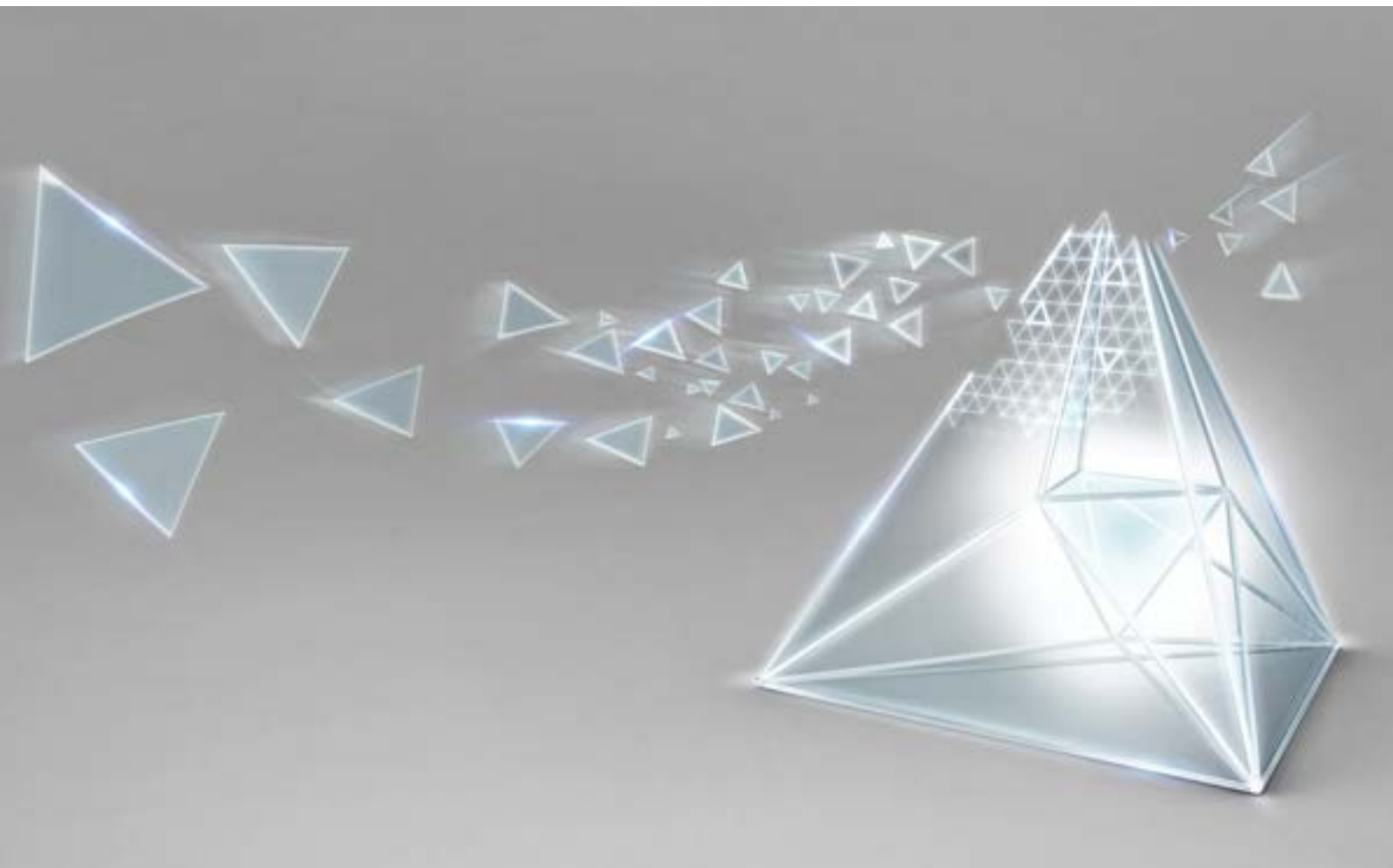


3DEXCITE DELTAGEN 2017

RELEASE NOTES



3DEXCITE DELTAGEN 2017 MOTIVATION

SMART DESIGN FLOW FOR BOUNDLESS CREATIVITY

3DEXCITE DELTAGEN is the world's leading high-end 3D visualization software that delivers a lifelike display of CAD data with real-time interaction. Packed with new features that optimize the design flow from CAD to sophisticated visual results, DELTAGEN 2017 takes your high-end 3D visualization beyond the imaginable. The wide array of robust enhancements and new features includes Live Update and Autopaint, as well as Automatic Jacketing, amongst many others. Enjoy the latest in Stellar render technology with instant real-time soft shadows for the model in Rasterizing mode and achieve desired interactive scene results with minimal preparation time.

NEW FEATURES IN DELTAGEN 2017

New Functionality

Live Update and Autopaint

This functionality makes data preparation using imported files much more convenient, as it accelerates the process of updating the visualization assets generated with DELTAGEN. This significantly reduces the required time for the generation of updated visualization assets and extends the application area of DELTAGEN to use cases requiring frequent updates. With this feature enabled, you can monitor the status of files on a disk and take action when they have changed. Two modes are available:

- In **automatic mode**, all modified files are automatically updated to the current version by reimporting them.
- In **manual mode** you are prompted and can decide whether to update or not the parts that have changed.

