

Manual of the visualization software

IDealVIEWER

Manual

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1 Introduction

1.1 Coverage

This here presented manual describes the features and usage of the visualization software *I-DEALview* for volume dataset presentation and evaluation.

1.2 Important Notice

To obtain an overview of all features and the use of these, we highly recommend to work through this here presented manual.

1.3 System Requirements

2 Installation

2.1 Common Notice

The installation of *I-DEALview* requires an user account with administrative privileges. After the installation any user account can use the software.

2.2 Installation

The Installation of *I-DEALview* starts with a double click on the file "Setup.exe" from the delivered installation cd or from the folder on your computer you received by electronic delivery.

Name	Größe	Typ	Änderungsdatum
DotNetFX35		Dateiordner	25.06.2009 09:13
vcredist_x86		Dateiordner	25.06.2009 09:13
WindowsInstaller3_1		Dateiordner	25.06.2009 09:13
I-DEALview Demo.msi	21.275 KB	Windows Installer-Paket	25.06.2009 09:14
setup.exe	466 KB	Anwendung	25.06.2009 09:13

Figure 1 Installation source folder

Within the now shown welcome window, the installation is started by pressing the button "Weiter".

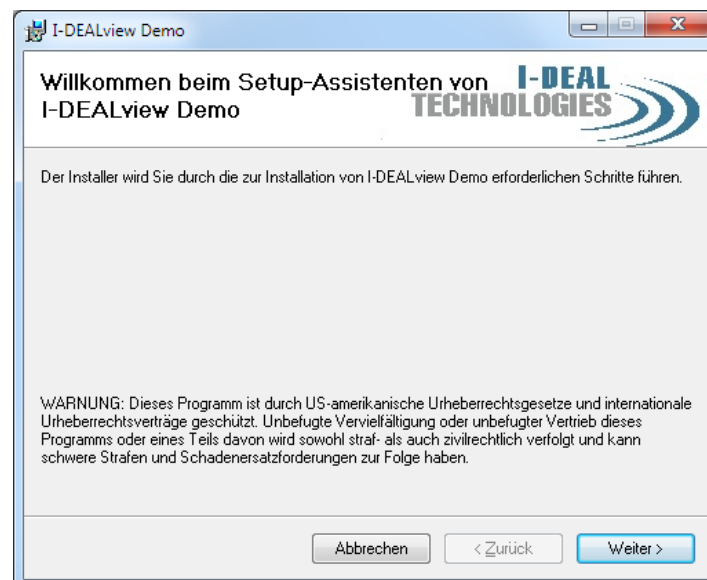


Figure 2 Welcome window

The following window offers the possibility to select the destination folder for the installation. It is highly suggested to keep the presetting and just proceed by pressing "Weiter"



Figure 3 Destination folder selection

Now all needed information are collected and the installation starts by pressing „Weiter“ again.

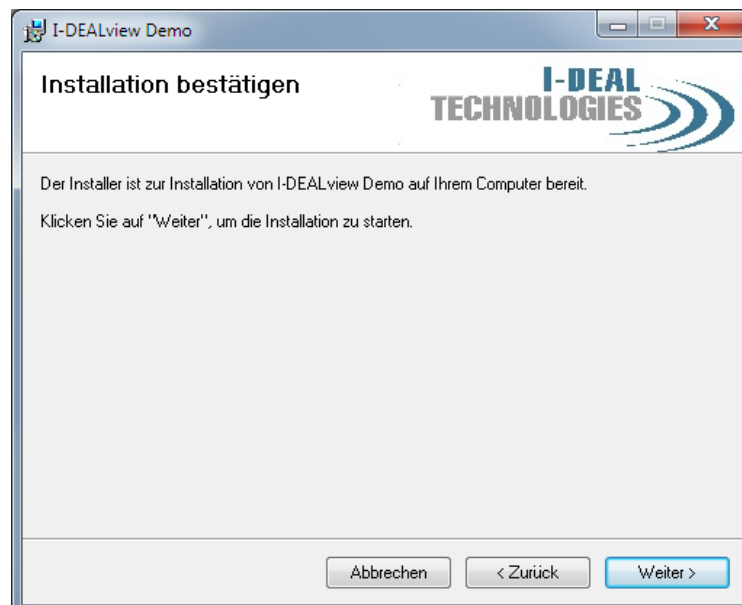


Figure 4 Installation start

The progress bar shown in figure 5 shows the status of the installation.

