

MEDUSA⁴

VERSION 5.0

CADConvert

GUIDE



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PREFACE

Book Conventions

The following table illustrates and explains conventions used in writing about MEDUSA applications.

Convention	Example	Explanation
Menu	Choose <i>Zoom</i> from the View menu Add button Choose the tool <i>Creates thin solid lines.</i>	Indicates a command, function or button that you can choose from a menu, dialog or tooltray.
Syntax	<code>acos 0.345</code> The <code>ciaddobj</code> command Return or Control-g	User input, commands, keywords and keys to press on a keyboard.
SyntaxBold	Enter command> plot_config	Where system output and user input are mixed, user input is in bold.
<i>SyntaxItalic</i>	<code>tar -cvf /dev/rst0 filename</code>	Supply an appropriate substitute for each variable; for the given example replace <i>filename</i> with an actual file name.
<i>Filename&path</i>	<code>medusa\med2d\m2d\src\</code>	Shows path and filenames.
UPPERCASE	MEDUSA or CADCONVERT	Names of products.
<i>italic</i>	<i>left mouse button</i> <i>Drafting User Guide</i>	Indicates the buttons to press on a mouse and names of books.
bold	A temporary group is a collection of ...	Emphasize text.

Please note: Illustrations showing menus and forms are taken from a window system. The display for other platforms can differ slightly.

Online User Documentation (HTML)

Online documentation for each book is provided in HTML format. You can view this online documentation in the MEDUSA installation directory and directly by calling it up within the MEDUSA user interface.

Installation Directory

1. Navigate to the directory where MEDUSA is installed.
<MEDUSA installation directory>/meddoc/doc/<language>/ (Unix)
<MEDUSA installation directory>\meddoc\doc\<language>\ (Windows)
where <language> is either *english*, *german* or *french*.
2. Click on the file *mainmenu.htm*.
3. Click the book title you want to view.

MEDUSA Interface

1. Click left on the entry *Help* inside the main menu.
2. Choose MEDUSA Documentation from the pulldown menu.
A browser opens showing the *mainmenu.htm* listing all available documents.

Printing Version of the Documentation (PDF)

A PDF (Portable Document Format) file is included for each online book. You must have Acrobat Reader installed to view and print PDF files. If you don't have the Acrobat Reader, you can download it for free from the Adobe homepage:

<http://www.adobe.com/products/acrobat/readstep.html>

In order to search for a keyword across PDF files you can use **Acrobat Reader**. Therefore **Acrobat Reader Version 6.0** or higher has to be installed. The Reader provides a multiple search function, i.e. you can specify complete directories containing several PDF files for searching.

INTRODUCTION AND START

Introduction

The CADConvert program builds the base for the MEDUSA-DXF/DWG interface. The converter enables 2D MEDUSA-drawings to be converted into DXF/DWG-data and vice versa. Therefore the program can be used in four ways:

- **MEDDXF** : Translates 2D MEDUSA-sheets to DXF-data
- **DXFMED** : Translates DXF-data to 2D MEDUSA-Sheets
- **MEDDWG** : Translates 2D MEDUSA-sheets to DWG-data
- **DWGMED** : Translates DWG-data to 2D MEDUSA-Sheets

DXF/DWG-data not produced by AutoCAD may not meet the DXF/DWG-standard and can produce unexpected results. The converter has been developed fault tolerant to read in non DXF/DWG-standard files but it is not able to compensate all deviations.

In some cases MEDUSA and AutoCAD work completely different, making it impossible to regenerate the same data using a **loop-translation** (e.g. MEDUSA-DXF-MEDUSA or DXF-MEDUSA-DXF). The converter is designed in a way to cover the properties of the target system. For loop-translation following has to be considered:

- MEDUSA line and text types are maintained during an export/import cycle. If lines or texts with free style are exported into AutoCAD and then re-imported into MEDUSA, they will be free styles again having the appropriate line or text type exported before, unless the type was explicitly mapped onto another MEDUSA style during import.
- Standard prims of MEDUSA are maintained during an export/import cycle. Standard prims are exported to AutoCAD as blocks and they are re-imported as MEDUSA prims again (in earlier revisions prims changed into groups with graphic elements). This is not valid for user defined prims. For mapping of prims see [“Configuration”](#), [“Default Mapping DXFMed/DWGMed”](#)“[Symbol Mapping](#)” on page 29.

URL text properties are exported to DXF/DWG and also imported back into MEDUSA.

Starting CADConvert

CADConvert can be started within MEDUTIL, within MEDUSA and offline.

Running CADConvert within MEDUTIL

You can start CADConvert from within MEDUTIL using the commands listed below for the appropriate interface.

Command	Called Interface
meddxf	MEDUSA to DXF
dxfmed	DXF to MEDUSA
meddwg	MEDUSA to DWG
dwgmed	DWG to MEDUSA

Using CADConvert within MEDUSA

The interfaces mentioned in “[Running CADConvert within MEDUTIL](#)” can be called within the MEDUSA user interface with the functions File -> Open and File -> Save as and then choosing the extension of the AutoCAD file.

Starting Offline inside a Console

Please note: The following explanations are valid for a Windows system.

It is similar on a UNIX system. You only have to use the usual path conventions (slash / instead of backslash \) and the executable is `cadconvert` instead of `cadconvert.exe`.

For starting CADConvert offline inside a console (DOS box) do the following steps:

1. Open a console (DOS box).
2. Inside the console start the *login.bat* from your user project.
3. Then type in the command:

```
<inst-dir>\CADCONVERT\M2D\RUN\cadconvert.exe @e- macro <macro name>  
where
```

<inst-dir> is the installation directory of MEDUSA.

<macro name> is a text file with commands which shall be done by CADConvert.

Example for a CADConvert macro converting MEDUSA files into ACAD DWG format:

```
@e- meddxf ----- direction of conversion  
@e- modin med ----- input format  
@e- modout dwg ----- output format  
@e- reset E:\medusa\cadconvert\cfg\cadconvert.cfg  
@e- BLOCKNAME Off  
...(some more parameter settings)  
@e- SHEETSIZE BYGEOMETRY  
@e- UNITS MM  
@e- in "E:\user_prj\med_to_convert\z_001.she"  
@e- out "E:\user_prj\converted_to_dwg\z_001.dwg"  
@e- go  
...
```

You also can do the steps for running the *login.bat* and starting CADConvert in a Batch file, which then looks like following:

```
call E:\user_proj\login.bat  
E:\medusa\CADCONVERT\M2D\RUN\cadconvert.exe @e-  
macro E:\user_proj\med_dwg.mac
```

List Conversion

You can convert automatically several files, which are compiled in a list, using one command.

1. Create a directory and insert any files, which should be converted. In our example the directory is called *sheet_dir*. It contains MEDUSA sheets with file extension *she*.
2. To create the list automatically open a console (DOS box) and type in the following:

```
dir /s /b E:\sheet_dir\*.she > E:\sheet_dir\list.txt
```

The list file, here called *list.txt*, is inserted into the specified directory, *E:\sheet_dir*. It contains all files of the *E:\sheet_dir* directory with extension *.she*.

In section “[Starting Offline inside a Console](#)” on page 8 the example of a macro is given, which converts a MEDUSA file into DWG format. For the list conversion in our example the macro *convert_meddwg.mac* has been created in the directory *E:\userproj*. It looks like as follows:

```
@e- meddxf  
@e- modin med
```

```
@e- modout dwg
@e- reset E:\medusa\cadconvert\cfg\cadconvert.cfg
@e- list E:\sheet_dir\list.txt
@e- go
@e- quit
```

The batch file, *convertjob.bat*, used for running the *login.bat* and starting CADConvert, looks for the list conversion as follows:

```
call E:\user_proj\login.bat
E:\medusa\CADCONVERT\M2D\RUN\cadconvert.exe @e-
        macro E:\user_proj\convert_meddwg.mac
```

CONFIGURATION

This chapter explains all the configuration and mapping files used by CADConvert.

- [Settings](#) 12
- [Settings - Graphical User Interface](#) 15
- [True Color](#) 18
- [Font Names - Font Numbers](#) 19
- [Character Mapping](#) 20
- [Default Mapping DXFMed/DWGMed](#) 21
- [Default Mapping MedDXF/MedDWG](#) 32
- [Default Mapping - Graphical User Interface](#) 40
- [Medstyle](#) 44
- [Changing the Configuration via User Interface](#) 45

Settings

By default the settings for CADConvert, which are transferred to the graphic user interface, are made in one of the following files (depending on the language):

- English: `<medusa>\cadconvert\cfg\cadconvert.cfg`
- German: `<medusa>\medchangeger\cadconvert\cfg\cadconvert.cfg`
- French: `<medusa>\medchangefra\cadconvert\cfg\cadconvert.cfg`
- Japanese: `<medusa>\medchangeja\cadconvert\cfg\cadconvert.cfg`

Further more it is possible to use another directory containing the configuration file than the default directory. This can be done by setting the environment variable `CADCONVERT_CUSTOM=e:\customer\<xyz>`. The value of the variable has to be a valid directory, which contains the `cadconvert.cfg` file at minimum. If the directory is invalid or the `cadconvert.cfg` file does not exist, the following error message is displayed:

```
Setting from CADCONVERT_CUSTOM environment variable ignored, because
specified directory or file cadconvert.cfg doesn't exist!
```

It follows an example of the `cadconvert.cfg` file. Keywords are described in the chapter “[List of Commands](#)” on page 49.

Which mapping file is used for the conversion is described in the entries to Linestyle and Textstyle Mapping. Mapping files are explained in the chapters “[Default Mapping DXFMed/DWGMed](#)” on page 21 and “[Default Mapping MedDXF/MedDWG](#)” on page 32.

```
Configuration file for CADConvert

-- General CADConvert Settings
HELPPATH      = ${CADCONVERT}\help\ger

MAPLOG        = off
MAPFILE        = cadconvert.map
ERRLOG         = off
ERRFILE        = cadconvert.err

-- MEDUSA Settings
PROJECT       = ${MED_PROJ}
CODEPATH      = ${MED_PROJ}\m2d\bin\code.bin
DDLPPATH      = ${MED_PROJ}\med\bin\ddl.bin
PRIMPPATH     = ${MED_PROJ}\m2d\bin\prims.bin

-- Linestyle Mapping
MEDDXF_LINestyle_MAP = ${CADCONVERT}\cfg\med2dxf_lstyle.map
DXFMED_LINestyle_MAP = ${CADCONVERT}\cfg\dxf2med_lstyle.map

-- Textstyle Mapping
MEDDXF_TEXTstyle_MAP = ${CADCONVERT}\cfg\med2dxf_tstyle.map
```

```
DXFMED_TEXTSTYLE_MAP = ${CADCONVERT}\cfg\dxf2med_tstyle.map
MEDMED_TEXTSTYLE_MAP = ${CADCONVERT}\cfg\med2med_tstyle.map

-- Symbol(Prim) Mapping
-- SYMBOLMAP = ${CADCONVERT}\cfg\dxf2med_symbol.map

-- DXF Point Mapping
--POINTMAP = ${CADCONVERT}\cfg\dxf2med_point.map

-- Layerstatus Mapping
-- MEDDXF_LAYERSTAT_MAP = ${CADCONVERT}\cfg\med2dxf_layerstatus.map

-- MEDUSA Stylefile
STYLEPATH      = ${MED_PROJ}\m2d\bin\styles.xml
COLOURPATH     = ${M2D_PROD}\m2d\src\colours.map
BOLDNESSPATH  = ${MED_PROJ}\m2d\bin\boldness.map

-- MEDUSA -> DXF Settings
MEDDXF_DIMENSION = DIM
BLOCKS           = ON
CLUMPNAME       = ON
COLORS          = ON
POLYLINE        = ON
MEDTEXT         = medtext
MEDTEXT_GDT     = medtext
DXFPRECISION    = 9
MEDCODE         = 1
UNSCALE         = OFF
SPECTEXT_AS_PIC = OFF
SUPERLINEMODE   = LINE
TEXTBOX         = OFF
TEXTHEIGHT_ZERO = OFF
LTSCALE         = 12
PM5             = ON
ACADVERSION     = ACAD2000
-- BIGFONT      = BIGFONT.SHX
DXFOUT_CHARSET  = ANSI_1252

-- DXF -> MEDUSA Settings
DXFMED_DIMENSION = COM
MOVE             = on
CLUMPS          = on
BLOCKNAME       = off
UNITS           = MM
SCALE           = 1.0
MEDPRECISION    = HIGH
SHEETSIZE      = BYDXFFILE
FILLGAP        = 0.1
```

```
CONVSPACE          = MODEL
CONVSPACE          = ALL_PAPER
HIDDENLAYER        = on
LINEWEIGHT_DEFAULT = 0.0
PROXY              = BLOCK
SPLINEAPPROX       = CONIC
DXFIN_CHARSET      = ANSI_1252
FORCE_DXF_IN_CS    = OFF
XREF               = OFF

USETRUECOLOR       = OFF
OVERWRITE          = ON
```

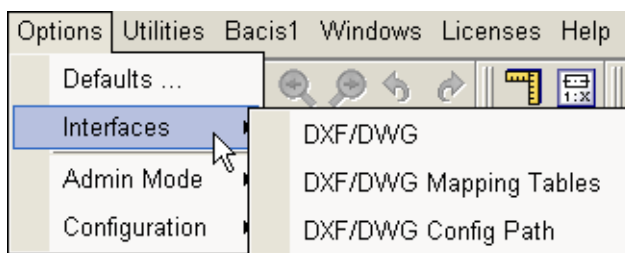
Settings - Graphical User Interface

Settings for the conversion of MEDUSA to AutoCAD and vice versa respectively can also be made inside the graphical user interface of MEDUSA by using the Options DXF/DWG-Interface dialog.

Please note: Modifications, which you make in this dialog and confirm them with OK, are only active during this work session. With a restart the settings are taken from the *cadconvert.cfg* file (see “Settings” on page 12). Since the *cadconvert.cfg* will be not overwritten automatically, MEDUSA reverts to the last saved settings of the file. i.e. If you want to change settings permanently, you have to change them in the *cadconvert.cfg*.

Choose the entry Options from the main menu and then Interfaces > DXF/DWG.

