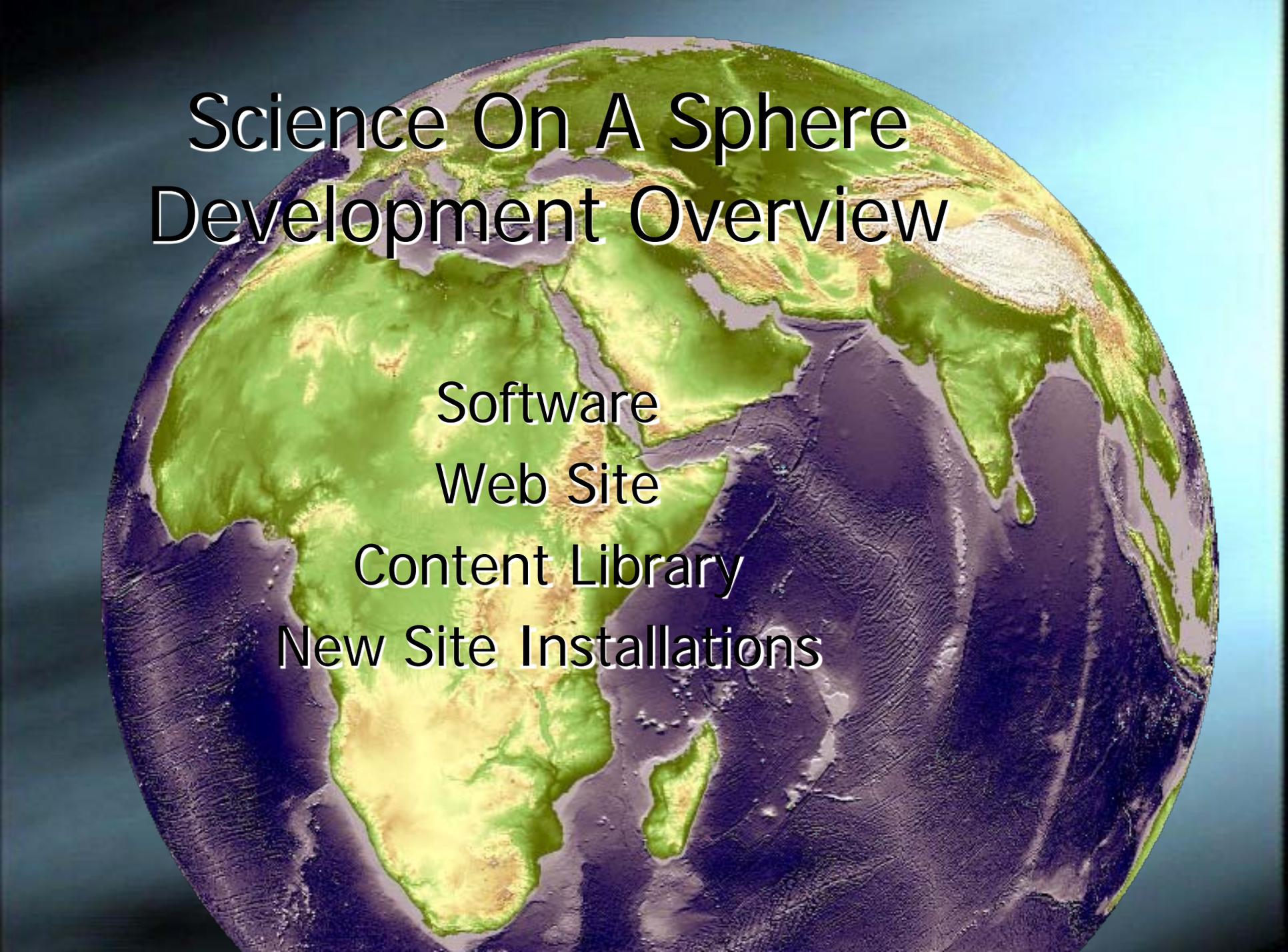


Science On A Sphere Development Overview

Current and Future Development
Activities

David Himes

11/15/2009



Science On A Sphere Development Overview

Software

Web Site

Content Library

New Site Installations



Release 3.2.7

(current release)

- SphereCasting
- Play list validation
- Geo-referenced PIPS
- MPEG playback improvements
- Wii remote control
- New Alignment Interface

What Is SphereCasting?

