

CAXperts  
*dgn2pdf*

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*Quick Reference Guide*



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# 1 Introduction

**dgn2pdf** is a fast PDF converter for MicroStation® DGN files. It processes single DGN files as well as complete directories packed with hundreds of DGN files or even ISO files and drawings selected from a PDS® project. The PDF files contain the text information of all labels, i.e. they are fully searchable.

## 1.1 General Conventions

This document contains many visual cues to help you understand the meaning of certain words or phrases. The use of different fonts for different types of information allows you to scan the document for key concepts or commands. Symbols help abbreviate and identify commonly used words, phrases, or groups of related information

### Typefaces

*Italic* Indicates a system response, which is an explanation of what the software is doing. For example,

The text is placed in the viewing plane.

**Bold** Indicates a command name, parameter name, or dialog box title. Command paths are shown using an arrow between command names. For example,

Choose **File** → **Open** to load a new file.

**Sans serif** Indicates a system prompt or message, which requires an action be taken by the user. For example,

Select first segment of alignment

Normal typewriter

Indicates an actual file or directory name. For example,

The ASCII report is stored in the layout.rpt file.

**Bold typewriter**

Indicates what you literally type in. For example,

Key in **original.dat** to load the ASCII file.

### Symbols

This document uses the following symbols to identify special information:



Note – important supplemental information.



Map or path – shows you how to get to a specific command or form.



More information – indicates there is additional or related information.

## 1.2 Installation

Requirements:

- Operating system: Windows 2000, Windows XP
- Bentley MicroStation 7J

Administrator rights are required on each computer to install **dgn2pdf**.

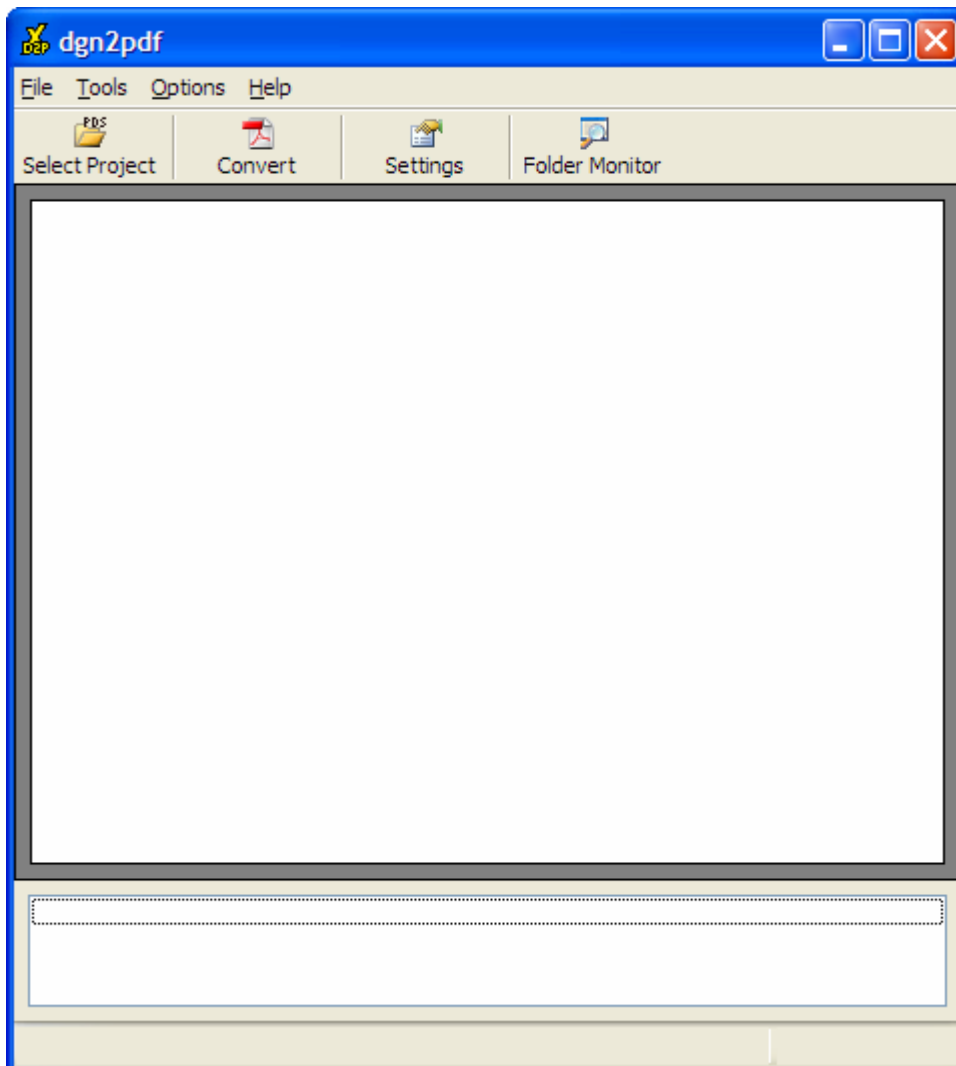
No configuration of **dgn2pdf** is required. Simply start `setup.exe` from your installation medium, the setup software will guide you through the installation process.



