DELTAGEN MARKETING SUITE 2020x

The following pages list the new features and enhancements as well as minor version changes of the DELTAGEN MARKETING SUITE 2020x release. In addition you can find the hardware requirements, support contact and licensing information in this document.

DELTAGEN ROBOT

NEW FEATURES

Python Scripting (Preview Feature)
Automate and customize workflows in DELTABATCH:
• Build-up master model and part conversion
• Build-up material library
• Tessellate, UV creation, jacketing and polygon reduction
• Assign metadata, materials and transformations
• Execute pre-defined assignment tables
• Logging
• Reporting

Please note: Python scripting is currently a preview feature. 3DEXCITE cannot ensure full productive readiness, please save all data before testing. Contact 3DEXCITE support in case of any problems or missing features for intended workflows. We appreciate your interest and any feedback you provide.

ENHANCEMENTS

Solidworks Configurations Support
• Utilize Solidworks part and assembly-based configurations seamlessly as DELTAGEN variants

DELTAGEN HUB

DELTAGEN HUB contains all new features and enhancements of DELTAGEN ROBOT as well as the following:

NEW FEATURES

Substance by Adobe® Integration
• Import of Substance files (.sbsar)
• Full Substance property support in Material editor
• Re-generated textures on demand – up to 8K
• Lossless conversion to 3DEXPERIENCE PBR material for manual tweaking

Search and Replace
• Search and replace inside the entire scene
• Define the scope on object level for scene objects, materials, variants, animations, logic networks, assignment tables, layer sets or metadata
• Define the scope on property level, for e.g. names, textures filenames, descriptions or queries
• Text search with wildcards
• Search and replace with regular expressions, e.g.:
  - Replace non-ASCII characters
  - Append suffix to search result
  - Change to lowercase or uppercase

Gateways
DIRECT UNITY Plugin:
• Object animation support: Import timelines and variant transitions from DELTAGEN to Unity®
• Partial Update: Reload variants without loading the full model
• Version support: Unity® 2018.4 LTS
DIRECT UNREAL ENGINE Plugin:
• Material replacement tool to exchange imported DELTAGEN materials with enterprise libraries
• Version support: Unreal® Engine 4.17, 4.19 and 4.20
DIRECT MAYA Plugin:
• Version support: see "Version Change and Compatibility"
Python Scripting (Preview Feature)
Automate and customize workflows in DELTAGEN:
• Build-up master model and part conversion
• Build-up material library
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• Assign metadata, materials and transformations
• Execute pre-defined assignment tables
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ENHANCEMENTS

3DEXPERIENCE PBR Material
• Displacement mapping support
• Automatic conversion of Stellar type material properties when switching to 3DEXPERIENCE PBR material
• Consistent enterprise material model across applications:
  - 3DEXPERIENCE
  - DELTAGEN
  - SOLIDWORKS VISUALIZE
• Consistency across render backends:
  - Rasterizer
  - Global Illumination
  - WebGL

POWER’BY - PBR Material Consistency
Import DELTAGEN models to 3DEXPERIENCE with highest material consistency.

Solidworks Import - Configurations
• Import Solidworks assemblies into DELTAGEN
• Store assembly based configurations as DELTAGEN variants

Miscellaneous
• Support for Nvidia RTX graphics cards
• Decoupled progressive sampling in Stellar:
  - Improved time-to-quality by combining sample steps
  - Selection / toggle highlight selection does not restart accumulation
• Multi-layer EXR support
• AXF version 1.7 support
• DASSAULT SYSTEMES License Server (DSLS) support for DELTAGEN HUB and DELTAGEN STAGE

DELTAGEN STAGE

DELTAGEN STAGE contains all new features and enhancements of DELTAGEN ROBOT and DELTAGEN HUB as well as the following:

NEW FEATURES

Layer Creator
• Fully automatic layer setup for 150% models (based on Z-depth pass)
• Cluster rendering support through Distributed Stellar
• Seamless support for APEXimagegen and other layer compositing engines
• Expert user settings for mask view layers
• Advanced authoring capabilities:
  - Layer preview
  - Grouping

Color Space Management
• Color space support for all input and output textures
  - sRGB (recommended for 8-bit textures)
  - Gamma 1.8 and Gamma 2.2
  - Linear (recommended for HDR textures)
• Automatic identification of color space through metadata
• User interaction only necessary to overwrite automatic identification

Quality-Based Sampling
Utilize quality-based sampling to define the desired image quality in decibel; this prevents wasted rendering time caused by too many or too few samples.

Render Region
• Limit Global Illumination convergence to area of interest
• Support of quality-based rendering and denoiser
**ENHANCEMENTS**

**Advanced Render Passes**
- New passes: Albedo and Irradiance
- Advanced depth pass with custom range, normalization and option to invert the results
- Interactive pass preview in 3D viewport including camera linking
- New custom light path expression (LPE) pass: Render beauty images and passes limiting light contribution per light

**Shadow Baking**
- Batch render support with Distributed Stellar
- Preview AO and lightmaps in the viewport

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**VERSION CHANGE AND COMPATIBILITY**

**Color Space Management**
The new color space option replaces the gamma function. Imported old textures and render jobs are converted automatically if possible.

**Color Space Detection**
Color space information stored inside texture metadata is evaluated properly and applied accordingly. Therefore the appearance may differ compared to older DELTAGEN versions.

