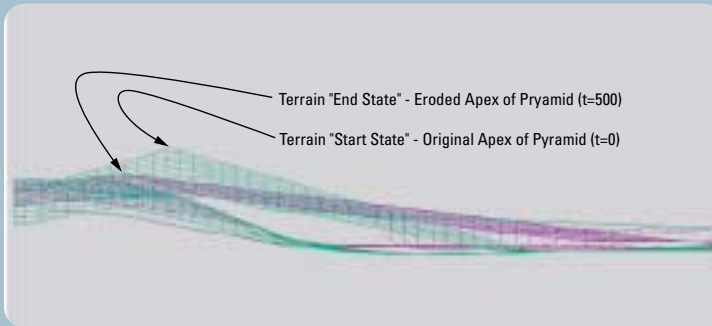
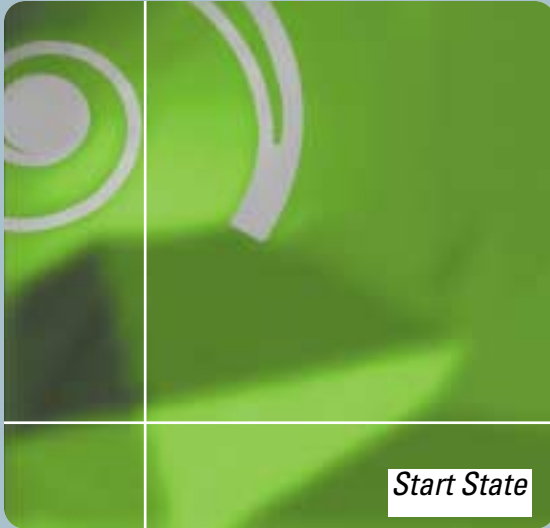


MORPHING TERRAIN

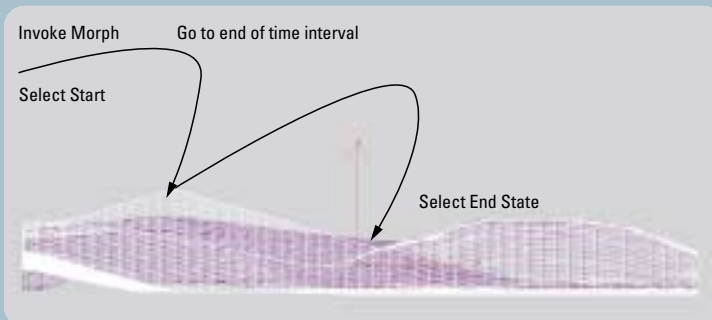
Objectives: To produce an animated “morph” between two terrain objects, simulating motion such as erosion or other geological dynamics.

Inputs: Two mesh representations, of the beginning and end state, with identical number of vertices in each mesh and similar topological directions.

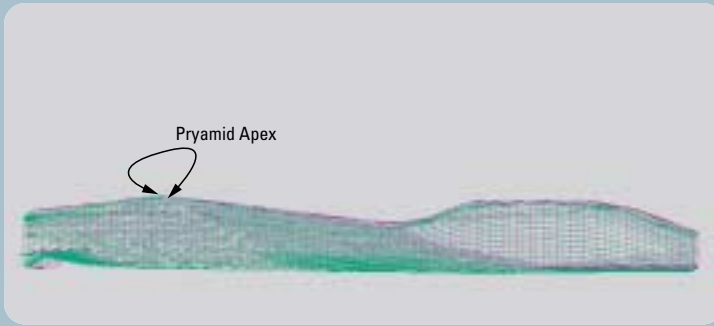


Process:

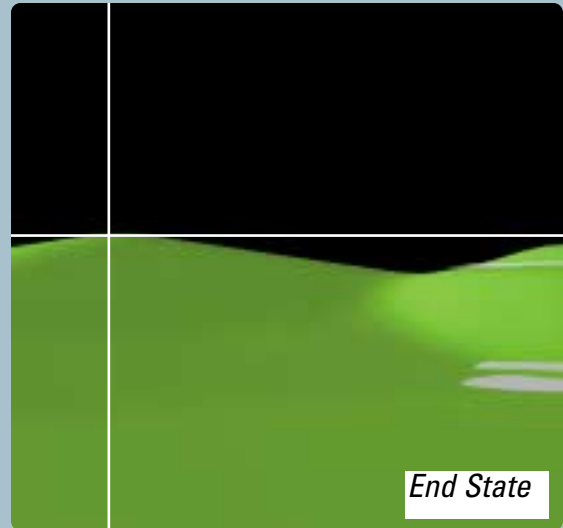
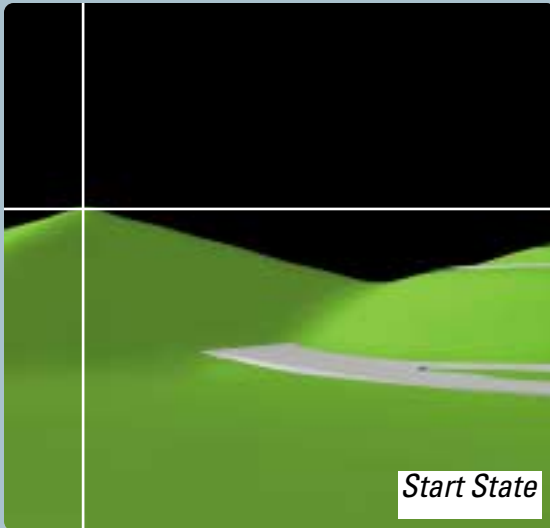
1. Generate terrain models that represent the “Start-state” and the “End-state” for the morph.
- 2 Set the desired duration of the animation. (time=500 frames.)
3. Make sure both terrain states are visible at the start (t=0).



4. Go to the end frame (t=500).
5. Activate the animation mode.
6. Select the “Start-state” terrain object.
7. Invoke the morph (or “tweening” operation)
8. Select the “End-state” terrain object.
9. End animation mode. Save.



10. Play back the animation. Now, at frame 500 the terrain model has morphed, so that the vertex points of the "Start-state" match those of the "End -state". The 3D modeler has interpolated a new mesh for each time step, moving each mesh point linearly from its start position ($t=0$) to its end position ($t=500$).



Troubleshooting:

- a) If you are unable to select the "End State" geometry, then your entities may not have the same number of vertices. If your modeler allows, delete excess vertices.
- b) If the morph sequence results in a awkward folding and stretching on the way to achieving its "End State" it means that the topological directions of the models vary. If you modeler allows, reverse the topological direction of one of the terrain objects.