Note – to install the **dgn2pdf** license, start **dgn2pdf** and go to Help → Update License and paste your license key into the text box.

## 2 Working with dgn2pdf

When you start **dgn2pdf**, the main window shows up:



The tree view in the middle of the window can show up to three sub-trees:

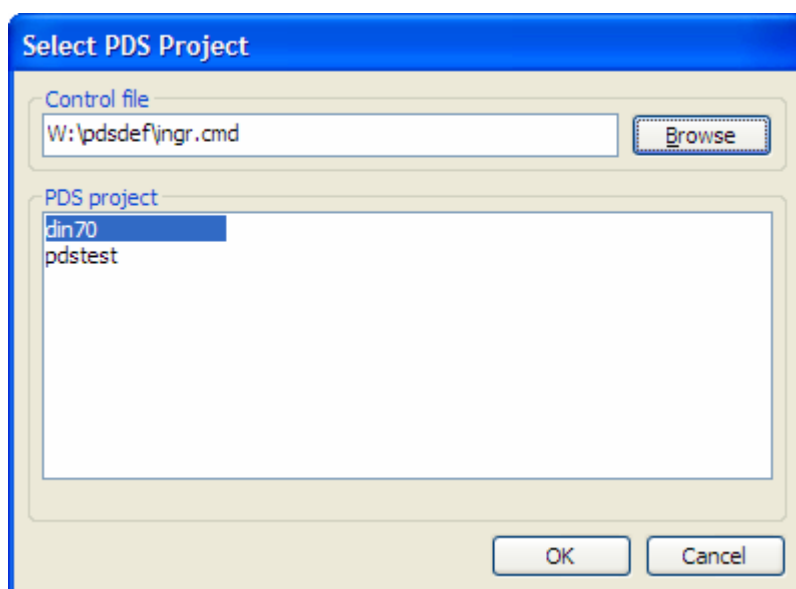
One for the drag and drop objects, one for drawings and one for pipings from the PDS project. Drawing sub-trees contain drawing type sub-items which contain individual drawings. Piping sub-trees contain areas, these contain models which contain ISOs.

The main menu provides the following items:

### 2.1 File

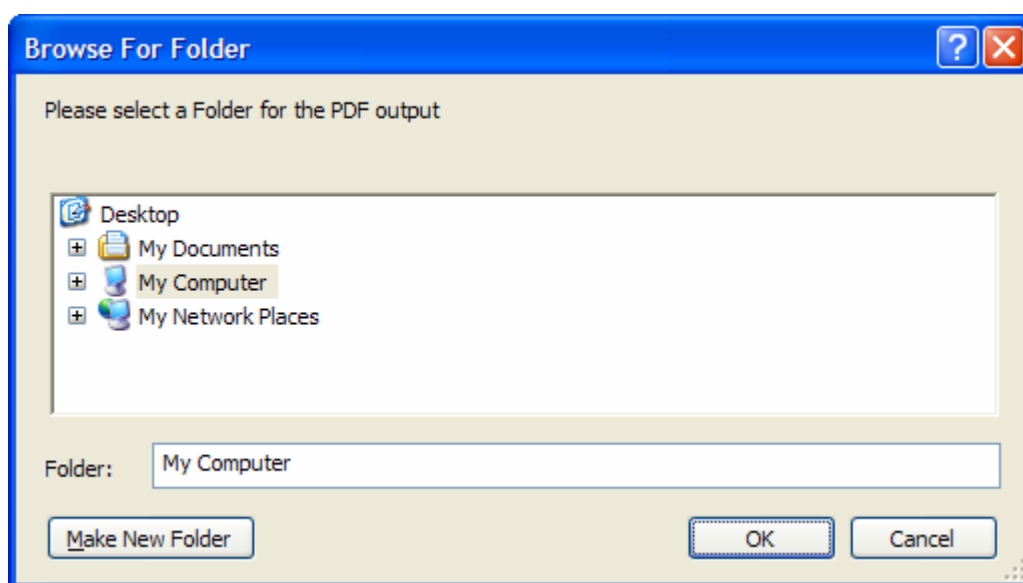
#### Select Project

When the user clicks on ‘Select Project’, a dialogue for the selection of the PDS control file and project shows up. After selection of a project, the project structure is displayed in the tree view of the main form.



