

Applicable to:	
Architectural Firm	
Architectural/Engineering Firm	
Engineer Constructor	
Manufacturing Company	
Facility Information Management	
Operating Plant	
Telecommunications	
Transportation Design & Engineering	
Transportation Management	
Utilities	
Municipality	

MICROSTATION POWERDRAFT®

Version 7.1

MicroStation PowerDraft v7.1— A no-compromise solution for the drafting professional.

MicroStation PowerDraft v7.1 is an optimized solution specifically designed for computer drafters who need focused abilities at an affordable price. It is precisely what people who are entering into computer drafting or transitioning from other computer-aided design products need—an excellent foundation for the conversion of engineering data into electronic form. Based on MicroStation/J® v7.1 technology, it employs a familiar, easy-to-use graphical user interface, intuitive viewing techniques and an innovative set of drafting tools—highlighted by AccuDraw®, IntelliTrim® and SmartLine®—making 2D and 3D production drafting efficient and effortless. And because MicroStation PowerDraft directly reads MicroStation® design files, understands AutoCAD DWG/DXF data, and can be easily customized using MicroStation BASIC and Visual Basic, it can fit perfectly in your workflow.

MicroStation PowerDraft v7.1 supports Windows NT® 4, Windows 2000, Windows® 95, and Windows 98 on Intel™-compatible Pentium-class computers. Like MicroStation/J v7.1, MicroStation PowerDraft is a ProjectBank™ DGN-enabled client, so it supports Bentley's revolutionary client/server technology that manages engineering project information at the component level instead of the file level through a process known as long-transaction management. ProjectBank DGN provides the foundation for next-generation Engineering Component Modeling functionality. ProjectBank enhances project productivity (or projectivity) by enabling more than one member of the design team to work on the same data at the same time.

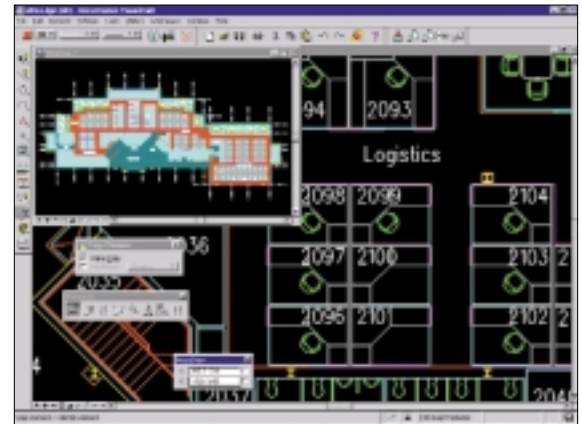
Through an innovative methodology of change merging, ProjectBank DGN automatically synchronizes the disparate edits made by individual project team members. If the changes made by the different team members are incompatible, then ProjectBank requires that the changes be resolved before new changes are accepted.

MicroStation PowerDraft v7.1 contains that same Java™ Virtual Machine that is in MicroStation/J and its tight integration with MDL® allow for both MDL applications and 100% Pure Java™ applets to execute supported functionality on MicroStation/J and MicroStation PowerDraft without modification. MicroStation PowerDraft v7.1 also provides OLE Server, Client and Automation support, further extending engineering data beyond the workgroup. All supported data files can be used without translation by MicroStation PowerDraft and other Bentley engineering products.

Powerful tools for optimum productivity.

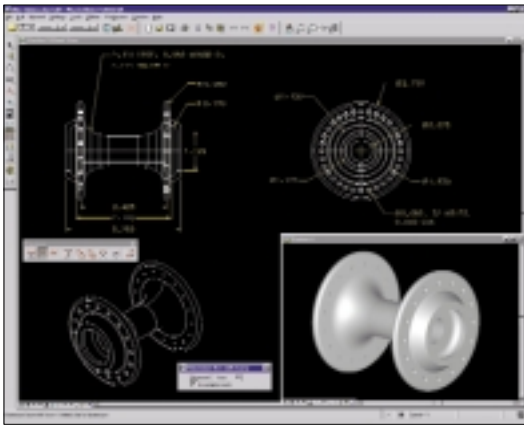
MicroStation PowerDraft v7.1 provides the drafting professional with a powerful and comprehensive set of drawing tools.

