



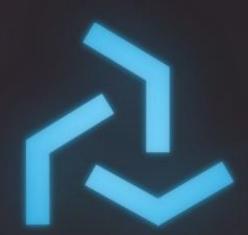


# Splice Procedural Geometry



## Splice for Procedural Geometry

- The *PolygonlMesh* KL type provides a variety of methods to create procedural topology.
- The topology attributes (such as normals) are stored in another container, called GeometryAttributes.
- Topology generating Splice nodes are portable and can be used in several different hosts, including offline renderers, for example.



#### Pile of Quads

File reference: 04\_splice/10\_proceduralquads.ma

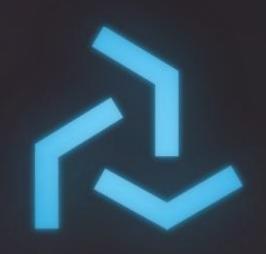
- In Maya the spliceMayaNode can provide a PolygonMesh port, which is then accessible in Maya.
- The *PolygonMesh* provides methods to recompute normals, shared by vertex of split based on angles.
- The *PolygonMesh* can provide other special attributes, such as *UVs*, for example.



#### High level modeling methods

File reference: 04\_splice/11\_extrusionwithshell.ma

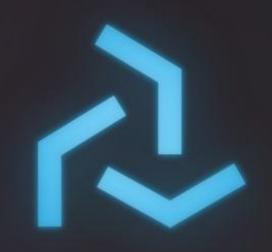
- The *PolygonMesh* provides a series of high level methods for modeling, including *extrusion*, *revolution*, *cloning* and a shell method (for *thickness*).
- These methods can be combined to create very complex topology rapidly.



### Raycasting

File reference: 04\_splice/12\_raycasting.ma

- The *PolygonMesh* provides methods for performing high performance queries, such as *raycast* and *closest* point.
- It uses a very efficient internal acceleration structure to perform, and can easily be used for auxiliary queries.



#### **Portability**

File reference: 04\_splice/13\_portablegeometry.ma

- Since Splice based functionality is portable, tools built can be moved between applications.
- This includes other DCC applications such as Softimage or Nuke, for example, but also offline renderers such as Arnold.
- The suite of integrations will grow in the future, and possibly cover products such as 3DSMax, Houdini, Motionbuilder, Cinema4D and Modo.