## Load DGN files

The 'Load DGN files' menu item allows the selection of DGN files.



## Most Recently Used Projects

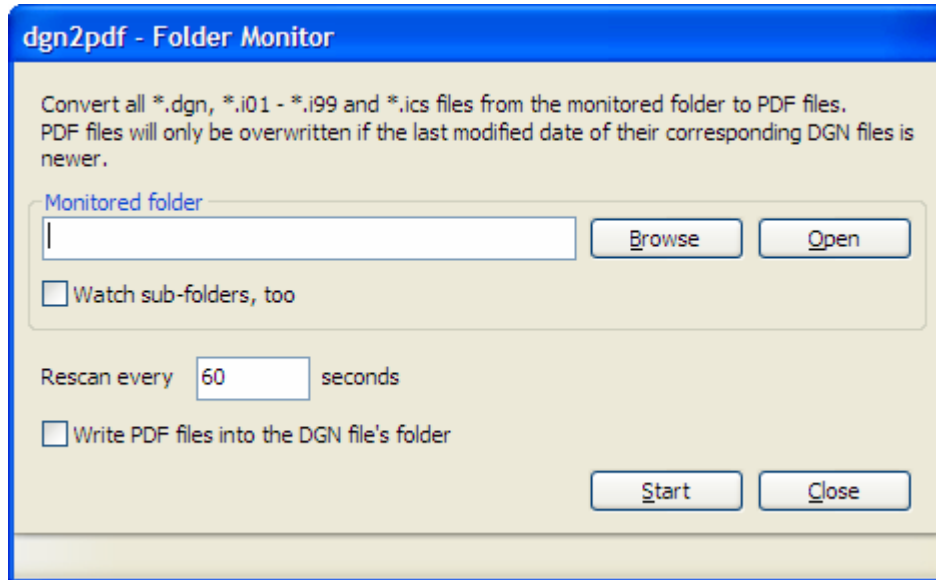
If a user has already used **dgn2pdf** on this computer, the most recently used projects will be displayed here.

## Exit

'Exit' closes the **dgn2pdf** tool.

## 2.2 Tools

### Folder Monitor



**dgn2pdf** has a monitor function to keep all DGN files in a folder up-to-date:

After selecting the folder and choosing the scan interval, click on start to monitor this folder. **dgn2pdf** will now look for outdated PDFs and replace them by new versions generated from the DGN files in the folder.

Additional check-box options:

- Watching of sub-folders
- DGN output to the monitored folder(s)

## 2.3 Options

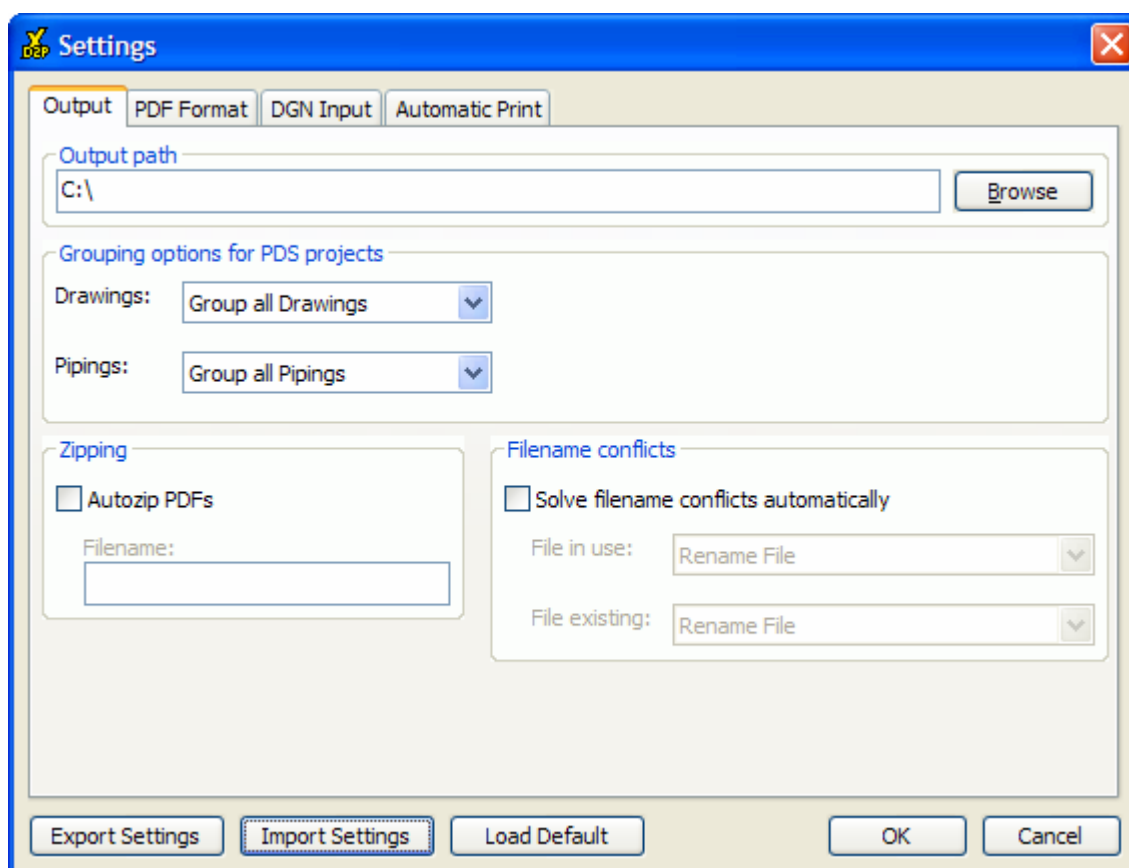
The 'Options' menu contains one item:

### Settings

'Settings...' brings up a configuration dialogue for the **dgn2pdf** functionality:

### Output

The output tab contains controls for the **dgn2pdf** file output.



### *Output Path*

Use the Browse button to set the output directory for the PDF and zipped PDF files

### *Grouping Options for PDS Projects*

**dgn2pdf** provides grouping for drawings and pippings.

For Drawings, the following options are available:

- Group all Drawings
- Group by Drawing Types
- No group

For Pippings, these options are provided:

- Group all Pippings
- Group all Areas
- Group all Models
- Group all ISOs
- No group

## Zipping

The PDF output can also be zipped by **dgn2pdf**. To do so, simply check ‘Autozip PDFs’ and specify a target filename.

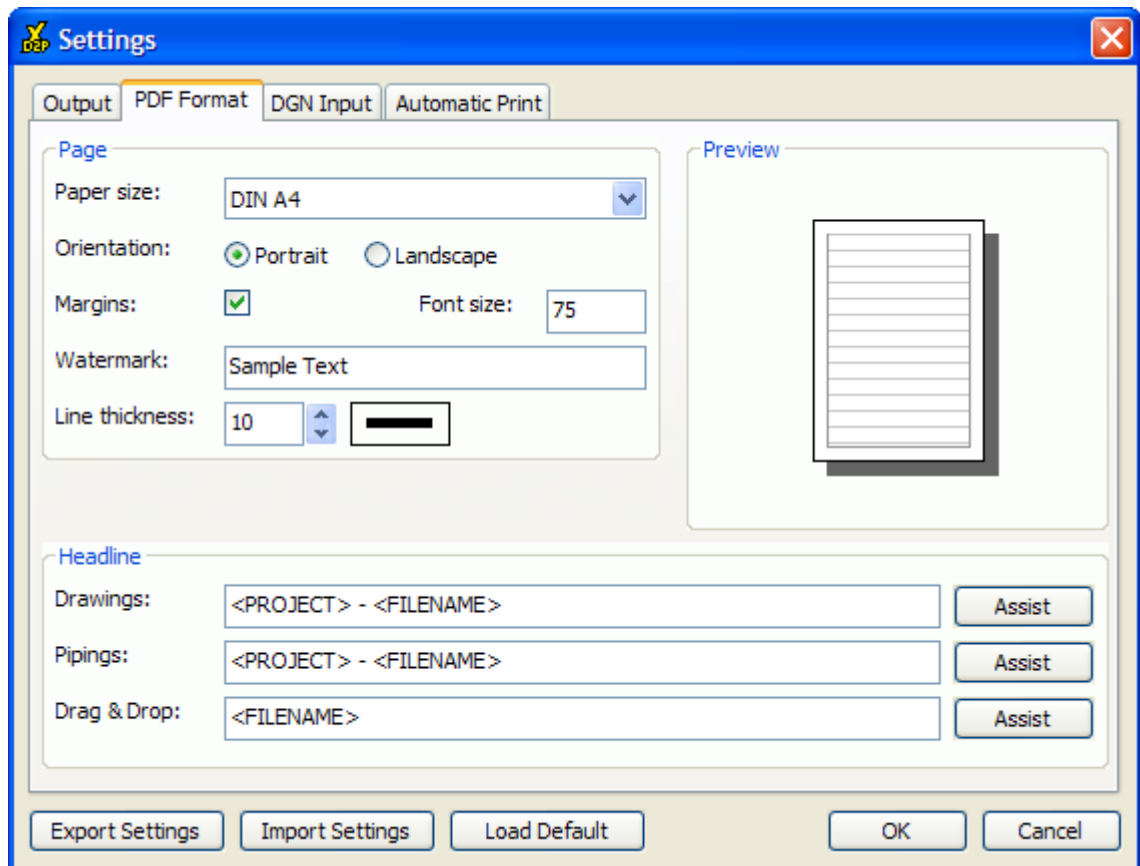
## Filename conflicts

For an automated solution of filename conflicts, check ‘Solve filename conflicts automatically’. These options are available for the new and the already existing file:

- Skip file
- Rename file
- Overwrite file (existing file)

## PDF Format

This tab provides formatting options for the PDF output.