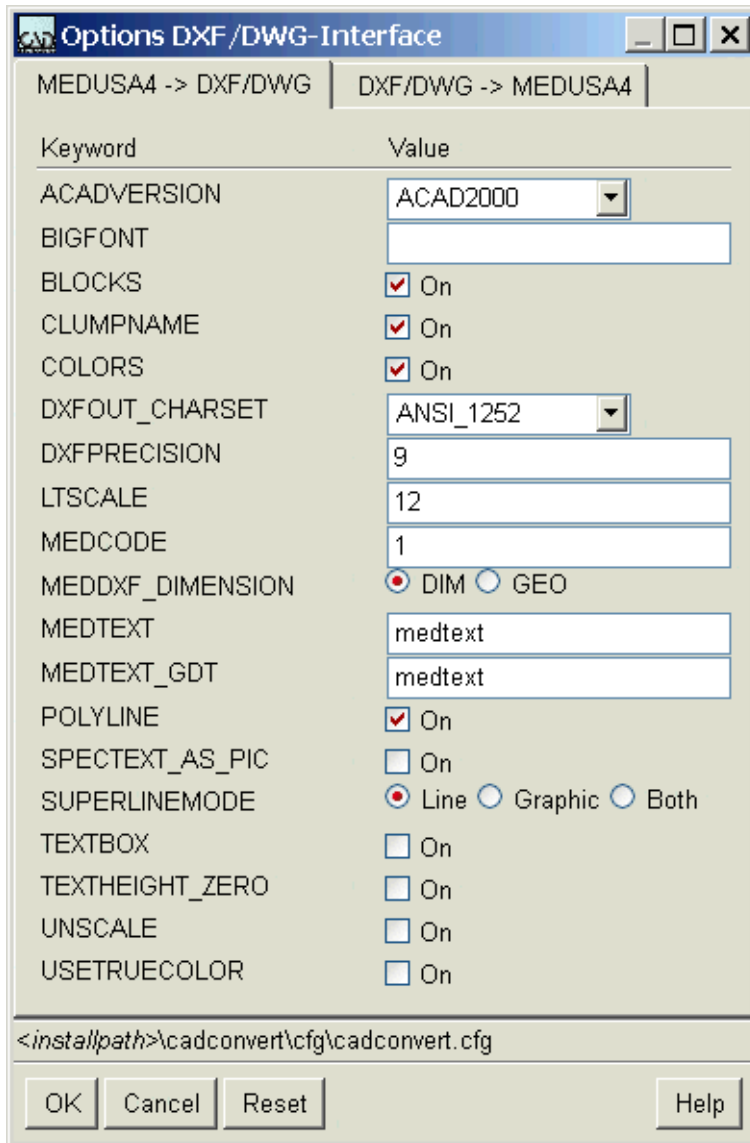
Figure 1 The Interfaces Pulldown Menu



The dialog Options DXF/DWG-Interface opens. It contains two different tabs.

The first tab provides the settings for the conversion from MEDUSA to DXF/DWG.

Figure 2 Dialog DXF/DWG Interface: Tab MEDUSA -> DXF/DWG



OK

Assumes modified settings for the duration of the work session.

Cancel

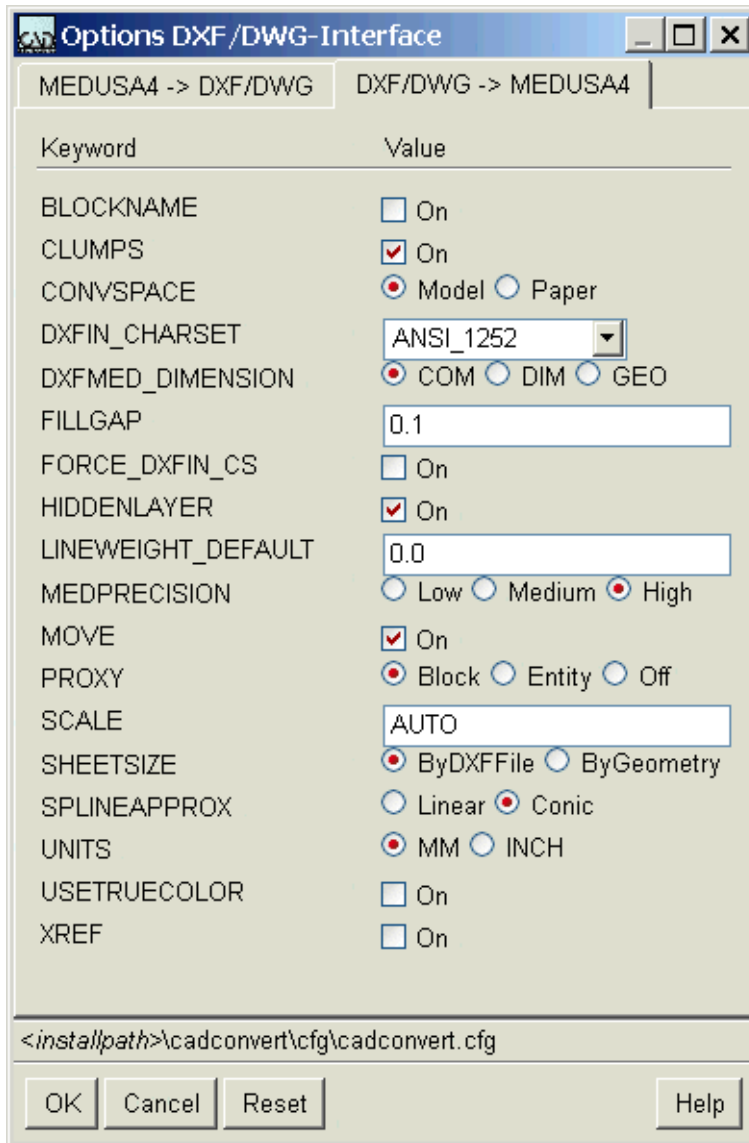
Changes are not assumed. The last specified settings, which have been approved with OK are active.

Reset

Takes the default settings from the *cadconvert.cfg* file.

The second tab contains the settings for the conversion from DXF/DWG to MEDUSA.

Figure 3 Dialog DXF/DWG Interface: Tab DXF/DWG -> MEDUSA



The functions of the buttons comply with the ones described on the previous page.

Keywords inside the dialogs are described in the chapter [“List of Commands” on page 49.](#)

True Color

Since AutoCAD 2004 it is possible to define True Colors for elements.

Usually AutoCAD has 256 base colors, the so called AutoCAD-Color-Index (ACI), which are defined as RGB values. However since AutoCAD 2004 an additional True Color can be defined, which can have any RGB value from the whole color palette of 16,7 million colors. If existent, the True Color value is leading against the ACI color value.

During conversion for both directions, import and export, the option `USETRUECOLOR` can be set in order to transfer these True Color values. For example, if you export a MEDUSA drawing, after an import of the drawing as a DXF or DWG file the same colors as before will be displayed in MEDUSA. If the option `USETRUECOLOR` is off, the ACI color value will be used.

DXF/DWG -> MEDUSA

When importing from AutoCAD, the True Color is taken, if it was defined in AutoCAD. If there is no color with appropriate RGB values in MEDUSA, the color will be added to the MEDUSA color catalog. If there is an appropriate value, the color existing in MEDUSA will be used. MEDUSA can manage 256 colors. If this amount is exceeded, that color will be taken which matches best.

MEDUSA -> DXF/DWG

When exporting, an AutoCAD file with RGB values will be written, if the option `USETRUECOLOR` is switched on. This will be not done, if the MEDUSA color comes close to an ACI color, then this one will be taken.

Mapping

Instead of a color number an RGB value can be defined for a True Color in the column `Colour` of the mapping table, if a certain True Color is to be mapped. This is possible for input and output.

Syntax: `RGB 247, 111, 17`

True Color values are handled in the same way as usual color values.

Details on the mapping is given in [“Default Mapping DXFMed/DWGMed” on page 21](#) and [“Default Mapping MedDXF/MedDWG” on page 32](#).

Font Names - Font Numbers

Inside the graphical user interface MEDUSA uses font names instead of font numbers, which are used internally only. CADConvert needs font numbers for mapping. The assignment of font names to font numbers is done in the *code.dat* file which is located in the directory *med2d\m2d\src*.

Font assignment has the following syntax:

```
FONT <no> <name>
```

where

<no>

is an integer number

<name>

is the font name

If you want to define a certain font for mapping on the site of MEDUSA look into the directory *med2d\m2d\src* either at the *code.dat* file or the *font.map* file for the number of a certain font name.

Details on font assignments are given in the *MEDUSA Customization Guide, chapter „Decortext Fonts“, „Numbering Fonts“*.

Example for some font assignments in *code.dat*:

```
...
-- The FONT vector
-- =====
--
-- The FONT vector associates the font number attribute of Decortext
-- with a font name
--
Font    1 ARIAL_DEFAULT
Font    2 ARIAL_FILL_DEFAULT
Font    3 EXPRESS
Font    4 GOTHIC
Font    5 HAND
Font    6 LEROY
Font    7 PICA
...
```

Character Mapping

MEDUSA and DXF/DWG allow the use of special characters that cannot be represented using the standard font set. The special characters can be mapped using the mapping table *character.map* located in the subdirectory *cfg*.

File Syntax:

```
-- Text Mapping MEDUSA --> Autodesk DXF

CSGConvType      : CSGMed42Dxf
CSGMappingType   : CSGTextMapping

<MEDUSA-Special Character> : <MEDUSA-Special Character>
<character string>         : <character string>
```

Please note: The first two entries are internal keywords which specify the kind of file. You may not change these entries.

In the first column of the next line the MEDUSA special character is included and in the second column the DXF/DWG special character is included. The columns are separated by a colon. The following is an example the first lines of the attached file.

```
-- Text Mapping MEDUSA --> Autodesk DXF

CSGConvType      : CSGMed42Dxf
CSGMappingType   : CSGTextMapping

-- Prims
@pmf1 : %%146
@pmf2 : %%147
@pmf3 : %%148
@pmf4 : %%149
...
```

The file delivered with the software includes the common MEDUSA special characters and the corresponding (AutoCAD) DXF/DWG special characters defined in the *medtext* font-file. You can change and extend the character mapfile. To get the correct result within AutoCAD, get the online parameter *MEDTEXT* to *medtext* so that the *medtext* font-file is used within AutoCAD. Furthermore the files *medtxt.shx* and *medtxt_gdt.shx* have to be integrated into the AutoCAD font directory.

Character mapping is leading. If a corresponding entry cannot be found in this table for a special character, the internal default mapping will be performed.

Default Mapping DXFMed/DWGMed

General Practice

Basically lines and texts are converted from AutoCAD into MEDUSA in that way, that the same style names are used. If no appropriate MEDUSA style name is found for a AutoCAD style name, conversion is performed according to the definition in the appropriate mapping table (see “Line Style Mapping” on page 22 and “Text Style Mapping” on page 26).

Layers are numbered in sequence as they appear in the DXF/DWG-file. The numbering starts using the baselayer that can be set in *dxf2med_lstyle.cfg* located in subdirectory *cfg*. The states of a layer (invis, frozen,...) are not taken into account.

The mapping of dimension elements is possible. The dimension graphics will be treated as normal graphics with one exception, the text and line types remain as TDM and LDM.

Attributes

DXF/DWG-attributes can be visible, invisible, constant or variable. In MEDUSA all attributes are translated as text attributes and added to the respective structure. To be consistent with the MEDUSA naming conventions, the attribute names are stripped to 6 characters. If the converted name already exists, a figure is appended to the name until a unique name is found.

If for example the attributes NUMBER_A, NUMBER_B and NUMBER_C are used within the DXF-file, then CADConvert changes NUMBER_A to NUMBER, NUMBER_B to NUMBE1 and NUMBER_C to NUMBE2.

Hints for Mapping

Properties which are locked in the MEDUSA style are not taken from the mapping.

Mapping does not create new styles.

For color of lines numbers are used on the side of MEDUSA. These numbers represent a certain coloring. The assignment of numbers to properties can be found in the file:

<installation path MEDUSA>\med2d\m2d\src\colours.map

Line Style Mapping

Differing from standard and in dependency of name, layer and color, DXF lines can be assigned to a defined MEDUSA line with a defined layer.

This can be done with the file *dxf2med_lstyle.map* in the subdirectory *cfg*.

File Syntax

```
-- Linestyle Mapping Autodesk DXF --> MEDUSA
CSGCONVTYPE      : CSGDXF2MED4
CSGMAPPINGTYPE   : CSGLINESTYLEMAPPING
CSGBASELAYER     : <int>
-- AutoCAD                               : MEDUSA
-- LineStyle : Layer   : Colour : Bold : LineStyle : Layer   : Colour : LineType : Bold : Transfer :
-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
<str>  : <str>  : <int>  : <re>  : <str>   : <int>   : <int>   : <str>   : <re>   : 1 / 2   :
```

Please note: The first two entries are internal keywords which specify the kind of file. You may not change these entries.

The line style mapping file has the following main definitions:

- `CSGCONVTYPE` marks the conversion type and is `CSGDXF2MED4`.
- `CSGMAPPINGTYPE` marks the mapping type. For line mapping it is `CSGLINESTYLEMAPPING`.
- `CSGBASELAYER` is the number of the basis layer, e.g. 500. This entry is optional.

Below the main definitions you find a table. On the left hand side the columns for AutoCAD line definitions are given, which are mapped to the MEDUSA line styles on the right.

The columns for AutoCAD definitions are:

- `LineStyle` gives lines by names (e.g. contour).
- `Layer` gives layers by names (e.g. dimension).
- `Colour` gives colors by the color numbers (e.g. 2) or True Color RGB values (e.g. RGB 247,111,17).
- `Bold` gives boldness by thickness values (e.g. 0.18).
You can also define an area for boldness in the column (e.g. 0.18-2.5).

The columns for MEDUSA definitions are:

- `LineStyle` is the name of a MEDUSA style (e.g. solid_thick).
- `Layer` gives layers by numbers (e.g. 11)
- `Colour` gives colors by color numbers (e.g. 1) or True Color RGB values (e.g. RGB 247,111,17).

- `LineType` gives lines by its internal names (e.g. L0). `LineType` is always associated with the MEDUSA `LineStyle` and therefore it matters for the Free Line Style only.
- `Bold` gives boldness by thickness values (e.g. 0.18).

Global setting:

- `Transfer` can be 1 for transferring elements and 2 for no transfer.

You can insert the following value types into the columns:

`<str>` = string

`<int>` = integer

`<re>` = real

`< >` = no entry. Any table cell can be empty. If a cell in the input section (DXF/DWG) is empty, it matches any property of a DXF element. If a cell in the output section (MEDUSA) is empty, it is filled during the scan, or, if scanning is finished, the default value is inserted.

The following special values can be set in the MEDUSA section:

- `@FRE` creates a Free Line Style which is characterized in that way that it has no name. This keyword can be set for `LineStyle` only.
- `@SRC` states that the input value is used also in the output. If there is no equivalent value in MEDUSA, the closest value is used. If you use `@SRC` for `LineStyle` and if there is no equivalent value in MEDUSA, the following styles will be generated:
 - `acad_solid` for solid lines,
 - `acad_center` for center lines,
 - `acad_dashed_short` for dashed lines (with comparable stroke/gap sequence to MEDUSA's dashed short line style),
 - `acad_dashed_long` for dashed lines (with comparable stroke/gap sequence to MEDUSA's dashed long line style), and
 - `acad_phantom` for phantom lines.
- `@NUM` defines that the output uses the same number as the input. For color, this can lead to a different color in AutoCAD and MEDUSA depending on the definitions inside the color map. `@NUM` can be set for `Layer` and `Colour` only.
- `@DEF` defines that the output uses the default value. The result of scanning is not taken into account.

Columns are separated by colons. You can comment out a column with two dashes (--).

A mapping table should be structured in that way, that on top of the table the special line types are defined and in the bottom the common definitions are given. This is because scanning the table is done from top to bottom (see "[Mapping Procedure](#)" below).

Mapping Procedure

CADConvert determines all qualities of a DXF/DWG element and puts them into an imaginary table. The table is scanned from top to bottom and from left to right, and each entry is evaluated for matching with a table entry inside the mapping table (see “[Example](#)” on page 24).

A DXF/DWG element table entry matches with a mapping table entry, if the elements quality is the same or if the mapping table has an empty table cell.

Once a DXF/DWG element table entry matches with a mapping table entry, the appropriate MEDUSA definitions are used. Characteristics that are not explicitly mapped are set to the default but they can be overwritten in the following scan, they are not occupied.

Several lines of the mapping table can match the properties of the DXF/DWG input element. Note that already set MEDUSA definitions are not overwritten. Only those MEDUSA settings can be overwritten which still have default values meaning that they are not occupied.

If all input DXF/DWG qualities are found in the mapping table or if all entries of the mapping table were checked, then scanning is finished for the current DXF/DWG element and the next one is evaluated.

