

# CAXperts

## *IsoOverView*

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*Manual*



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# 1 Introduction

This software product positions a key plan of the installation on each sheet of an Isogen isometric drawing.

This key plan traces the **entire** pipeline system.

**All the software parameters** are set in a single **INI file**. These can also be specially set for a project or design area.

The pipeline information is read from the hits file and idf file.

In addition, a cover sheet (IsoCoverSheet) is generated for each pipeline. The pipeline is drawn on the basis of the grid on this cover sheet. The connection points in the pipeline are measured on the basis of the grid.

A further display presents the entire pipeline in an isometric, undistorted view. Here again, the connection points are labelled.

## 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

<i>Italic</i>	Indicates a system response, which is an explanation of what the software is doing. For example,  <i>The text is placed in the viewing plane.</i>
<b>Bold</b>	Indicates a command name, parameter name, or dialog box title. Command paths are shown using an arrow between command names. For example,  Choose <b>File</b> → <b>Open</b> 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.
<b>Bold typewriter</b>	Indicates what you literally type in. For example,

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

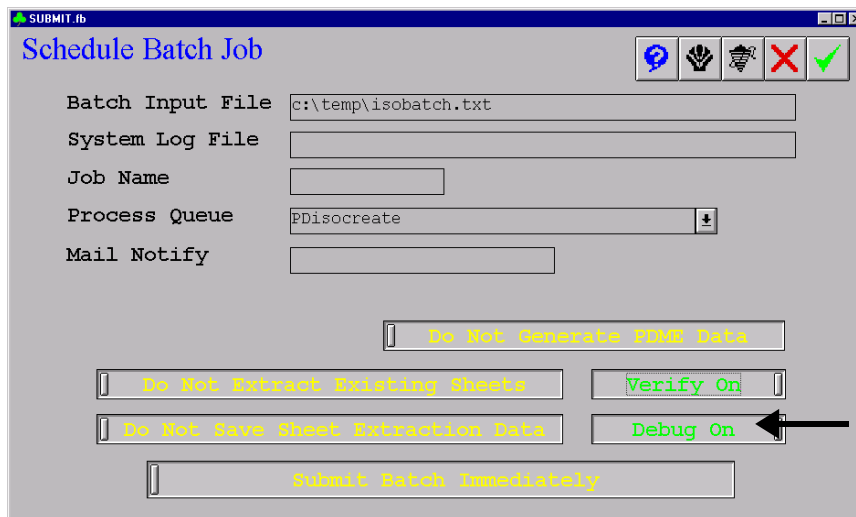
## Symbols

This document uses the following symbols to identify special information:

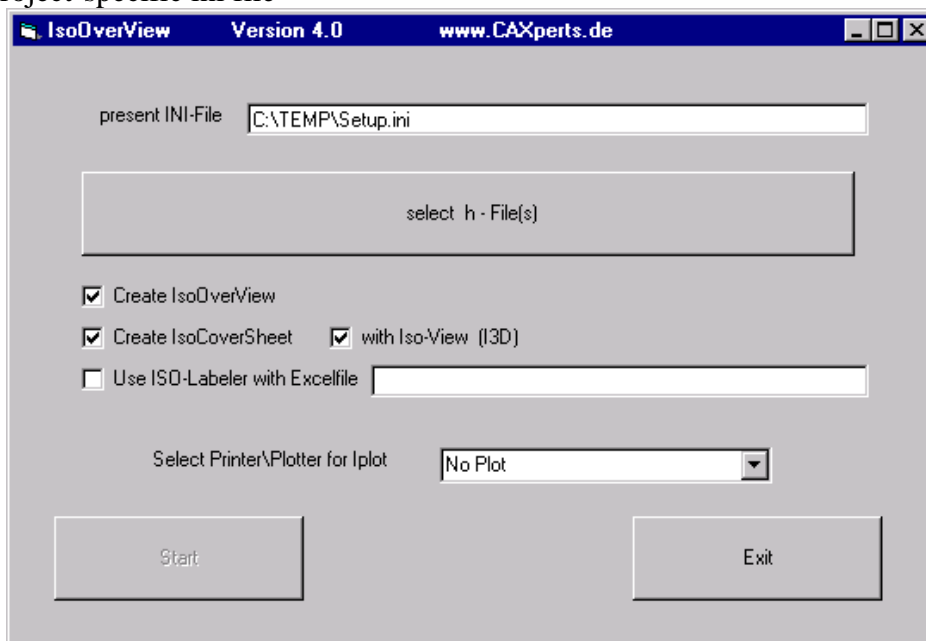
-  Note – important supplemental information.
-  Map or path – shows you how to get to a specific command or form.
-  More information – indicates there is additional or related information.

