

Introduction

Canvas 3D JS Library (C3DL) is part of the CATGames Project (www.catgames.ca) whose aim is to come up with leading edge tools for game development. The purpose of C3DL is to provide an open source JavaScript library for producing interactive 3D content in the browser using Canvas 3D.



Figure 1: screenshot of our front page. With the canvas 3d extension installed in Firefox, the logo and the rectangular plates will be spinning

Background

Web browsers do not have a standard method of creating/delivering 3D content. Previous attempts at standardization, such as VRML, have largely been top down. Canvas3D takes a different approach to the problem of 3D in the browser. It allows the creation of an OpenGL context within the <canvas> element of a web page. Drawing to the context can then be done with OpenGL function calls accessible via Javascript

Since many web developers would find 3D programming with OpenGL difficult, C3DL was developed to provide a Javascript library to make it easier for web developers to create 3D content.

Current development:

C3DL is currently in its 0.7 release. The features supported by the library include:

- ability to load collada models
- lighting
- elementary picking
- particle systems

Demos:

Below are a few screenshots of C3DL demos. When viewing through a canvas 3D enabled browser, the demos will come to life. All demos are accessible from the C3DL website: <http://www.c3dl.org>



Figure 2: From our mocap demo. Demo plays a sequence captured by a motion capture system

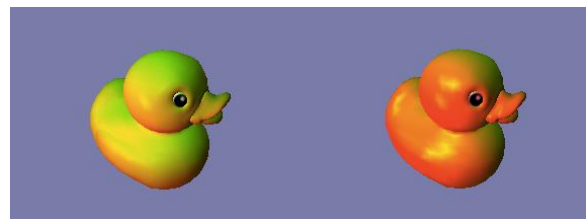


Figure 3: Same duck under different lighting conditions.

Many more demos are available on our website. Don't have a canvas3D enabled browser? Check out our videos at: <http://www.youtube.com/user/cathyatseneca>