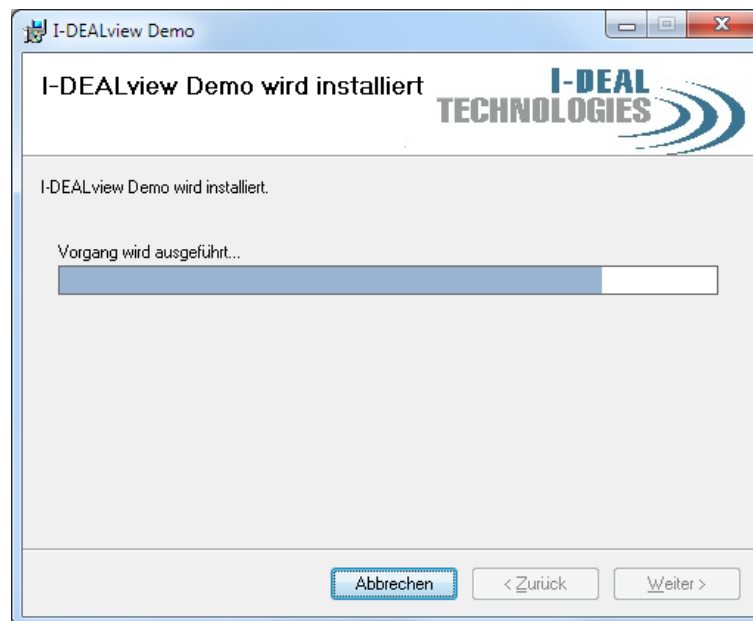


Figure 5 Installation progress

The last window informs about the successfully installation of IDEALview. Should an error occur during the installation, please contact our local reseller.

3 I-DEALview start

After the installation all needed files are located in the folder you selected during the installation configuration.

Double clicking the „I-DEAL-Viewer“ icon starts the program.

To make the start easier the software installation places a shortcut in the windows “start menu”. To start the software with the shortcut press the „I-DEALview“ icon under the „I-DEAL Technologies“ folder in the windows “start menu” as shown in figure 6.

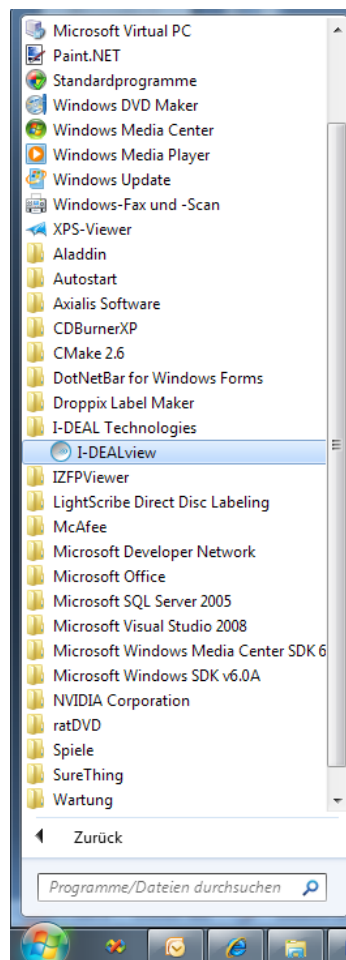


Figure 6 I-DEALview shortcut

4 I-DEALview user interface

4.1 Operations without dataset

After starting the software the main window of IDEALview shows up as seen in figure 7.

