GMH 2 Documentation

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2 INSTALLING

Put ThunderCloud folder into Maya default’s scripts folder. Make sure you put it in the correct script path of current Maya.

Note: if you already have ThunderCloud folder in your script folders, you can append and overwrite to the old folder.

Advance: If you have set Maya script path to something else in Maya.env file, please put ThunderCloud folder in the custom script folder stated in Maya.env

2.1 RUNNING

- Execute this line in Maya Mel Editor

  1. source "ThunderCloud/GMH2_6/GMH2_starter.mel";

or

- Drag and drop GMH2_starter.mel file onto Maya viewport.

Running GMH2.6 first time will set the hot key for GMH2 as Ctrl + Shift +1, you can press this combination next time you want to start GMH2.6.
There are two main workflows in GMH 2.6:

- **GMH Hair style system**: Manipulate and output Maya Hair system. After converting Polygon Meshes to GMH Surface, users can carry out usual Maya hair workflows like assigning N-solver, N-caching, colliding with passive objects, etc.

- **GMH Poly style system**: Manipulate and output PFX brush geometry tubes which can be exported to meshes and curves or baked onto textures of original polygon base mesh.

![Diagram of GMH 2.6 Workflow](image)
4.1 CREATION TAB

GMH Style System Managing GMH Style system

Create GMH Style
- Create a GMH Style System Node.

Polygon Style System Check Box
- Option to create polygon style system.

Rename GMH Style
- Rename current selected GMH Style System.

Delete GMH Style
- Delete current selected GMH Style System.

Apply Preset
- Choose a GMH preset file to apply preset to current selected GMH Style System.

Save Preset
- Save GMH Preset of current selected GMH Style System.

Update GUI
- refresh GMH2 Window.

Edit GMH Style
- Select the GMH Style Node to edit in attribute editor.

Edit Maya Hair
- Select Maya Hair Node of current GMH Style System.

Edit PFX
- Select PFX Brush Node of current GMH Style System.

GMH Surface Managing GMH Surfaces

Rotate
- Rotate hair direction of selected GMH Surfaces.

Reverse
- Reverse hair direction of selected GMH Surfaces.

Select Root Vertices
- Select Root Vertices of selected GMH Surfaces.

Apply GMH Style
- Apply current selected GMH Style System to selected surfaces

Apply 2nd GMH Style
- Apply current selected GMH Style System as extra style system on top of selected GMH surface.

Delete GMH Surface
- Delete current selected GMH Surface

Delete Orphan Surface
- Delete all GMH Surfaces that are not associated with a base surface.

GMH auto UV Box for Poly Style System

Assign UV spaces to Style System’s hair tubes.
- Assign current set of UV to current Poly Style System’s hair tubes.
  +
  - Add one slot to UV Space
  - Minus one slot to UV Space
0 1 2 3 4 etc
- UV Space hair tubes will take.
**4.1 SURFACE EDIT TAB**

**GMH Surface Edit**

- Override settings of each GMH Surface
  - **Reset**
    - Reset all GMH Surface attributes to default values
  - **Rotate**
    - Rotate hair direction of selected GMH Surfaces.
  - **Reverse**
    - Reverse hair direction
  - **Thicken**
    - Increase the number of hair clumps
  - **Thinning**
    - Decrease the number of hair clumps

**Edit Distribution Ramp**

- Edit the distribution intensity of hair clumps across GMH Surfaces.

**Show Follicles**

- Show follicles visibility of selected GMH Surfaces

**Hide Follicles**

- Hide follicles visibility of selected GMH Surfaces

**Select Root Vertices**

- Select Root Vertices of selected GMH Surfaces

**Clump Width Multiply**

- Adjust hair clump width of each GMH Surface

**Tube Rotation**

- Rotate hair mesh tubes facing direction

**Hair Tube Per Loop Multiply**

- Adjust number of hair mesh tubes

**Segment Per Tube Multiply**

- Adjust hair mesh tube segment numbers

**Hair Tube Seed**

- Random Seed number of hair tubes

**Maya Hair Style Surface**

- Decrease the number of hair clumps

**Per Surface Hair Color**

- Decrease the number of hair clumps

**Hair Color Override**

- Decrease the number of hair clumps

**Assign UV spaces to hair tubes of selected GMH Surface**

- + Add one slot to UV Space
- - Minus one slot to UV Space
  0 1 2 3 4 etc
  - UV Space hair tubes will take.

**GMH auto UV Box for GMH Surfaces**

- Assign UV space to GMH Surfaces hair tubes
4.2 MATERIAL TAB

**GMH Shaders Manage materials apply to GMH Polygon Style**

- **Add GMH Shader**
  - Set selected shader as GMH Shader
- **Remove Shader**
  - Remove selected shader.
- **Apply Shader To GMH Style**
  - Assign selected shader to GMH Poly Style System
- **Apply Shader To Current GMH Surface**
  - Assign selected shader to selected GMH Surfaces
- **Remove override**
  - Decrease the number of hair clumps

4.3 DYNAMIC TAB

**Dynamic: Support buttons to work with Maya Hair's dynamic**

- **Apply Nucleus**
  - Apply Nucleus solver to selected GMH Style System
- **Delete Nucleus**
  - Remove Nucleus solver from selected GMH Style System
- **Select Follicles of Current GMH Surfaces**
  - Select follicles of selected GMH Surfaces.
- **Make Static**
  - Make selected GMH surface static (no dynamic applied)
- **Make Passive**
  - Make selected GMH surface passive
- **Make Dynamic**
  - Make selected GMH surface dynamic

4.4 EXPORT TAB

**Export: Functions to export output from GMH Poly Style System**

- **FileName**
  - File name to export
- **Auto Name**
  - Auto name file base on export type
- **Path**
  - Path to export file
- **SET**
  - Set path to export file
- **Type**
  - Type of data to export
  - **Meshes**: Export Hair mesh tubes
  - **Curves**: Export Hair curves
- **Structure**
  - **Group separation**: Group data into separated groups
- **Format**
  - File type to export
- **Export from Selected GMH Style System**
  - Export data base on selected GMH Style Systems.
- **Export from Selected Material**
  - Export data from base on selected materials
- **Export from Selected GMH Surface**
  - Export data from selected GMH Surfaces.
4.5 BAKING/UV TAB

BAKING/UV: Baking & UV functions of GMH System

Path
- Path to export file

SET
- Set path to export file

FileName
- File name

Map To Bake
- Type of map to bake

Texture Size
- Texture size to bake

Ray Distance
- Max distance to sample surfaces

Sampling Quality
- Quality of baking

Filter Size
- Filter size

Create UV Sheet of selected surfaces:
- Assign current set of UV to current selected Poly Style System.

Auto UV
- Auto assign UV space of selected surfaces (auto assign UV if multiple surfaces is selected)
  +
  - Add one slot to UV Space

- Minus one slot to UV Space

0 1 2 3 4 etc
- UV Space hair tubes will take.