- AccuDraw, the patented technology that defines easy data input, marries your keyboard and mouse, combining the precision and speed of keyboard input with the intuitive dynamics of mouse movement, minimizing typing and mouse motion. A sophisticated system of keyboard shortcuts also minimizes the need for mouse movement.
- SmartLine is a composite drawing tool for efficiently inputting geometry into a design. When you activate the SmartLine tool, it understands what type of object to create based on your input. Rounded and chamfered vertices can also be created at the time of placement. This vertex information



Designed with the drafting professional's need for efficiency in mind, MicroStation PowerDraft v7.1 combines a streamlined interface with simple viewing techniques and industry recognized productivity tools.





Whether working in 2D or 3D, detailing is easy with MicroStation PowerDraft v7.1.

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can be modified later with the enhanced Modify Element tool.

- IntelliTrim differs from other trim tools in that you can pick multiple objects to trim at the same time. There is also an option to extend the objects in addition to trimming them. Objects to be trimmed or the cutting objects can be selected individually or with a selection set. This speeds the process of drafting cleanup by making it more efficient.
- PowerSelector allows you to create simple or complex selection sets easily with a minimal number of steps. For example, a selection set can be specified through mouse clicks, rectangular or polygonal areas or by using “cross-the-line” or shape methodology. Adding or removing selection set members is just as easy.
- A JMDL™-based SpellChecker helps minimize spelling mistakes. Like spell-checking utilities that exist in word-processing software, the spellchecker supports numerous languages and provides an easy way to create custom dictionaries.
- Reference files facilitate data coordination by letting project team members share design files concurrently. Reference files are read-only attachments of files that give you the ability to view others’ work in real time. Hundreds of files can be attached simultaneously. Inconsistencies and data redundancies are eliminated, as each member of the design team working on the project utilizes a single set of data. You can achieve significant savings in disk space by attaching binary and continuous tone raster files as reference files, rather than embedding all the pixel information in the design.
- Raster reference file support is augmented by the inclusion of Image Manager, Bentley’s high-performance image management technology. Raster data such as scanned drawings or aerial photographs can be attached to a drawing as a background image and stored together with the vector data as a hybrid project. Image Manager™ also enables MicroStation PowerDraft v7.1 to be a ModelServer Imager® Client.
- Level Manager provides a single dialog from which you can determine which levels are displayed, which levels contain information, and which level names are currently being used. Level Manager not only manages this information for the active design file, but also for any attached reference files.
- QuickVision®GL is an OpenGL-based caching system designed to support the interactive manipulation of 3D design graphics in shaded mode. Shaded updates

and dynamic view manipulations can be two to three times faster than non-accelerated views, and even faster with OpenGL-accelerated hardware.

- If you need plot resymbolization, reprioritization and simple plot configuration abilities, MicroStation PowerDraft v7.1 offers a convenient way to simply get designs to paper. MicroStation PowerDraft supports various common output devices and is integrated with the Windows System Printer. It incorporates many user-friendly functions, like a non-modal plot dialog (you can leave it open as you work), intuitive plot controls, an integrated Plot Preview and much more. You can easily control resymbolization and the plotting priority of design data through easy-to-create-and-edit pen tables. You can also substitute text strings, ignore certain objects, or call external MicroStation BASIC functions to do things like change cells without affecting the design.
- Other tools, such as associative dimensioning and hatching, also enhance productivity. Dimensions directly associated to the graphics they describe are automatically updated when the objects are modified. Similarly, patterns and hatching associated to their bounding graphics are automatically regenerated when the boundaries change. 2D Boolean unions, differences and intersections give you the ability to quickly define areas for complex collections of polygonal shapes.
- Custom line styles are user-defined, intelligent line types that represent complex drawing objects. You can define various display symbology such as width, offset, dash/dot lengths and graphic symbols included at defined points along the line. Line style definitions, which can include text characters and even shared cells, are stored in external resource files. This reduces file size and provides efficient global editing.
- Engineering Links® integrates Web browsing abilities within a design. Through Engineering Links, one can navigate from links within a design to another design or even Web sites.
- Support for 32-bit MAPI compliant E-mail systems makes it easy to provide a design to another member of the project team if ProjectBank is not being utilized.

Easy to learn and easy to use.

MicroStation PowerDraft v7.1 works the way you do. The intuitive graphical interface features pull-down menus, dialog boxes and icon-based tear-off toolboxes.

The non-modal environment means you can change tool settings and view parameters in the middle of an operation without restarting a tool. You can work in up to eight always-active, resizable views at a time. View-control buttons on the window borders let you manipulate each view with the click of a mouse button.