- Remote Lectures For SOS Sites
 - Subject matter expert gives SOS presentation using local SOS
 - Audio and possibly video are broadcast out to each participating site using either Internet video or phone lines
 - Remote SOS systems are controlled by the presenter
 - Gives SOS sites access to offsite experts
 - Special presentations for patrons
 - Training opportunity for museum staff

A topographic map of the Earth, showing continents and oceans. The map uses a color scale where green and yellow represent lower elevations, and brown and white represent higher elevations. The map is centered on the Atlantic Ocean, with North and South America on the left and Europe and Africa on the right. The background is a light blue gradient.

Play List Validation

- Given a play list
 - Checks to ensure data is local
 - Automatically downloads missing data

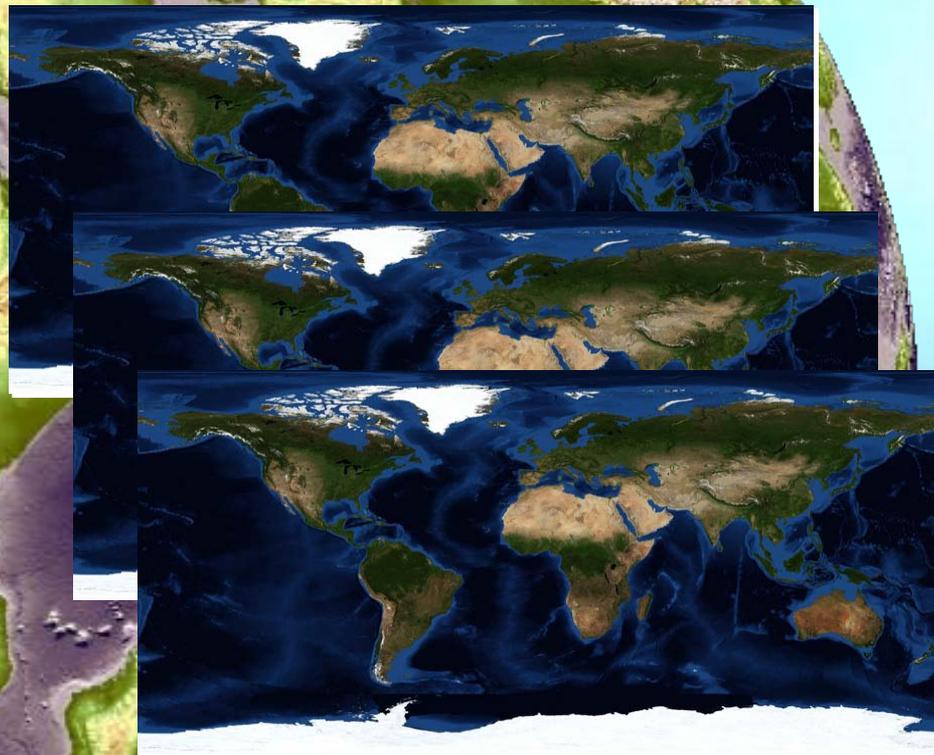
Geo-referenced PIPS

- New PIP styles
 - Projector
 - Room
 - Globe



Cylindrical Images In MPEG Containers

- MPEG is recommended format
- Full Earth view in one file
- MPEG gives best playback performance
- Easy to create with Linux tools
- MPEG gives good storage utilization
 - under 50GB for entire library





Remote Controls

- ATI remote is only supported on RH4
- All new development will be for the Wii
- Dropping ATI support in next release
- All sites should move their presenters to the Wii

What's In Store After Release 3.2?

