Laser pointer control with Stellarium

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This project consists on a first approach to control a pan-tilt mechanism, built from scratch and based on Arduino microcontrolle and the Stellarium software.

Software

The software is divided on two main blocks, the first one implemented in Python (computer) and the other one for Arduino microcontroller (device):

In the computer side with Python:

- Communications with Stellarium ([Stellarium Telescope Protocol](http://www.stellarium.org/wiki/index.php/Telescope_Control_(client-server)), python-bitstring)
- Communications with the device (USB-Serial)
- User interface (PyQt4)

Device with Arduino:

- Communications with the computer (receiving commands and parameters, and sending responses)
- Control mechanisms (servo motors, laser positioning)

python folder

Software to control the "Laser pointer device" with Stellarium, including GUI.

bitstring-3.0.2 folder

A Python module that makes the creation, manipulation and analysis of binary data as simple and natural as possible. Bitstring project page: http://code.google.com/p/python-bitstring/

arduino folder

code for pan-tilt mechanism, laser pointer control handling and two-way communication. ...to be uploaded on arduino.