Please note: Mapping does not create new MEDUSA line styles.
Mapping can be done on existing MEDUSA styles only.
Properties are only taken if they are not protected inside the MEDUSA style.

Example

The table below gives the mapping used for this example:

```
--AutoCAD : MEDUSA
--LineStyle: Layer : Colour: Bold :LineStyle : Layer : Colour: LineType : Bold : Transfer :
```

	Layer	Colour	Bold	LineStyle	Layer	Colour	LineType	Bold	Transfer
	:dimension:	:	:	:	4	:	:	:	1
continious	:	:	:	:solid_thin	21	:	L0	:	1
dashed	:	:	:	:dashed_short_thin:	:	:	L3	:	1
	:machine	:	:	:	256	@DEF	:	:	1
	:basement	6	:	:	64	@NUM	:	:	1
	:basement	7	0.18	:	60	:	:	@SRC	1
	:basement	5	:	:	58	:	:	:	1
	:	:	:	:@FRE	:	:	L4	:	1

The following table shows some DXF/DWG elements, one per line, on the left hand side. On the right you see the resulting MEDUSA line styles, which are created according to the mapping table given above.

AutoCAD				MEDUSA				
LineStyle	Layer	Color	Bold	LineStyle	Layer	Color	LineType	Bold
dotted	dimension	5	0.5	Free Style	4	Default	L4	0
phantom	dimension	3	0.5	Free Style	4	Default	L4	0
continuous	dimension	(all)	0.5	solid_thin	4	Default	L0	Default
continuous	(all, not 4)	(all)	0.5	solid_thin	21	Default	L0	Default
dashed	machine	(all)	0.2	dashed_short_thin	256	Default	L3	Default
dashed	basement	5	0.2	dashed_short_thin	58	Default	L3	Default
dashed	basement	6	0.2	dashed_short_thin	64	6	L3	Default
dashed	basement	7	0.18	dashed_short_thin	60	Default	L3	0.18

The value `Default` in the table above stands for the appropriate default value of the MEDUSA style, which always has defaults for layer, color, line type and boldness. In case of `Free Style` boldness is set to zero, meaning minimum thickness.

In detail a DXF element is mapped like following, taking the last DXF/DWG element as example. The input element is `dashed basement 7 0.18`.

1. CADConvert starts scanning through the mapping table looking for `dashed` in the 1st row.
The first cell is empty, meaning that it matches. The second cell contains `dimension` which does not match and CADConvert aborts evaluating this row.
2. CADConvert goes on looking for `dashed` in the 2nd row.
The first cell contains `continuous`, meaning no match and CADConvert goes on scanning the next row.
3. CADConvert looks for `dashed` in row 3.
In this row `dashed` is found and now the other two table entries are evaluated. Both are empty, meaning that also these entries match. Now CADConvert takes the defined properties of the appropriate line style and writes the entries into the table.
At this time the MEDUSA style settings are:
`dashed_short_thin Default Default L3 Default`.
4. CADConvert goes on looking for `dashed` in the 4th row of the mapping table.
The left table entry is empty, meaning that it matches.
CADConvert looks for the 2nd table cell, `basement`, but it finds `machine`, meaning no match. Scanning this row is finished with that.
5. CADConvert goes on looking for `dashed` inside the next row (5).
Again the left table cell is empty, meaning that it matches.
 - a. CADConvert looks for `basement` in the 2nd cell.
Now `basement` is found and so it matches.

- b. The color 7 is looked up in the 3rd cell.
In this row the color is 6. So there is no match and CADConvert goes on scanning the next row.
6. CADConvert looks for `dashed` in row 6 of the mapping table.
Again the first cell is empty (match).
 - a. The 2nd cell is `basement` (match).
 - b. The 3rd cell is 7 (match).
 - c. The 4th cell is `0.18` and so the whole line matches.
As in step 3 CADConvert takes the appropriate line style settings and writes the entries into the table. This time only the layer number 60 is taken because all other properties were already allocated in step 3. The MEDUSA settings are now:
`dashed_short_thin 60 Default L3 0.18.`
Because all input properties are evaluated, scanning for this DXF/DWG element is finished.

Text Style Mapping

Differing from standard and in dependency of name, layer and color, DXF/DWG texts can be assigned to defined MEDUSA texts with a defined MEDUSA text style, text type, font, layer, color and boldness. This can be done with the file `dxf2med_tstyle.map` located in subdirectory `cfg`.

File Syntax

```
-- Textstyle Mapping AutoCAD -> MEDUSA
CSGCONVTYPE      : CSGDXF2MED4
CSGMAPPINGTYPE   : CSGTEXTSTYLEMAPPING
CSGBASELAYER     : 500
--AutoCAD                : MEDUSA
--TextStyle: FontFile: Layer: Color: Bold: TextStyle : Layer: Color: TextType: Font: Bold: Transfer:
-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
      :      :      :      : 0.18:plain_large:      : @DEF :      :      : 0.5 :      : 1 :
      :      :      :      : :plain_large:      : @SRC :      :      : @SRC:      : 1 :
<str> : <str> : <str>: <int>:<rea>: <str> : <int>: <int>: <str> :<int>:<rea>: 1 / 2 :
```

Please note: The first two entries are internal keywords which specify the kind of file. You may not change these entries.

The text style mapping file has the following main definitions:

- `CSGCONVTYPE` marks the conversion type and is `CSGDXF2MED4`.
- `CSGMAPPINGTYPE` marks the mapping type. For text mapping it is `CSGTEXTSTYLEMAPPING`.
- `CSGBASELAYER` is the number of the basis layer, e.g. 500. This entry is optional.

Below the main definitions you find a table. On the left hand side the columns for AutoCAD line definitions are given, which are mapped to the MEDUSA line styles on the right.

The columns for AutoCAD definitions are:

- `TextStyle` gives styles by names (e.g. hints).
- `FontFile` is a file name (e.g. ARIALBD.TTF). If you do not want to use True Type fonts, the file `medtext.shx` is provided which is in the subdirectory `font`.
- `Layer` gives layers by names (e.g. dimension).
- `Colour` gives colors by the color numbers (e.g. 2) or True Color RGB values (e.g. RGB 247,111,17).
- `Bold` gives boldness by thickness values (e.g. 0.18).
You can also define an area for boldness in the column (e.g. 0.18-2.5).

The columns for MEDUSA definitions are:

- `TextStyle` is the name of a MEDUSA style (e.g. plain_large).
- `Layer` gives layers by numbers (e.g. 11)
- `Colour` gives colors by color numbers (e.g. 1) or True Color RGB values (e.g. RGB 247,111,17).
- `TextType` gives texts by its internal names (e.g. T1). `TextType` is always associated with the MEDUSA `TextStyle` and therefore it matters for the Free Text Style only.
- `Font` gives the number of the font (e.g. 1).
- `Bold` gives boldness by thickness values (e.g. 0.18).

Global setting:

- `Transfer` can be 1 for transferring elements and 2 for no transfer.

You can insert the following value types into the columns:

`<str>` = string

`<int>` = integer

`<rea>` = real

`< >` = no entry. Any table cell can be empty. If a cell in the input section is empty, it matches any property of a DXF element. If a cell in the output section is empty, it is filled during the scan, or, if scanning is finished, the default value is inserted.

The following special values can be set in the MEDUSA section:

`@FRE` creates a Free Text Style which is characterized in that way that it has no name. This keyword can be set for `TextStyle` only.

`@SRC` states that the input value is used also in the output. If there is no equivalent value in MEDUSA, the closest value is used. If you use `@SRC` for `TextStyle` and if there is no equivalent value in MEDUSA, the following styles will be generated:

- `acad_ttf_text` for all text elements with a True Type font, and

- acad_plain_text for all other text elements.

@NUM defines that the output uses the same number as the input. For color, this can lead to a different color in AutoCAD and MEDUSA depending on the definitions inside the color map. @NUM can be set for Layer and Colour only.

@DEF defines that the output uses the default value. The result of scanning is not taken into account.

Columns are separated by colons. You can comment out a column with two dashes (--).

A mapping table should be structured in that way, that on top of the table the special text types are defined and in the bottom the common definitions are given. This is because scanning the table is done from top to bottom. For details on the mapping procedure see ["Mapping Procedure" on page 24](#).

Example

The table below gives the mapping table used for this example:

```
--AutoCAD                               : MEDUSA
--TextStyle: FontFile: Layer: Color: Bold: TextStyle : Layer: Color: TextType: Font: Bold: Transfer:
-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
example1:      :text  :      : 0.18:plain_large :      : @DEF :      :      : 0.5 :      : 1 :
      :      : :com  : 7 : 0.2 :plain_large :      : @SRC :      :      : @SRC: 1 :
hints  :      :      :      :      :plain_large :      :      : T1  :      :      : 1 :
      :      : :title:  :      :      : 2 :      :      :      : 1 :      : 1 :
company :      :      :      :      :plain_small : 17 :      : T1  : 1 :      : 1 :
number  :      :      : 4 :      :circle      : 11 :      : TC1 :      :      : 1 :
```

The following table shows some DXF elements, one per line, on the left hand side. On the right you see the resulting MEDUSA style, which is created according to the mapping table above.

AutoCAD				MEDUSA					
TextStyle	Layer	Color	Bold	TextStyle	Layer	Color	TextType	Font	Bold
example1	text	5	0.18	plain_large	Default	Default	Default	Default	0.5
example1	com	7	0.2	plain_large	Default	7	Default	Default	0.2
hints	text	2	0.2	plain_large	Default	Default	T1	Default	Default
hints	title	4	0.2	plain_large	2	Default	T1	Default	1
company	title	2	0.2	plain_small	2	Default	T1	1	1
company	text	2	0.2	plain_small	17	Default	T1	1	Default
number	text	4	0.2	circle	11	Default	TC1	Default	Default
number	text	5	0.2	Free Style	Default	Default	Default	Default	0

As you can see the last DXF element matches with no line of the mapping table and therefore this element is assigned to the free style in MEDUSA.

The value `Default` in the table above stands for the appropriate default value of the MEDUSA style, which always has defaults for layer, color, line type and boldness. In case of `Free Style` boldness is set to zero, meaning minimum thickness.

Special Text

For a clear definition of special texttypes (e.g. underlined text, text in a box, ...) a second mapping table is recommended. This is the table *med2med_tstyle.map* located in the subdirectory *cfg*.

The file is build up like:

```
-- Textstyle Autodesk DXF --> Mapping MEDUSA
CSGConvType      : CSGMed2Med
CSGMappingType   : CSGTextStyleMapping

-- ACAD      : MEDUSA
--Texttype: underlined : overlined : boxed : circle : sausage
-----:-----:-----:-----:-----:-----
<string> : <string> : <string> : <string> : <string> : <string>
```

The following table is delivered as a standard. You can change and extend it.

```
--Texttype: underlined : overlined : boxed : circle : sausage
-----:-----:-----:-----:-----:-----
DT1      : DT2      : DT1      : DT3      : DT4      : DT5
  T1      : TU1      : T1      : TR1      : TC1      : TS1
  T2      : TU2      : T2      : TR2      : TC2      : TS2
  T3      : TU3      : T3      : TR3      : TC3      : TS3
ST1      : TU1      : T1      : TR1      : TC1      : TS1
ST2      : TU2      : T2      : TR2      : TC2      : TS2
ST3      : TU3      : T3      : TR3      : TC3      : TS3
```

Symbol Mapping

In MEDUSA you can have prims consisting of one or more line elements. When converting a MEDUSA drawing into AutoCAD, prims are converted to blocks with a certain nomenclature. For example, a prim `PAP` in MEDUSA gets the block name `MEDPRIM_LAY6_PAP_` in AutoCAD, if it is on layer 6, or `MEDPRIM_LAY90_SUP_EAR_` is a superprim with picture `EAR` on layer 90.

To re-create prims or superprimis from blocks in AutoCAD during the translation to MEDUSA, there exists a mapping file *dxfmed_symbol.map*, containing the assignment of block names and primis and superprimis respectively. The path to the mapping file has to be set in the configuration file *cadconvert.cfg* (see [“Settings” on page 12](#)).

Example Table:

```
-- Symbol Mapping AutoCAD -> MEDUSA      --
CSGCONVTYPE      : CSGDXF2MED4
CSGMAPPINGTYPE   : CSGSYMBOLMAPPING
-- DXF-BLOCK      : MEDUSA Prim : Superprim
-----+-----
MED*PRIM*PAP?    : PAP           :
MED*PRIM*EAR_    : EAR           : SUP
```

The block names can contain wildcards. * stands for several signs and ? represents one sign.

Point Mapping

Points in AutoCAD are converted into Prims in MEDUSA.

The path to the mapping file has to be set in the configuration file *cadconvert.cfg* (see [“Settings” on page 12](#)).

Example Table:

```
-- Point Mapping
--POINTMAP = ${CADCONVERT}\cfg\dxkf2med_point.map

CSGCONVTYPE      : CSGDXF2MED4
CSGMAPPINGTYPE   : CSGPOINTMAPPING

-- DXF-Point No  : MEDUSA Prim : Superprim
-----+-----
      2           : PAP           :
     32           : PAP           :
      5           : PAP           :
     62           : PAP           :
     34           : PAP           :
     35           : PAP           :
      3           : DTM           :
```

Raster Images

With the conversion, referenced raster images of a DXF/DWG file are transferred to MEDUSA. Precondition for the import is, that the referenced image(s) is (are) located in the same directory as the DXF/DWG file.

With the conversion of raster images only rectangular clipping of images and rotation by steps of 90 degrees is possible. Shearing is not transferred (see also chapter [“Limitations”](#) on [page 85](#)).

Default Mapping MedDXF/MedDWG

General Practice

Basically lines and texts are converted from MEDUSA to AutoCAD in that way, that the same style names are used. If no appropriate AutoCAD style name is found for a MEDUSA style name, conversion is performed according to the definition in the appropriate mapping table (see [“Line Style Mapping” on page 32](#) and [“Text Mapping” on page 36](#)).

If additional definitions of MEDUSA linestyles (STY >5, so called user-styles) in the MEDUSA code-file are made, these definitions have also to be done in the file *medstyle.cfg* located in subdirectory *cfg*. The syntax in this file is the same as in the MEDUSA code-file (see *<install path to MEDUSA>\med2d\m2d\src\code.dat*).

Text height and text width are taken from the code-file definition. Using the online parameter `MEDTEXT`, you can determine which font-file is used for the graphical representation in AutoCAD.

During conversion the states of a layer (invis, frozen,...) are not taken into account. Therefore an additional Layer Status Mapping can be used (see [“Layer Status Mapping” on page 39](#)).

Attributes

MEDUSA attributes are converted to constant hidden text attributes in DXF/DWG. Since there is no way to attach attributes to single elements in DXF/DWG, only clump-linked MEDUSA attributes can be converted.

Hints for Mapping

For color of lines numbers are used on the side of MEDUSA. These numbers represent a certain coloring. The assignment of numbers to properties can be found in the file:

<installation path MEDUSA>\med2d\m2d\src\colours.map

Line Style Mapping

Differing from standard and in dependency of name and layer MEDUSA lines can be assigned to defined DXF lines with defined layer, color and linestyle. This can be done with the file *med2dxf_lstyle.map* located in subdirectory *cfg*.

File Syntax

```
-- Linestyle Mapping MEDUSA -> AutoCAD      --
CSGCONVTYPE      : CSGMED42DXF
CSGMAPPINGTYPE   : CSGLINESTYLEMAPPING
CSGBASELAYER     : 500
-- MEDUSA                               : AutoCAD
-- LineStyle : Layer : Color : LineType : Bold : LineStyle : Layer : Color : Bold : Transfer :
-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
      <str>  : <int> : <int> : <str>  : <re>  : <str>  : <int> : <int> : <re>  : 1 / 2 :
```

Please note: The first two entries are internal keywords which specify the kind of file. You may not change these entries.