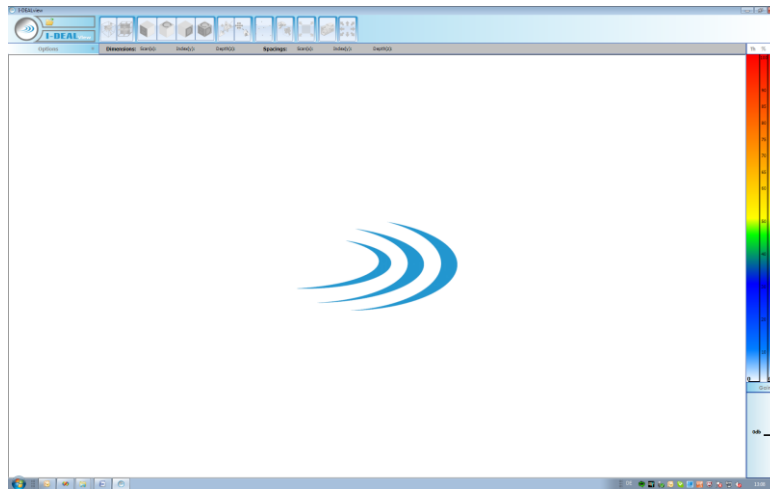


Figure 7 Main window of I-DEALview

As long as no dataset has been loaded, all buttons are disabled except the „I-DEALbutton“ that opens the main menu.

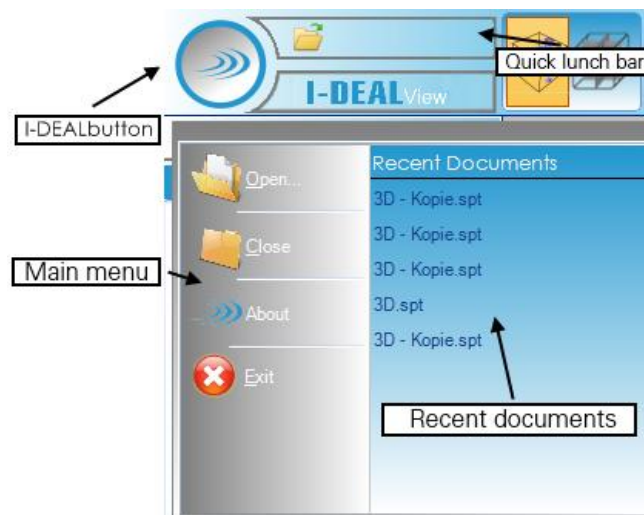


Figure 8 Main menu of I-DEALview

The main menu offers to :

- select and load a dataset
- close a dataset
- view contact information
- exit the software
- open one of the last datasets

Besides by the main menu, loading a dataset is also possible by a button in the quick lunch bar.

After you selected and confirmed a dataset file by pressing the "OK" button, a progress bar informs about the status of the load procedure.

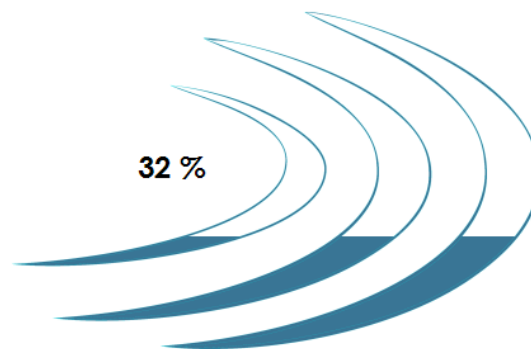


Figure 9 Loading progress

After finishing the load procedure, all buttons are enabled and IDEALview can be used.

4.2 Operations with loaded dataset

The user interface is divided into six main parts

- Main menu (1)
- Image selection and render technique (2)
- Cut planes (3)
- Dataset information (4)
- Color table and software gain (5)
- Additional features (6)

