X3D Blender Support call – Minutes, prepared 13 Nov 2024

Tues Nov 12 2024 12:00 EST, 17:00 UTC

Zoom https://us02web.zoom.us/j/81634670698?pwd=a1VPeU5tN01rc21Oa3hScUlHK0Rxdz09

Document Folder :
https://drive.google.com/drive/folders/1SXdThpjSxA_EzCXlhG2y6pP0TaqkZbp1?usp=drive_link

Attending:

- Vince Marchetti
- Michalis Kamburelis
- John Carlson
- Anita Havele

Agenda:

0: As a “0” minutes item, Michalis Kamburelis announced that he had gotten Castle Game Engine written in Pascal, to run in the browser using WASM. See the link https://castle-engine.io/web for details!

1. Review and inform status of X3D in Blender 4.2 as an extension that is easily downloaded and installed for those users that want to import and export X3D. See Extensions Platform X3D Support
    a. The X3D extension now has a separate git based source control very similar to Github project Web3D X3D/VRML2 code
        i. MK believes X3D could be restored to “out of the box” if activity progressed on developing the exporter
        ii. AH suggested to collect statistics on our members’ usage of a Blender with X3D, to send a message to Blender requesting that X3D be added to the “out of box” installation.

b. The X3D extension needs maintenance, as the capabilities of both X3Dv4 and new material model – node-based – in Blender have progressed

c. Some users may have needs for Blender support that are not met by the exporter-importer model, for example batch conversion, specialized preparation of X3D output from non-3D formats.

2. Goal of today's meeting is to promote collaboration within X3D community and between X3D and Blender communities. Three type of collaborative activity
    a. Everyone does their own project, we have a loose support system to share knowledge and ideas (Slack channel, shared git repository with multiple user projects?)
        i. Does anyone know how to run the Python code in Blender in an interactive debugging environment?
        ii. Is there a standard way for Blender - Python code developers to edit their source-controlled code in-place. Example File System for Development
        iii. MK says that in he prepares Python scripts for Blender, packages them in blend files. He debugs scripts, when they achieve maturity they can be updated to "extensions"
    b. There is a concerted effort to develop a Blender extension distinct from the current Blender Extensions Platform code, "we" are responsible for developing and distributing it. Can be a fork of the Web3D X3D/VRML2 project, adhering to GPL 3
        i. MK pointed out the Khronos develops a separate glTF Blender code which is periodically synchronized with Blender's
    c. "We" contribute to the maintenance and improvement of the current Blender X3D extension, by the standard git workflow of developing and testing new code, and submitting pull requests to the existing repository.
3. Discussion of current or near term projects from those present
4. One current effort is re-enabling ImageTexture export in Blender 4.2, as a patch to the Blender Extensions WebX3D/VRML2 code
    a. A WIP pull request has been created
    b. MK suggests starting a separate file with code to traverse and search the Blender node tree to determine materials properties to develop X3D equivalent appearance

c. MK also points out the Khronos-Blender code for glTF might also be useful to understand how to search node trees
d. MK pointed out that Castle Game Engine has an extension equivalent to the Blender and glTF method of mixing a base color with vertex color data. Reference ZOOM chat nodes:
e. 13:00:39 From Michalis Kamburelis to Everyone: https://github.com/michaliskambi/x3d-tests/wiki/Converting-glTF-to-X3D
f. 13:00:40 From Michalis Kamburelis to Everyone: https://github.com/michaliskambi/x3d-tests/wiki/Converting-glTF-to-X3D#per-vertex-colors
g. 13:00:46 From Michalis Kamburelis to Everyone: in Castle Game Engine we introduced mode to X3DColorNode to address this.
h. SFString [] mode "REPLACE" # allowed values: ["REPLACE","MODULATE"]

Action Items coming out of meeting

- JC will continue working on import HAnim content with animation, which has already been submitted as a WIP pull-request
- VM will see the ImageTexture pull request through to being merged into the Web3D X3D/VRML2 extension
- MK will review the code in the ImageTexture pull request for how it can be generalized to handle other Blender material node cases.

Perhaps another meeting after ImageTexture pull request has been accepted, which may be in two weeks.

ZOOM Chat from call:
12:01:52 From Michalis Kamburelis to Everyone:

https://castle-engine.io/web

12:09:07 From Michalis Kamburelis to Everyone:

there are 13 options in "export" in blender 4.2 :)

12:09:11 From Michalis Kamburelis to Everyone:

out of the box

12:36:30 From Michalis Kamburelis to Everyone:

current https://github.com/Web3DConsortium/BlenderX3DSupport

12:37:26 From Michalis Kamburelis to Everyone:

https://github.com/Web3DConsortium/BlenderX3DSupport?tab=readme-ov-file

12:46:49 From Michalis Kamburelis to Everyone:

https://projects.blender.org/extensions/io_scene_x3d/pulls/39

13:00:39 From Michalis Kamburelis to Everyone:

https://github.com/michaliskambi/x3d-tests/wiki/Converting-glTF-to-X3D

13:00:40 From Michalis Kamburelis to Everyone:

https://github.com/michaliskambi/x3d-tests/wiki/Converting-glTF-to-X3D#per-vertex-colors

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