3DEXCITE DELTAGEN MARKETING SUITE
RELEASE NOTES
R2022x RF1

DELTAGEN MARKETING SUITE 2022x RF1 Release

The following pages list the enhancements as well as minor version changes of the DELTAGEN MARKETING SUITE 2022x RF1 release.

DELTAGEN ROBOT

ENHANCEMENTS

- The version reader supports both csb and 3xf files.
- The Stellar renderer can be restarted to release unused memory.

DELTAGEN STAGE

ENHANCEMENTS

- Improved presets for GPU GI rendering in Stellar mode.
- Lower bandwith required for offline rendering with DStellar.

VERSION CHANGE AND COMPABILITY

- Newly created ambiences have Background set as "From Lighting".
- The PICTUREBOOK Browser Plugin is not delivered anymore as part of the DELTAGEN MARKETING SUITE installer.
- Mesh light materials can't be created in DELTAGEN HUB.

DELTAGEN MARKETING SUITE 2022x Release

The following pages list the new features and enhancements as well as minor version changes of the DELTAGEN MARKETING SUITE 2022x release. In addition you can find the hardware requirements, support contact and licensing information in this document.

DELTAGEN ROBOT

ENHANCEMENTS

- Ampere Cards support (since 2021x RF1)

DELTAGEN HUB

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

NEW FEATURES

Jacketing

- Interior jacketing considering multiple seed points in a single jacketing group in DELTAGEN and DELTABATCH

- Option to measure the hole or gap size of a model in the viewport
- Viewport manipulator to position the seed for interior jacketing
- Variants support to identify hidden surfaces, visible in none of the variant combinations
- New selection option for bodies and shells containing only b-sides

AXF Material

- Extended support of metadata during import (official axf metadata, like processing options)

Color Picker

- Floating point colors for materials and lights:
  - Additional options for specifying color values also in RGB linear color space
  - sRGB can be entered in a 0 - 1 high precision range
  - HSV color definitions for Saturation and Value adjusted to a 0-1 range as well
  - When switching the color space the values are converted and rounded

3DS PBR Material

- New 3DS PBR 2022x material including parameters to control Dispersion and Flip flop color including corresponding texture bank
- Improved conversion of typed stellar material to 3DS PBR 2022x
- Introduction of new predefined 3DS PBR subtypes with reduced parameters and some default textures, allowing rapid creation and manipulation of materials like Leather, Plastic, Metal etc.

Stellar Rendering

- Parallel Rendering of up to 8 passes with same quality
- Advanced color correction using filmic tone mapping
- The Material ID pass can be saved in 4 channels (RGBA) or merged into a single UINT32 channel if EXR is selected as output format (since 2021x RF1)
- New material type "Mesh light" supporting various options to control light emission including the option to use IES light profiles
- Automatic calculated physical stellar camera exposure, based on the current view during live rendering plus option to ignore the background
- 16x Multi Sample Anti Aliasing in Rasterizer mode

Scripting

- Assignment of shortcuts to scripts for easier execution of code snippets
- Import of variant sets from external files
- Access to materials assigned to look variants
- Access to metadata of variant sets
- Creation and editing of object and camera sets
- Editable override look of scene objects.
- Access to background color for offline rendering
- Aligned interface for searching for scene objects, materials and variants
- Access to the scaling of UVs
- Various options for cleaning empty or untessellated objects.
- Access to scene objects references
- Improved interface for color definition
- Jacketing modifier supports interior jacketing and multiple seeds
- Linked files handling like attach, load, unload and integrate
- Recalculate normals
- Option to convert all textures loaded in a scene to a specific output format and output path

Connector to 3DEXPERIENCE

- New function to connect to the 3DEXPERIENCE platform to save .3xf scenes and rendered images to 3DSpace
- Download option for .3xf scenes saved in 3DSpace

DIRECT MAYA® Plugin

Version Support: The DIRECT MAYA Plugin 2022x supports the current Autodesk® Maya release as well as the previous 3 major releases:

Qualified	Compatible
Autodesk® Maya 2022	Autodesk® Maya 2018, 2019 and 2020

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.

ENHANCEMENTS

- Stellar renderer provides 16 samples of hardware anti-aliasing now (since 2021x RF1)
- Indication in yellow on local surrounding textures that are too big and have been reduced automatically (since 2021x RF1)
- Enabled texture banks that are empty are highlighted now accordingly and the material on the model also indicates the missing texture (since 2021x RF1)
- The Illumination "Factor" of IES point lights can be set to arbitrary values, higher than 1.0 in Stellar renderer (since 2021x RF1)

