Project Presentation
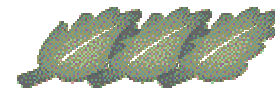
Astronomy

Simulum:
Simulation of star movements

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Project Summary

- **Operating System :** All 32-bit MS Windows (95/98/NT/2000/XP), All POSIX (Linux/BSD/UNIX-like OSes), OS Independent (Written in an interpreted language)
- **Programming Language :** Java
- **Topic :** Screen Savers, Simulation, 3D Rendering, Astronomy, Physics, Visualization
- **Translations :** English, German
- **User Interface :** Win32 (MS Windows), X Window System (X11), Web-based

What is Simulum?

Simulum, version 0.04.44 is a release of the program suite "Simulum" that deals with different simulations of star movements and their visualizations. It is completely written in Java and runs as a Java applet. This newer version provides Simulum with a nice GUI, so you can browse the simulation as you like it just with your mouse.
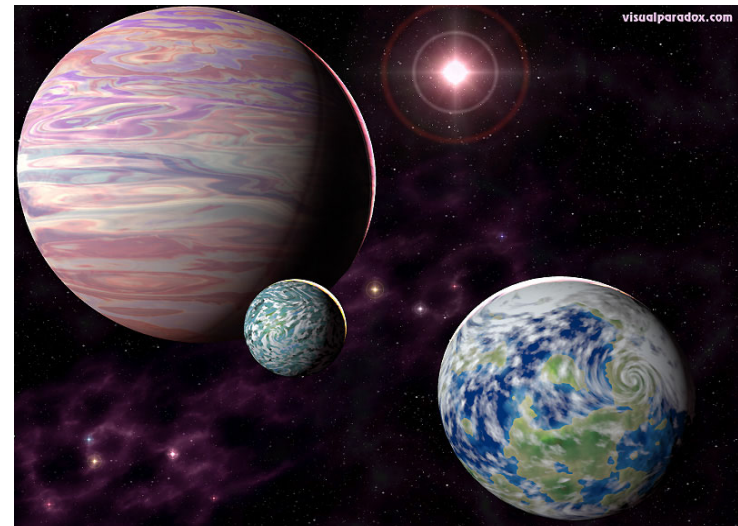
Let's take a closer look…

Here is an example:
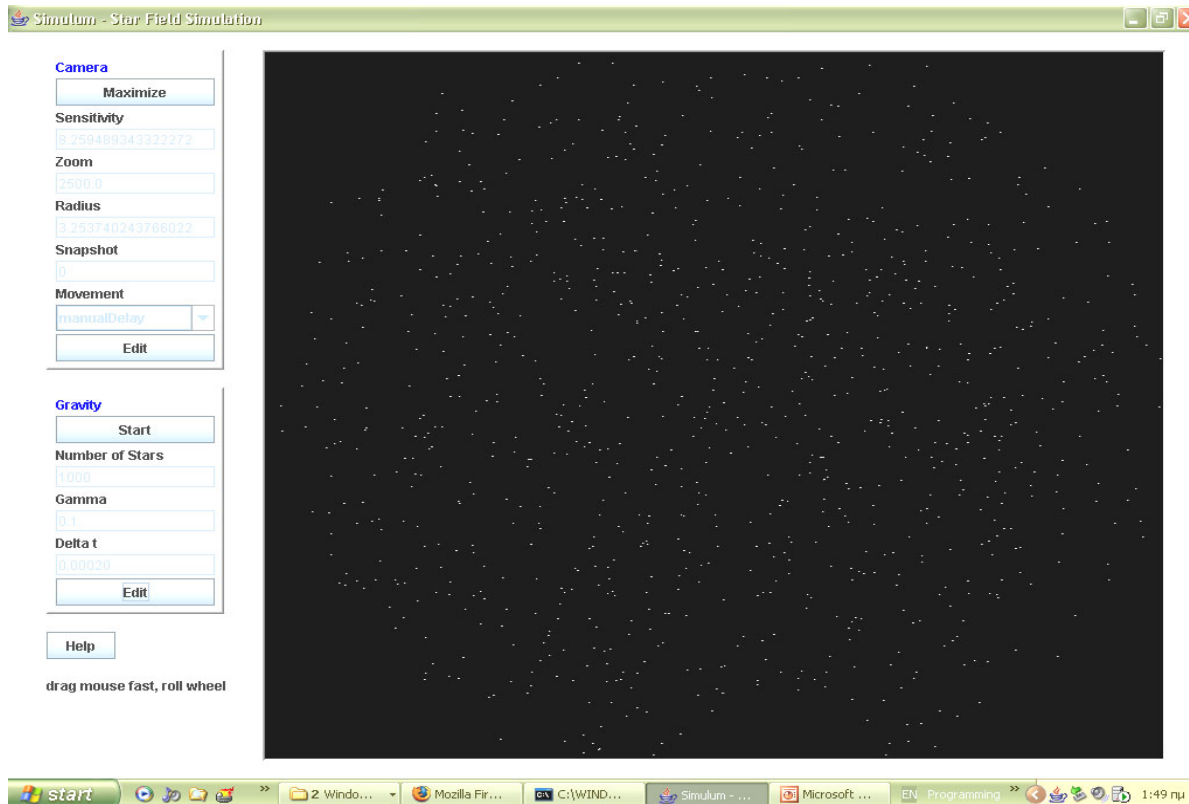
1000 stars are distributed in a sphere. The viewpoint circles around the sphere and creates the impression of a rotating sphere.

