

Science On a Sphere® (SOS)

Technical Innovation
and Network Growth

Keith Searight

CIRA

Performing work for ESRL/GSD

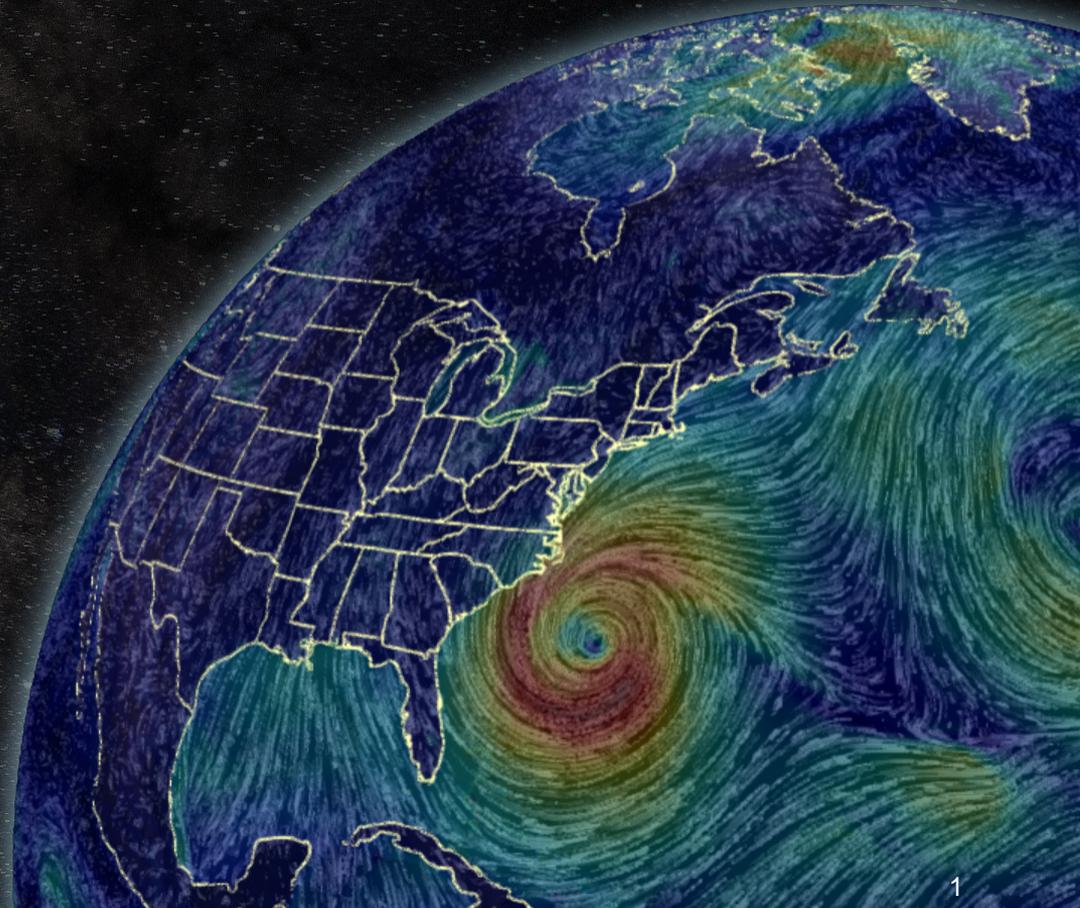
Shilpi Gupta

CIRES

Performing work for ESRL/GSD



GSD Science Review
3-5 Nov 2015



SOS Introduction

NOAA's most impactful outreach tool
for public science education



128 Sites
Installed



0.5 TB Data
Distributed/Day



68" Sphere, 4 Projectors, 1 Linux Server, 1 iPad



2.6K Web
Visits/Day



30K Likes



NOAA's #1 Award



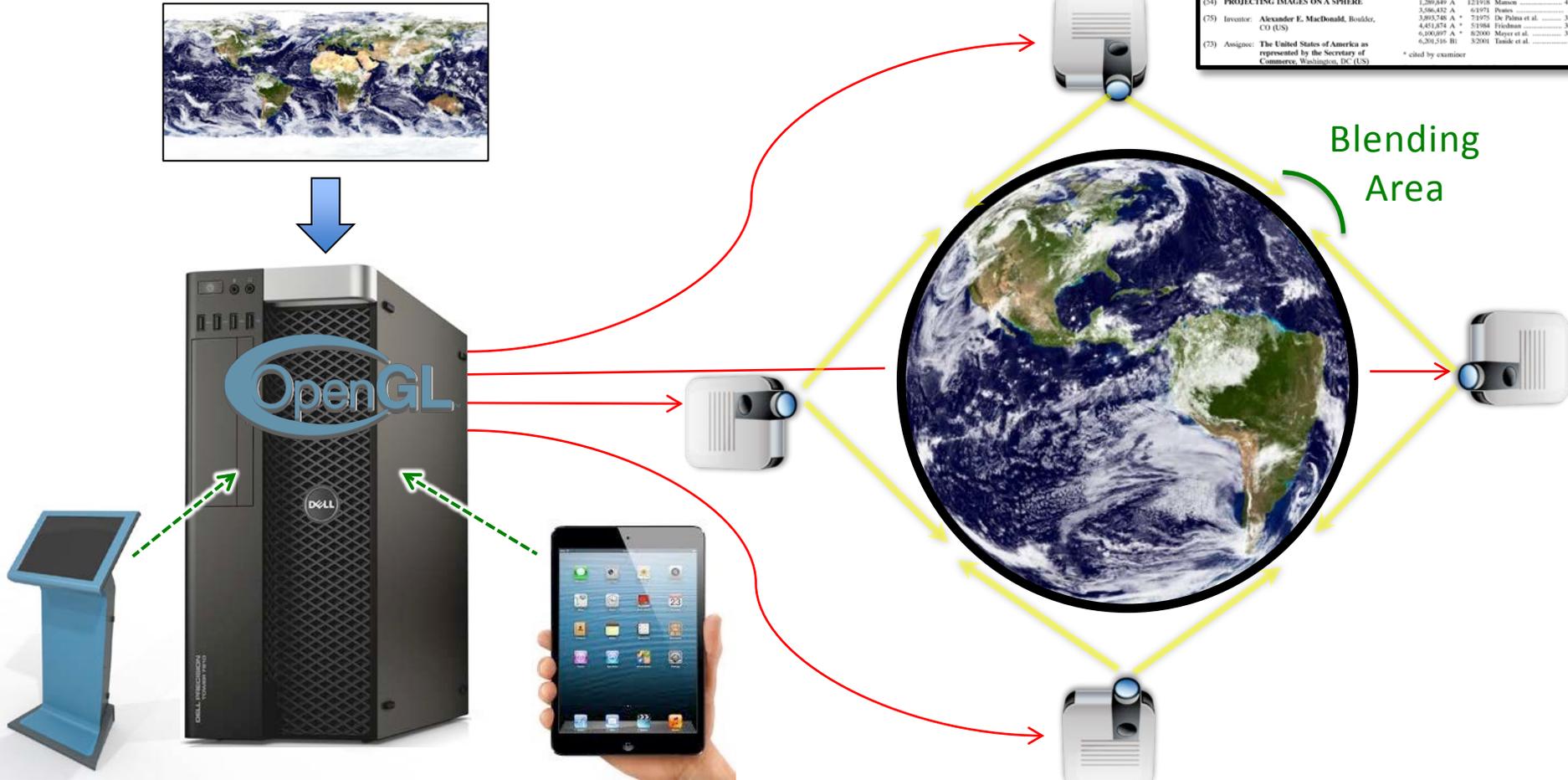
\$1.20 Stamp



100 Most Influential

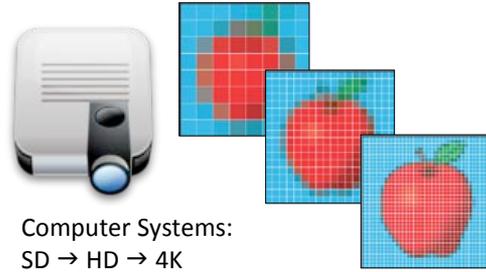
Unique Patented Technology

(12) United States Patent MacDonald	(10) Patent No.: US 6,937,210 B1
	(45) Date of Patent: Aug. 30, 2005
(54) PROJECTING IMAGES ON A SPHERE	1,289,849 A 12/19/18 Mason 434/31
	3,586,432 A 6/19/71 Davies 353/74
(75) Inventor: Alexander E. MacDonald, Boulder, CO (US)	3,893,548 A * 7/18/75 De Palma et al. 319/455
	4,451,874 A * 5/19/84 Fishman 362/285
	6,590,897 A * 8/25/00 Meyer et al. 345/426
(73) Assignee: The United States of America as represented by the Secretary of Commerce, Washington, DC (US)	6,205,516 B1 3/20/01 Tanaka et al. 345/7
	* cited by examiner