- Newly created materials in the look library are automatically selected (since 2021x RF1)
- Generated substance textures are saved asynchronously to avoid long saving times of the scene in the end (since 2021x RF1)
- Improved color space detection (since 2021x RF1)
- Ampere Cards support (since 2021x RF1)
- JT 10.8.1 (since 2021x RF1)
- Model optimizer: "Resolve references" and "Optimize geometries" are also affected by "preserve metadata" (since 2021x RF1)
- STEP XML .stpx file support version AP 242 (since 2021x RF2)
- The rotation of IES lights is indicated by the manipulator gizmo (since 2021x RF2)
- The shutter speed value used by the physical camera exposure and motion blur can be reduced to 1/4000 (since 2021x RF2)
- The recent file list shows up to 20 recently opened and saved files
- Improved visualization of the toggle state in the menus
- The accumulation count (samples per pixel, samples during interaction, denoising and pass quality) is not bound to values anymore, which are a power of two. New command line parameter -saa_quality_linear
- New mode to select bodies and shells that only contain B-sides
- Improved polygon reduction user interface, including parameter explanations and presets. Alignment of DELTABATCH and DELTAGEN parameters

DELTAGEN STAGE

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

NEW FEATURES

GPU GI with Stellar Renderer

- Faster convergence of scenes using light tracing
- Better quality with photon caustics
- New ambience object with full variant support to setup lighting, background HDRI and ground shadow, supported in layer creator
- New render passes direct illumination and glossy for assembling the beauty image from GPU GI light passes
- Capabilities to analyze if a scene is compatible with GPU GI using the new constancy check in addition automatic solutions can be applied
- Grouped visibility flags of scene objects in new mode "basic"
- New option to enable Fast Subsurface scattering

ENHANCEMENTS

- D-Stellar batch rendering can be continued using a higher sample count

VERSION CHANGE AND COMPATIBILITY

Refined Color Space Detection for Textures (since 2021x RF1)

Can lead to a different visual result when importing old scenes.

Warning message is shown in this case on scene load. Log window shows additional info. You can restore the color space of textures, to retain the legacy visual appearance (not supported in DELTABATCH and script editor).

We recommend in this case to update old scenes (older than 2021x) and look libraries to this DG release: First load these manually in DG and choose the desired color space detection option, then save the scene with the color spaces applied to all the texture slots.

X-Rite AxF CarPaint2 Materials (since 2021 RF1)

Different visual appearance of X-Rite AxF CarPaint2 materials, because of a fix in the brdf_colors texture that negative values are clamped to 0 now.

Several Seed Points for Interior Jacketing

When opening 2021x scenes the existing seed is added to the list and named "Jacketing_Seed_1".

Color Picker

RGB is named sRGB [0-255] and the saturation and value parameters of HSV color space are in the range from 0 - 1. Conversion takes place automatically.

Color Space

When switching the file format, the color space adjusts automatically to the recommended one for the selected format.

Updated 3DEXPERIENCE PBR Material

Automatic conversion from previous 3DEXPERIENCE PBR material as far as possible to new version, renamed to "3DS PBR". The redundant property "Sheen" (intensity) was removed from the new version, as the intensity is already affected by the sheen color. Only if sheen intensity was set and also a sheen texture exists, the material cannot be converted to the new version. Sheen roughness is now a quadratic value slider compared to before (linear). An automatic conversion takes place to adjust the sheen color and roughness in order to create the same visual appearance,

New Icons for Predefined and Read-Only Metadata Sets

When importing AXF metadata it is read only and thus the icon is marked with a small lock. For predefined metadata sets the icon changed as well and has a green star now.

Refined and Renamed Stellar Material Types:

Several Stellar material types have been deprecated and cannot be created anymore. The following lists their new counterparts based on the 3DS PBR material:

"Matte" --> "3DS PBR Basic"

"Metal" --> "3DS PBR Metal"

"Leather" --> "3DS PBR Leather"

"Textile" --> "3DS PBR Textile"

"Plastic" --> "3DS PBR Plastic"

"Metallic Paint" and "Solid Paint" --> "3DS PBR Car Paint"

"Emissive" --> "3DS PBR Emissive"

"Glass" and "Thin glass" --> "3DS PBR Glass"

Recommendation to specialize the PBR materials to get similar rasterizer performance as with the former stellar material types.

There are no 3DS PBR counterpart materials for "Display", "Generic" and "Linear Light scanner".

When loading a legacy scene the old material types are kept, but you can manually convert to a 3DS PBR type. Visual consistency cannot be guaranteed in this case.

When creating a new material in stellar in the look library or opening external file formats in DELTAGEN Marketing SUITE, the type is "3DS PBR Basic" by default.

Depth Channel Name Change

The depth channel name in multi-layer EXRs is changed from "Depth.Z" to "depth.Z".

Render Setting Renamed

"Global illumination/Pathtracing" is named "Global Illumination".