The line style mapping file has the following main definitions:

- `CSGCONVTYPE` marks the conversion type and is `CSGMED42DXF`.
- `CSGMAPPINGTYPE` marks the mapping type. For line mapping it is `CSGLINESTYLEMAPPING`.
- `CSGBASELAYER` is the number of the basis layer, e.g. 500. This entry is optional.

Below the main definitions you find a table. On the left hand side the columns for AutoCAD line definitions are given, which are mapped to the MEDUSA line styles on the right.

The columns for MEDUSA definitions are:

- `LineStyle` is the name of a MEDUSA style (e.g. `solid_thick`).
- `Layer` gives layers by numbers (e.g. 11)
- `Colour` gives colors by color numbers (e.g. 1) or True Color RGB values (e.g. RGB 247,111,17).
- `LineType` gives lines by its internal names (e.g. L1). `LineType` is always associated with the MEDUSA `LineStyle` and therefore it matters for the Free Line Style only.
- `Bold` gives boldness by thickness values (e.g. 0.18).

The columns for AutoCAD definitions are:

- `LineStyle` gives lines by names (e.g. `contour`).
- `Layer` gives layers by names (e.g. `dimension`).
- `Colour` gives colors by the color numbers (e.g. 2) or True Color RGB values (e.g. RGB 247,111,17).
- `Bold` gives boldness by thickness values (e.g. 0.18).

Global setting:

- `Transfer` can be 1 for transferring elements and 2 for no transfer.

You can insert the following value types into the columns:

<str> = string

<int> = integer

<re> = real

< > = no entry. Any table cell can be empty. If a cell in the input section is empty, it matches any property of a MEDUSA element. If a cell in the output section is empty, it is filled during the scan, or, if scanning is finished, the default value is inserted.

The following variables can be set in the MEDUSA section:

@FRE defines the Free Line Style which is characterized in that way that it has no name. This keyword can be set for `LineStyle` only.

The following variables can be set in the AutoCAD section:

@SRC states that the input value is used also in the output. If there is no equivalent value available in the output, the closest value is used.

@DEF defines that the output uses the default value. The result of scanning is not taken into account.

@NUM can be set for `Colour` only. @NUM defines that the output uses the same color number as the input. This can lead to a different color in AutoCAD and MEDUSA depending on the definitions inside the color map.

@NAM can be set for `Colour` only. @NAM instructs the converter to use the MEDUSA layer label as AutoCAD layer name. If no label is defined, the naming convention is `Layer_<layer no>`.

Columns are separated by colons. You can comment out a column with two dashes (--).

A mapping table should be structured in that way, that on top of the table the special line types are defined and in the bottom the common definitions are given. This is because scanning the table is done from top to bottom. For details on the mapping procedure see ["Mapping Procedure" on page 24](#).

Example

The following table is the mapping used for this example.

```
-- MEDUSA                                     : AutoCAD
-- LineStyle : Layer : Color : LineType : Bold : LineStyle : Layer : Color : Bold : Transfer :
-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
dotted thin : 11 :      : L1      :      : :Continuous :boundary:      :      :      : 1
           : 100 :      : L0      :      : :Continuous :shafts  :      :      :      : 1
           : 110 :      : L0      :      : :Continuous :details :@NUM  :@SRC  :      :      : 1
           : 1018 :      :         :      :      :         :hidden : 3    :      :      : 1
           :      :      : L1      :      : :Continuous :         :      :      :      : 1
           :      :      : L2      :      : :centre    :centre  : 4    :      :      : 1
```

The table below gives some MEDUSA input elements on the left and the resulting AutoCAD elements after conversion on the right. For the DXF output the closest possible DXF value is calculated from the MEDUSA input value, given as best match (BM) in the table below.

MEDUSA					AutoCAD			
LineStyle	Layer	Color	LineType	Bold	LineStyle	Layer	Color	Bold
dotted_thin	11	2	L1	0.25	Continuous	boundary	BM	BM
hidden_line	1018	2	L1	0.25	Continuous	hidden	3	BM
dotted_thick	100	2	L1	1.0	Continuous	100	BM	BM
hidden_line2	1018	2	L4	0.75	hidden_line2	hidden	3	BM
chain_thin	11	2	L2	0.25	Centre	centre	4	BM
solid_thin	100	2	L0	0.25	Continuous	shafts	BM	BM
solid_medium	110	2	L0	0.5	Continuous	details	2	0.5
solid_medium	110	12	L0	0.75	Continuous	details	12	0.75
solid_thick	11	2	L0	1.0	solid_thick	11	BM	BM
dashed_short2	1	2	L3	0.75	dashed_short2	1	BM	BM

Special Mappings

The line styles of the following special mappings are „imaginary“ line style for CADConvert. They are used for the graphical translation of the elements Prim, Point function and Superline.

- Linestyle mapping for Prims

MEDUSA				DXF		
LineStyle	Layer	Color	Bold	Layer	Color	Linestyle
LPRM	241			Surface		

- Linestyle mapping for Point functions

MEDUSA				DXF		
LineStyle	Layer	Color	Bold	Layer	Color	Linestyle
LFUN	0			FUNV		

- Linestyle mapping for Superlines

MEDUSA				DXF		
LineStyle	Layer	Color	Bold	Layer	Color	Linestyle
LSUP	0			Superline		

- Linestyle mapping for the graphical part of, for example, boxed or underlined texts

MEDUSA				DXF		
LineStyle	Layer	Color	Bold	Layer	Color	Linestyle
LTXT	0			Textline		

Text Mapping

Differing from standard and in dependency of text, font and layer MEDUSA texts can be assigned to defined DXF texts with a defined DXF layer, color style and font. This can be done with the file *med2dxf_tstyle.map* located in subdirectory *cfg*.

File Syntax

```
-- Textstyle Mapping MEDUSA -> AutoCAD --
CSGCONVTYPE      : CSGMED42DXF
CSGMAPPINGTYPE   : CSGTEXTSTYLEMAPPING
CSGBASELAYER     : 500

-- MEDUSA                               : AutoCAD
-- TextStyle: Layer: Color: TextType: Font: Bold: TextStyle: Font: Layer: Color: Bold: Transfer:
-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
<str> : <int>: <int>: <str> :<int>: <re>: <str> :<str>: <str>: <int>: <re>: 1 / 2
```

Please note: The first two entries are internal keywords which specify the kind of file. You may not change these entries.

The text style mapping file has the following main definitions:

- `CSGCONVTYPE` marks the conversion type and is `CSGMED42DXF`.
- `CSGMAPPINGTYPE` marks the mapping type. For text mapping it is `CSGTEXTSTYLEMAPPING`.
- `CSGBASELAYER` is the number of the basis layer, e.g. 500. This entry is optional.

The columns for MEDUSA definitions are:

- `TextStyle` is the name of a MEDUSA style (e.g. `plain_large`).
- `Layer` gives layers by numbers (e.g. 11)
- `Colour` gives colors by color numbers (e.g. 1) or True Color RGB values (e.g. RGB 247,111,17).
- `TextType` gives texts by its internal names (e.g. T1). `TextType` is always associated with the MEDUSA `TextStyle` and therefore it matters for the Free Text Style only.
- `Font` is the number of the font (e.g. 1).

- `Bold` gives boldness by thickness values (e.g. 0.18).

The columns for AutoCAD definitions are:

- `TextStyle` gives styles by names (e.g. hints).
- `Font` is a file name (e.g. ARIALBD.TTF). If you do not want to use True Type fonts, the file `medtext.shx` is provided which is in the subdirectory `font`.
- `Layer` gives layers by names (e.g. dimension).
- `Colour` gives colors by the color numbers (e.g. 2) or True Color RGB values (e.g. RGB 247,111,17).
- `Bold` gives boldness by thickness values (e.g. 0.18).

Global setting:

- `Transfer` can be 1 for transferring elements and 2 for no transfer.

You can insert the following value types into the columns:

`<str>` = string

`<int>` = integer

`<re>` = real

`< >` = no entry. Any table cell can be empty. If a cell in the input section is empty, it matches any property of a MEDUSA element. If a cell in the output section is empty, it is filled during the scan, or, if scanning is finished, the default value is inserted.

The following variables can be set in the MEDUSA section:

`@FRE` creates a Free Line Style which is characterized in that way that it has no name. This keyword can be set for `TextStyle` only.

The following variables can be set in the AutoCAD section:

`@SRC` states that the input value is used also in the output. If there is no equivalent value in AutoCAD, the closest value is used.

`@DEF` defines that the output uses the default value. The result of scanning is not taken into account.

`@NUM` can be set for `Colour` only. `@NUM` defines that the output uses the same color number as the input. This can lead to a different color in AutoCAD and MEDUSA depending on the definitions inside the color map.

`@NAM` can be set for `Layer` only. `@NAM` instructs the converter to use the MEDUSA layer label as AutoCAD layer name. If no label is defined, the naming convention is `Layer_<layer no>`.

Columns are separated by colons. You can comment out a column with two dashes (`--`).

A mapping table should be structured in that way, that on top of the table the special text types are defined and in the bottom the common definitions are given. This is because scanning the table is done from top to bottom. For details on the mapping procedure see [“Mapping Procedure” on page 24](#).

Example

The table below gives the mapping table used for this example:

```
-- MEDUSA : AutoCAD
-- TextStyle : Layer: Color: TextType: Font: Bold: TextStyle: Font : Layer : Color: Bold: Transfer :
-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
: : : T1 : 1 : : : MEDTEXT: : @NUM : @SRC: 1
: 2 : : : : : : MEDTEXT:titlebox: 3 : : : 1
: 11 : : T1 : : : : : MEDTEXT:hints : : : : 1
: : : TC1 : : : : : MEDTEXT:partlist: 4 : : : 1
: : : TR1 : 0 : : : : MEDTEXT:company : 5 : : : 1
```

The following table gives some MEDUSA input elements on the left and the resulting AutoCAD elements after conversion on the right. For the DXF output the closest possible DXF value is calculated from the MEDUSA input value, given as best match (BM) in the table below. For `Font` the default is usually the parameter `MEDTEXT` (see [“Settings” on page 12](#)).

MEDUSA						AutoCAD				
TextStyle	Layer	Color	TextType	Font	Bold	TextStyle	Font	Layer	Color	Bold
plain_large	11	2	T1	1	0.7	plain_large	MEDTEXT	hints	2	0.7
plain_medium	2	3	T1	0	0.35	plain_medium	MEDTEXT	titlebox	3	BM
plain_thin	100	4	T1	1	0.18	plain_thin	MEDTEXT	100	4	0.18
part1	11	2	TC1	1	0.18	part1	MEDTEXT	partlist	4	BM
part2	2	2	TC1	1	0.18	part2	MEDTEXT	titlebox	3	BM
part3	110	2	TC1	1	0.18	part3	MEDTEXT	partlist	4	BM
decor1	11	5	TR1	0	0.18	decor1	MEDTEXT	company	5	BM
decor2	2	6	TR1	1	0.18	decor2	MEDTEXT	titlebox	3	BM
decor3	110	7	TR1	0	0.18	decor3	MEDTEXT	company	5	BM
decor4	11	8	TR1	1	0.18	decor4	MEDTEXT	11	BM	BM

Note that in the last row of the table the MEDUSA input element does not match any line inside the mapping table and therefore the AutoCAD- `TextStyle` is used as MEDUSA style name.

Mapping for Decor Text

MEDUSA						AutoCAD			
TextStyle	Layer	Color	TextType	Font	Bold	TextStyle	Font	Layer	Color
			T1	2		DT1_2	ARIBLK.TTF (*)	Decor	

(*) For the assigned DXF font the filename has to be used. This can be found under the following path:

```
C:\windows\fonts
```

You can only use Windows true type fonts (*.TTF) or AutoCAD fonts (*.SHX), no Windows bitmap fonts (*.FON)!

Special Text

For special texttypes such as underlined text and text in a box, the online parameter `MEDTEXT` (see “Settings” on page 12) is also significant. Most of these texttypes can be displayed in DXF/DWG by special characters. When the parameter `MEDTEXT` is set to `medtext`, this conversion is processed automatically, otherwise only underlined text is converted.

For a correct presentation in AutoCAD, the text shape file `medtext.shx` located in the subdirectory `font` has to be copied to the AutoCAD installation. A complete data exchange should always include this text shape file.

If the parameter `SPECTEXT_AS_PIC` is set to `ON` inside the file `cadconvert.cfg` (see “Settings” on page 12), special texts are transferred as blocks. A block contains text and lines respectively circles.

Layer Status Mapping

In AutoCAD layers can have the states frozen, off or locked. To set these states in AutoCAD by the translation from MEDUSA, there exists a mapping file `med2dxf_layerstatus.map`. In this file you can make the settings. The path to the mapping file has to be set in the configuration file `cadconvert.cfg` (see “Settings” on page 12’).

Example Table:

```
-- Layerstatus Mapping MEDUSA -> AutoCAD      --
CSGCONVTYPE      : CSGMED42DXF
CSGMAPPINGTYPE   : CSGLAYERSTATUSMAPPING

-- DXF-Layer      : Status FROZEN / HIDDEN / LOCKED
-----+-----
      11          : FROZEN
```

- Status FROZEN: The layer has the state `frozen` in AutoCAD.
- Status HIDDEN: The layer has the state `off` in AutoCAD.
- Status LOCKED: The layer has the state `locked` in AutoCAD.

Combinations of the states are possible.

Default Mapping - Graphical User Interface

The files which define the mapping between MEDUSA and AutoCAD are available as text files, which can be edited inside the graphical user interface of MEDUSA.

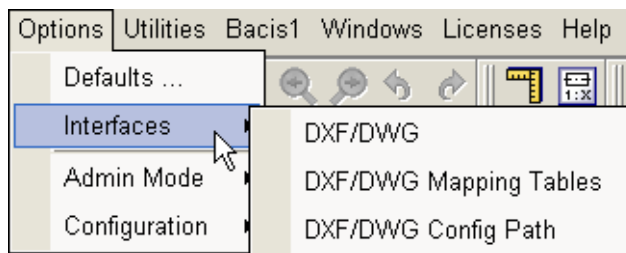
This section gives you the dialogs. Below each dialog you will find a link to the section which gives detailed explanations on the entries of the appropriate mapping table.

Open the Mapping Tables Dialog

Please note: The Interfaces -> DXF/DWG Mapping Tables function is only available in the Admin mode.

Choose the entry Options from the main menu and then Interfaces -> DXF/DWG Mapping Tables.

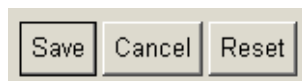
Figure 4 Open Mapping Tables



The dialog CADConvert Mapping Tables opens. The first tab you see is DXF -> MED Line (see [“Mapping Lines, DXF to MEDUSA”](#) on page 41).

