions, as well as multiuser editing.

Advance your network with engineering analysis tools

Enhance your intelligent design environment with engineering analysis tools, including Cable Pulling and Voltage, to generate the best economical solution for providing electricity to the new development areas. Generate intelligent prints and analysis providing electricity to the new development areas. Generate intelligent prints and analysis reports out of this very configurable semi-automated tool.

Work on a GIS environment with full CAD capabilities.

System requirements

OpenUtilities Map at-a-glance

Intelligent industry standard data models

- Electric distribution
- Gas distribution
- Water distribution
- Wastewater
- District energy
- Support for data model adaptation and modification
- Support for data model creation from scratch

All the power of MicroStation

- Smart, quick drawing, and editing of utility network data
- Reference and raster management
- Display priority and transparency
- AccuSnap and AccuDraw placement and editing

All the power of OpenCities Map

- XML feature modeling
- Geospatial Administrator
- Map Manager
- Geographic coordinate systems tools
- GIS Interoperability tools
- Integration with Safe Software's FME
- File and spatial database persistence
- Interoperability with PostGIS, ArcGIS Server
- Enhanced import/export capabilities e.g. Esri File Geo Database

GIS analysis

- Buffer, overlay, and joins creation
- Thematic resymbolization
- Dynamic labeling
- Data browser (reporting)
- Query builder (search by)

Network tracing and reporting

- Flow and conduit networks traces
- Connected, upstream/downstream, shortest path traces
- Pre-defined or user defined stop criteria
- Network trace API
- Individual, composite, or cumulative trace reports

Utility layout and edit tools

- Inference assisted placement
- Editor tool to modify properties
- Editor tool to modify network relations
- Smart move utility network features
- Smart modify utility network features
- Split/merge utility network features
- Connect/disconnect from flow network
- Attach/detach from structural network
- Conduit management and editing tools
- Attributes driven symbology and annotation management

Oracle Spatial editing

- Fully Oracle Spatial compliant
- Two or three-tier connection
- Long and short transaction support for safe multiuser editing
- Supported versions: 11g, 12c, 18c, 19c
- Adherence to native Oracle Spatial feature and topology models

SQL Server Spatial editing

- Fully SQL Server Spatial compliant
- Two-tier connection for safe multiuser editing
- Short transaction support for safe multiuser editing
- Adherence to native SQL Server Spatial feature models
- Supported versions: SQL Server 2012, 2014, 2016, 2017, Azure SQL DB version 12

Automated Distribution Design System (ADDS)

- User driven automated design creation
- Optimized electric engineering
- Voltage drop and flicker calculations
- Wire and transformer sizing
- Complete engineering drawings and materials lists
- Multiple format digital outputs (dgn, dxf, dwg, Shapefiles)

Engineering analysis tools

- Voltage Drop calculations
- Cable Pulling Analysis

Construction-quality prints

- WYSIWYG plot generation with user-defined templates and legends
- Publishing to intelligent PDF, PostScript, and other output formats

Fully configurable and customizable

- Model administrator and data loader configuration tools
- .NET language customization, including VBA
- Adaptable to OpenUtilities Designer workflows