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## 3D Modeling and Texturing

In computer graphics, 3D modeling is the procedure of developing a 3D model using a specialized software. For example in this class we are going to use Autodesk Maya 2014. It is a process of creating a model that represents a three dimensional object. That object can be alive or inanimate, for example a simple model can be just a building or a rock or also can be a full character with movements etc.. A three dimensional model is created using a set of points in 3D space, which are connected by various geometric data such as lines, curves and surfaces.

Three dimensional models are created using four popular methods:



*Polygon modeling.* Many three dimensional models are created as textured polygonal models. Polygonal modeling is a method of creating a 3D model by connecting line segments through points in a 3D space (these point in space are called vertices). this is very common when developing video games, because it is not as important

as in movies, so they can just model with polygons and with a good texture they make awesome looking characters. This helps because it can be rendered by a computer very quickly. A good example are the older video games in which you could see on the faces or the bodies the polygons from where they are formed.

*Primitive modeling.* This is the simplest way of modeling three dimensional object. Using geometric primitives such as cylinders, cones, cubes and balls.



*NURBS modeling.* Non-uniform rational B-spline. It is very popular on softwares such as Maya. The developer can create smooth-surfaces 3D models. This technique can truly create smooth curved surfaces. Is really common on movies when you need a really realistic model which is going to pop on the movie or also on

some games now days to the main character.

*Splines and patches modeling.* Is very similar to the NURBS modeling procedure. It depends on curved lines to identify the visible surface.



**I am trying** to develop mobile applications so 3D modeling and animation is really important because it really pumps up an application to have good graphics which can be achieved with good models.

So my concern is to develop, to model a character which I can use on my mobile applications for a game or a simple educational application for kids, something similar maybe to *talking tom cat*. Try to make some characters to use them later on my developments. I think everyone is very visual, when you see something for just a second you can decide if you like it or not.

But kids are even more visual, once they see something it is really difficult to change their minds so it is really important to

make a good first impression with them. So my goal is to create a character that they will love and also it can not be very complicated, so I was thinking about making an animal or maybe some kind of robot like Wall-E...