Buttons of the Mapping Tables Dialog

Figure 5 Dialog Mapping Tables, Buttons

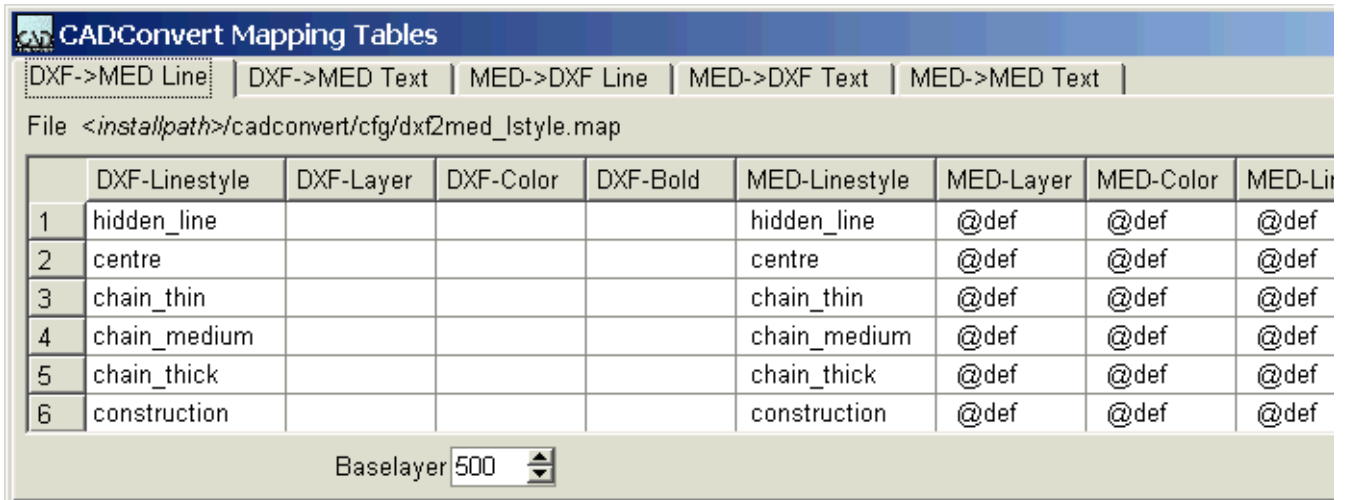


Save
stores the settings into the corresponding mapping files. In the next session of MEDUSA these settings are used.

Cancel
closes the dialog without applying the parameters of the mapping tables.

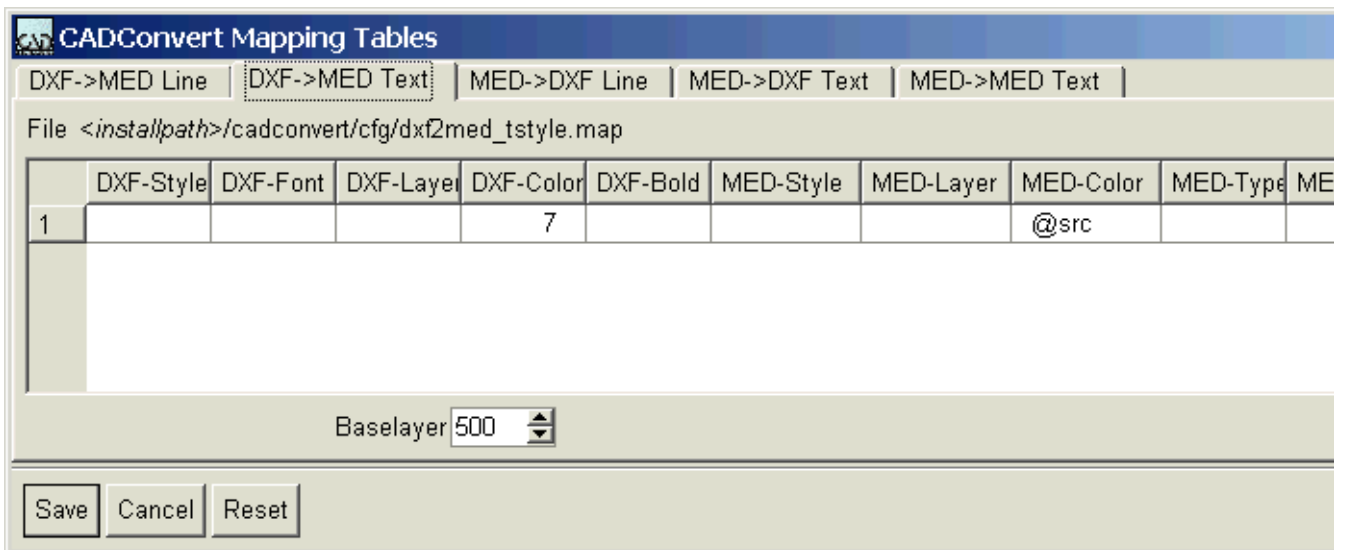
Reset
restores the current data to the last saved data in the corresponding mapping file.

Mapping Lines, DXF to MEDUSA



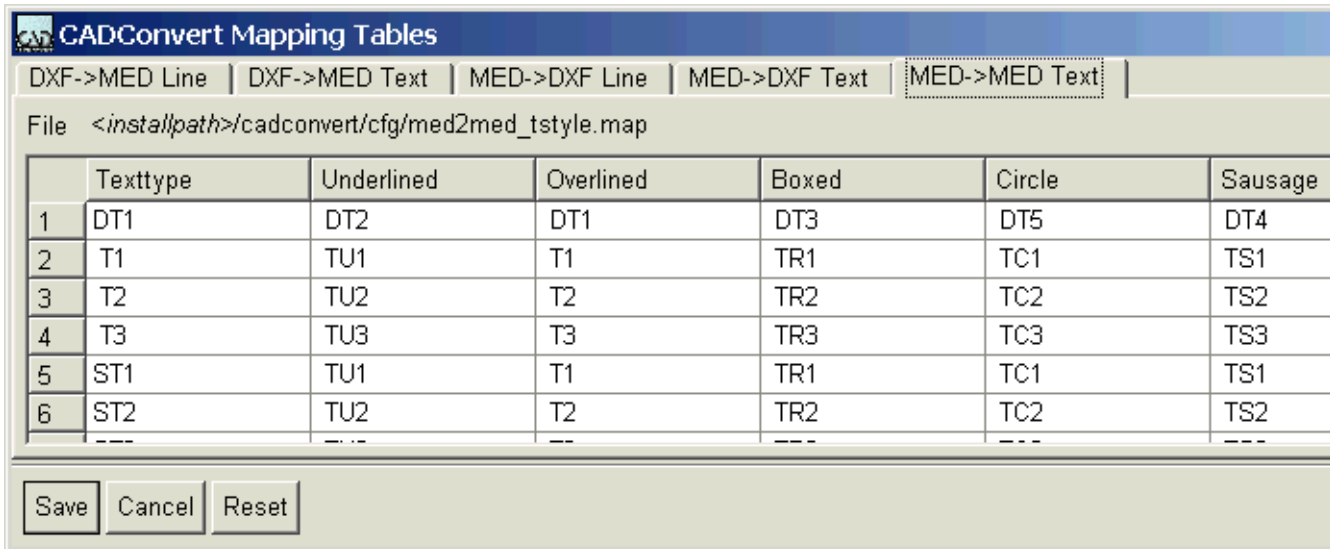
For details on the parameters see “Default Mapping DXFMed/DWGMed”, “Line Style Mapping” on page 22.

Mapping Texts, DXF to MEDUSA



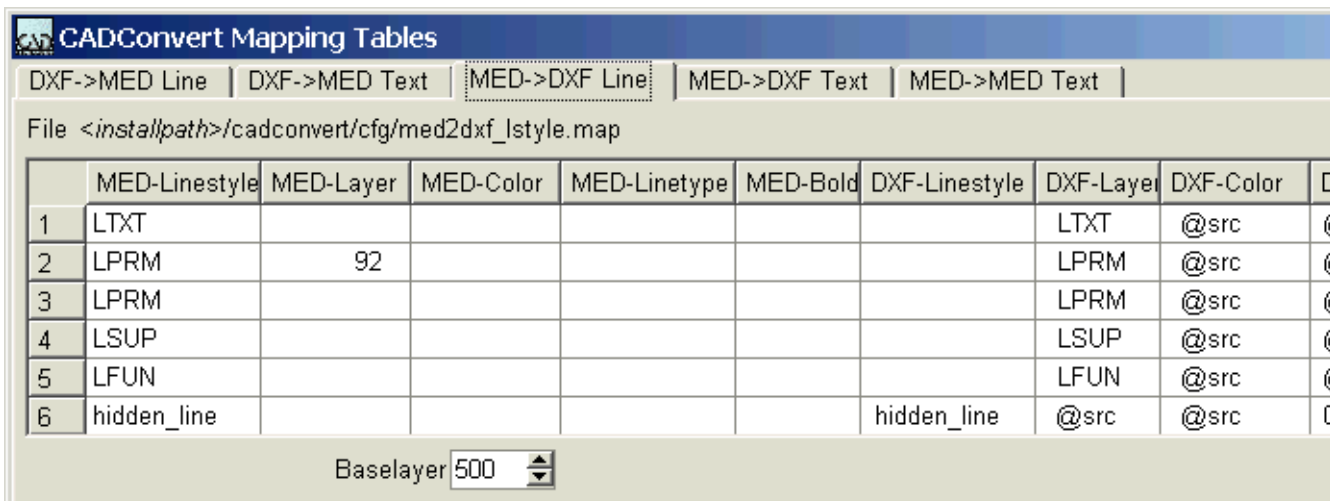
For details on the parameters see “Default Mapping DXFMed/DWGMed”, “Text Style Mapping” on page 26.

Mapping Special Texts, DXF to MEDUSA



For details on the parameters see “Default Mapping DXFMed/DWGMed”, “Text Style Mapping”, “Special Text” on page 29.

Mapping Lines, MEDUSA to DXF



For details on the parameters see “Default Mapping MedDXF/MedDWG”, “Line Style Mapping” on page 32.


Mapping Text, MEDUSA to DXF

CADConvert Mapping Tables

DXF->MED Line | DXF->MED Text | MED->DXF Line | **MED->DXF Text** | MED->MED Text

File <installpath>/cadconvert/cfg/med2dxf_tstyle.map

	MED-Style	MED-Layer	MED-Color	MED-Type	MED-Font	MED-Bold	DXF-Style	DXF-Font	DXF-Layer	D
1				TLL						
2	boxed			TR1			boxed		TEXT	
3	circle			TC1			circle		TEXT	
4	default			T1			default		TEXT	
5	sheet_title			TTI			sheet_title		TEXT	
6	drawing_nurr			TSH			drawing_nur		TEXT	

Baselayer 500 

For details on the parameters see [“Default Mapping MedDXF/MedDWG”](#), [“Text Mapping”](#) on page 36.

Medstyle

The presentation of broken line styles is fundamental different in MEDUSA and AutoCAD. In AutoCAD it depends from the zoom factor and resolution but not in MEDUSA.

To make the presentation of these lines in AutoCAD equal to MEDUSA, the user has the possibility to make an entry in the file *cadconvert/cfg/medstyle.cfg*. Open the file in an editor and insert a new style description as given in the example below.

Example:

```
STY      2      1.0      0.25      0.5      0.25
|         |         |         |         |
|         |         |-----|-----|-----|-----line, space, line, space, ...
|         |-----style number according to line type
|-----keyword
```

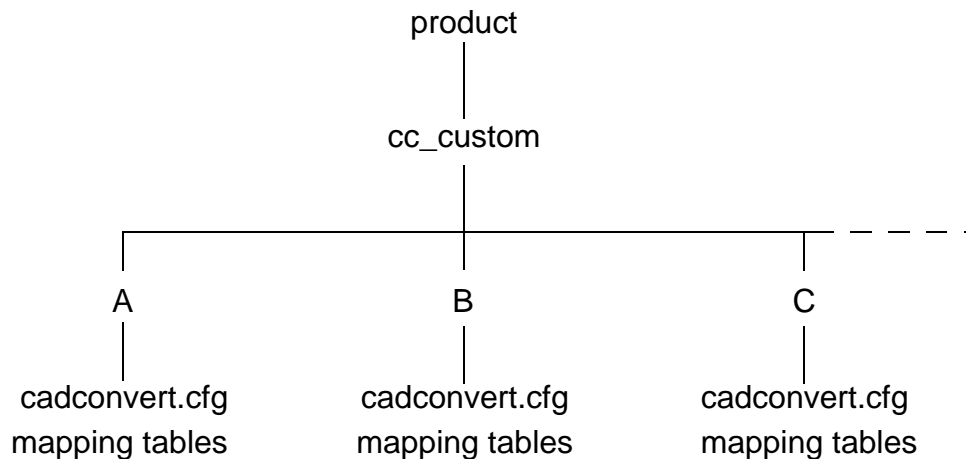
Changing the Configuration via User Interface

It is possible to change the configuration of CADConvert via MEDUSA User Interface. For this, you need a specific directory structure.

Directory Structure

It is searched for all subdirectories of all *cc_custom* folders in all directories in the product list. This folders must contain a *cadconvert.cfg* file. It is used for the configuration and mapping of CADConvert.

Figure 6 Directory Structure



Creating Directory Structure

1. Create a folder named *cc_custom* within a product.
2. Create subdirectories within the *cc_custom* directory as many as desired (example: *A*, *B*, *C*).
3. Copy the *cadconvert.cfg* file and the mapping files from the *cfg* directory of the english original product (<medusa>\cadconvert\cfg) into your subdirectory (e.g. *cc_custom\A*).
4. Change the mapping tables as required and modify the *cadconvert.cfg* file by giving the path to the modified mapping files

Figure 7 Example of the modified path in the cadconvert.cfg file

```
cadconvert.cfg - Editor
Datei Bearbeiten Format Ansicht ?

-- CADConvert Main Configuration File
-----
--
-- IMPORTANT:
-- Path delimiter character MUST be a slash "/" to make sure
-- that this file can be used at all platforms (PC, UNIX).
--
-- General CADCONVERT Settings
HELPPATH = ${CADCONVERT}/help/db

-- Linstyle Mapping
MEDDXF_LINESTYLE_MAP = D:/user_product/cc_custom/B/med2dxf_lstyle.map
DXFMED_LINESTYLE_MAP = D:/user_product/cc_custom/B/dxf2med_lstyle.map

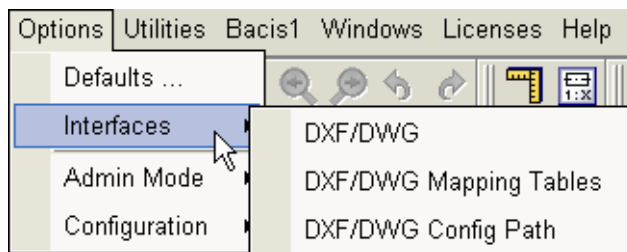
-- Textstyle Mapping
MEDTTF_FONT_MAP = ${CADCONVERT}/font/med2dxf_font1.map
```

User Interface

In order to switch between different configurations:

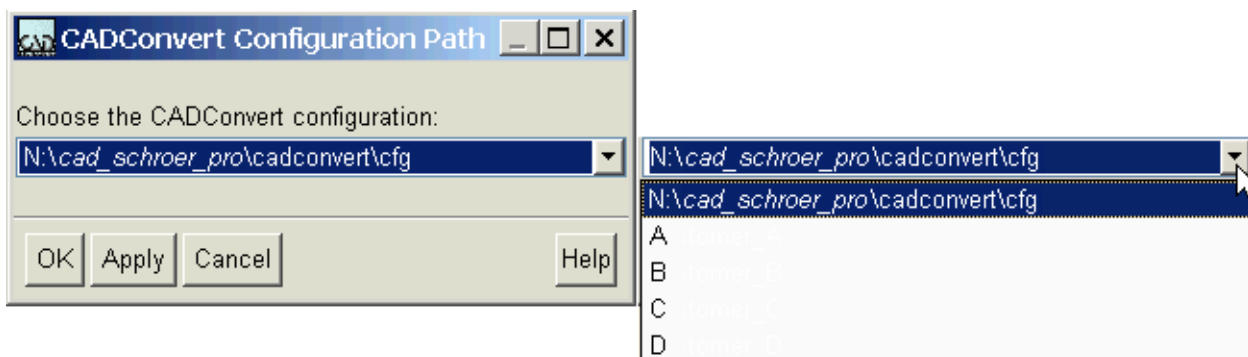
1. Choose Options > Interfaces > DXF/DWG Config Path.

