

Creating and Implementing Photographic 3D on the web

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Diginiche

1 Introduction

Over the past few years, 3D on the web has been emerging as a viable format. The growth in both computing power and bandwidth has made this technically possible. 3D has many advantages over more traditional frame animations, such as QTVR object movies. These include a greater ability to display objects from any angle, and a greater ability to animate objects and have them react to user interaction. One of the challenges of creating compelling 3D, has been to make it "photorealistic". Recently a new type of 3D has emerged, which is "photographic" 3D. Photography is now being used to create both textures and geometry for 3D objects, and not just in the lab. Diginiche is doing this efficiently and commercially now, using Viewpoint technology.

2 Overview

Paul Nykamp of Diginiche is a leading developer of photographic 3D. He will demonstrate how he creates web 3D objects photographically from real objects using Viewpoint's 3DPhotoStudio software and other tools. Many differences between photographic 3D and traditional 3D will be outlined. He will also demonstrate how photographic 3D has been combined with other rich media formats, such as Flash, video, and Viewpoints ZoomView, to create content which is more compelling.

3 How Photographic 3D is unique

Photographic 3D has many differences from CG 3D, some obvious, some subtle. For instance, although the textures are generally heavier in Photographic 3D, the geometry is generally lighter. These differences will be explored.

4 Creating Photographic 3D

Traditional photographic skills such as studio lighting, choosing correct exposure and lenses, are combined with the latest software and hardware, such as Viewpoint's 3D Photostudio, ATI's Fire GL 8800 graphics card, Alias/Wavefront's Maya, and Adobe Photoshop to create Photographic 3D. The process has two main workflows, and these will be outlined.

5 Combining Photographic 3D with other rich media

Photographic 3D objects are very compelling on their own. They can be effectively combined with other rich media to create presentations which are much more informative, compelling, and interactive than the objects on their own. XML and JavaScript can be used to add animations and interactivity. Flash can be used as a texture on the 3D geometry to, for instance, bring a 3D monitor to life. Video and ZoomView can be used to compliment and enhance 3D objects. Currently live web examples, which the author created or helped create, will be used to demonstrate the possibilities:

- Ford Explorer from the Ford website
- Stanley Cup from the Hockey Hall of Fame website
- Virtual Video Host, presenting the Baird Televisor (the first commercially available tv) from the MZTV website

The technologies and processes used to create these presentations will be explained.

6 Web sites

www.fordvehicles.com/suvs/explorer/3Dviews/
www.legendsofhockey.net/html/silver_vrtro.htm
www.mztv.com (3D Interactive gallery)
www.diginiche.com/explorer_alt
www.diginiche.com/clothing
www.diginiche.com/monitor

7 About the Presenter

Paul Nykamp is an digital artist, photographer, and programmer. As a partner in Diginiche, a production studio based in Toronto and New York, he has helped lead the company into the forefront of cutting-edge photographic 3D and interactive virtual host technologies.

He spoke recently on the Alias/Wavefront panel at Digifest in Toronto and also gave a seminar on Viewpoint 3DPhotostudio.

He has a background in sciences from the University of Guelph, and is a graduate of the TMSI multimedia program offered jointly by York University and the Bell Centre.

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