# Splice Deformers

# Splice for Deformation

- Per vertex deformation is an ideal candidate for KL's *PEX*.

- The *PolygonMesh* KL type provides access to the DCCs meshes.

# Wave Deformer

File reference: 04_splice/06_wavedeformer.ma

- In Maya the *spliceMayaDeformer* provides a slightly specialized node for deformation. This has been done so that Splice based deformations integrate with Maya's deformation pipeline. In other DCCs that might be implemented slightly different.

- As an initial test a per vertex deformation can be implemented performing a *wave* using the *sin* trigonometry function.

# Jiggle Deformer

File reference: 04_splice/07_jiggledeformer.ma

- The jiggle deformer uses an auxiliary matrix (driven by a locator) to skin points.

- Skinning isn't performed in an absolute fashion, but the projected position is used as a target for a spring algorithm (similar to the locator based spring implemented before)

# Wrap Mesh Deformer

File reference: 04_splice/08_wrapdeformer.ma

- The wrap mesh deformer uses a closest point lookup onto a secondary mesh, and stores a relative location on that mesh.

- During deformation the mesh is then reprojected into that space. This way the deformed mesh can follow the secondary mesh.

# Wrap Mesh Deformer with sliding

File reference: 04_splice/09_wrapslidedeformer.ma

- Additionally to reprojection during deformation the wrap deformer can also implement sliding.

- For this the location is constantly interpolated between the initial location and a new location, and therefore the deformed point can slide along the surface.

- This can be parameterized, limited etc to solve a wide variety of scenarios, for example for implementing a simplified model of human skin.