An additional column in the scene tree indicates the status of the linked files. Filtering the scene tree based on this column shows only the linked files in the scene, providing a quick glance of which files are not up to date.

Upon updating a part, an additional step called **Autopaint** can be performed. This step applies the material assignments previously done on the part that was updated. For the automatic material assignment, the material names of the CAD data are used. In case of conflicts DELTAGEN selects one material. This functionality can be found in the following areas:

- Scene tree
- Menu bar items
- Object editor

Automatic Jacketing

Jacketing, also known as Hidden-Surface-Removal (HSR), is the process of detecting invisible NURBS faces within a part or an assembly of parts. In the end, the found faces are deleted or set to the B-Side, which means that they are kept in the background but are not used for further data preparation, for example for unwrapping UV cords.

Automatic Jacketing provides suitable meshes for unwrapping and minimizes the number of faces which contribute to the visualization. There are two major uses for jacketing:

- **AutoJacketing**: This is done directly after the import of CAD data on a part level. For example for the a mirror of a car containing all of the wiring.
- **Jacketing of assemblies**: Several parts are assembled to a group. Within the assembly, many previously visible faces are completely covered by other parts of the assembly and can therefore be ignored for further processing (set to B-side).

In order to support successive jacketing of several variants of a part, you can choose to maintain the current A-sides. This means faces which have been set to the B-side in a previous run will be reset to the A-side if they are visible in the current run.

Enhanced Functionality

High-quality real-time shadow

In DELTAGEN 2017 the Stellar render engine is enhanced with a high-quality instant real-time shadow for the **Rasterizer mode**. Instant means the final shadow quality of a complete model is available in a couple of seconds. The new shadow technology is designed for scenarios where you need good visual quality in an interactive, complex real-time scene with minimal preparation time. In this scenario Global illumination as well as precalculated shadow textures are not the perfect solution. Global illumination is computationally intensive, which means that it needs a big cluster for interactive scenes. Precalculated shadows are not feasible due to a long preparation time, especially in scenes with a lot of variants or daily geometry updates.



Rasterizing scene without real-time shadow.



Rasterizing scene shadow only.



Rasterizing beauty scene with real-time shadow.



Consistent global illumination reference .

The new shadow solution in the Stellar render engine is also designed for supporting multisegment displays (like Powerwall).

Render settings improvements

In DELTAGEN 2017 we have consolidated all **Render settings** in one dialog which displays only the values currently available depending on the renderer (Look or Stellar) and render mode (Rasterizing, Raytracing, Global illumination). This enhancement impacts the layout of different functions needed to define the visual aspect of the model (for example, Anti-aliasing-, Ambient occlusion- or Raytrace settings). All can now be specified in one unified window.

This great improvement also enables less-experienced users to tweak the visual result and performance of the scene in the desired way.

Enhancement of the Autodesk® FBX Converter

The DELTAGEN converter for DELTAGEN Direct FBX was enhanced and is now be able to, among other functions, import and export NURBS, visibilities and metadata. You can find a complete overview in the Appendix of the 3DEXCITE DELTAGEN User Guide.

Group node slot enhancements in the LNE

It is now possible to create multiple connections between nodes and groups, whereas previously only a single connection was possible. A single group input slot can now be connected to multiple nodes/slots inside the group.

Advanced shortcuts for Triggers and Initiators

Activation keys like characters and numbers can now be combined with Alt, Shift, Ctrl and Meta (windows) keys.

Typed metadata access

It is now possible to use numeric values provided by the **Metadata access** node for further calculations within the **Logic Network Editor**. The node automatically detects if the given metadata is composed of text or numbers and transforms the output slot value accordingly. Use only numbers (0-9) and a period (.) to separate the decimal part, if needed, otherwise the value cannot be interpreted as a number. A mixture of numbers and other characters will always be interpreted as text and therefore cannot be used for further calculations. For further information please see the node description within DELTAGEN.

Miscellaneous

- The user can now copy and paste transformation properties between geometries. **Paste transformation** applies only the transformation associated with the previous object as an individual transformation. You may select multiple objects and the transformation will be applied to all objects that support that transformation. For this, at least one of the target objects has to be able to support the transformation properties. Targets that do not support that transformation remain untouched. This new feature can be found in the context menu as well as the **Edit** menu in the toolbar
- It is possible to visualize the bounding box(es) instead of the current highlighted selection for selected objects. With **Selection as bounding box** you can visualize the volume of one or more selected objects in your scene.

SYSTEM REQUIREMENTS

These requirements represent the capacity required to run DELTAGEN and DELTAVIEW and also for processing the 3D scenes that will be loaded.

Only NVIDIA pro graphic cards are currently capable of displaying all visual effects and shaders created with our software. This cannot be guaranteed with graphic cards from other manufacturers. Visit our Software Services website for constantly updated information.

