Name

André Castelo Branco Gomes

Email / IRC / WWW

Email: andrecastelo@gmail.com
Irc handle: andrecastelo

Synopsis

Blender 2.5 UI is being refactored and Blender's internal code is changing to use consistent access to its internal data, be it through the interface, through python scripts, through Operators or through the Animation System. This project's primary goals are to port Python Importer/Exporter Scripts to the new system, implementing RNA wrapping and improving the Python API as well.

Benefits to Blender

Blender 2.5 will feature generic access to properties, via Python scripts, via the Interface, via Operators or via the animation system. This generic access will be done by the RNA layer that abstracts and wraps the inner DNA properties.

Thus, the current Python scripts will be incompatible with Blender 2.5 and must be ported and adapted to use the RNA layer and operators. This project will improve Blender by making some importer and exporter scripts compatible with the new version. As side-effects, improvements on the RNA layer will be done as needed and some scripts will be changed to operators.

Deliverables

Main deliverables

- Python Import Scripts compatible with Blender 2.5:
  - 3D Studio
  - VRML 97
  - x3D
- Python Export Scripts compatible with Blender 2.5:
  - 3D Studio
  - VRML 97
  - x3D
- Documentation on how to use the new RNA system;

Secondary deliverables

- RNA layer improvements: addition of new operators and wrapping of DNA

data;
- Documentation on adding new operators and wrapping of DNA data.

Project Details

The project will consist of porting the following importers and exporters to the new system: 3D Studio, VRML 97, X3D. For each script, its code will be evaluated to detect the need for further implementation of operators or implementing RNA for a specific property or data not yet supported.

The script files to be modified are located in /blender/release/scripts: 3ds_export.py, 3ds_import.py, import_web3d.py, vrml97_export.py and x3d_export.py.

The RNA files are located in the makesrna module, in /blender/source/blender/makesrna. The files to be altered are located in the intern folder.

Project Schedule

The work can begin immediately. Currently, I'm in between university terms, so currently I'm not attending any classes. Classes will begin near mid April, and if time becomes a problem, one or two disciplines may be dismissed and done later. I also work at the university; I'm a volunteer in a computer graphics and virtual reality laboratory which demands ~20 weekly hours. But I do intend focusing on GSoC, and will do my best to give Blender 30+ weekly hours. That being said, the summer plans are detailed below:

1. April 20th ~ May 18th

This is referred by Google as the Community Bounding Period. It will be used to study the problem and the source code, evaluating which RNA Operators will be needed that are not yet available. Study RNA wrapping and the use of operators. Start studying the Python scripts and plan how to implement the new scripts. Also, Blender 2.5 paradigms differs from Blender 2.48, so this period will be used to define what can be done and stay true to Blender 2.5's designs.

2. May 18th ~ June 15th

Beginning of the program. In this period, I'll research and implement the 3D Studio Importer and Exporters; write documentation on the RNA implementation needed and write documentation on the exporter/importer.

3. June 15th ~ July 13st

In these weeks, I plan to implement the X3D importer and exporter. Just like step 1, I'll also implement missing functionality such as RNA Wrapping and Operators; improve the RNA documentation written in step 1; and write documentation on the exporter and importer.

4. July 13st ~ July 27th

I'll use this period to tackle the VRML 97 importer and exporter. I'll refine the RNA documentation and write documentation on the format.

5. July 27th ~ August 10th

Although I'll test each importer and exporter in their respective periods, I think it is useful to allocate time to handle unforeseen issues and testing.

6. August 10th ~ August 17th

I'll use this last week to refine code and documentation.

Bio

My name is André Castelo Branco and I'm 22. I'm an undergraduate Computer Science student at the Federal University of Paraiba, in João Pessoa, Brazil.

I have an interest in programming since I was 15, developing simple applications using Delphi and writing simple IRC scripts before that. Along the years I have studied some very different topics: from web development tools, such as CSS, ASP and Flash, to 3D development, with Blender and OpenGL. I am comfortable working with C, C++ and Python.

I have a little experience working with open source projects and GSoC - I have worked on BRL-CAD during GSoC 08 [1] and the project consisted of implementing a unbiased rendering algorithm (Metropolis Light Transport). I also started contributing to Blender's source code, contributing to the Game Engine cleanup [2] with Mitchel Stokes (Moguri) and Benoit Bolsee (ben2610).

[1]
http://brlcad.org/wiki/Google_Summer_of_Code/2008#Andr.C3.A9_Castelo_Branco_Gomes
[2]
https://projects.blender.org/tracker/?func=detail&aid=18102&group_id=9&atid=306