Figure 8 The DXF/DWG Config Path Option



The CADConvert Configuration Path dialog is displayed.

Abb. 9 Configuration Path Dialog



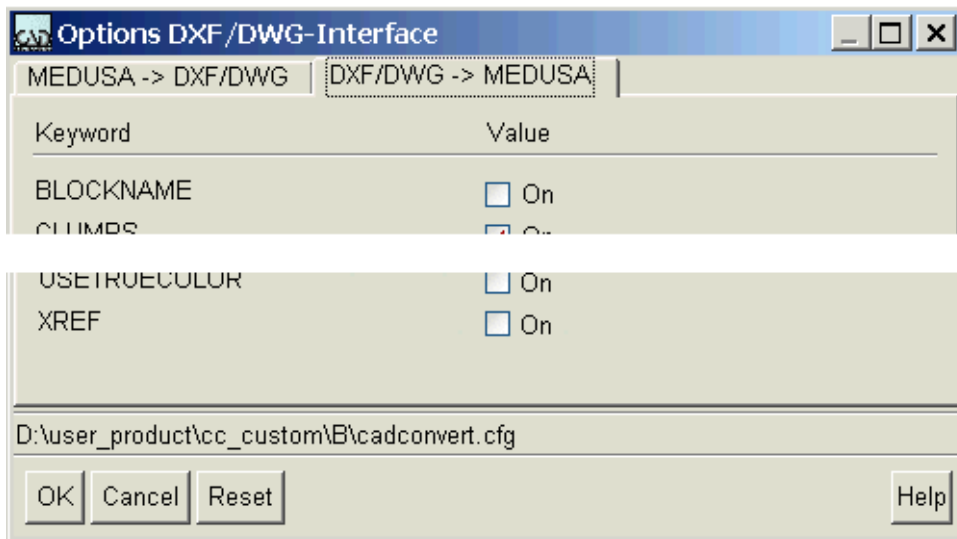
By default the input field of the dialog displays the path to the *cadconvert.cfg* file of the MEDUSA installation directory, respectively, if the environment variable CADCONVERT_CUSTOM is set, it is the path to the directory defined by that variable which is displayed.

Using the arrow, you can display a list of all existing folders of your products, which are located within the *cc_custom* directory and contain a *cadconvert.cfg* file.

2. Choose the path to the desired *cadconvert.cfg* file, by selecting the accordant directory.
3. Click on *Apply* to use the file for the conversion. A click on *OK* additionally closes the dialog.

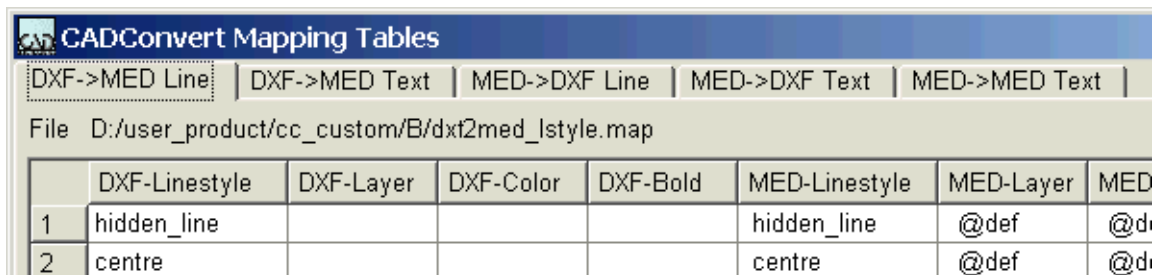
Now, when you open the *Options DXF/DWG Interface* dialog via *Options > Interface > DXF/DWG*, the path to the desired *cadconvert.cfg* file is displayed on both index cards.

Figure 10 Options Dialog with Path to the used cfg File



When you open the mapping tables via *Options > Interfaces > DXF/DWG Mapping Tables*, the path defined in the chosen *cadconvert.cfg* file is displayed at the top of the tabs.

Figure 11 Example of a Mapping Table with Path to a User defined cadconvert.cfg File



LIST OF COMMANDS

This chapter lists all commands available for DXFMed / DWGMed and MedDXF / MedDWG.

- [Common Commands](#) 50
- [DXFMed / DWGMed](#) 60
- [MedDXF / MedDWG](#) 73

Common Commands

The following list contains the common commands valid for both conversion types:

CD	Changes the working directory
CODE	Specifies a pathname for a MEDUSA CODE file.
DDL	Specifies a pathname for a MEDUSA DDL file.
DIR	Lists the contents of a directory.
ERRFILE	Specifies a pathname for the error file.
ERRLOG	Controls whether a ERRLOG-file is written.
GO	Starts the translation.
HELP	Displays information on the specified command.
HELPPATH	Specifies a path to the help files.
IN	Specifies the pathname of the input file.
LINestyle	Specifies the pathname of the linestyle mapping file.
LIST	Specifies the pathname of the listing file.
LS	Lists the content of an directory.
MAPFILE	Specifies the pathname for the mapfile.
MAPLOG	Controls whether a MAPLOG-file is written.
MEDCODE	Specifies the MEDUSA Code number for the conversion.
MESSPATH	Specifies the pathname of the message file.
OVERWRITE	Controls whether or not an already existing output-file with the same name should be over written.
PRIM	Specifies the pathname for a MEDUSA PRIM-file.
QUIT	Quits the program.
RESET	Resets the conversion adjustments to standard or to the definitions of a configuration file.
SAVE	Writes the current settings into the cadconvert.cfg file.
SHOW	Shows the conversion adjustments.
TEXTSTYLE	Specifies the pathname for the textstyle-mapping-table.
USETRUECOLOR	Controls whether True Colors will be transferred.
!	is used to enter commands of the operating system under CADConvert.

CD

SYNTAX	<code>cd [Pathname]</code>
DESCRIPTION	This command will change the working directory. If <code>Pathname</code> is a backslash (Windows) or slash (Unix) you change into the root directory.
OPTIONS	<code>Pathname</code> Full pathname of the directory you want to change to.
EXAMPLE	<code>cd /</code> <code>cd /proj</code>

CODE

SYNTAX	<code>code [pathname]</code>
DESCRIPTION	The command <code>code</code> specifies the pathname for the MEDUSA CODE file.
OPTIONS	<code>pathname</code> Full pathname of the MEDUSA CODE file.
EXAMPLE	<code>DXFMED> code /medusa/proj13b/m2d/bin/code.bin</code>

DDL

SYNTAX	<code>ddl [pathname]</code>
DESCRIPTION	The command <code>ddl</code> specifies the pathname for the MEDUSA DDL-file to be use during translation.
OPTIONS	<code>pathname</code> Full pathname of the desired MEDUSA DDL-file.
EXAMPLE	<code>MEDDXF> ddl /medusa/proj13a/m2d/bin/ddl.bin</code>

DIR

SYNTAX	<code>dir</code> <code>dir [Pathname]</code>
DESCRIPTION	This command lists the content of the working directory, or the content of the directory pointed to by pathname.
OPTIONS	Pathname Full pathname of the directory, which content will be listed
EXAMPLE	<code>dir</code> <code>dir ddl /medusa/proj13a/m2d/bin</code>

ERRFILE

SYNTAX	<code>errfile [pathname]</code>
DESCRIPTION	If <code>errlog</code> is on, the systems creates an error message file containing any error messages generated during translation. If errors occur, the program informs you about messages in the error file. If there are no errors, you will not receive an error message. The error file is an ASCII file you can read using a text editor.
OPTIONS	pathname Full pathname for the error message file to be used.
EXAMPLE	<code>errfile /medusa/medtemp/errors.err</code>

ERRLOG

SYNTAX	<code>errlog [on/off]</code>
DESCRIPTION	<code>on</code> ERRLOG-file will be written. <code>off</code> ERRLOG-file will not be written. Errors are written directly into the console (DOS box).

GO

SYNTAX	<code>go</code>
DESCRIPTION	The command <code>go</code> starts the translation.
EXAMPLE	MEDDXF> <code>go</code>

HELP

SYNTAX	<code>help [command]</code>
DESCRIPTION	The command <code>help</code> without a parameter shows a list of all available commands or on the specified command.
OPTIONS	(no option) Displays a list of all available commands. <code>command</code> Displays information about the selected command.
EXAMPLE	MEDDXF> <code>help in</code>

HELPPATH

SYNTAX	<code>helppath [pathname]</code>
DESCRIPTION	The command <code>helppath</code> specifies a path to the help-files. Help files have the suffix <code>.hlp</code> .
OPTIONS	<code>pathname</code> Full pathname of the help files.
EXAMPLE	DXFMED> <code>helppath /medusa/cadconvert/help/ger</code>

IN

SYNTAX	<code>in [pathname]</code>
DESCRIPTION	The command <code>in</code> specifies the pathname of the input file you want to translate into the output file format.
OPTIONS	<code>pathname</code> Full pathname of the input file to be converted. The length of the pathname is limited to 256 signs.
EXAMPLE	<code>DXFMED> in /data/dxf/D008.dxf</code> <code>MEDDXF> in /data/sheets/9876543.she</code>

LINestyle

SYNTAX	<code>linestyle [pathname]</code>
DESCRIPTION	The command <code>linestyle</code> specifies the pathname of the linestyle-mapping-table for the translation.
OPTIONS	<code>pathname</code> Full pathname of the linestyle-mapping-table.
EXAMPLE	<code>DXFMED> linestyle /custom/cfg/dxf2med_lstyle.map</code>

LIST

SYNTAX	<code>list [pathname]</code>
DESCRIPTION	The command <code>list</code> indicates the pathname of the list-file containing the files you need to convert. After <code>list</code> you have to start the process with <code>go</code> .
OPTIONS	<code>pathname</code> Full pathname of the list-file to be processed. The length of the pathname is limited to 256 signs.
EXAMPLE	<code>DXFMED> list /data/dxf/allfiles.list</code>

LS

SYNTAX	<code>ls</code> <code>ls [pathname]</code>
DESCRIPTION	This command lists the content of the working directory, or the content of the directory pointed to by <code>pathname</code> .
OPTIONS	<code>pathname</code> Full pathname of the directory, which content will be listed
EXAMPLE	<code>ls</code> <code>ls ddl /medusa/proj13a/m2d/bin</code>

MAPFILE

SYNTAX	<code>mapfile [pathname]</code>
DESCRIPTION	The command <code>mapfile</code> specifies the pathname for the mapfile. If <code>Maplog</code> is on, the Made-Mapping will be written into this file. 'Made Mappings' means, that CADConvert analyses the layer, color and text types of the drawing which has been loaded and makes a default mapping that depends of the output system. To make your own mapping, you have to open the mapfile in an editor. You can change the mapping and than save the file. To use your own mapping, start CADConvert again.
OPTIONS	<code>pathname</code> Complete pathname of the mapfile.
EXAMPLE	<code>DXFMED> mapfile /project/maplogs/defaults.map</code>

MAPLOG

SYNTAX	<code>maplog [on / off / append]</code>
DESCRIPTION	<code>on</code> Writes a MAPLOG-file. <code>off</code> No MAPLOG-file will be written. <code>append</code> existing MAPLOG-file will be extended.

MEDCODE

SYNTAX	<code>medcode [codenumber]</code>
DESCRIPTION	The command <code>medcode</code> sets the MEDUSA codenumber for the conversion.
OPTIONS	1-10 The Default is code 1
EXAMPLE	<code>medcode 5</code>

MESSPATH

SYNTAX	<code>messpath [pathname]</code>
DESCRIPTION	The command <code>messpath</code> specifies the pathname of the message files.
OPTIONS	<code>pathname</code> Full pathname of the DXFMED message files.
EXAMPLE	<code>DXFMED> messpath /medusa/cadconvert/mess/gb</code>

OVERWRITE

SYNTAX	<code>overwrite [on / off]</code>
DESCRIPTION	With <code>overwrite</code> set to <code>on</code> , existing files with the same name as the current output filename are over written without warning. <code>overwrite</code> default is <code>ON</code> .
OPTIONS	<code>on</code> If a file by the same name exists, it is over written without warning. <code>off</code> A warning is displayed prior to over writing any existing files.

EXAMPLE	In the following example <code>overwrite</code> is set to <code>off</code> . The output-file exists.
conversion of drawings	<pre> MEDDDXF> in D008 MEDDDXF> out D008-940314.dxf MEDDDXF> go File exists, overwrite? (Y / N) MEDDDXF </pre>
conversion of lists	<pre> this question is asked: File exists, overwrite? </pre>

PRIM

SYNTAX	<code>prim [pathname]</code>
DESCRIPTION	The command <code>prim</code> specifies the pathname of a MEDUSA PRIMS file for the translation.
OPTIONS	<p><code>pathname</code> Full pathname of the PRIM file.</p>
EXAMPLE	<code>DXFMED> prim /medusa/proj13b/bin/prims.bin</code>

QUIT

SYNTAX	<code>quit</code>
DESCRIPTION	<p>Use <code>quit</code> to exit from the utility. If you are running the utility from within MEDUTIL, for example, you will return to the MEDUTIL prompt.</p>

RESET

SYNTAX	<code>reset</code> <code>reset [filename]</code>
DESCRIPTION	The command <code>reset</code> without filename resets the conversion relevant settings to the values of the default file <code>cadconvert.cfg</code> . This file is in the product path below the directory <code>cfg</code> . This command with filename sets the settings to the values of the named file.
EXAMPLE	<code>DXFMED> reset projects/userproj/cadconvert_usr.cfg</code>

SAVE

SYNTAX	<code>save [filename]</code>
DESCRIPTION	Saves the current settings of CADConvert in a named file.
EXAMPLE	<code>save cadconvert_usr.cfg</code>

SHOW

SYNTAX	<code>show</code>
DESCRIPTION	The command <code>show</code> displays relevant settings of the program.

TEXTSTYLE

SYNTAX	<code>textstyle [pathname]</code>
DESCRIPTION	The command <code>textstyle</code> specifies the pathname for the textstyle mapping table.
OPTIONS	<code>pathname</code> Full pathname for the textstyle mapping table.
EXAMPLE	<code>DXFMED> textstyle /custom/cfg/dxf2med_tstyle.map</code> <code>MEDDXF> textstyle /custom/cfg/med2dxf_tstyle.map</code>

USETRUECOLOR

SYNTAX	<code>usetruicolor [on / off]</code>
DESCRIPTION	With <code>usetruicolor</code> set to <code>on</code> , True Color RGB values will be transferred, if defined. <code>usetruicolor</code> default is <code>off</code> . Note that True Color RGB values can be defined in AutoCAD since version 2004.

!