## 2 For users

- Set the *Debug On* switch in the Schedule Batch Job screen during isometric sheet creation and start Iso as usual.



- Start IOV (iovs.exe)
- Select the project-specific ini file



- Select one or more h files (isometric sheets).
- Select the plotter or printer.
- Click on "Start".
- Wait until Microstation terminates and the IOV message "ISO Over View completed" is displayed.

## 3 For the administrator

### 3.1 Automatic hits file generation

IOV requires the Hits file for each pipeline. Users can either set the *Debug On* switch on generation of the isomorphic sheets or word 16 can be set to 0 in INTERGRAPH\_OPTIONS\_BLOCK.

### 3.2 Program execution

Below is a brief summary of how the program executes in order to improve readers' understanding of the process.

- The `iov.ini` file in the program folder is read
- The INI file selected by the user is read
- The seed file is copied to an `iov` file
- All the elements in the `iov` file are set to *pipelv* level
- The pipeline is drawn
- The isometric sheet is opened
- All elements on *pipelv* are deleted
- The view *mstnseedview* from the `iov` file is referenced with the scale *refscale* and insertion point *refpoint*
- The reference file is copied into the isometric sheet
- The `iov` file is detached
- The line terminal numbers are written to the IOV file
- The grid file is read and the distance is calculated
- The "Connect to" information is read from the IDF file
- The IsoCoverSheet is created (ICSseed copied)
- The IOV file is copied in (via refernece)
- The table is created
- The I3D file is created
- The line terminal numbers are written to the I3D file
- The I3D file is copied in (via reference)
- Microstation is terminated

### 3.3 Creation of the Seed files

Seed files are Microstation **2D** files.

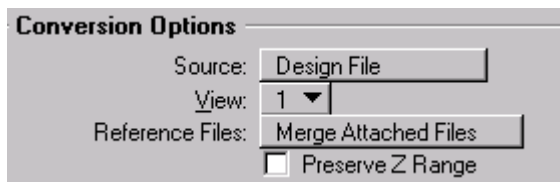


## IsoOverView seed file

This contains the key plan drawing with the original coordinates and the *Saved View* with the name taken from the *mstnseedview* variable.

The recommended procedure for creating the seed file is as follows.

- Open the PDS model (Piping or EQP) with the referenced grid.
- Reference the model with the most important components.
- File → Export → 2D...
- Select View: Top View.



- Edit the seed file, e.g. delete any surplus lines.
- Create a Saved View with the name from the *mstnseedview* variable.

## IsoCoverSheet (ICS) seed file

This file is usually a copy of the IsoGen border file. The additional dimension table entries should also be made here.

## 3.4 LOG file

The Temp folder (often c:\temp) contains a LOG file (iov.log). Thanks to this file, it is easy to identify errors.

## 4 INI file

[IsoOverView]

seedfile=o:\sk\proj\lingen\defset\iovseed.dgn

pipeco=3

pipelv=40

pipewt=4

pipelc=0

'Name of the Saved view in the IOV seed file

mstnseedview=iov

'Insertion scale of the view in the Iso sheet (???.i01)

refscale=7:1

'Insertion point of the view in the Iso sheet (???.i01)

refpoint=100,35

isopath=0:\sk\proj\lingen\iso\

'Factor for unit conversion (default 1000)

Unitfactor=1000

'Elements that are not to be displayed (e.g. support segment), name from the hits file (1st column). Multiple names can be specified if separated by spaces.

NotUsedComponent=SUPP

[IsoCoverSheet]

'Color, Level, Weight, Text Height, etc. of the line terminal number in the CoverSheet top view (for ISO view, see [I3D])

LEntextco=2

LEntextlv=1

LEntextwt=1

LEntextlc=0

LEntexttx=0.2

LEntexttw=0.2

LEntextJustification=CC

'Color, Level, Weight, Text Height, etc. of the table in the CoverSheet

TABtextco=1

TABtextlv=1

TABtextwt=1

TABtextlc=0

TABtexttx=3.5

TABtexttw=2.5

TABtextft=29

TABtextJustification=LC

'Table settings (measured with reference to grid)

'Y coordinate of first line

TABlineheight=10

'Line spacing

TABlinespacing=6

'C coordinate of serial number

TABnumberpoint=15

'X coordinate of label (connection to)

TABlabelpoint=35

'X coordinate of delta x

TABXpoint=250

'X coordinate of delta y

TABYpoint=320

'X coordinate of delta z

TABZpoint=400

'Number of decimals for distance to grid lines

TABround=0

'The distance to the grid lines is multiplied by this distance

TABfactor=1000

'Coordinates read from the h file and the idf file are different, value necessary to locate the "Connected to" text

TABaccuracy=0.05

'MicroStation macro, fill in text field in ICS file. Isometric sheet ????.i01 is automatically referenced, this macro can then be used to copy out the text field

ICSmacro=o:\sk\proj\lingen\defset\icsmacro.bas

'ICS-Seed-File

ICSseedfile=o:\sk\proj\lingen\defset\icsseed.dgn

'PDS file for grid measurement. Created using PDS.