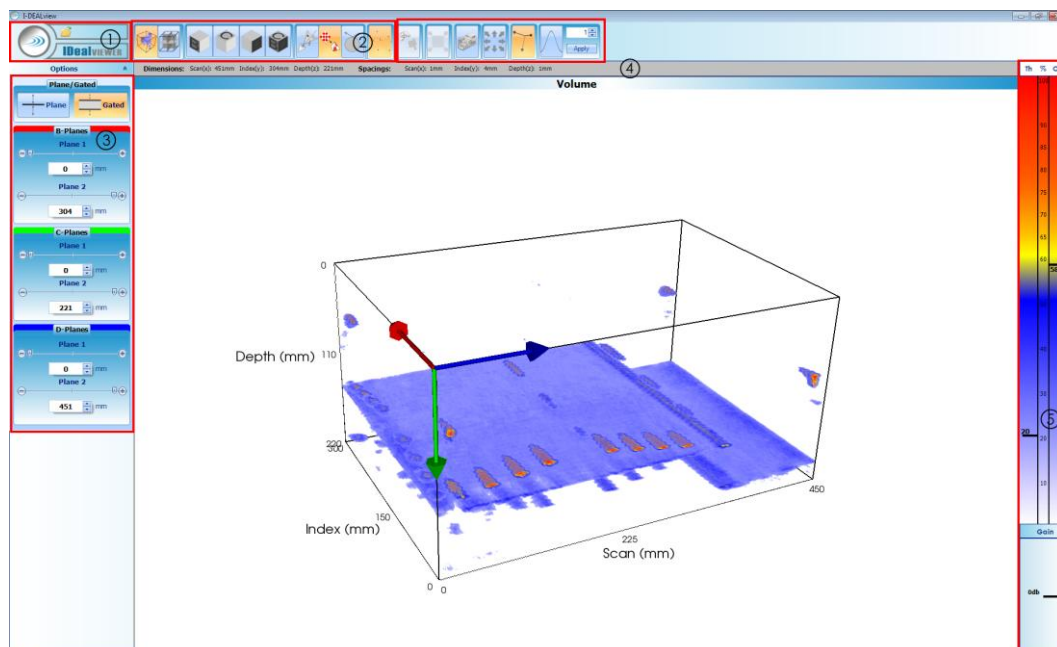


Figure 10 User interface with dataset

4.2.1 Main menu

The features with loaded dataset differ to the features shown in 4.1 only by the fact, that a loaded dataset can be closed.

4.2.2 Image selection and rendering technique



Shows a 3D view of the dataset



Switch to cut plane mode



Shows a B-Scan of the dataset



Shows a C-Scan of the dataset



Shows a D-Scan of the dataset



Shows the B-, C- and D-Scan of the dataset



Software rendering, maximum along the view ray



Hardware rendering on the graphics card



Surface rendering on the graphics card



Interpolation selection



Interpolation „Linear“



Interpolation „Nearest“

4.2.3 Cut planes

The cut planes area contains

- the selection between cut plane (Plane) and cut off mode (Gated)
- settings of the mode dependent positions of the B-, C- and D – planes

