

Javier Edo - 2009 TD Reel Breakdown

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Description

iSculpt is the core of a simple sculpting application. This core can be used in several different platforms such as a computer, a smartphone or any other kind of embedded system.

iSculpt lets you sculpt on models and animations. This could be useful for any kind of CG production, whether if it is for VFX or Animation. Since it could let you manually “fix” pinches and weird anomalies with skinning that may occur during production.

This animation sculpting feature could give an unlimited amount of control over the resulting animations, forgetting about the limitations of the current “Model-Rig-Animation” pipeline, letting the animator improve any baked animation deforming to the extremes the previous fully rigged, skinned model, only being limited by the actual topology of the model.

Languages & Libraries

- Core: C++, OpenGL|ES v1.1, STL.
- iPhone port: iPhone SDK.
- Cross-platform computer port: Qt.

Future of this project

This project was developed just as a “Tech Demo” to showcase my programming skills.

As of today there is no intention in continuing the development of this small project.

If I had to continue with this project, I would change the current STL structures for BOOST C++ Library structures.

Exponential and Logarithmic interpolation could be added when sculpting animated meshes.

Also Hermite interpolation could be added when loading Point Caches.

note

Audio is necessary to view this reel since there is an audio explanation.

I have tried to keep this reel as simple and short as I could. There is a lot of information to cover. If you have any question, please ask me.

I developed and modeled everything shown in this reel unless specified.

The Arcball class was downloaded from Neon Helium’s OpenGL website (NeHe’s) and its not coded by me.

For this class I only wrote the usage methods in order to be able to use this class for my own project.

Important: After re-watching the videos I have noticed that the version of the iSculpt core that appears on these videos was an in-development version, you may have noticed that normals do not seem to be calculated after sculpting, in fact they are, but the results of these calculations are kept in RAM and not sended to VRAM, so since I forgot to update these normals on the VBO, these normals look the same even though their vertex positions may have changed.