Segment 3DPrint Installation Manual

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Software platform v2.2 R7056

CE 0413

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Contents

1 Conventions and Trademarks

1.1 Typographic conventions

`A`	Key `A` at the keyboard.
`Ctrl-A`	Control key. Hold down `Ctrl` key and `A` simultaneously.
	Icon in toolbar.
`*.mat`	Filename extension.
`C:/Program`	Folder.
File	Menu, e.g. File menu.
File→Save As	Sub menu, e.g. under the File menu the item Save As is found.
Close	Push/Toggle button in the graphical user interface.
◎ Endocardium	Radiobutton in the graphical user interface.
☒ Single frame	Checkbox in the graphical user interface.

1.2 Trademarks

Below are some of the trademarks used in this manual.

- Segment 3DPrint is a trademark of Medviso AB.
- Segment DICOM Server is a trademark of Medviso AB.
- Sectra PACS is a trademark of Sectra Imtec AB, (`http://www.sectra.se`).
- Matlab is a trademark of the Mathworks Inc, (`http://www.mathworks.com`).

2 System Requirements

In this chapter the hardware requirements for Segment 3DPrint are outlined. Possible bottlenecks are (in order of likelihood) lack of RAM memory, CPU speed, and I/O network or disk transfer rates.

2.1 Operating system

Segment 3DPrint is available for the following platforms:

- Microsoft Windows 64-bit platform
- For Mac Segment 3DPrint can be run on virtual machines such as Parallels or using dual booting

2.2 Hardware requirements

The list below are the recommended hardware requirements for Segment 3DPrint.

- Computer with at least 16 GB of memory
- Harddisk with at least 1 GB of available space
- CUDA enabled graphics card with 4GB memory or more
- Internet connection for software license management
- 3-button computer mouse
- Systems with two screens is recommended
- Using SSD disk for reading data is recommended

2.3 Safety Instructions

The computer where Segment 3DPrint is installed should have

- anti-virus protection installed to protect against cyber attacks
- login to access Segment 3DPrint to ensure that only accredited users use the device

- backup on patient data to ensure no data is lost

In the preferences for Segment 3DPrint the user can activate user login to the device and user logging for the usage of the device.

2.4 Installation qualification and User training

The user is responsible for installing Segment 3DPrint. Medviso provide online assistance in the installation process if needed. To install Segment 3DPrint you need to be Administrator on the computer to install on.

Users should participate in an online training session held by Medviso prior to use Segment 3DPrint. This is provided by Medviso as a part of the software trial process.

3 Installation guide

For instructions on how to perform a first time installation of Segment 3DPrint see section 3.1. For upgrading Segment 3DPrint see section 3.3.

3.1 Installation

This section is written for first time installation of Segment 3DPrint. For upgrading, see the Section 3.3. The program is written in Matlab, in order to run it you therefore need to install Matlab Compiler Runtime first. **Note** that to be able to perform these steps below you **need** to have administrator privileges on the machine. If you are using Windows Vista, then please also refer to Section 3.1.5.

3.1.1 Installing Matlab Compiler Runtime

If you have Matlab **and** Matlab Compiler Runtime (MCR) installed on your computer this step may not be necessary, provided that you have exactly the same version as used for compiling Segment 3DPrint. Currently Matlab Compiler Runtime R2014a is required. Download the file `MCR_R2014a_win64_installer.exe`. Exact name of the file depends on operating system you are installing to. Download the file to a suitable location (i.e your desktop or a temporary folder) and double-click it. Follow the instructions in Figures 1-4.

This step to install MCR Installer does only need to be performed once and should generally not be necessary when upgrading to a later version of the software.

Note: For some operating systems it is required to reboot the computer after installing the MCRInstaller. We therefore, **strongly** advise all users to reboot the computer after installing the MCRInstaller.