These paper sizes are available:

- DIN A0
- DIN A1
- DIN A2
- DIN A3
- DIN A4

- Broadsheet
- Ledger
- Executive
- Legal
- Letter
- ANSI D 22x34

Orientation may be Portrait or Landscape

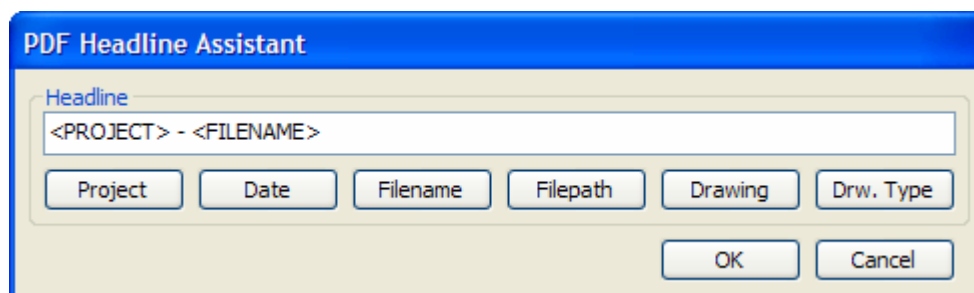
When ‘Margins’ is checked, **dgn2pdf** will shrink the drawing and add margins on all edges.

The content of the ‘Watermark’ textbox will be printed in the size specified by ‘Fotn size’ across the drawing.

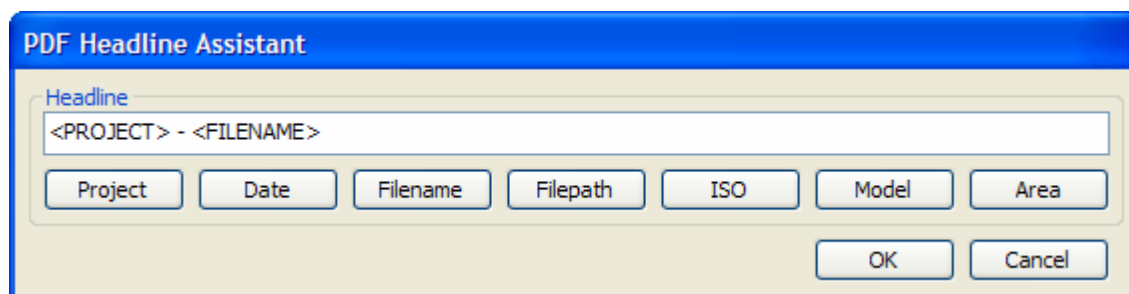
Use ‘Line Thickness’ for fine-tuning the thickness of the vector lines.

**dgn2pdf** contains a headline assistant tool for putting together the headline of the PDF document.

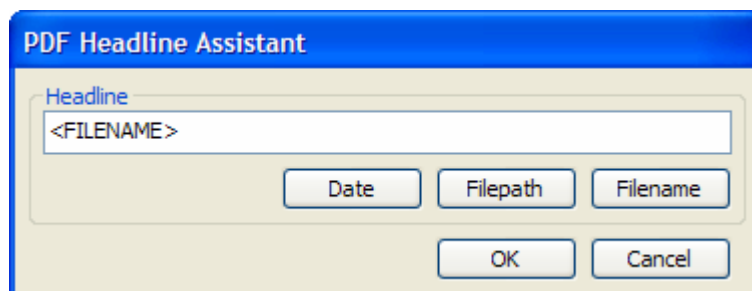
Drawings:



