SETI Visualizations

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Computer Systems

1 Objective

The Search for Extra-Terrestrial Intelligence (SETI) has been active since 1960.[1] There are many good text-based sites to explain the purpose and theory of the program. However, few good graphical utilies are available to explain that theory to the general public. The purpose of this project is to develop such utilities.

2 Justification

To my knowledge, there are very few graphical explanations of the SETI research. There are several text-based scripts[2] that allow the user to create a model Drake Equation universe. However, these scripts only output a single number, whose meaning may not be obvious to the user. Organizations within the SETI project try to educate the public about their efforts. In particular, many solicit donations to fund their work. It is well-known that graphical presentations are more effective than purely textual ones. If graphical utilities were available, such fundraising efforts would be more effective.

3 Description

The graphical utilities available in the Computer Systems lab (OpenGL, POV-Ray) should be well suited to developing such programs. Several programs will likely be developed. One would be a graphical representation of alien civilizations in the galaxy, using the Drake Equation[2]. Another would be a simulation of a colonizing civilization.

4 Limitations

This project is designed to provide an overview of the beliefs and philosophies behind SETI. There is no plan to analyze specific data gathered by the various SETI searches. Because most viewers will be nonscientists, the programs will not try to explain the technical methods used by the SETI organizations.

References

[1] The SETI League, Inc., "General Information", 27 July 2002.
http://www.setileague.org/general/general.htm (September 12, 2002)

[2] Jones, Douglas S., "Beyond the Drake Equation", 26 September 2001.
http://www.station1.net/DouglasJones/drake.htm