Camera Logic Network Slot for Tone Mapping

Renamed from "Set tone mapping: photographic enabled" to "Set tone mapping: mode"

The following values are available:

- 0: Eye physiology based
- 1: Photographic
- 2: Filmic

Changed Unwrapping Default Behavior (Configurable via .ini File):

- Unwrapping process will be skipped for shapes estimated to take longer than 1 hour.
- The physical memory actively used by the generation process is limited to 90%. Shapes to unwrap are split into batches that are processed sequentially to avoid that the physical memory goes beyond the limit.
- The memory consumption is estimated upfront and the unwrapping process will be aborted in the beginning if 90% of the total system memory is exceeded.

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.

Graphics Cards

Qualified	Validated	Compatible
NVIDIA® Quadro RTX6000, P6000, GV100, M6000	NVIDIA® Quadro RTX5000, P5000, P4000, GP100, M5000, M4000	NVIDIA® RTX A4000, RTX A5000, RTX A6000, Quadro RTX4000, M2000

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

Operating System

Component	Recommended	Minimum
DELTAGEN DELTABATCH DELTAVIEW	Windows® 10 x64 Enterprise	Windows® 10 x64 Enterprise

Monitor Resolution

Component	Recommended	Minimum
DELTAGEN DELTABATCH DELTAVIEW	1920 x 1200	1280 x 1024

Recommended Drivers

Component	NVIDIA driver	Certification document
DELTAGEN DELTABATCH DELTAVIEW	471.68	Available upon request

Additional Software

Component	Minimum requirements
DELTAGEN DELTAVIEW	Apple QuickTime Player (for QuickTimeVR export)
XPLORE DELTAGEN	Web browser, supporting HTML5 (Google Chrome™ browser is recommended)

SUPPORT CONTACT

Visit 3ds.com/support or have a look into our knowledgebase on support.3ds.com/knowledge-base for helpful information.

In case you have further 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

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 tothe Software License Key terms (https://www.3ds.com/terms/software-keys/). Here you can obtain your new DSLS license directly.
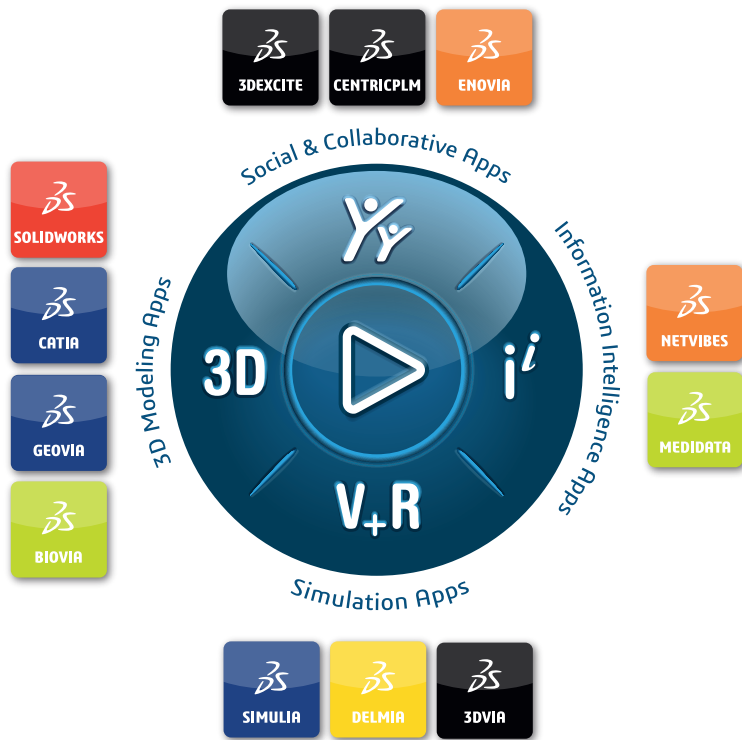
Our **3D**EXPERIENCE® platform powers our brand applications, serving 11 industries, and provides a rich portfolio of industry solution experiences.

Dassault Systèmes, the **3D**EXPERIENCE Company, is a catalyst for human progress. We provide business and people with collaborative virtual environments to imagine sustainable innovations. By creating 'virtual experience twins' of the real world with our **3D**EXPERIENCE platform and applications, our customers push the boundaries of innovation, learning and production.

Dassault Systèmes' 20,000 employees are bringing value to more than 270,000 customers of all sizes, in all industries, in more than 140 countries. For more information, visit **www.3ds.com**.

Europe/Middle East/Africa
Dassault Systèmes
10, rue Marcel Dassault
CS 40501
78946 Vélizy-Villacoublay Cedex
France

Asia-Pacific
Dassault Systèmes K.K.
ThinkPark Tower
2-1-1 Osaki, Shinagawa-ku,
Tokyo 141-6020
Japan

Americas
Dassault Systèmes
175 Wyman Street
Waltham, Massachusetts
02451-1223
USA

 | The **3D**EXPERIENCE® Company