More specifically…

You can activate the star panel by clicking it. Rolling the mouse wheel changes the viewpoint distance. Rolling the mouse wheel while pressing the right mouse button changes the star brightness. Dragging the mouse moves the viewpoint. A fast drag gives the camera an appropriate angular momentum.

Furthermore…

Simulum source code release, provides the programmer with a fine documentation, as an Application Programming Interface (A.P.I) which is pretty useful for the process of reading and understanding the code.
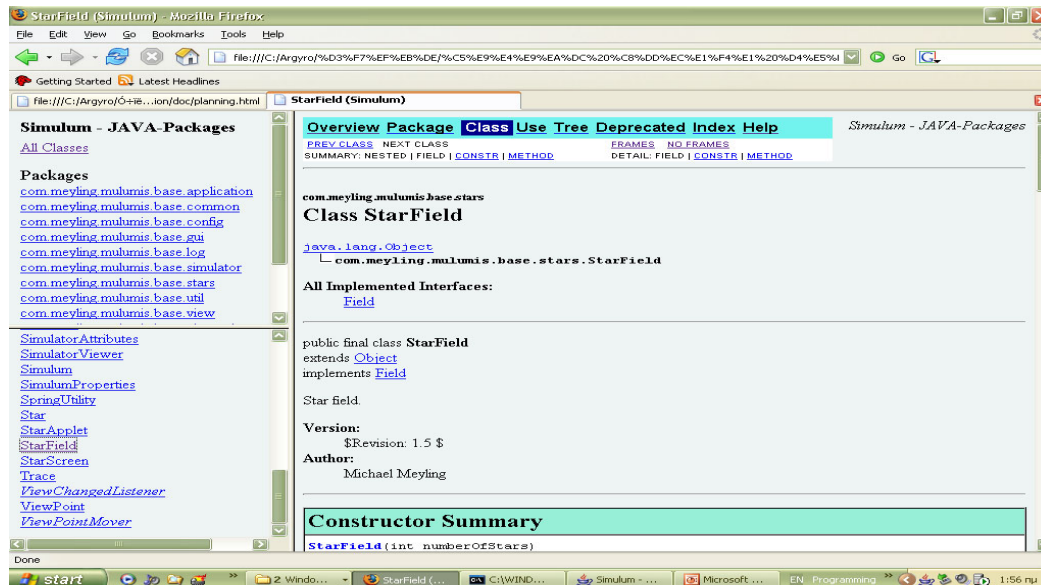
Some ideas for enhancements..

This application is already fully working. But nevertheless there are many things to improve, such as:

- Save snapshot pictures
- Save films
- Load and save star orbits
- Perhaps stars should come in colors

We have reached the end…

That was the case so far. Next time there will be plenty more information and ideas to be implemented, but that's all for now.

So,
what do you think ???