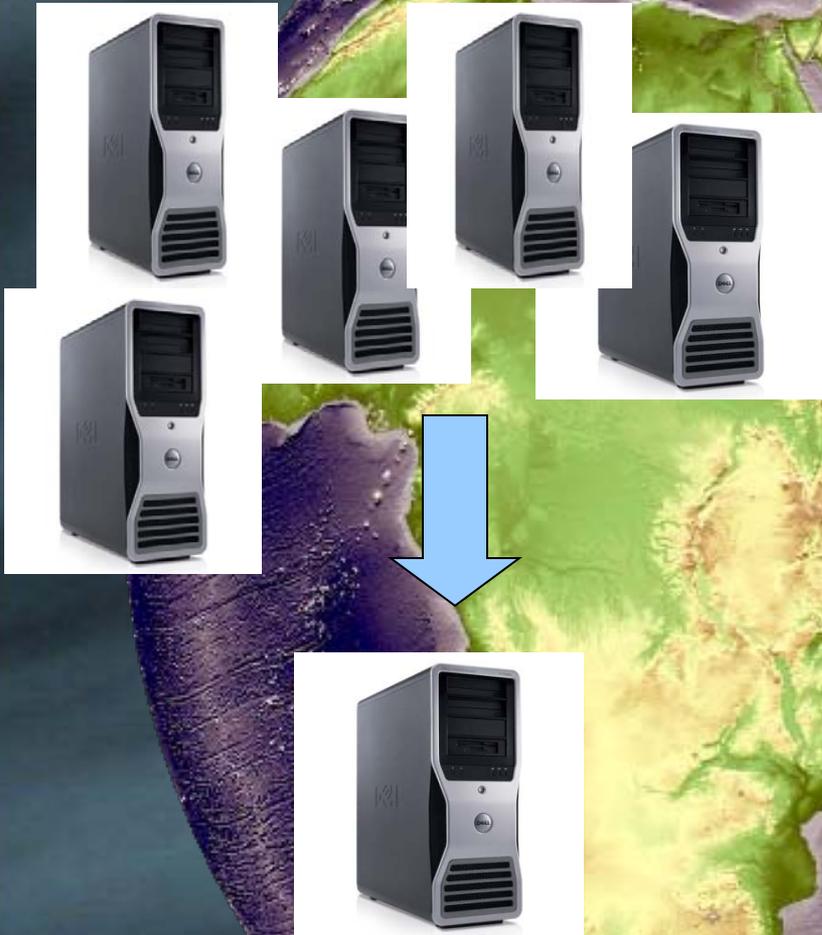
- Google Earth KML support
- Auto-download of new content
- Single computer SOS
- Wifi enhancements
- Closed Caption
- SOS screen capture
- Alignment software improvements
- Improved edge blending
- Efficiency improvements

Google Earth KML Support



- NOAA / Google MOU signed in 2009
- Limited KML support
- Ability to read and display KML
- Layers, sprites, labels, and so on
- Not sure how far we can go

Single Computer SOS



- Reduced hardware footprint
- Five computers down one
- One computer with three video cards
- RedHat to Ubuntu

Auto Content Download

NOAA Server

Auto
Download



- Content scheduled to download automatically
- Local customization
- Easy play list configuration
- Some user notification (recently added play list?)



Wii Enhancements

A topographic map of the Earth, showing continents and oceans. The landmasses are colored in shades of green and yellow, indicating elevation, while the oceans are dark blue. The map is centered on the Atlantic Ocean, with North and South America visible on the left and Europe and Africa on the right.

- More intuitive interactions for rotations
- On screen menus
- Looking for suggestions...

Efficiency Improvements



- Continued performance improvements
- OpenGL shaders
- Optimized display pipeline

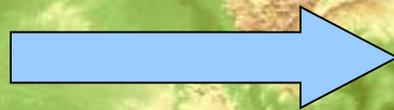
Content Library

Many new data visualizations

KML files for some SOS visualizations



SOS Library



New real-time visualizations

Earthquakes, sea-ice, forecast models, etc



Web Site Additions

- Improvements to the primary support pages
- Flash how to videos
- Facebook -- be a fan of SOS

Setup and Installations

- It was a busy year for installations
- 18 new installations since July 2008
- Plus 5 traveling/ temporary exhibits



Questions / Comments?

The End