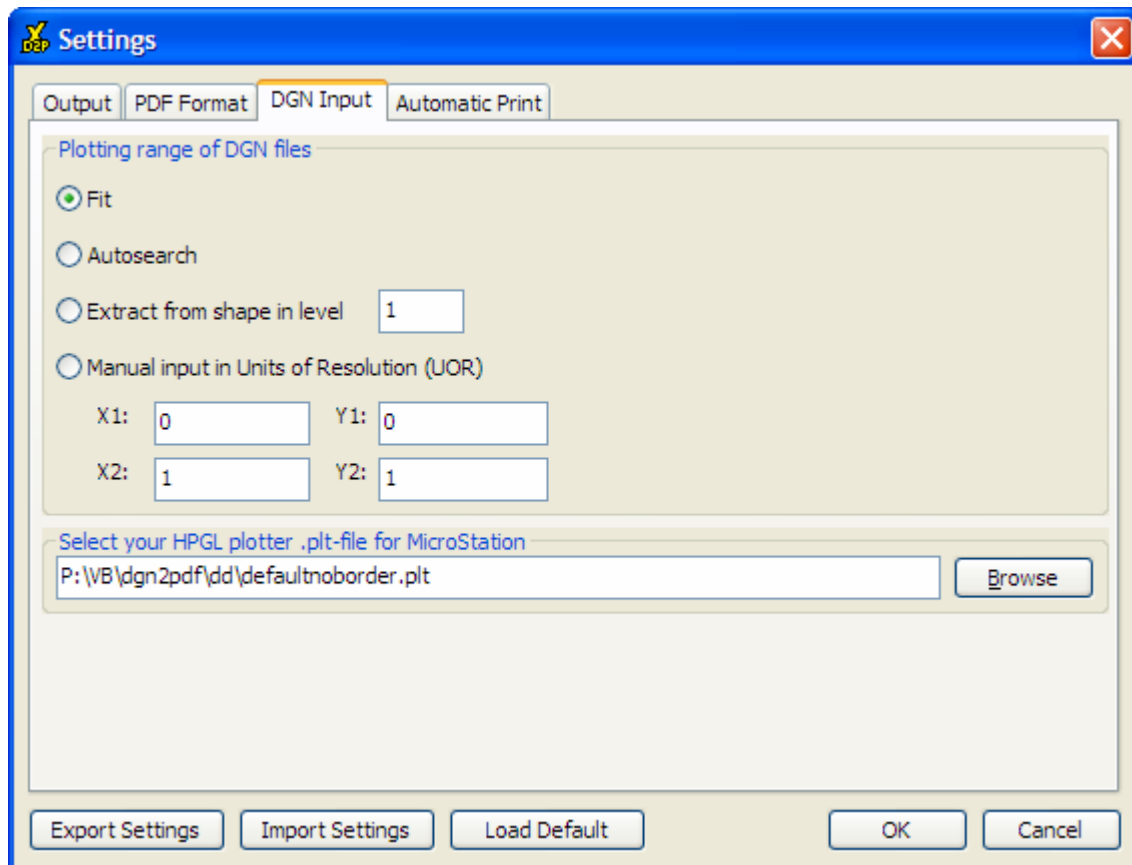
Pipings:



Drag & Drop:



## DGN Input



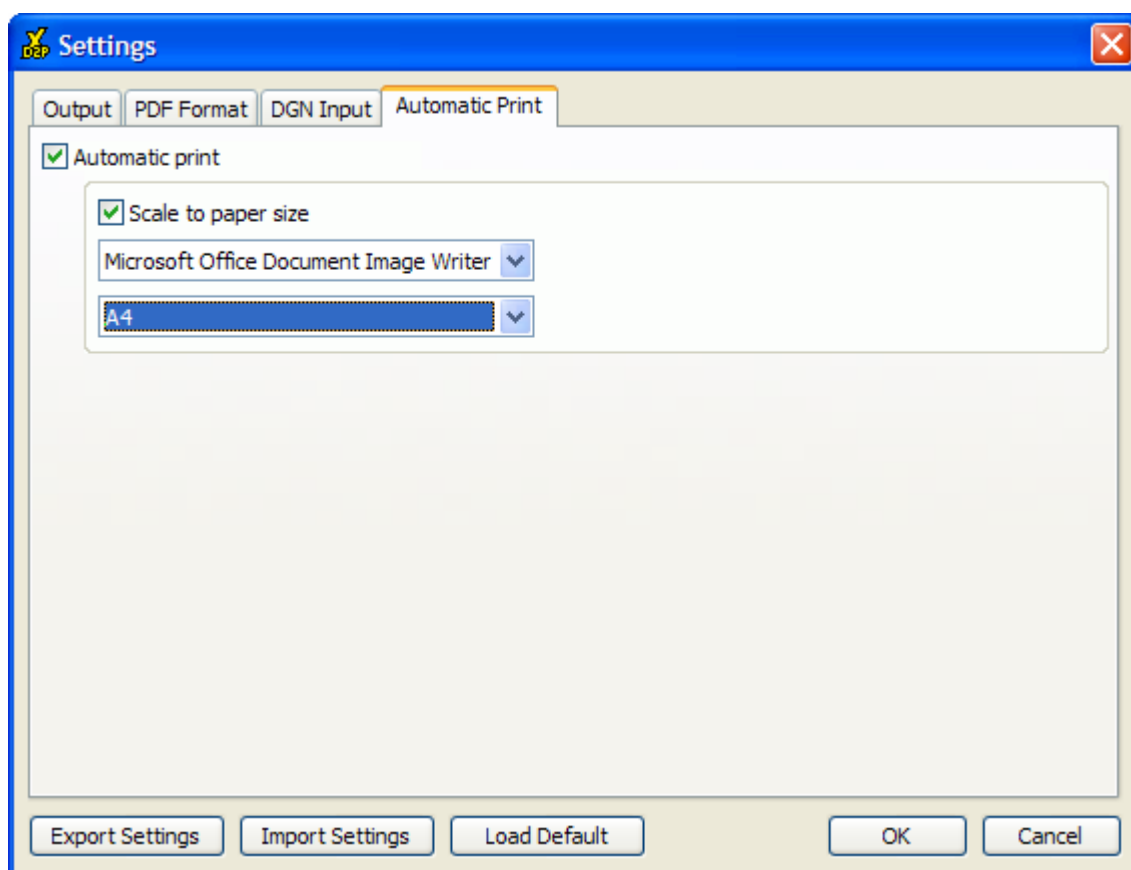
On the 'DGN Input' tab, the plotting range for the DGN files and the HPGL plotter .plt-file for MicroStation can be selected. This HPGL plotter file is needed for printing the DGN files to HPGL files; afterwards, these HPGL files are converted into PDFs. These options are available:

- Fit: All visible elements will be plotted and scale to the paper size
- Autosearch: If the DGN file is a drawing and a reference file of slot 31 named BORDER exists, the largest rectangle in the border file will be fitted to the paper size, if not, behaviour is the same as describe at 'Fit'. If the file is not a drawing, the largest rectangle in the master file will be fitted to the paper size.
- Extract from shape in level n: Fits and prints the largest shape in level n.
- Manual: Printing area has to be selected manually (in MicroStation Units of Resolution)

## Automatic Print

When 'Automatic Print' is checked, **dgn2pdf** will send PDF files directly to a printer.

When 'Scale to paper size' is checked, **dgn2pdf** will scale the output to match the selected printer's paper size.



## Export Settings

The 'Export Settings' button lets you store all settings in an .ini-file.

## Import Settings

'Import Settings' loads all settings from an .ini-file.

## 2.4 Help

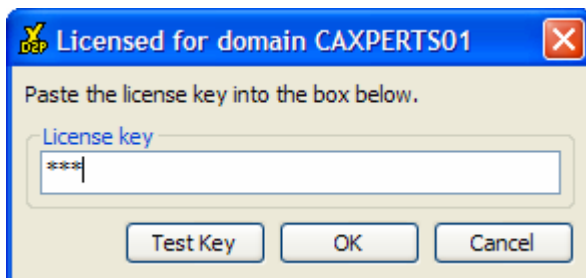
The help menu contains two items:

## About

'About' shows the **dgn2pdf** about box.



## Update License



'Update License' shows as dialogue where you can key in and test your license key.

## 3 Technical support

<http://www.caxperts.com/>



## 4 Glossary of Terms

### *Attribute*

A property or characteristic of an entity. A column in an entity table.

### *Batch Queue*

A queue, or channel for moving requests, created through NQS. A batch queue handles scheduling for processes submitted through the forms interface.

### *Cancel Box*

A box that appears in the upper right corner of the PD Shell forms and contains an X. Place a data point on the cancel box to exit the active form or option.

### *Client*

In network operations, a node that accesses data or performs a function on the remote resource (usually a server). All network operations (database, NFS, NQS) between two or more nodes establish a client/server relationship.

### *Code List*

A set of acceptable values for a specific attribute (column) that can be referred to by an index number or selected from a form. For example, the code list set for the fluid code attribute allows you to select from a set of standard entries (such as P for process or MMA for methyl alcohol).

### *Code-listed Attribute*

An attribute linked to a specific entry in a code list set. These attribute values can be referenced by entering the associated code list number.

### *Column*

An attribute of a table. A group of columns defines a table.

### *Confirm Button*

A button that appears in the upper right corner of a form and contains a green check mark. Choose the confirm button to initiate a selected option.

### ***Database***

A collection of comprehensive informational files having predetermined structure and organization that can then be communicated, interpreted, or processed by a specific program.

### ***Database Table***

The part of the database that is made of rows and columns and contains information about the project and design elements.