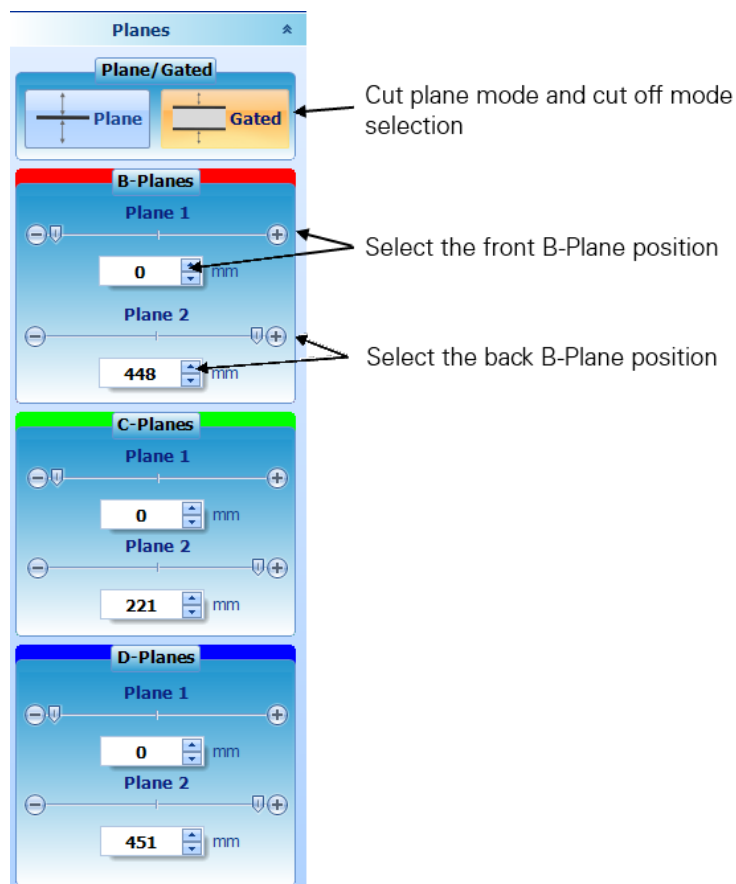


Figure 11 Cut planes

Clicking the „Plane“ button matches the function “Switch to cut plane mode” from chapter 4.2.2. These functions are in all image views (B, C, D, BCD, 3D) available.

Positioning one of the planes is possible by

- using the correspondent slider
- the + respectively the – button next to the Slider
- by entering a valid position in the edit field
- the arrows up respectively down next to the edit field

Cut plane mode (Plane)

By activating this mode, only one slice of the volume is shown and accordingly the second plane (Plane 2) is disabled.

Cut off mode (Gated)

Here the front and the back plane are enabled and the volume between these two planes are shown. Using this mode the “minimum” and “maximum” software rendering techniques from chapter 4.2.2 are available as well.

By default the planes are only visible in the small “volume overview” view but not in the “3D” view itself. To show these planes right click in the correspondent group box of the plane you want to see (B-, C-, D-Planes) as show in figure 12 and click the menu entry that shows up.

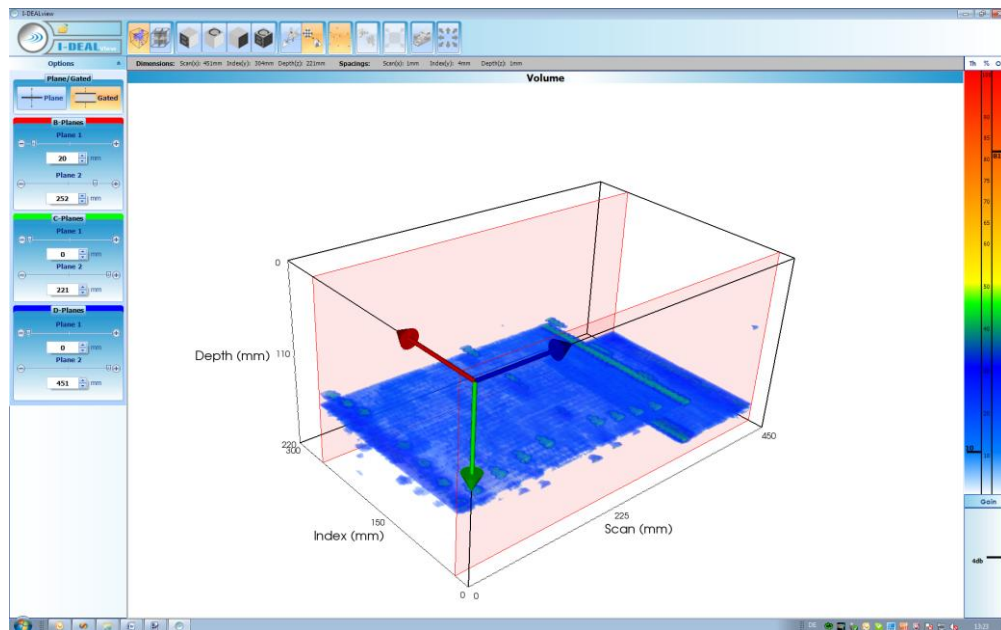


Figure 12 Visibility of the cut planes

Positioning the cut planes can also be done in the „3D“ view itself by moving the mouse over one of the planes, keep the left mouse button pressed and drag the plane to the new position.

