FEATURE
May 21 2008
Getting scientific with Google Earth
As part of Google's ongoing mission to make information more readily available we recently collaborated with the University of Colorado, Boulder to hold an event for scientists and researchers in the area. The event focused on finding ways to use KML and Google Earth to display and communicate scientific research with policy makers, students, and the public.

The event was hosted by the Laboratory for Atmospheric and Space Physics as part of the Electronic Geophysical Year program. Learn More

Saturn's Auroras
UVIS obtained 26 images of Saturn's auroras on May 25, 2007 over an 8 hour 15 minute period, most of a planetary rotation period. They are presented here as side-by-side animations of simultaneous observations from two UVIS channels, the Extreme Ultraviolet (EUV) and the Far Ultraviolet (FUV). Learn more / view video

SCIENCE
Solar Influences | Atmospheric Science | Space Physics | Planetary Physics | Center for Astrobiology

EDUCATION & OUTREACH
Undergraduate | Graduate/Ph.D. | K-12 Students & Teachers | Journalists

ENGINEERING
Technical Capabilities | Calibration & Test | Quality Assurance

MISSION OPS
Flight Operations | Planning and Scheduling | Software Tools | Date Systems | Information Technology

ABOUT LASP
LASP was born in 1948 as the Upper Atmosphere Lab (UAL) along with a handful of other American universities and the military to initiate the era of space exploration... (more)

Employment
Seminars
Public Lectures
Visitor Info / Maps & Directions
LASP Mission Statement
Mission/Project History

PRODUCTS
LISIRD (Solar Irradiance Datacenter)
LASP Data Products
LASP Software Tools
Publications
IGY Legacy Videos

LASP IN THE NEWS
NASA SELECTS CU-BOULDER TO LEAD $485 MILLION MARS MISSION

Sect. 15. in the largest research contract
Outline

- Eclipse Web Tools Platform Project
  - What it can do
  - High Level Architecture
  - System Requirements
  - Demos
    - Top-down Development
    - Bottom-up Development
  - Resources
Eclipse WTP - Features

- Standard Web Tools
- Wizard that guides the user through the generate/deploy/test/publish lifecycle of a web service
- Supports bottom-up (from Java technology) and top-down (from WSDL) web service creation
- Configures project, server, and SOAP engine
- Code generators
- Test facilities
Eclipse WTP – System Req’s

What I needed…

- Eclipse
- Java Development Kit
- Eclipse WebTools
- Tomcat
- Axis 2

AND...

- Sysdeo Tomcat Launcher – offers easy access to Tomcat configuration. Launching web services would not work for me on Mac OS X without this plug-in.
Creating a Web Service

- Eclipse WTP offers wizards that guide the user through the generate/deploy/test/publish lifecycle of a Web service
- Configures project, server, and SOAP engine
- Code generators
- Test facilities
Creating a Web Service – Bottom-up

- Write Java class that implements server functionality.

- Create a web project:
  File -> New -> Other -> Dynamic Web Project (select local Tomcat server as target)

- Import Java class into new web project.

- Create web service and client:
  right-click Java class -> New -> Other -> Web Service
Create Web Service From Java Class
Resulting WSDL
WSDL in Design Editor
Running...
Creating a Web Service – Top-down

Create WSDL document

Create a web project:
File -> New -> Other -> Dynamic Web Project (select local Tomcat server as target)

Create a corresponding web client:
right-click WSDL document -> File -> New -> Other -> Web Services -> Web Client

Flesh out server functionality in resultant Java stub.
Create Web Project From WSDL
Create Web Service From WSDL
Flesh out Resulting Java Stubs
Running...
Eclipse WTP - Resources

- Web Tools Platform - [http://eclipse.org/webtools](http://eclipse.org/webtools)
- Web Tools Community
- Eclipse Built-in Help
- Google – “eclipse web services tutorial”