

BENTLEY® INROADS® SURVEY™

The **v8** Generation

A tool for processing raw survey data

Bentley's InRoads® Survey™ is the ideal application for surveying professionals who need to process raw survey data in a CAD environment and produce plot-ready graphics for civil infrastructure projects. InRoads Survey has a robust feature set that can be used with the world's most popular CAD formats.

Using industry standard methods, InRoads Survey can generate graphics from electronic field book and global positioning system (GPS) data. The software enables survey teams to display and visually verify the data in the field before returning to the office. With InRoads Survey, the data you produce is fully compatible with the InRoads family of products.

Feature-driven Processing

InRoads Survey provides a simple interface for generating drawings immediately after the survey has been collected. Utilizing a user-definable feature table, InRoads Survey can automatically draw coded features to the proper CAD symbology based on your standards. The feature table can even be edited on-the-fly, if InRoads Survey encounters a new code or error during processing.

Data Transfer and Interoperability

Data transfer between InRoads Survey and your data collector is performed quickly. InRoads Survey supports both the download of field survey and the upload of design data. InRoads Survey runs on either MicroStation® or AutoCAD®; the data is interoperable between these two platforms.

Survey Adjustments

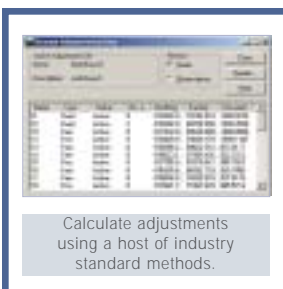
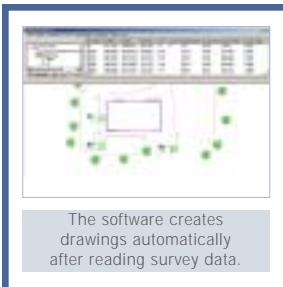
You can adjust survey data using industry-standard routines—including Least Squares and other methods—and visually inspect traverse adjustments. The graphic representation clearly shows the differences in adjustments, making it easy to determine the acceptability of results.

Interactive Coordinate Geometry

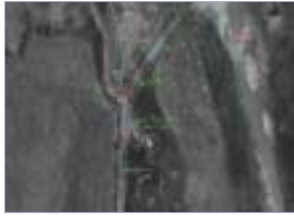
InRoads coordinate geometry tools are integrated with InRoads Survey. This valuable toolset enables you to perform offset commands, intersections and many other geometry commands. Additionally, you can leverage the data generated with other modules of the InRoads family of products.

Intelligent 3D Modeling

At the core of InRoads Survey is a feature-based digital terrain model (DTM) that tracks every aspect for the survey data. As you create features, the DTM tracks the three-dimensional data of the elements, as well as the feature type. In addition, the feature-based DTM is used in the creation of customized data reports.



BENTLEY INROADS SURVEY AT-A-GLANCE



Generate hybrid displays of your data, combining both raster and vector elements



Interactively edit your raw survey data and verify results onscreen.

BENTLEY INROADS SURVEY SYSTEM REQUIREMENTS

- Prerequisites: MicroStation v8.1 or higher or AutoCAD 2000i & 2002
- Processor: Intel® Pentium® II 400Mhz minimum, 500Mhz recommended
- Operating System: Microsoft Windows® XP Professional, Microsoft Windows 2000, Microsoft Windows NT® (SP6), Microsoft Windows Me, Microsoft Windows 98 (2nd edition)
- Memory: 128 Mb minimum, 256 Mb recommended
- Disk Space: 75 Mb minimum, 100Mb or more recommended
- Input Device: Mouse

Data Interoperability

- Seamless integration between CAD platforms—in both DGN and DWG environments
- Import from almost any source

Centralized Data Model

- Single data source for all modules within the InRoads family of products
- All InRoads modules interoperate directly and seamlessly
- Multi-user access to data facilitates workgroup collaboration

Direct Connection to Survey Equipment

- Direct connection provided to:
 - Electronic Field Books (EFB)
 - Global Positioning Systems (GPS)
- Data is read directly from collection devices, such as:
 - TOPCON
 - Nikon
 - SOKKIA
 - SDMS
 - KORK
 - SMI
 - LISCAD
 - WILD
 - ZIESS
 - TDS
 - GEODIMETER
- Plot-ready graphics based on customizable feature tables

Text Import Wizard

- Step-by-step process of bringing ASCII data from virtually any source into the CAD environment
- Importing of correct data for use in the design environment

Feature Code Editing

- Easy identification of incorrect feature codes and other errors on screen
- Flexible and intuitive editing process allows for easy manipulation of field data with on-screen visual verification

Multi-Coded Features

- Establishment of a single feature for multiple codes, for example, various deciduous tree codes treated with the same symbology

Feature Attributes

- Ability to scale the symbol of any feature, for example, controlling the size or scale of a cell that represents a specific code

Interactive Coordinate Geometry

- Creation and modification of geometry elements on screen using methods and principles specific to civil engineering
- Powerful point-and-click tools that provide graphic feedback for immediate verification

DTM Features

- Ability to view triangles and contours, save off surfaces and prepare DTM data for use with other InRoads modules
- Cutting of profiles to view survey results

Adjustments

- Calculation of adjustments of raw survey data using several methods, including:
 - Compass rule
 - Transit rule
 - Crandall method
 - Level
 - Least squares
- On-screen viewing of the adjusted traverse

Construction Stake-out

- Ability to import road and site design data and then upload to a data collector for use in the project stake out

LandXML Support

- Exporting of alignments, surfaces and other pertinent design information to other systems via XML

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Bentley Systems, Incorporated, is a global provider of collaborative software solutions that enable our users to create, manage and publish architectural, engineering and construction (AEC) content. As a part of those solutions, Bentley provides professional services including implementation, integration, customization and training.

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