Mudbox Vector Displacement

Export FBX from Mudbox
Before you start sculpting, export your Fbx from Mudbox.

Export an OpenEXR from Mudbox
Name: My Extraction Operation 1

Maps to Generate:
- Transfer Paint Layers
- Ambient Occlusion Map
- Vector Displacement Map
- Displacement Map
- Normal Map

Vector Displacement Map Extraction
Compare detailed and simple surfaces and extract the detail

Target Model & Source Model → Vector Disp. Map

Extraction Options

**Target Models** (low resolution mesh)

<table>
<thead>
<tr>
<th>Model</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>basicHead</td>
<td>0</td>
</tr>
</tbody>
</table>

- [ ] Smooth Target Models
- [ ] Smooth Target UVs
- [ ] Use Creases & Hard Edges

**Source Models** (high resolution mesh)

<table>
<thead>
<tr>
<th>Model</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>basicHead</td>
<td>5</td>
</tr>
</tbody>
</table>

- [ ] Smooth Source Models

Image properties
- Generate one map for all targets
- Image Size: 1024x1024
- Anti-aliasing: Off

Vector Displacement Map Options
- Vector Space: Absolute Tangent

Output options
- Map Type: Texture
Export a PTex from Mudbox
Import FBX and Add Subdiv Scheme

- Import the FBX you just exported from Mudbox. For its shape node, add Attributes|RenderMan|Subdiv Scheme:

![Image showing RenderMan settings](image)

Assign Displacement Shader (UV Texture)

- Create a PxrTexture node. Set the Filename to your exported Mudbox EXR map. Keep all parameters at their defaults.
- Create PxrDispTransform node. Set Displacement Type to Mudbox Vector and Vector Space to "Tangent".

![Image showing PxrDispTransform node](image)

- Create a PxrDisplace node (this is the displacement shader that actually displaces your surface).
- Connect PxrTexture's output Result RGB to PxrDispTransform's Disp Vector.
- Connect PxrDispTransform's Result XYZ to PxrDisplace's Disp Vector. Your graph should look like this:
Assign Displacement Shader (PTex)

- Create a `PxrTexture` node. Set the Filename to your exported Muxbox ptx map. Keep all parameters at their defaults.
- Create `PxrDispTransform` node. Set Displacement Type to `Mudbox Vector` and Vector Space to `World`.

- Create a `PxrDisplace` node (this is the displacement shader that actually displaces your surface).
- Connect PxrTexture's output Result RGB to PxrDispTransform's Disp Vector.
- Connect PxrDispTransform's Result XYZ to PxrDisplace's Disp Vector. Your graph should look like this:
Render

- Add PxrSurface, assign it to the model and add some lights, set the displacement bound appropriately, and render!

Toad King creature created by Craig Barr, Autodesk Media and Entertainment.