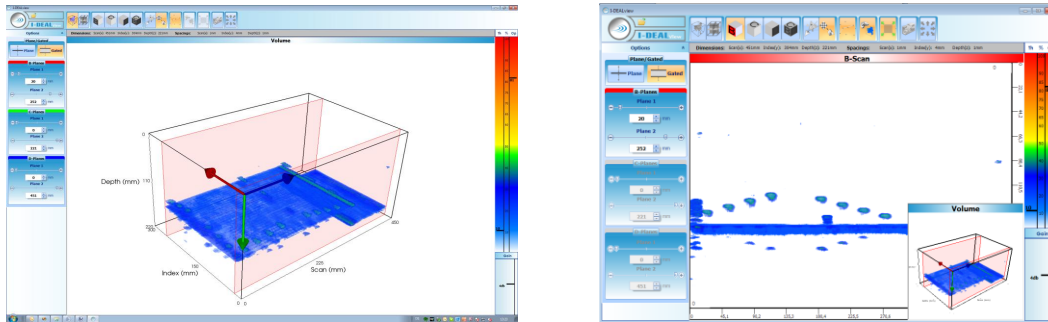


Figure 13 Positioning a cut plane in the “3D” view respectively the “volume overview” view

4.2.4 Dataset information

The information bar shows details like the dimensions and the offsets of the current dataset (Inspection position offset, Sampling offset)

4.2.5 Color table and software gain

Color table

Here the color table is shown with two additional sliders.

The left slider (Threshold) offers the selection of a value in percent from the maximum amplitude. All voxels under this threshold value are not shown.

The right slider (Opacity) sets the transparency for the remaining voxels that are not cut off by the threshold slider.

By right clicking into the color table area a menu shows up where the used color table can be changed.

Software gain(Gain)

The software gain slider applies a gain respectively a weakening to the dataset.

4.2.6 Additional features



Shows the „volume overview“ view in the B-, C- or D-Scan



Screenshot

By clicking this button the screenshot window shows up that saves a screenshot of the actual view(s) to the harddrive as shown in figure 15. You can choose between BMP and PDF file format. The PDF file format has the advantage that additional information like threshold, opacity and an optional comment are added to the document.

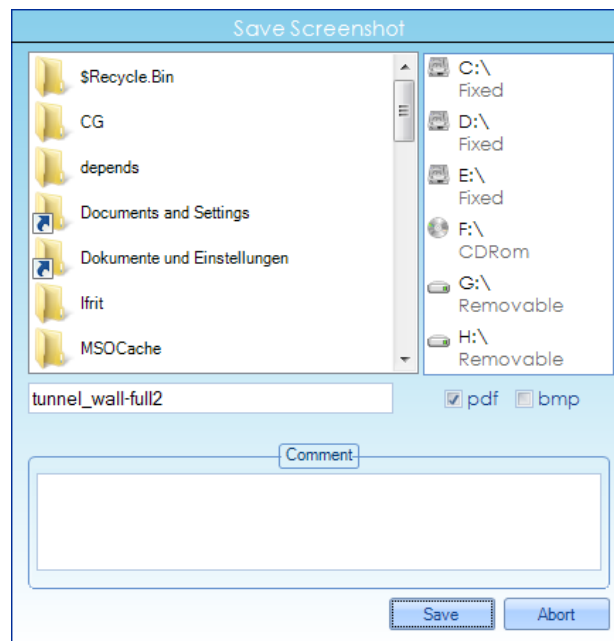


Figure 15 Screenshot Window

In the upper part you can select the drive (harddrive, USB drive or cd drive) and the folder where you want to save the screenshot.

By default the PDF file format is selected. If you want to change that just check the BMP box. In the edit field you can enter respectively change the name for the screenshot. By default the name of the dataset is used here.



Rotation / Zoom

This control offers the possibility to rotate or zoom the volume without the normal interaction with the window. To rotate the volume in a specific direction, press or press and hold the arrow that directs in this direction.

To zoom in press the "+" button, to zoom out the "-" button.

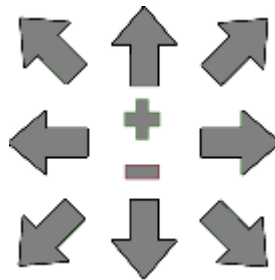


Figure 16 Rotation and Zoom



Origin

Enable or disable the arrows that indicate the dataset's origin.



Smoothing

The button enables or disables the smoothing. The input box next to the button offers the adjustment of the range that is used by the algorithm. Once the smoothing is enabled and a new

range value is entered in the input box, it is needed to press the "Apply" button that the changes take effect.