Programmable—even if you are not a programmer.

MicroStation PowerDraft v7.1 includes easy-to-learn-and-use, user-level programmability through MicroStation BASIC. Improve your productivity by automating often-used sequences of operations without requiring high-level language development skills. In its simplest form, a MicroStation BASIC macro “drives” MicroStation PowerDraft v7.1 in much the same way you do. The obvious advantage of writing and using a macro to perform a task that could otherwise be done manually is to automate mechanical and repetitive tasks. Macros created in one MicroStation-based product can also be used in others that utilize the same functionality.

MicroStation BASIC code can be automatically generated by using the included built-in macro record/playback utility, which writes a prototype framework by recording tasks as you manually perform them. This feature can also be used as a learning aid for macro writing. After the prototype is built, the robust MicroStation BASIC editor can be used to customize or debug the macro. A visual dialog builder is also included, letting you drag and drop interface components into a dialog box and assign various properties to them.

OLE Capabilities

MicroStation PowerDraft v7.1 offers OLE Automation Server abilities. This opens the product's functionality to Visual Basic and other OLE Automation Controllers. MicroStation BASIC programs can be easily converted to Visual Basic programs and run within this environment. In fact, several delivered examples are delivered as both MicroStation BASIC and Visual Basic code. If you are

familiar with Visual Basic, you do not need to learn another language to leverage MicroStation data in your enterprise with OLE Automation.

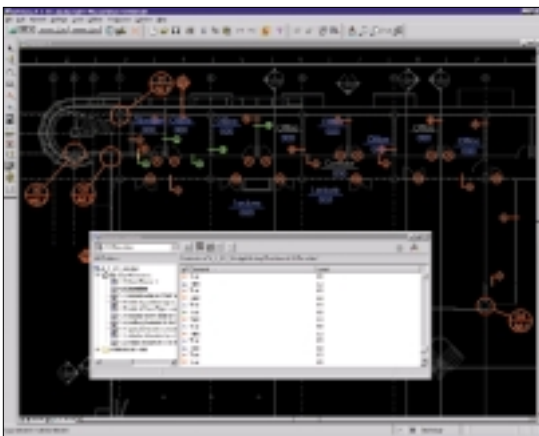
Support for OLE 2 Server allows MicroStation PowerDraft v7.1 to serve 32-bit Windows applications, such as Microsoft Word™ and Excel™. You can embed views from within MicroStation PowerDraft into compound documents in other Windows applications, and reactivate MicroStation PowerDraft by simply clicking on the embedded object. This ability works in the opposite direction by allowing components to be linked or embedded into a design file with complete fidelity. When the source information is updated using the application that created it, the representation in the MicroStation PowerDraft file is efficiently updated accordingly.

About Bentley

Founded in 1984, Bentley Systems, Incorporated is a premier technology supplier dedicated to improving the process of designing, building and operating permanent assets such as buildings, roadways, manufacturing facilities and utility and telecommunications networks. The professionals who use Bentley technology include architects, engineers, constructors and owner/operators. Bentley's MicroStation, ProjectBank and Viecon™ technology and services make Bentley the leader in the Engineering, Construction and Operations (E/C/O) market.

Bentley's annual revenues exceed \$190 million, and its reach spans the globe, serving more than 300,000 professionals and over 20,000 companies and organizations. Bentley is the second-largest privately held PC software company in the United States. More than 200,000 Bentley users participate in the Bentley SELECT® technology and service subscription program.

*MicroStation
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offers a convenient
way to simply get
designs to paper.*



When MicroStation PowerDraft v7.1 is used as a ProjectBank DGN client, you can view a design at a certain point in history and see exactly what data had been added, modified, and deleted at that particular moment.

MicroStation PowerDraft Technical Specifications

Highlights:

- Enabled to be a ProjectBank DGN Client
- Implemented from the same codebase as MicroStation/J v7.1, contains consistent and similar functionality
- Complete and accurate access to 2D and 3D designs for 100% graphical binary compatibility with Bentley Engineering products
- JMDL kernel supports MDL and advanced, object-based functionality
- Native 100% Pure Java support
- Industry recognized productivity tools
- AccuDraw
- SmartLine
- PowerSelector
- Level Manager
- IntelliTrim
- JMDL-based Spell Checker
- Reference files
- High-performance image management functionality using Image Manager
- Engineering Links - providing integrated connection to the Internet and corporate intranets
- QuickVisionGL for the interactive manipulation of 3D design file graphics in shaded mode
- OLE Server, Client, and Automation support, extending engineering design data beyond the workgroup

