S10: As a User, I want to install the System, so that it becomes available to use within Blender. (1 SP)

Labels

`Low Risk` `Must Have`

Description

Developer Conversation:

- This is basically developing the plumbing required to register/unregister a Blender add-on, and creating a simple GUI panel for further development.

Acceptance Criteria:

- The add-on is registered within Blender.
- A custom panel is created within the Blender GUI.

S20: As a User, I want to enable the System within Blender, so that the System reacts when I perform a Render operation. (1 SP)

Labels

`Low Risk` `Must Have`

Description

Developer Conversation:

- bpy.app.handlers.render_pre: Set up required compositor nodes to ensure all required render passes are written to disk.
- bpy.app.handlers.render_post: This will be used in the future to trigger image processing and to render to SVG according to specified options.

Acceptance Criteria:

- An "enabled" checkbox is present and can be toggled in the GUI panel.
- When "enabled" is checked, verify handlers have been

S30: As a User, I want to visualise the structure of the Subject in terms of it's curvature, as a SVG. (13 SP)

Labels

`High Risk` `Must Have`

Description

Developer Conversation:

- Lots of work needed here, including generation of a stroke orientation map, curvature-magnitude map(?), development of a suitable stroke model, stroke placement algorithm, stroke clipping algorithm...

Acceptance Criteria:

- A SVG document is saved to disk that produces an aesthetically pleasing, accurate representation of the scene, using only strokes, with a parsimony of ink and effective communication of the surface features.

S40: As a User, I want lighting to influence the output, to achieve a visually-appealing Render. (5 SP)

Labels

`High Risk` `Must Have`

Description

Developer Conversation:

- Spacing or thickness of existing surface strokes influenced by incident light (direct diffuse). Perhaps additional strokes placed according to AO?

Acceptance Criteria:

- A SVG document is saved to disk that produces an aesthetically pleasing, accurate representation of the scene and it's lighting, using only strokes, with a parsimony of ink and effective communication of the surface features.

S50: As a User, I want to globally configure geometric Stroke properties, so these are reflected in the Render. (3 SP)

Labels

`Medium Risk` `Should Have`

Description

Developer Conversation:

- Configuration limited to a Stroke thickness factor and selection of a specific Stroke model.

Acceptance Criteria:

- Output reflects the chosen properties.

S60: As a User, I want to identify specific surfaces, so that these areas will be emphasised in the final Render. (3 SP)

Labels

`Medium Risk` `Should Have`

Description

Developer Conversation:

- Initial idea is to use the Grease Pencil to produce a masking Map, which will be taken into consideration during Stroke placement.

Acceptance Criteria:

- Surface strokes are placed only on the indicated areas.

S70: As a User, I want to globally configure Stroke colour, so that this is reflected in the Render. (1 SP)

Labels

Low Risk   Could Have

Description

Developer Conversation:

-

Acceptance Criteria:

- Output reflects the chosen colour.

S80: As a User, I want to configure canvas colour, so that this is reflected in the Render. (1 SP)

Labels

Low Risk   Could Have

Description

Developer Conversation:

-

Acceptance Criteria:

- Output reflects the chosen colour.

S70: As a User, I want to globally configure Stroke colour, so that this is reflected in the Render. (1 SP)

Labels

Low Risk   Could Have

S80: As a User, I want to configure canvas colour, so that this is reflected in the Render. (1 SP)

Labels

Low Risk   Could Have