

CSCI-4961/6961: 3D Computer Graphics
Class 16: October 23, 2006
B-Splines and NURBS

Announcements

- Project 3 is due by 11:59:59pm on Tuesday, November 7, 2006.

Today's Class

Today we will continue our discussion of B-Splines, which are approximating splines, and then look at NURBS.

1. B-spline curves and their properties
2. Non-uniform B-splines
3. Rational splines
4. NURBS (Non-Uniform Rational B-Splines): These are the most general form of splines we will discuss. They provide an exact representation for conics and are invariant to perspective transformations.

Reading

Chapters 8.12 and 8.15–8.18 of Hearn and Baker.
Chapter 12 of the OpenGL red book.

Next Class

Spline surfaces.