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It's Time For Real-Time



Splice Procedural Geometry

Splice for Procedural Geometry

- The *PolygonMesh* 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*.