Hardware requirements

| Type | Minimum | Recommended |
|------|--|--|
| RAM | 3 GB | 24 GB |
| CPU | Intel Xeon DP or MP, Intel Core 2 Duo / Quad / Extreme | Intel Xeon E5-2670 |
| GPU | NVIDIA Quadro K5000 NVIDIA Quadro K5200 | NVIDIA Quadro K6000 and NVIDIA Quadro M6000 (additional QuadroSync add-on card for Powerwall setup) |

Operating system

| Component | Minimum | Recommended |
|---------------|---|---------------|
| DELTAGEN 2017 | Windows 7 x64 Win update KB2999226 for Stellar | Windows 7 x64 |

Monitor resolution

| Component | Minimum | Recommended |
|---------------|-------------|-------------|
| DELTAGEN 2017 | 1280 x 1024 | 1920 x 1200 |

Recommended drivers

| Component | NVIDIA driver | Certification document |
|---------------|---|---------------------------|
| DELTAGEN 2017 | NVIDIA driver recommendations available on our Software Services website support.3dexcite.com | Available upon request |

Additional software

| Component | Minimum requirements |
|---------------|---|
| DELTAGEN 2017 | Adobe Flash Player 20 or higher (for DELTAGEN Flash Video Texture, PICTUREBOOK Browser, XPLORE) Apple QuickTime Player (for QuickTimeVR export) Internet Explorer 10 or higher |
| DELTATEX 2017 | Adobe Flash Player 20 or higher |

DELTAGEN Scale System requirements

During the operation of Scale, antivirus programs must not prevent the execution of rexec.exe, pskill.exe and the rexecservice service on participating computers.

Antivirus programs must be disabled or set to permit execution of these programs. In any case the network traffic monitoring and analysis feature must be disabled to prevent performance issues.

INSTALLATION

In addition to what is described in the Software Installation Guide, please note the following:

The installer was rebranded and installation directories have been adapted. The TC Plugin and CAD converter JT are now delivered separately .

Due to the fact that you need write access to the installation source, please do not try to install from an optical disk or from a network location. Please copy the installer files to your local hard drive instead.

The installer must be executed with administrative rights. Please note that it is not sufficient to be logged in as Administrator or as a user with administrative rights. Please right-click the file Setup.exe and select **Properties** from the context menu.

The use of the DirectWire importer requires additional run-time libraries that may require a local installation of the third-party software on the machine or access to the relevant binaries via the network drive. Upon initiation, DELTAGEN searches the default installation directory. Additionally a different location may be defined in the **Preferences** menu.

Installing DELTAGEN Scale with Installation Script

To install Scale on all the clients it is possible to use the installation script available in the "Tools" subfolder inside DELTAGEN installation folder. Please make sure PCExec.exe has been copied to the "Tools" folder before you run the installation script. The installation script name is master_install_script.bat. The script must be edited first with a standard text editor and customized to fit the local network configuration and domain settings. Only then can you execute it. The area to be customized starts after the following line:

```
REM ---- BEGIN USER AREA - EDIT FROM HERE-----
```

Please customize the settings following the schema as described:

| | |
|------------|--|
| <Domain> | Please change with network Domain Name |
| <User> | Please change with User Account Name (1) |
| <Password> | Please change with the Account Name password (2) |
| <hostname> | Please change with the Computer name of the Scale client computers (3) |

(1) In case of Workgroup, change the line "set domain_user=DE\User" in "set domain_user=\UserAccount".

(2) For security reasons, please remember to delete the password from the installation script after the installation is completed.

(3) The number of destination clients can be increased by adding all the hostnames in the line set "client_addr_list=...".

Additional scripts are available to execute other Scale operations:

redist_install_script.bat installs the necessary Ms Visual C++ redistributable in case it is not already available on the Scale client workstations;

client_install_script.bat copies necessary files and DLLs to Scale client workstations;

update_rexec_script.bat stops and uninstalls from Scale client workstations the running rexecservice and installs and starts a new one.

VERSION CHANGE AND COMPATIBILITY

When loading scenes of previous releases, DELTAGEN will check for ID consistency in the scene and inform the user about possible inconsistencies.

In case duplicate IDs are identified, the user log contains a list of entities to which a new ID has been assigned. Those elements may have malfunctioned in animations/variants/networks in the old version and may need to be reassigned to their targets.

NONSUPPORTED PRODUCT MODULES AND FEATURES

Modules

- REALVIEW will no longer be supported as of this release.
- We have decided to discontinue REALFLUID as we have seen little interest in the market.

Features

- Templates have been deactivated by default and may be removed in a future release.
- We have decided to make external CGFX Shaders a legacy feature. CGFX is seen as a legacy technology and it is currently not certain that this feature will be supported by NVIDIA drivers in the near future. Old materials can still be used even if using an external CGFX shader for the time being.

SOFTWARE SERVICES WEBSITE - NEW HOME OF KNOWN AND RESOLVED ISSUES

Please visit the Software Services website to access video tutorials and training opportunities, the current known and resolved issues and the latest support news. Our Software Services team is there for your success with 3DEXCITE software products.

Register today at:

support.3dexcite.com

Feel free to contact [Support](#) for more information.

Our 3DEXPERIENCE® platform powers our brand applications, serving 12 industries, and provides a rich portfolio of industry solution experiences.

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