### ***Design Area***

A grouping of model files by discipline. A design area can refer to a specific volume of the project area or the entire project area. The defined volume can represent a unique volume or overlap another design volume. Design areas are used to manipulate sets of design files. This is useful for operations which require multiple design volumes such as reporting and interference checking.

### ***Design Database***

A database that contains the nongraphic design data for a project. Each model represents a partition of the database.

### ***Entity***

An object (project, drawing, element, and so forth) of interest about which information is stored; a relational database table.

### ***Form***

An interface or screen menu designed with the I/FORMS product.

### ***Full Path Name***

The name of the entire path or directory hierarchy to a file, including the file name. See also *relative path name*.

### ***Gadget***

A portion of a form, such as a button, a field, or a checklist, that responds to information. Gadgets can display default values or act as data entry areas.

### ***Help Files***

On-line documentation that provides command descriptions and sequences, and other information to help you use the software.

***Integrated Project***

A project created with Piping, P&ID, Electrical Raceway, and ModelDraft Data.

***IPLOT***

An InterPlot client product that provides command-line, tutorial, and user command interfaces for plotting.

***Key-in Field***

The field on a screen used to accept user-supplied data. Also known as *data entry field*.

***Model***

A graphic representation or schema.

***Model Number***

A database attribute used to refer to a 3D model in the active project

***Module***

A specialized application within PDS such as the Piping Designer or Equipment Modeling task.

***Network***

An interconnection of computers that enables them to share data and control. The term *network* can mean the devices that connect the system, or it can mean the connected system.

***Neutral File***

An ASCII file which can be used to load data into a library, database, or design file.

***Node Address***

The hard-wired Ethernet address assigned to each node when it is manufactured. It is necessary for each node to identify and communicate with another node in the network.

***Node Name***

A name, or alias, that can be assigned to the node address of a device on a network. The node name for Intergraph workstations can be a maximum of 6 alphanumeric characters while all other devices on the network allow up to 14 alphanumeric characters in the node name.

### ***NQS***

The acronym for Network Queuing System, the software package that allows you to define network-wide batch and device queues. Use of NQS involves setting up local resource queues on the system(s) where the resources reside and setting up “pipe queues” on the systems that are to have access to the resources.

### ***NPD***

The acronym for nominal piping diameter.

### ***Oracle***

A relational database management system supported by RIS.

### ***Partition***

a subset of the database. Each model represents a partition of the Design database.

### ***Path Name***

The sequence of directories leading to a file. See also *absolute path name* and *relative path name*.

### ***PDS***

Plant Design System.

### ***Pipeline Name***

A piping line number label that usually corresponds to sections of piping within a model.

### ***Pipe Queue***

A controlled channel for moving requests to batch or device queues on remote systems and for receiving status and/or data in response.

### ***Project Control Database***

A database used to define all the information related to managing a project including design area definitions, interference management data, and revision management data.

### ***RDB***

The acronym for Reference Database. A collection of reference data that contains information relative to industry design codes, vendor’s catalog data, job specifications,

commodity libraries, graphics symbology, label descriptions, report formats, and other information of a similar manner.

### ***Reference Database***

See *RDB*.

### ***Relational Interface System***

A generic relational database interface that isolates the differences in specific vendors' relational database management systems.

### ***Relative Path Name***

The sequence of directories that lead from the current directory to a specific file. See also *path name* and *absolute path name*.

### ***Report Format File***

A file that determines the contents and format of a report. It defines all the needed criteria for creating the actual report, including which database attributes are reported.

### ***RIS***

The acronym for Relational Interface System.

### ***Row***

A unit of related information in a table. One collection of column values for a table.

### ***Schema***

An RIS identifier of a unique database/user combination that exists in a commercial database system.

### ***Search Criteria***

A set of values used to scan a database or object library.

### ***Seed Data***

The default data used to create new projects, models, or drawings.

### ***Seed File***

A design file used to create a design file with a set of default parameters.

### ***Server***

In network operations, the node that maintains common data or performs a common task needed by clients. All network operations (database, NFS, and NQS) between two or more nodes establish a client/server relationship.

### ***Source File***

The uncompiled version of a language file or other data table. Source files are usually contained in text libraries. See also *neutral file*.

### ***Standard Note***

A set of acceptable responses defined in the Standard Note Library. See also *code-list*.

### ***Standard Note Library***

A library that contains the text for code-listed attributes and standard notes. All attributes identified as code-listed are stored in the database as integer data.

### ***Toggle***

To switch; to change between two alternatives.

### ***Type 63 Element***

An element used to store active parameters and customization data in a model or drawing. Most of the customization data defined with the Project Data Manager is stored in a type 63 element.

## 5 Index

Error! No index entries found.