SYNTAX	<code>! [command]</code>
DESCRIPTION	To enter a command of the operating system under CADConvert, you have to write <code>!</code> in front of the command.
OPTIONS	<code>command</code> command of the operating system
EXAMPLE	<code>! chmod ...</code>

DXFMed / DWGMed

Commands for the conversion from DXF/DWG to MEDUSA:

BLOCKNAME	Controls whether the name of the individual block should be appended to the corresponding clump (group).
CLUMPS	Controls whether the entire block depth should be undertaken during the translation.
CONVSPACE	Defines how paper / model spaces from AutoCAD are translated
DXFIN_CHARSET	Specifies the code of the text transfer, if no CODEPAGE is set within the DXF/DWG file.
DXFMED_DIMENSION	Specifies the handling of dimensions during the translation.
FORCE_DXFIN_CS	Controls whether the <code>dxfin_charset</code> entry shall be used as code definition with the text transfer, even if a CODEPAGE definition exists within the DXF/DWG file.
FILLGAP	Influences the distance of the cross-hatching for special imported elements
HIDDENLAYER	Handles the translation of layers with status off or frozen.
LIMIT_MAXSIZE	Limit the maximum size to four times of the size of the sheet.
LINEWEIGHT_DEFAULT	Defines the line weight for default lines.
MEDDIM_STANDARD	Controls the way of creating dimensions.
MEDPRECISION	Specifies the precision of the MEDUSA-drawing.
MOVE	Controls whether the variable EXTMIN should be used as (0,0).
OUT	Specifies the pathname of the MEDUSA output-file.
PAPSPACE	Defines the paper space of the DXF/DWG
PROJECT	Specifies the pathname for a MEDUSA PROJECT-file.
PROXY	Controls whether Proxy-elements, which contain graphical elements, should be transferred to MEDUSA and should be associated to a clump.
READ_PAPSPACE	Lists all paper spaces of a DXF/DWG input file.
SCALE	Specifies a scale multiplier.
SHEETSIZE	The size of the sheet is either determined by entries of the DW/DWG file or of the geometry size.
SPATIALFILTER	Specifies to display only a certain area of a block cut in AutoCAD or the complete block.
SPECTSTYLE	Specifies the pathname for the spectstyle-mapping-table.
SPLINEAPPROX	Controls the way of approximation of splines in MEDUSA

SUBCLUMP_TYPE	Defines the group type used for a nested structure
UNITS	Sets the sheet-units to mm or inch.
XREF	Controls whether external references are processed during conversion or not.

The following list contains the common commands valid for both conversion types:

CD	Changes the working directory
CODE	Specifies a pathname for a MEDUSA CODE file.
DDL	Specifies a pathname for a MEDUSA DDL file.
DIR	Lists the contents of a directory.
ERRFILE	Specifies a pathname for the error file.
ERRLOG	Controls whether a ERRLOG-file is written.
GO	Starts the translation.
HELP	Displays information on the specified command.
HELPPATH	Specifies a path to the help files.
IN	Specifies the pathname of the input file.
LINestyle	Specifies the pathname of the linestyle mapping file.
LIST	Specifies the pathname of the listing file.
LS	Lists the content of an directory.
MAPFILE	Specifies the pathname for the mapfile.
MAPLOG	Controls whether a MAPLOG-file is written.
MEDCODE	Specifies the MEDUSA Code number for the conversion.
MESSPATH	Specifies the pathname of the message file.
OVERWRITE	Controls whether or not an already existing output-file with the same name should be over written.
PRIM	Specifies the pathname for a MEDUSA PRIM-file.
QUIT	Quits the program.
RESET	Resets the conversion adjustments to standard or to the definitions of a configuration file.
SAVE	Writes the current settings into the cadconvert.cfg file.
SHOW	Shows the conversion adjustments.
TEXTSTYLE	Specifies the pathname for the textstyle-mapping-table.
USETRUECOLOR	Controls whether True Colors will be transferred.
!	is used to enter commands of the operating system under CADConvert.

BLOCKNAME

SYNTAX	<code>blockname [on / off]</code>
DESCRIPTION	With the command <code>blockname</code> , you can decide if the individual block should be appended to the corresponding clump.
OPTIONS	<code>on</code> The clumps made during the translation are appended to the names of the corresponding blocks as an attribute. <code>off</code> The clumps made during the translation are not appended the names of the corresponding blocks as an attribute.

CLUMPS

SYNTAX	<code>clumps [on / off]</code>
DESCRIPTION	With AutoCAD you can organize the clumps very accurate. The command <code>clumps</code> sets how the entire block depth should be used the translation.
OPTIONS	<code>on</code> The entire depth of block structure is used for translation to MEDUSA file format. <code>off</code> The block structure is lost completely.

CONVSPACE

SYNTAX	convspace [paper / all_paper / model]
DESCRIPTION	<p>Different paper and model spaces of AutoCAD can be written to single MEDUSA files.</p> <p>With this function you can switch between the different types of translation.</p>
OPTIONS	<p>paper MEDUSA checks whether several paper spaces are available. If more than one layout is found, a dialog appears which lists all paper spaces and you can choose the required one.</p> <p>In MEDUTIL the available paper spaces are listed by the <code>read_papSPACE</code> command. The required one can be defined using the <code>papSPACE [number]</code> command (see page 69).</p> <p>If only one paper space exists, it is directly transferred from AUTOCAD to MEDUSA.</p> <p>If the switch is set to <code>convspace paper</code> only DXF/DWG files with a paper space are imported.</p> <p>If no paper space exists, no MEDUSA drawing is created!</p> <p><code>convspace paper</code> is available in the MEDUSA UI, in MEDUTIL and offline, but not with the list conversion.</p> <p>all_paper All paper spaces of a DXF/DWG file are converted into MEDUSA at once. During the process single MEDUSA files are created from each paper space of the DXF/DWG file as part of a working set (.wsd file). Then, all files belonging to that working set can be opened at once.</p> <p>The files are automatically stored in the directory of the DXF/DWG file using the following naming convention: IN: <code><path>/<DXF filename>.dxf</code> OUT: <code><path>/<DXF- filename>_<layout name>.she</code> <code><path>/<DXF filename>.wsd</code></p> <p>It is also possible to define another path and filename. The naming of the .wsd file is created accordingly.</p> <p>Example: OUT: <code>E:\abc</code> <code>E:\abc.wsd</code></p> <p><code>convspace all_paper</code> is only available at MEDUTIL command line prompt, not in the UI.</p> <p>model Only the model space of AutoCAD will be converted to a MEDUSA sheet.</p>

DXFIN_CHARSET

SYNTAX	<code>dxfin_charset [Code]</code>
DESCRIPTION	Usually a DXF/DWG file contains a text code entry. By default the entry within the DXF/DWG file is <code>DXFIN_CHARSET ANSI_1252</code> . Via <code>dxfin_charset</code> you can specify different codes. If <code>CODEPAGE</code> is not set within the DXF/DWG file, the <code>dxfin_charset</code> -entry is used.
EXAMPLE	<code>ANSI_932</code> (Code of Japanese Shift-JIS)

Please note: The following codes are possible:

- ANSI 932 - japanese Microsoft Shift-JIS
- ANSI 936 - GBK simplified chinese
- ANSI 950 - BIG5 traditional chinese
- ANSI 1250 - east european latin
- ANSI 1251 - cyrillic
- ANSI 1252 - west european latin
- ANSI 1253 - greek
- ANSI 1255 - hebrew
- EUC-JP - UNIX japanese encoding

DXFMED_DIMENSION

SYNTAX	<code>dxfmед_dimension [geo / dim / com]</code>
DESCRIPTION	<p>Using the command dimension, you can convert the dimension geometrically (<i>geo</i>), as genuine dimensioning (<i>dim</i>) or in a combined manner (<i>com</i>).</p> <p>With the geometrical conversion (<i>geo</i>), the geometrical copy of dimensioning is received. However, all functionality is lost.</p> <p>With a genuine dimensioning conversion (<i>dim</i>), functionality survives. However, because AutoCAD and MEDUSA take different approaches to dimensioning, there may be some differences.</p> <p>With the combined conversion (<i>com</i>), the genuine dimensioning is also maintained, however, a geometrical copy is first deposited.</p> <p>Case differences exist between the converted dimensioning and the geometrical representation of the original dimensioning. These become visible at the next UNDIM / REDIM.</p>
OPTIONS	<p><i>geo</i> During the conversion, dimensioning as a geometrical copy is created according to MEDUSA. The functionality is lost.</p> <p><i>dim</i> The conversion translates the genuine dimensioning according to MEDUSA and functionality is kept.</p> <p><i>com</i> The conversion transmits the genuine dimensioning, however, it first creates a geometrical copy. The functionality is preserved. Differences occur only after the first UNDIM / REDIM.</p>

FORCE_DXFIN_CS

SYNTAX	<code>force_dxfin_cs [on/off]</code>
DESCRIPTION	<p>The switch is directly associated with the <code>dxfin_charset</code> entry (see above).</p> <p>It controls whether the <code>dxfin_charset</code> entry is used, even if a <code>CODEPAGE</code> is given within the DXF/DWG file.</p>
OPTIONS	<p><i>on</i> In any case the <code>dxfin_charset</code> entry is used, even if a <code>CODEPAGE</code> entry exists within the DXF/DWG file.</p> <p><i>off</i> The code entry of the DXF/DWG file is used. <i>off</i> is default setting.</p>

FILLGAP

SYNTAX	<code>fillgap [value]</code>
DESCRIPTION	<p>AutoCad creates (for example) arrows with an element, which is unknown in MEDUSA.</p> <p>This element will be imitated by creating a contour which will be cross hatched. If the drawing is very large, the range of the hatching may become very small, this causes a big number of line-elements. By using <code>fillgap</code> the range can be controlled and there are less elements in MEDUSA</p>
OPTIONS	<p><code>value</code> Value of range of cross hatching.</p>
EXAMPLE	<code>DXFMED> fillgap 0.002</code>

HIDDENLAYER

SYNTAX	<code>hiddenlayer [on / off]</code>
DESCRIPTION	<p>This switch defines wether layers with the status <code>frozen</code> or <code>off</code> are translated to MEDUSA or not.</p> <p>If the switch is not set, <code>on</code> is default.</p>
OPTIONS	<p><code>on</code> Layers with the status <code>frozen</code> or <code>off</code> are translated</p> <p><code>off</code> Layers with the status <code>frozen</code> or <code>off</code> are not translated</p>

LIMIT_MAXSIZE

SYNTAX	<code>limit_maxsize [on / off]</code>
DESCRIPTION	<p>Very large arcs can be the reason for a very large maximum size of a MEDUSA sheet. This might cause problems for MEDUSA to handle the sheet. With this command you can limit the maximum size to four times of the size of the sheet.</p> <p>If limitation is on it can happen that some warnings are given when loading the sheet into MEDUSA.</p>
EXAMPLE	<code>limit_maxsize on</code>

LINWEIGHT_DEFAULT

SYNTAX	<code>lineweight_default [value]</code>
DESCRIPTION	In AutoCAD there is the possibility to control the line weight not only directly but also by defining a default value. The value for the default is defined in the AutoCAD installation file and is not part of the DXF format. With <code>lineweight_default</code> you can assign a value to the default line weight as it will be used in MEDUSA. Default value is 0.0.
EXAMPLE	<code>lineweight_default 0.5</code>

MEDDIM_STANDARD

SYNTAX	<code>meddim_standard = [on / off]</code>
DESCRIPTION	The command <code>meddim_standard</code> controls the way of dimension creation from AutoCAD to MEDUSA. Please note: This switch can be set in the configuration file <code>cadconvert.cfg</code> only.
OPTIONS	<code>on</code> Standard MEDUSA dimensions with default thicknesses and colors will be created. Also the size of the arrows will conform with the standard. This is the default setting. <code>off</code> Thickness, color and size of arrows will be determined by the given AutoCAD values and the mapping facility.

MEDPRECISION

SYNTAX	<code>medprecision [low / medium / high]</code>
DESCRIPTION	The command <code>medprecision</code> specifies the amount of precision for the MEDUSA-drawing.
OPTIONS	<code>low</code> MEDUSA-sheet with low precision is generated (6 digits). <code>medium</code> MEDUSA-sheet with medium precision is generated (9 digits). <code>high</code> MEDUSA-sheet with high precision is generated (12 digits)

MOVE

SYNTAX	<code>move [on / off]</code>
DESCRIPTION	With the command <code>move</code> you set the variable <code>EXTMIN</code> be used or not be used as (0,0).
OPTIONS	<code>on</code> EXTMIN will be used as (0,0). <code>off</code> EXTMIN will not be used as (0,0).

OUT

SYNTAX	<code>out [pathname]</code>
DESCRIPTION	The command <code>out</code> specifies the pathname for the output MEDUSA sheet. If you do not specify an output pathname, the output sheet is created in the current directory.
OPTIONS	<code>pathname</code> Full pathname of the output sheet file. The length of the pathname must not exceed 256 characters.
EXAMPLE	<code>DXFMED> out /data/sheets/9876543.she</code>

PROJECT

SYNTAX	<code>project [pathname]</code>
DESCRIPTION	Specifies the pathname of a MEDUSA project. This must be a valid MEDUSA project.
OPTIONS	<code>pathname</code> Full pathname of the project file.
EXAMPLE	<code>DXFMED> project /projects/proj_jeb14</code>

PROXY

SYNTAX	<code>proxy [block / entity / off]</code>
DESCRIPTION	Controls whether Proxy-elements, which contain graphical elements, should be transferred to MEDUSA and should be combined to a clump.
OPTIONS	<p><code>block</code> is the default setting. Proxy-elements are combined to clumps</p> <p><code>entity</code> Graphical elements are transferred as simple elements</p> <p><code>off</code> Proxy-elements are ignored, i.e., they are not transferred to MEDUSA.</p>

READ_PAPSPACE / PAPSPACE

SYNTAX	<code>read_papspace/papspace [number]</code>
DESCRIPTION	<p>The command relates to the <code>convspace</code> command (see page 63). <code>read_papspace</code> causes the listing of all available paper spaces of the DXF/DWG input file.</p> <p>The following <code>papspace [number]</code> command defines the paper space, which shall be converted into MEDUSA.</p>

SCALE

SYNTAX	<code>scale [factor / auto]</code>
DESCRIPTION	<p>The MEDUSA scale factor is different from the AutoCAD scale factor.</p> <p>The command <code>scale</code> indicates which scale factor is written into the MEDUSA file during the conversion.</p>
OPTIONS	<p><code>factor</code> Value for the sheet scale (> 0.0).</p> <p><code>auto</code> The DXF-File usually contains a value for DIMSCALE. If it does contain a value, it is taken for the sheet scale, if not 1.0 is set.</p>

SHEETSIZE

SYNTAX	<code>sheetsize [byDXFfile / byGeometry]</code>
DESCRIPTION	The size of a MEDUSA sheet may either be determined by a size entry in the DXW/DWG file (extmin, extmax), or it is calculated according to min., max. of the geometry. Reading the value out of the file can resolve problems, because not every system writes this entry correctly.
OPTIONS	<code>byDXFfile</code> Sheet size is selected out of the DXF/DWG file. <code>byGeometry</code> Sheet size is calculated from geometry.

SPATIALFILTER

SYNTAX	<code>spatialfilter [on / off]</code>
DESCRIPTION	The command <code>spatialfilter</code> specifies to display only a certain area of a block cut in AutoCAD or the complete block.
OPTIONS	<code>on</code> Only the part of the cut block which is visible in AutoCAD will be displayed in MEDUSA. <code>off</code> The complete block will be displayed in MEDUSA. <code>off</code> is default setting.
EXAMPLE	<code>DXFMED> spatialfilter ON</code>

SPECTSTYLE

SYNTAX	<code>spectstyle [pathname]</code>
DESCRIPTION	The command <code>spectstyle</code> specifies the pathname of the spectstyle mapping table.
OPTIONS	<code>pathname</code> Full pathname of the spectstyle mapping table.
EXAMPLE	<code>DXFMED> spectstyle /custom/cfg/med2med_tstyle.map</code>

SPLINEAPPROX

SYNTAX	splineapprox [linear / conic]
DESCRIPTION	Controls the way how splines are approximated at curves.
OPTIONS	linear Approximation of curves is carried out by line segments. conic Approximation of curves is carried out by conic arcs.