- SGML-based online help subsystem
- Support for reviewing and reporting of Tag data
- Support for 32-bit MAPI compliant E-mail
- MicroStation BASIC provides easy-to-learn-and-use, user-level customization abilities.
- Fast and easy-to-use plotting and printing, including support of Windows System Printer devices
- Popular data format import and export applications are included free of charge.
- Non-modal operation lets you work the way you want to, not the way the software wants you to work.
- Independent, resizeable, always-active views let you work more efficiently.
- Supports existing workspaces

System Requirements

- Intel®-compatible Pentium-based PCs and workstations running Microsoft Windows NT 4, Windows 2000, Windows 95, or Windows 98
- **Memory:** At least 16 MB more than the minimum requirements for the Windows operating system being used.
- **Hard disk space:** At least 100 MB free space on a hard disk drive after installation. The disk space occupied by MicroStation PowerDraft v7.1 depends on the installation options selected.

- **Input device:** Mouse or digitizing tablet (digitizing tablet on Windows requires vendor-supplied WINTAB driver or Bentley's Digitizer Tablet Interface).
- **Output device:** A host of industry-standard devices are supported. Works with output devices supported by Windows.
- **Video:** Supported graphics card (16-bit color and 24-bit z-buffer minimum for QuickVisionGL). Dual-screen graphics supported with vendor-supplied drivers for Windows NT 4 and Windows 95. Multi-monitor configurations supported with Windows 2000 and Windows 98.

AccuDraw, Bentley, the "B" Bentley logo, Engineering Links, IntelliTrim, MDL, MicroStation, MicroStation/J, MicroStation PowerDraft, ModelServer Imager, QuickVision, and SmartLine are registered trademarks; Image Manager, JMDL, ProjectBank and Viecon are trademarks; "Engineering the future together" and Bentley SELECT are registered service marks of Bentley Systems, Incorporated or Bentley Software, Inc. Java, 100% Pure Java and all Java-based trademarks and logos are trademarks or registered trademarks of Sun Microsystems, Inc. in the U.S. and other countries. Windows and Windows NT are registered trademarks of Microsoft Corporation. All other brands and product names are trademarks of their respective owners.

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For more information about the MicroStation and ModelServer families of products and services, please contact Bentley.

US/Canada/Latin America Headquarters:

Bentley Systems, Incorporated
685 Stockton Drive
Exton, PA 19341-0678 USA
Phone: +1 610 458 5000
+1 800 BENTLEY
Fax: +1 610 458 1060

Europe/Middle East/Africa Headquarters:

Bentley Systems Europe
Wegalaan 2
2132 JC Hoofddorp
THE NETHERLANDS
Phone: +31 23 556 0560
Fax: +31 23 556 0565

Asia/Pacific Headquarters:

Bentley Systems Pty. Ltd.
68 Dorcas Street
Southbank VIC 3006
AUSTRALIA
Phone: +61 3 9699 8699
Fax: +61 3 9699 8677

Electronic Communications:

www.bentley.com
E-mail: family@bentley.com

Regional office phone numbers:

Australia: +61 2 9929 5822

Belgium: +32 16 40 83 94

Benelux: +31 23 556 0600

Brazil: +55 11 5181 2666

Canada: +1 905 501 9989

China (Beijing): +86 10 6310 3280

China (Hong Kong): +852 2802 1030

China (Shanghai): +86 21 6375 8298

Czech Republic & Slovakia:

+420 2 5731 4131

Denmark: +45 45 41 2525

Dubai UAE: +971 43312666

Finland: +358 9 5407 330

France: +33 1 46924092

Germany: +49 89 962432 0

Hungary: +36 1 337 3411

India: +91 22 851 4299

Italy: +39 02 57500254

Japan: +81 3 5993 7770

Korea: +82 2 557 0555

Malaysia: +60 3 242 6233

Mexico: +525 652 7678

Norway: +47 6756 9590

Poland: +48 22 616 16 04

Portugal: +35 11 418 9072

Saudi Arabia: +966 3 865 2393

Singapore: +65 292 3929

South Africa: +27 11 482 3262

Spain: +34 91 372 8975

Sweden: +46 8 24 5260

Switzerland: +41 56 4834020

United Kingdom: +44 1344 412233

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