Gridfile=o:\sk\proj\lingen\defset\FW\_lingen.dat

'Insertion scale for IOV in ICS file

ICSrefscale=25:1

'Insertion point for IOV in ICS file

ICSrefpoint=220,230

[Programm]

'These variables are used by the program itself.

Lizenz=338070

inifile=o:\sk\proj\lingen\defset\iovinini

createIOV=1

createICS=1

createI3D=1

[IPlot]

'IPlot Iparm file

IParmfile=o:\sk\proj\lingen\defset\plotseed.i

'Printer in format: \\server\drucker

IPlotque1=\\XNS178\ls802\_A3

IPlotque2=\\XNS178\ls802\_A4

---

IPlotque3=\\S\_MT200\5000A4Q

[I3D]

'3D mstnfile as seed file for isometric view

I3Dseedfile=o:\sk\proj\lingen\defset\I3Dseed.dgn

'Insertion scale for IOV in ICS file

I3Drefscale=2.2:1

'Insertion point for IOV in ICS file

I3Drefpoint=450,320

'Color, Level, Weight, Text Height, etc of line terminal numbers or isometric view

I3DLEntextco=2

I3DLEntextlv=1

I3DLEntextwt=1

I3DLEntextlc=0

I3DLEntexttx=2

I3DLEntexttw=2

I3DLEntextJustification=CC

## 4.1 Variables in the IsoOverView section

### Seedfile

Specifies the seed file for IOV (e.g.: EQP top view exported to a 2D file).

### Pipeco

Color number of the drawn pipeline.

### Pipelv

Level of the drawn pipeline.

**Note! All Microstation elements on this level in the isometric sheet are deleted.**

### Pipewt

Line weight of the drawn pipeline.

## Pipelc

Line type of the drawn pipeline.

## DelLevel

**Deletes** all elements on this level. This is useful if the level has been changed during testing.

Specify as usual in MicroStation (e.g. 10,12,50-60)

## Mstnseedview

Name of the Saved View in the IOV seed file

## Refscale

Scaling for referencing the IOV file in the ISO sheet.

## Refpoint

Insertion point for the IOV file in the ISO sheet.

## isopath

**The software itself enters the value of this variable.**

## Unitfactor

Factor for unit conversion (default 1000)

## NotUsedComponent

Elements that are not to be displayed (e.g. support segments), name from the hits file (1st column). You can specify multiple names as long as they are separated by spaces.

## 4.2 Variables in the IsoCoverSheet section

### LENtext??

Color, level, weight, text height etc. of the line terminal number in the CoverSheet top view (for the ISO view, see [I3D])

### TABtext??

Color, level, weight, text height etc. of the table in the CoverSheet

### TABlineheight

Table settings (measured with reference to the grid). Y coordinate of the first line (line height)

## **TABlinespacing**

Table settings (measured with reference to the grid). Line spacing.

## **TABnumberpoint**

Table settings (measured with reference to the grid). X coordinate of the serial number.

## **TABlabelpoint**

Table settings (measured with reference to the grid). X coordinate of the label (Connected to.)

## **TAB?point**

Table settings (measured with reference to the grid). X coordinate of delta X, delta Y or delta Z

## **TABround**

Number of decimal places for distance to grid lines.

## **TABfactor**

The distance to the grid lines is multiplied by this factor.

## **TABaccuracy**

Coordinates from the h file and the idf file are different. This value is necessary to identify the "Connection to" text.

## **ICSmacro**

MicroStation macro, fill in text field in the ICS file. Isometric sheet ???i01 is automatically referenced. This macro can be used to copy out the text field.

## **ICSseedfile**

ICS seed file.

## **Gridfile**

The PDS file for grid measurement. This is created using PDS.

## **ICSrefscale**

Insertion scale for IOV in the ICS file.

## **ICSrefpoint**

Insertion point for IOV in the ICS file.

## **gridextension**

Excess grid. The terminal point may lie outside the grid if still within this value. This is of value if multiple grids are in use.

If this value is not specified then the terminal point may be located at any distance from the edge of the grid.