**DIRECT MAYA Plugin version support**
The DIRECT MAYA Plugin 2020x supports the current Autodesk® Maya release as well as the previous 3 major releases:

<table>
<thead>
<tr>
<th>Qualified</th>
<th>Compatible</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autodesk® Maya 2019</td>
<td>Autodesk® Maya 2016, 2017 and 2018</td>
</tr>
</tbody>
</table>

**Qualified**: supported by the DIRECT MAYA Plugin and tested using extensive functional workflows.

**Compatible**: no functional workflows coverage, but no known technical limitations

For questions regarding other Autodesk® Maya releases contact the 3DEXCITE Support.

**DELTAGEN STAGE specific:**

**Utility Passes**
When rendering utility passes with Stellar renderer, GI shadow catcher geometries and local surroundings are now ignored.

**New Layer Creator**
Legacy files can be imported into the new Layer creator. They are then automatically converted into the new structure. The new Layer creator is part of DELTAGEN and no longer a Plugin that needs to be licensed and loaded separately.
SYSTEM REQUIREMENTS

The following quotes the required setup specifications for running DELTAGEN and DELTAVIEW and also for processing the 3D scenes that will be loaded.

Only NVIDIA® graphic cards are 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

<table>
<thead>
<tr>
<th>Type</th>
<th>Recommended</th>
<th>Minimum</th>
</tr>
</thead>
<tbody>
<tr>
<td>RAM</td>
<td>16 GB</td>
<td>64 GB</td>
</tr>
<tr>
<td>CPU</td>
<td>2 * Intel® Xeon® E5-2680 v4</td>
<td>2 * Intel® Xeon® Gold 5120T</td>
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</tbody>
</table>

Graphics Cards

<table>
<thead>
<tr>
<th>Qualified</th>
<th>Validated</th>
<th>Compatible</th>
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</thead>
<tbody>
<tr>
<td>NVIDIA® Quadro RTX6000, P6000, GV100, M6000</td>
<td>NVIDIA® Quadro RTX5000, P5000, P4000, GP100, M5000, M4000</td>
<td>NVIDIA® Quadro RTX4000, M2000</td>
</tr>
</tbody>
</table>

Qualified: tested using extensive functional workflows. 
Validated: tested using basic functional workflows. 
Compatible: no functional workflows coverage, but no known technical limitations.

Operating System

<table>
<thead>
<tr>
<th>Component</th>
<th>Recommended</th>
<th>Minimum</th>
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</thead>
<tbody>
<tr>
<td>DELTAGEN</td>
<td>Windows® 10 x64 Enterprise</td>
<td>Windows® 10 x64 Enterprise</td>
</tr>
<tr>
<td>DELTABATCH</td>
<td></td>
<td></td>
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<tr>
<td>DELTAVIEW</td>
<td></td>
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</tbody>
</table>

Monitor Resolution

<table>
<thead>
<tr>
<th>Component</th>
<th>Recommended</th>
<th>Minimum</th>
</tr>
</thead>
<tbody>
<tr>
<td>DELTAGEN</td>
<td>1920 x 1200</td>
<td>1280 x 1024</td>
</tr>
<tr>
<td>DELTABATCH</td>
<td></td>
<td></td>
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<tr>
<td>DELTAVIEW</td>
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</tbody>
</table>

Recommended Drivers

<table>
<thead>
<tr>
<th>Component</th>
<th>NVIDIA driver</th>
<th>Certification document</th>
</tr>
</thead>
<tbody>
<tr>
<td>DELTAGEN</td>
<td>Driver recommendations available on our Software Services website</td>
<td>Available upon request</td>
</tr>
<tr>
<td>DELTABATCH</td>
<td></td>
<td>support.3dexcite.com</td>
</tr>
<tr>
<td>DELTAVIEW</td>
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</table>
SOFTWARE SERVICES WEBSITE

Visit the Software Services website to access video tutorials, the current known and resolved issues as well as a knowledgebase and the latest support news.

SUPPORT CONTACT

In case you have any questions, our support team is happy to help you:
Customers who purchase their software via media order (MO) and obtain their licenses via the Key Management Center (KMC), can report incidents to DS by using the 3DSupport App: https://www.3ds.com/support/contact/call-us/submit-a-request/
All other customers should report incidents per e-mail to: 3DEXCITE.Support.Global@3ds.com

Our 3DEXPERIENCE® Platform powers our brand applications, serving 11 industries, and provides a rich portfolio of industry solution experiences.

Dassault Systèmes, the 3DEXPERIENCE® Company, provides business and people with virtual universes to imagine sustainable innovations. Its world-leading solutions transform the way products are designed, produced, and supported. Dassault Systèmes’ collaborative solutions foster social innovation, expanding possibilities for the virtual world to improve the real world. The group brings value to over 250,000 customers of all sizes in all industries in more than 140 countries. For more information, visit www.3ds.com.

DASSAULT SYSTEMES LICENSE SERVER SUPPORT

In addition to FlexLM, the DS License Server (DSLS) is supported for licensing DELTAGEN HUB and DELTAGEN STAGE. This allows easier maintenance of your systems, especially if other software packages are running with the DS License Server. During the installation process you can choose your preferred license server.

- Please contact 3DEXCITE.Support.Licensing@3ds.com if a FlexLM license is needed for 3DEXCITE products.
- For DSLS licensing please refer to Software License Keys terms. Here you can obtain your new DSLS license directly.