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r26.3 Changelog

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|   r26.3  Release - 175110
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Release day December 6th 2023

New Features

New 2.5D Workflow

The new 2.5D workflow is also covered in the Disguise User Guide, together with a demonstration video, at https://help.disguise.one/en/Content/Workflows/VP%20Workflows/2p5D-workflow.htm

What is 2.5D?

2.5D workflows bridge the gap between traditional 2D video plates and full 3D generative scenes. By building up a scene with layers of images or video plates, with the possibility to add depth or shaping to the plates, users can quickly create a realistic-looking scene with parallax. 2.5D assets can be saved as .2p5d files and shared across projects or created using external integrations such as Cuebric to harness the power of generative AI to optionally create the image or just to speed up the process of image segmentation using AI.

What has changed?

2.5D has been possible with Designer prior to 26.3, however, it required the manual creation of plates using a projection surface per plate, manually applying specific settings to each plate, and the use of a StageRender layer. With r26.3, 2.5D has been made a first-class citizen in Designer with its own layer type and the concept of a 2.5D asset. This dramatically increases the usability and speeds up the workflow, as well as making it more intuitive and less error-prone.

In addition, the Cuebric integration speeds up the pipeline between the creative and volume control stages of the end-to-end workflow.

How-To

The following instructions assume an LED and MRset have already been set up in the Designer project

To set up a 2.5D asset from an existing .2p5d file:

1. Copy the .2p5d file to objects/2p5DFile in the project folder
2. Add a 2.5D layer to the timeline
3. Click on the asset field in the 2.5D layer. The copied 2p5d file should appear in the list of assets
4. Click on the asset to select it, it should then load and be visible in the stage
5. Select the desired 3D mapping in the 2.5D layer, e.g. MR set backplate
6. To reload the asset from the file and overwrite any local changes, click ‘Reload from file’ under Import/Export in the 2.5D asset editor

To create a new 2.5D asset from scratch:

1. Add a 2.5D layer to the timeline
2. Click on the asset field in the 2.5D layer, and create a new 2.5D asset
3. Add a new 2.5D plate to the ‘plates’ field in the 2.5D asset
4. Under ‘Layer Stack’ in the plate editor, click ‘Add Video’ to add a video or image to the plate

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5. Continue adding plates and modifying their properties until the desired scene composition is achieved
6. Select the desired 3D mapping in the 2.5D layer, e.g. MR set backplate
7. To export the asset for use in other projects, click ‘Export to file’ under Import/Export in the 2.5D asset editor. The exported .2p5d file will appear under objects/2p5DFile in the project folder.

Modifying 2.5D asset properties:

- The 2.5D asset is an Object which can have its offset and rotation set by changing the values in the editor or moving the white box in the visualiser. Doing so changes moves all the plates to change the origin point of the 2.5D scene. It is recommended that the origin is set roughly in the middle of the range of movement of the camera, to achieve the most realistic-looking parallax.
- The ‘Field of view’ and ‘Maximum depth’ fields can be adjusted to scale the total area encompassed by the 2.5D scene. This can be used to ensure that the edges of the plates are not seen when moving the camera within its expected range.
- Plates can be added to or removed from the asset using the +/- buttons in the ‘Plates’ field. Plates are ordered by depth, and reordering the plates in the list will update the plates' depth to reflect their new positions.
- The Import/Export settings can be used to load or save .2p5d files. When loading files that contain depth maps, the ‘Depth map minimum override’ setting can be used to change the minimum distance from the origin, represented by full white in the depth map.

Modifying 2.5D plate properties:

- The plate depth can be changed by modifying the z offset value, or by dragging the plate in the visualiser. If the option ‘Scale with depth’ is ticked, the scale and x/y offsets will automatically be adjusted with depth so that the plate looks the same when viewed from the asset origin. If ‘Scale with depth’ is not ticked, the scale and x/y offsets will not change, so the plate will appear smaller as it moves further away.
- By default new plates will be scaled to match the total field of view of the asset. However, the scale values can be adjusted in the 2.5D plate editor to change the scale. Similarly, the x and y offsets can be adjusted to move the plate position.
- The plate’s mesh can be changed to add depth to a layer and make the parallax effect more realistic. Some .2p5d files will contain depth maps, which will be converted to meshes when importing. To remove the depth from the plate, the standard rectangle mesh can be selected instead.
- The plate Layer Stack is used to set up the layers appearing on the plate. To quickly add an image or video to the plate, use the ‘Add Video’ button. Otherwise, layers can be created as normal and stacked to create effects such as blur or colour adjust. Note that these layers can’t be keyframed, see ‘Advanced Workflows’ for methods to keyframe layers on plates.

Advanced workflows:

The 2.5D layer and assets are designed to provide a user-friendly way to quickly create 2.5D scenes which are portable between projects. The standard workflow should allow for the majority of use cases, however, more advanced workflows can also be achieved by combining 2.5D assets with other tools in Designer.

- Generally, images, videos, and effects should be added to plates using the plate Layer Stack. However, this does not allow for keyframing within these layers. To keyframe content on plates, layers should be added to the timeline as normal. Content can be mapped to 2.5D plates from the timeline similarly to any other display.
- 2.5D assets and plates are both Objects, so it is possible to animate them from the timeline, or parent assets to other objects which are controlled using tracking data
- The ‘Stage render layer’ which was used for 2.5D workflows prior to r26.3 still functions as it did previously, so it is still possible to use the old workflow if desired.

Cuebric Integration

Cuebric is a web-based tool for creating 2.5D scenes with the help of AI. For more information visit https://cuebric.com/.

With r26.3, 2.5D scenes can be exported from Cuebric and imported into Disguise. At the time of writing, the Cuebric scene is exported from Cuebric by clicking on “Plug & Play 3D” in the Segmentation view under the Depth option. Once exported, follow the instructions in the section above on “*To set up a 2.5D asset from an existing .2p5d file*”.

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When the Cuebric export includes AI-generated mapping depth information, Designer will auto-generate a 3D mesh from the depth data to add shape to the plates.

To remove the depth mapping from the plate, the standard rectangle mesh can be selected instead in the plate properties.

For a video explanation of the Cuebric to Disguise end-to-end workflow, visit https://vimeo.com/890469715.

Improvements

- DSOF-17618 - HDR processing of Notch content
- DSOF-25812 - Branding updates

Fixes

- DSOF-25844 - ResourceTransport: Fixed an Undefined Behaviour copying "UID not found Reason" list