3.1.2 Installing Segment 3DPrint

Download the file (called something like `install_Segment 3DPrint_2px_Ryyyy.exe`, where `2px` is the version number and `Ryyyy` is the revision number). Place the file where you easily can find it (i.e your desktop). When downloaded,

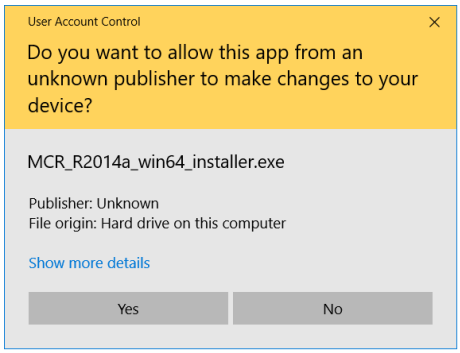

Figure 1: Click on `Run` or `Kör`.

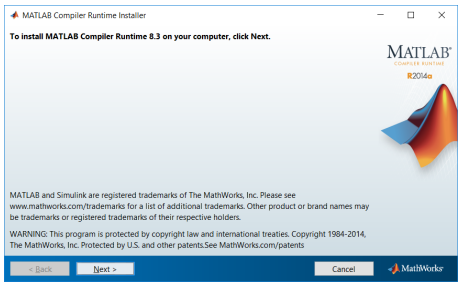

Figure 2: Click on `OK`.

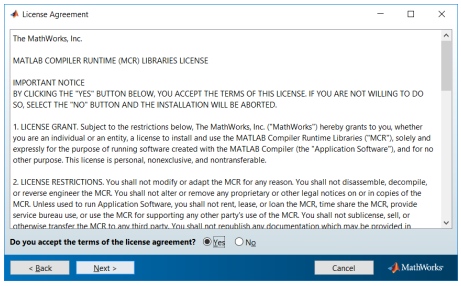

Figure 3: Click on `Install`.

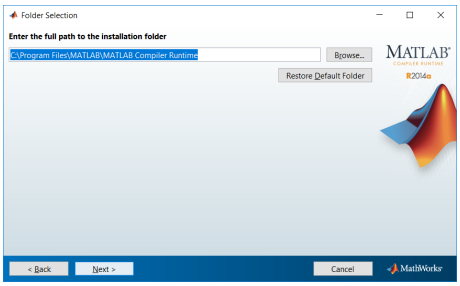

Figure 4: Click on `Next`.

double click on the file, and follow the instructions. You will be prompted if you want to install the program to the default location (`C:/Program Files` or `C:/Program` depending on operating system language). One advantage of installing to another location, where you have write access, is that you can thereafter install upgrades without being logged in as local administrator.

3.1.3 Verify installation of Segment 3DPrint

To start the program, double click the file `C:/Program Files/Segment 3DPrint/segment3dp.exe`, or your shortcut to it. When starting the software, the image in Figure 5 should be displayed. If it is not displayed, then the software is not correctly installed.

3.1.4 Create shortcut

Place a shortcut to the file `C:/Program Files/Segment 3DPrint/Segment 3DPrint.exe` at your desktop. Note that depending on your system locale, or if you have installed Segment 3DPrint to a non-default location this path may be different. Creating this short-cut is done by using the standard Windows file explorer to find the file, then right click on the file and select the option Create a short-cut. Move the created shortcut to your desktop.

3.1.5 Notes for Windows Vista users

You will need to run the application in administrator mode the first time you run Segment 3DPrint since the first time Segment 3DPrint is started some files are extracted. This operation is blocked in user mode. The second time you run Segment 3DPrint you should be able to run in a user mode.

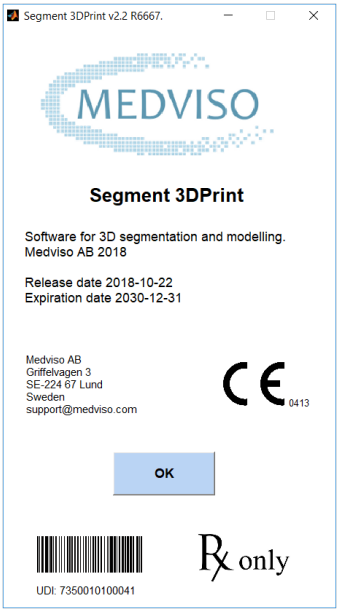

Figure 5: Startup window for Segment 3DPrint.

