Surface Extend

Step 1 Open the model tilted_surface.hm.

Step 2 Extend a surface.
1. Click Geometry > Edit > Surfaces > Extend to open the Surface Edit panel.
2. Set the top toggle to max extension if not already done.
3. Click surfs: to extend to activate the selector.
4. Select the surface shown.
5. Click the toggle below **surfs: to extend** to change it **surfs: to target**.
6. Select the surface shown as the target surface.
7. Click **extend** to extend the surface.
Notice the surface to extend is extended and creates a non-manifold edge at the target surface. Notice the edges were extended perpendicular to the extended edge of the surface.

8. Click `reject` to reject the surface extension.

**Step 3 Move the target surface.**

1. Click `Geometry > Translate > Surfaces` to open the `Translate` panel.
2. Select the vertical surface as shown.

3. Set the direction to `z-axis`.
4. Enter `3.00` in the `magnitude` field.
5. Click `translate` to move the surface.
6. Click `return` to exit the panel.

**Step 4 Extend the horizontal surface.**

1. Click the `View 2` in the `Model Browser` to set the view of the model.
2. Click *surfs: to extend* to activate the selector.
3. Select the horizontal surface shown.

4. Click *surfs: to target* to activate the selector.
5. Select the vertical surface as shown.
6. Click *extend* to extend the surface.
Notice the horizontal surface extended to meet the projection of the target (vertical) surface.

7. Click **reject** to reject the surface.

**Step 5 Set the extension to use the guide lines option.**

1. Click the **options** button on the panel.
2. Activate the **use guide edges** option.
3. Click **return** to exit the **options** panel.

**Step 6 Extend the horizontal surface using extend over edges.**

1. Click **View 1** in the **Model Browser** to set the view.
2. Click the top toggle to set it to **extend over edges**.
3. Enter 1.00 in the **by distance** field.
4. Click **surfs: to extend** to activate the selector.
5. Select the surface shown.
6. Click *lines: to extend over* to activate the selector.
7. Select the line shown.
8. Click *extend* to see the extended surface.

Notice the extended surface edges follow the edges of the surface.

9. Click *reject* to reject the surface extension.
10. Select the edge shown to add a second edge to the extension.
11. Click **extend** to extend the edges.

Notice that both edges extend to create the extended surface.

12. Click **reject** to reject the surface extension.

**Step 7 Ignore guide edges during the extension**

1. Click **\[button\]** to clear the contents of the **lines: to extend over** selector.
2. Select the line shown.
3. Click *lines: guide edges to ignore* to activate the selector.
4. Select the edge shown to ignore.
5. Click *extend* to create the surface extension.

Notice the edge is ignored and the surface is extended perpendicular to the selected line.

6. Click *reject* to reject the surface extension.
Step 7 Extend the surfaces in a new component.

1. Click the **options** button to open the **options** panel.
2. Click the **create in:** switch and set it to **Extended Surface Component.**
3. Deactivate the **use guide edges** option.
4. Click **return** to exit the panel.
5. Click **extend** to extend the surface.

6. Expand the **Component** folder in the **Model Browser.**

   ![Model Browser](image)

   Notice a new component has been created for the extension.

7. Click **return** to exit the panel.
Chapter 3: HyperMesh Geometry Enhancements