## **4.3 Variables in the Programm section**

### **Lizenz**

You enter the licence number here. The licence number is supplied by ITC-Schlegel. The licence applies to the entire domain, i.e. you can use the program throughout the entire network.

### **INI-File**

The value of this variable is entered by the software itself.

## **4.4 Variables in the Iplot section**

### **Iparmfile**

This variable specifies the Iplot-Iparm file.

### **IPlotque1 to Iplotque5**

These variables make it possible to specify up to 5 plotters or printers. These are then listed in the drop-down list box.

## **4.5 Variables in the I3D section**

### **I3Dseedfile**

3D mstnfile as the seed file for the isometric view.

### **I3Drefscale**

Insertion scale for IOV in the ICS file.

### **I3Drefpoint**

Insertion point for IOV in the ICS file.

### **I3DLEntext??**

Color, level, weight, text height etc. of the line terminal number for the isometric view.

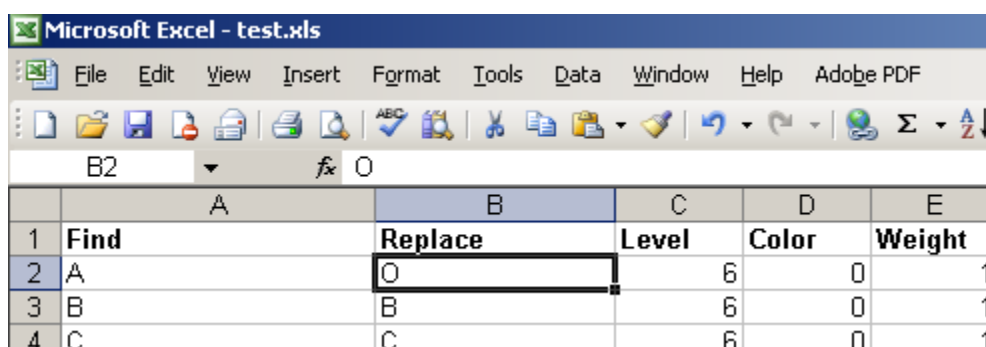


## 5 Tools

### 5.1 DGN Find and Replace

DGNFindReplace is a tool to find text in DGN files and replace the text with desired text defined in one Excel sheet.

In following example sheet, the text 'A' in level 6, with color 0 and weight 1 will be replaced with text 'O'.



The screenshot shows an Excel spreadsheet with the following data:

	A	B	C	D	E
1	Find	Replace	Level	Color	Weight
2	A	O	6	0	1
3	B	B	6	0	1
4	C	C	6	0	1

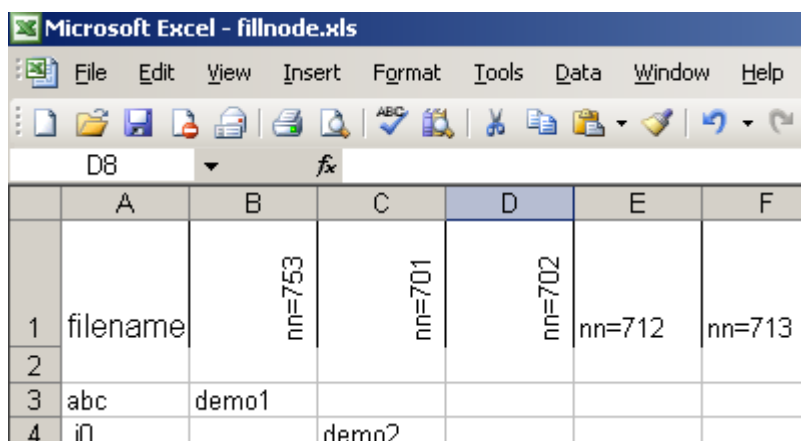
One can define a folder, where the DGN files will be searched with given extensions. And one can also add the desired DGN files to the file list to process them.

The Excel configuration file can be created manually, or can be created automatically using "Extract text to Excel" function.

### 5.2 DGN Fill Text Nodes

DGN FillNode is a tool to fill DGN file text nodes with text defined in one Excel sheet.

In following example Excel sheet, all files, whose names contain substring 'abc', will be filled with text 'demo1' for text node number 753. All files, whose names contain substring '.i0' will be filled with text 'demo2' for text node number 701.



The screenshot shows an Excel spreadsheet with the following data:

	A	B	C	D	E	F
1	filename	nn=753	nn=701	nn=702	nn=712	nn=713
2						
3	abc	demo1				
4	.i0		demo2			

## **6 Technical support**

Need more help? Contact CAXperts support by email, online, or phone:

<mailto:support@caxperts.com>

[http://www.caxperts.com/component/option,com\\_contact](http://www.caxperts.com/component/option,com_contact)