

Sharing Ideas for Teaching Web 3D

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Introduction

3D is expanding to the Internet. Over the past years, 3D has been used in motion pictures, print media, games and simulations; now, the web is the next frontier. How should educational institutions address teaching interactive 3D for the internet? This forum is an opportunity to discuss issues and gain insights in adding web 3D to a 3D animation curricula.

The Issues of Web 3D

Web 3D is cross-discipline, combining 3D modeling with software programming, skills that span Art and Computer Science. While much of new media is multi-discipline, tools such as Flash have handled the programming for web designers. Web 3D does not have such clear cut choices. There are a multitude of technologies supporting web 3D, all with many smart features, all with trade-offs requiring a variety of plug-in installations, long learning curves, advanced programming skills, proprietary technologies or big downloads. Beyond these technical issues, market place considerations factor in such as development time, production and licensing costs and end-user experiences with 3D interfaces.

The Goals of a Web 3D curricula

This forum will provide an opportunity for attendees to share their thoughts, provide lessons learned, raise issues and gather insights into teaching web 3D. We will discuss what goals and objectives to incorporate into a web 3D course. Should a web 3D course extend an animator's modeling skills, or be used for creating an online portfolio in designing 3D user interfaces? Or perhaps web 3D can be an effective introductory course into 3D animation since its 3D scenes and objects are so fundamental?

The forum will then discuss issues that confront teaching web 3D. Should these courses be dependent on one or a few sets of commercial tools? What roles should API's (Application Programming Interfaces) play and is it preferred to develop your own software tools? As software programs extend themselves from 2D to 3D such as Macromedia Director, is it practical to require students to learn the 2D tool first before using the software program to develop 3D content? What tool and publishing costs factor in, especially if student's need to pay a publishing fee to post their content?

What opportunities also exist for teaching web 3D? Can web 3D be expanded to encompass all interactive 3D such as games and simulations? Can web 3D be used to introduce 3D graphics file formats, 3D-engines or basic concepts of 3D? How can web 3D be used to enhance a student's online portfolio and learn 3D user interface and web design? Is it possible to have a combined class of 3D artists and software developers?

Topics for a Web 3D course

This forum will then discuss specific topics to incorporate into a web 3D course. How in-depth should artists get into a 3D modeling program's own web 3D extended features. For example, should you cover 3D Studio Max's VRML97 Helper Object to insert Anchors and TouchSensors? Should a web 3D course also become a course in 3D user interface design? What tips and tricks are available in creating low polygon, small download, efficient web 3D? What areas do we need to distinguish web 3D as a real-time application from rendered 3D? For example, lighting and shading features may not be available in web 3D as they are when creating movies and stills. At the same time, we can now consider multiple cameras and navigation in our 3D scene. What options exist for developing multi-user 3D worlds? And what would make for a great final project to add to a student's portfolio?

Following this forum, attendees will come away with new ideas from this shared knowledge to incorporate into their own web 3D curricula.