3.2 License code

Add your license by enter your license code in the installation process. You can also add your license code after installation by starting Segment 3DPrint and select `Generate License` under the Help menu in Segment 3DPrint. Note that you have to run the software as Administrator to be able to add the license code in Segment 3DPrint. A third way of adding your license is to add a license file (named `code.lic`) to the same folder as where Segment 3DPrint is installed. If your license check fails it could be due to a proxy server blocking the communication, if this is the case adjust settings for proxy server under Preferences. If you have not received a license code, please contact `sales@medviso.com`.

3.3 Upgrading Segment 3DPrint

If your previous version used another MCR then you need to **first** replace your old Matlab Compiler Runtime. To see which version of Matlab Compiler Runtime is required, please see the table below.

Segment 3DPrint version	**MCRInstaller**
2.2	Matlab Compiler Runtime 2014a

If you need to upgrade MCR, follow the installation instructions in Section 3.1. It is **important** to uninstall the old MCR before installing a new one. When having problems installing or uninstalling the MCRInstaller, please consult Mathworks support pages, and search for `MCRInstaller`.

If you, as in most cases, do not need to upgrade MCR, simply download the Segment 3DPrint installation file and double click on it to install it, as described in Section 3.1.2. If you are running services for the Segment Server solution, then you need to stop and delete them prior to upgrading, please see Patient Database and PACS Communication Manual for details.

3.4 First time running Segment 3DPrint

Doubleclick the file `C:/Program Files/Segment 3DPrint/segment3dp.exe`, or your shortcut to it, to start the program. The first time it is started, it runs a setup process which can take a while, so be patient. To complete setup, set preferences and window positions as described in Sections 3.4.1 and 3.4.2.

3.4.1 Setting preferences

The preferences are saved as a file `.segment_preferences.mat` in a folder that can be accessed by selecting Open Folder with Log Files from the Help menu. This preferences are specific for all users, however it is possible to set default preferences for all users starting to use the software by in the Advanced System and DICOM preferences click on Save to all. This preferences file will then be copied to the preferences path of every user that does not already have preferences saved. It will also override any PACS or Segment Server settings for all users on the machine. Please note that these operations may require that you run the software as Administrator (not only beeing logged in as Administrator). This is done by right clicking on the icon of the software and then select "Run as administrator".

3.4.2 Setting window positions

The position of the main window for Segment 3DPrint can be set by dragging the window to an optional position and size. The size and position will be saved so that next time Segment 3DPrint is launched the same position will be used.

In case where one have switched to another monitor Segment 3DPrint may move outside the screen. In this case you could press `Shift-Ctrl-R` to reset GUI positions. This is also available under the File menu.

3.4.3 PACS connectivity

Setting up PACS connection and Segment Server usually requires help from your local PACS support, and we recommend that contact us to setup a telephone / web-based video conference to make this process as smooth as possible. The Patient Database and PACS Communication manual, and the Sectra PACS plugin manual is found at Medviso AB homepage (http://medviso.com/products/cmr/). The Sectra PACS plugin may require additional Microsoft Visual C++ components that can be downloaded from Medviso AB homepage (http://medviso.com/download2/).

3.5 Uninstallation

There is currently no uninstallation software available. Remove all files in the folder `C:/Program/Segment 3DPrint` or `C:/Program Files/Segment 3DPrint`. User preferences are stored in the `Application Data` and the subfolder `Segment 3DPrint` under each user account (Windows). To uninstall the Matlab Compiler Runtime, use the Windows functionality Install or Remove Programs in the control panel menu. Please note that if you are running services for the Segment Server solution, then you need to first stop and delete these services before uninstalling the software, as they otherwise will lock files that needs to be deleted. See Patient Database and PACS Communication Manual for details.

3.6 Trouble shooting

The absolutely most common problem is the failure to not login as a local administrator of the computer. The second most common mistake is not to read

the installation instruction provided in this user manual or on the homepage.

To trouble shoot the installation you can see if the Segment 3DPrint installation program actually was successfully started by checking for the existence of `.log` files. Segment 3DPrint creates a log file during installation, this file is stored in the user folder (i.e `Documents and Settings/Username` and `Application Data` and the subfolder `Segment 3DPrint`. Note that this folder by default is hidden. If you have problems installing Segment 3DPrint, please send this log-file to together with a description on what problems where encountered.