SUBCLUMP_TYPE

SYNTAX	subclump_type [type]
DESCRIPTION	Usually CADCONVERT creates a nested group structure using the element type named group (with the old type SET it would look like this: SET > SET > SET...). In some cases it might be useful to define a different sub-group, in order to create structures like SET > UCL > SET > UCL..., for example.
OPTIONS	type Valid group type, e.g. UCL.

UNITS

SYNTAX	units [mm / inch]
DESCRIPTION	MEDUSA works unlike AutoCAD with units. The command sets the sheet-units to mm or inch.
OPTIONS	mm The unit mm will be used during translation. inch The unit inch will be used during translation.

XREF

SYNTAX	<code>xref [on / off]</code>
DESCRIPTION	The switch controls whether external references, which are content of a DWG sheet, are processed and transferred to MEDUSA or not.
OPTIONS	<code>on</code> References within the DWG file are processed during conversion and appear as SET (Clump) in the MEDUSA sheet. <code>off</code> References within the DWG file are not processed during conversion, i.e. they do not appear within the MEDUSA sheet. <code>off</code> is default setting.

MedDXF / MedDWG

Commands for the conversion from MEDUSA to DXF/DWG:

ACADVERSION	Specifies the ACAD version to which you want to convert the MEDUSA sheet.
BIGFONT	Supports text fonts with more than 255 characters.
BLOCKS	Controls whether or not MEDDXF should take over the complete clump-structure.
CLUMPNAME	Controls whether the group name should be taken over as block name or not.
COLORS	Controls whether or not MEDDXF should take over the attachment between colors and pens.
CONTEXTCHECK	A MEDUSA sheet is opened either considering or regardless of code and DDL.
DXFOUT_CHARSET	Specifies the text code within the DXF/DWG file.
DXFPRECISION	Specifies the number of digits in the DXF-file.
FORCE_DXFOUT_CS	Controls whether the <code>dxfout_charset</code> entry shall be used as code definition with the text transfer.
LTSCALE	Defines the proportion of drawing units to line definition units for broken lines.
MEDDXF_DIMENSION	Specifies the handling of dimensions during the translation.
MEDTEXT	Specifies the pathname of the text definition-file.
MEDTEXT_GDT	Optimizes the representation of bordered text.
PM5	Controls whether PM5 elements are transferred to ACAD or not
OUT	Specifies the pathname of the DXF output-file.
POLYLINE	Controls whether or not a complex, drawn by polylines, should be saved to the DXF-file as a polyline or a complex of lines.
PROJECT	Specifies the pathname for a MEDUSA PROJECT-file.
SPECTEXT_AS_PIC	Special text types are transferred as a block, including text and graphic. elements.
SUPERLINEMODE	Supports the translation of Superlines as graphic.
TEXTBOX	Optimizes the text representation in DXF/DWG.
TEXTHEIGHT_ZERO	Determines whether text with height zero is transferred or not.
UNSCALE	Sets the sheet scale and the drawing to 1:1

The following list contains the common commands valid for both conversion types:

CD	Changes the working directory
CODE	Specifies a pathname for a MEDUSA CODE file.
DDL	Specifies a pathname for a MEDUSA DDL file.
DIR	Lists the contents of a directory.
ERRFILE	Specifies a pathname for the error file.
ERRLOG	Controls whether a ERRLOG-file is written.
GO	Starts the translation.
HELP	Displays information on the specified command.
HELPPATH	Specifies a path to the help files.
IN	Specifies the pathname of the input file.
LINestyle	Specifies the pathname of the linestyle mapping file.
LIST	Specifies the pathname of the listing file.
LS	Lists the content of an directory.
MAPFILE	Specifies the pathname for the mapfile.
MAPLOG	Controls whether a MAPLOG-file is written.
MEDCODE	Specifies the MEDUSA Code number for the conversion.
MESSPATH	Specifies the pathname of the message file.
OVERWRITE	Controls whether or not an already existing output-file with the same name should be over written.
PRIM	Specifies the pathname for a MEDUSA PRIM-file.
QUIT	Quits the program.
RESET	Resets the conversion adjustments to standard or to the definitions of a configuration file.
SAVE	Writes the current settings into the cadconvert.cfg file.
SHOW	Shows the conversion adjustments.
TEXTSTYLE	Specifies the pathname for the textstyle-mapping-table.
USETRUECOLOR	Controls whether True Colors will be transferred.
!	is used to enter commands of the operating system under CADConvert.

ACADVERSION

SYNTAX	<code>acadver [version]</code>
DESCRIPTION	This switch is used to specify the ACAD version to which you want to convert the MEDUSA sheet.
OPTIONS	<code>version</code> is one of ACAD12, ACAD13, ACAD14, ACAD2000, ACAD2004, ACAD2005, ACAD2006, ACAD2007, ACAD2008, ACAD2009, ACAD2010.
EXAMPLE	<code>acadver acad2006</code>

BIGFONT

SYNTAX	<code>bigfont [filename]</code>
DESCRIPTION	This switch is used for text fonts with more than 255 characters. (e.g. Japanese text)
OPTIONS	<code>filename</code> If the switch is set text fonts with more than 255 characters can be used.
EXAMPLE	<code>bigfont bigfont.shx</code>

BLOCKS

SYNTAX	<code>blocks [on / off]</code>
DESCRIPTION	In MEDUSA you can organize the clumps very complex. The command <code>blocks</code> controls how the translator builds the clump-structure.
OPTIONS	<code>on</code> The whole clump-structure is build. <code>off</code> The clump-structure is lost.

CLUMPNAME

SYNTAX	<code>clumpname [on / off]</code>
DESCRIPTION	Controls whether the group name should be taken over as block name or not. <code>off</code> is default setting.
OPTIONS	<code>on</code> Groupnames from MEDUSA are transferred as blocknames to DXF. Equal groupnames in MEDUSA receive automatically a sequential number added to the blockname in DXF. (blockname = grouplabel_sheet_no) <code>off</code> Groupnames from MEDUSA are not transferred as blocknames to DXF. A standardname is used, MEDUSA_SET_<element_number>_

COLORS

SYNTAX	<code>colors [on / off]</code>
DESCRIPTION	MEDUSA cannot handle colored lines but it can attach colors to pens. This attachment is saved in the file CODE.BIN. The command <code>colors</code> controls whether or not MEDDXF uses this attachment for the translation.
OPTIONS	<code>on</code> The attachment colors to pens is used. <code>off</code> The attachment colors to pens is not used.

CONTEXTCHECK

SYNTAX	<code>contextcheck [on / off]</code>
DESCRIPTION	<p>This switch controls, if a drawing without fitting code and DDL can be opened. If it is opened all line and text elements, which do not fit to standard, may be displayed wrong.</p> <p>If the switch is unset, the default is <code>on</code>.</p>
OPTIONS	<p><code>on</code> MEDUSA sheets without code and DDL are not opened and a warning is displayed.</p> <p><code>off</code> The drawing is opened without code and DDL. All line and text elements, not according to standard may be displayed wrong,</p>

DXFOUT_CHARSET

SYNTAX	<code>dxfout_charset [code]</code>
DESCRIPTION	<p>Specifies the text code during the conversion from MEDUSA to DXF/DWG.</p> <p>The code is entered as text string into the DXF/DWG file.</p>
EXAMPLE	<p><code>DXFOUT_CHARSET ANSI_1250</code> (Code of Windows East European Latin)</p>

Please note: The following codes are possible:

- ANSI 932 - japanese Microsoft Shift-JIS
- ANSI 936 - GBK simplified chinese
- ANSI 950 - BIG5 traditional chinese
- ANSI 1250 - east european latin
- ANSI 1251 - cyrillic
- ANSI 1252 - west european latin
- ANSI 1253 - greek
- ANSI 1255 - hebrew
- EUC-JP - UNIX japanese encoding

DXFPRECISION

SYNTAX	<code>dxfprecision [decimal points]</code>
DESCRIPTION	The command <code>dxfprecision</code> specifies the number of digits in the DXF-file.
EXAMPLE	<code>MEDDXF> dxfprecision 6</code>

FORCE_DXFOUT_CS

SYNTAX	<code>force_dxfout_cs [on/off]</code>
DESCRIPTION	The switch is directly associated with the <code>dxfout_charset</code> entry (see above). It controls whether the <code>dxf_charset</code> entry is used.
OPTIONS	<code>on</code> In any case the <code>dxfout_charset</code> entry is used. <code>off</code> The <code>dxfout_charset</code> entry is not used. <code>off</code> is default setting.

LTSCALE

SYNTAX	<code>ltscale [factor]</code>
DESCRIPTION	This command describes the size factor (the proportion of drawing units to line type definition units) for broken lines.
OPTIONS	<code>factor</code> Number bigger than 0.
EXAMPLE	<code>ltscale 1</code>

MEDDXF_DIMENSION

SYNTAX	<code>meddxf_dimension [dim / geo]</code>
DESCRIPTION	<p>Using the command <code>meddxf_dimension</code>, you can convert dimensioning as genuine dimensioning (<code>dim</code>) or as a geometrical copy (<code>geo</code>).</p> <p>With genuine dimensioning conversion, functionality survives. However, because AutoCAD and MEDUSA take different approaches to dimensioning, there may be some differences.</p> <p>If you convert dimensioning as a geometrical copy, the functionality is lost. Dimensioning only exists geometrically.</p>
OPTIONS	<p><code>dim</code> Dimensioning of the drawing is converted as a genuine dimensioning. The functionality of dimensioning is preserved.</p> <p><code>geo</code> Dimensioning of the drawing is converted geometrically. The functionality of dimensioning is lost.</p>

MEDTEXT

SYNTAX	<code>medtext [filename]</code>
DESCRIPTION	The command specifies the font filename.
OPTIONS	<p><code>filename</code> Contains the filename of the text font in DXF.</p>
EXAMPLE	<code>medtext medtext.shx</code>

MEDTEXT_GDT

SYNTAX	<code>medtext_gdt [filename]</code>
DESCRIPTION	<p>The command specifies the font filename.</p> <p>The translation to DXF is optimized, so the representation is similar to MEDUSA representation (for TR texts).</p>
OPTIONS	<p><code>filename</code> Contains the filename of the text font in DXF.</p>
EXAMPLE	<code>medtext_gdt medtext_gdt.shx</code>

PM5

SYNTAX	PM5 [on/off]
DESCRIPTION	The command specifies, if PM5 elements are transferred from MEDUSA to ACAD or not.
OPTIONS	on: PM5 elements are transferred from MEDUSA to ACAD off: PM5 elements are not transferred from MEDUSA to ACAD. off is default setting

OUT

SYNTAX	out [pathname]
DESCRIPTION	The command <code>out</code> specifies the pathname of the output AutoCAD DXF file. If you do not specify an output pathname, the output DXF file is created in the current directory with a default filename of <code>inputsheet-name.DXF</code> . If you specify an output filename that does not end in <code>.DXF</code> a <code>.DXF</code> suffix is added.
OPTIONS	pathname Full pathname of the output DXF file. The length of the pathname cannot exceed 256 characters.
EXAMPLE	MEDDXF> out /usr/sandy/dxf/elec.dxf

POLYLINE

SYNTAX	<code>polyline [on / off]</code>
DESCRIPTION	MEDUSA stores objects drawn from lines fundamentally as polylines. AutoCAD stores these objects as single lines. With the command <code>polyline</code> you can determine if objects drawn from lines are stored as polylines or a complex from single lines.
OPTIONS	<code>on</code> Objects drawn from lines are stored in the DXF file as a polyline. <code>off</code> Objects drawn from lines are stored in the DXF file as a complex of single lines

PROJECT

SYNTAX	<code>project [pathname]</code>
DESCRIPTION	Specifies the pathname of a MEDUSA project. This must be a valid MEDUSA project. The translator uses DDL.BIN, CODE.BIN and PRIMS.BIN files located in the project. This allows the interface to detect any customizing you have done to the project and includes the modified or new elements in the translation process.
OPTIONS	<code>pathname</code> Full pathname of the project file.
EXAMPLE	<code>MEDDXF> project /projects/proj_jeb14</code>

SPECTEXT_AS_PIC

SYNTAX	<code>spectext_as_pic [on / off]</code>
DESCRIPTION	Special text types (e.g. texts in boxes) are transferred in a block including text and graphic elements.
OPTIONS	<code>on</code> Transfer as block with text and graphic elements. <code>off</code> Default. Transfer as text element.

SUPERLINEMODE

SYNTAX	<code>superlinemode [line / graphic / both]</code>
DESCRIPTION	With the help of this switch superlines can be translated as graphic into a DXF Block.
OPTIONS	<p><code>line</code> Transfer of the Superline as line.</p> <p><code>graphic</code> Transfer of the Superline as a simple vector graphic into a DXF Block.</p> <p><code>both</code> Transfer of the Superline as graphic and line.</p>

TEXTBOX

SYNTAX	<code>textbox [on/off]</code>
DESCRIPTION	<p>You can optimize the text representation in DXF/DWG. In the DXF/DWG format, you can fit a text between two points. These two points are calculated inside MEDUSA. The original justification is lost, so if you convert this DXF/DWG file back to MEDUSA all texts will have the justification 22 (= baseline left bottom).</p>
OPTIONS	<p><code>on</code> Optimizes by fitting.</p> <p><code>off</code> Keeps the justification if possible. The text representation will be optimized with the <code>texttight</code>.</p>

TEXTHEIGHT_ZERO

SYNTAX	<code>textheight_zero [on/off]</code>
DESCRIPTION	Determines whether texts with height zero are transferred or not.
OPTIONS	<p><code>on</code> Texts will be transferred.</p> <p><code>off</code> Texts will be not transferred. This is the default.</p>

UNSCALE

SYNTAX	<code>unscale [on / off]</code>
DESCRIPTION	The command <code>unscale</code> sets the sheet scale and the drawing to 1:1
OPTIONS	<code>on</code> Converts the drawing by using the original sheet scale. <code>off</code> sets the sheet scale and the drawing to 1:1.

LIMITATIONS

Since MEDUSA and DXF are in different CAD formats, some information may not be translated between them. MEDUSA is designed to save as much information as possible from each of the two formats, but there are some restrictions. The most important restrictions are described below.

Raster Transfer

Raster transfer is restricted to projects with the MEDCOLRASTER product.

With the conversion of raster images only rectangular clipping of images and rotation by steps of 90 degrees is possible. Shearing is not transferred.

DXF/DWG -> MEDUSA

In the current CADConvert version the AutoCAD Revision 2000 DXF element multiline is not processed. Shapes are not processed.

Pattern hatchings are not exactly transferred into MEDUSA, they will be defined as standard hatchings.

3D Elements are processed with X and Y values only. 3D volume elements and views are not processed.

Width of start and end segments of poly lines are not evaluated.

`convspace[paper]` is not available for list conversion.

`convspace[all_paper]` is only available in MEDUTIL, but not in the MEDUSA UI.

MEDUSA -> DXF/DWG

Parallel dimension-chains and coordinate dimensions are converted to geometry.

In AutoCAD version R12 boldness is still unknown, nevertheless it appears in the settings of line-style mapping. However this column is not analyzed. It is reserved for future use.

Elements from AutoCAD Inventor

It is not possible to convert elements from AutoCAD Inventor to MEDUSA. This data can only be displayed with an AutoCAD internal add-on.

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