Technical Innovation: Examples Since 2010

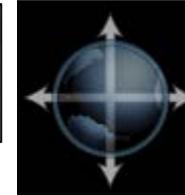
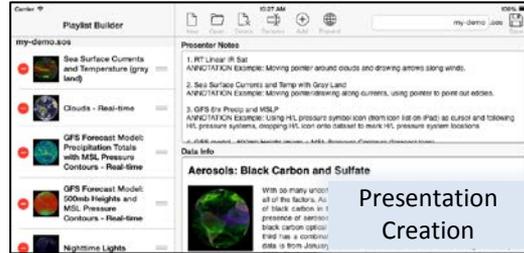
Hardware:



Controller:
Wii → iPad



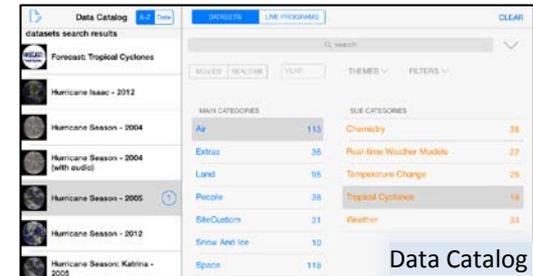
Software:



Interactive Display Tools



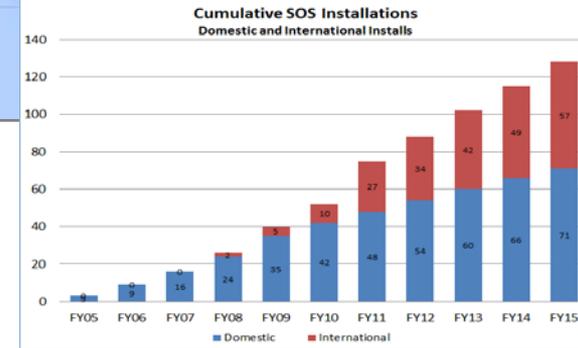
Content:



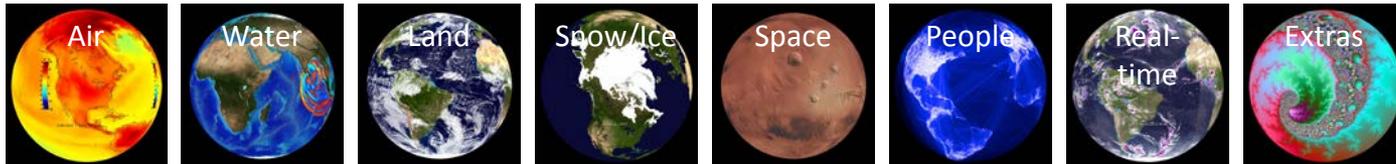
SOS Growth and Reach

- 128 Science On a Sphere® (SOS) installations worldwide in:

Museums	Visitor Centers
Aquariums	Labs
Schools/Univ.	Zoos



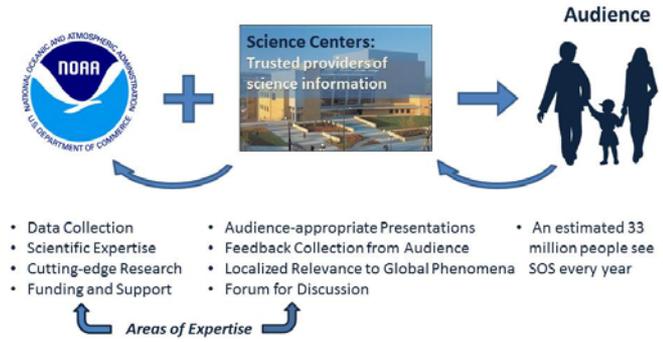
- 71 Domestic in 29 States
- 57 International in 22 Countries
- 33 million viewers per year
- Technology transferred by 12 distributors worldwide
- SOS Data Catalog contains 500+ freely available datasets:



The SOS Network

- **SOS Network:** institutions with SOS and partners creating and sharing content and educational programming for SOS
 - Build capacity of presenters
 - Provide guidelines for good SOS content
 - Evaluate the effectiveness of SOS
- **SOS Education Webinars** held quarterly
- **SOS Users Collaborative Network Workshops**

The Ideal Partnership



Live SphereCast of NOAA scientist on SOS to SOS workshop participants

The Value of SOS

- Support NOAA's goal to enhance **environmental literacy**
 - Engage audiences of all ages
 - Build public understanding of diverse topics
 - Foster appreciation for the interconnectedness of the planet
- Excellent **collaboration and outreach** opportunities
- Discovering **innovative** ways to use SOS
- **Network surveys** *:
 - **82% of visitors** stated that seeing information on the sphere is more realistic and changed how they understood the information
 - **87% of visitors** who had a facilitated sphere experience reported learning something new

	Very Good	Excellent
Knowledge	✓	✓
Engagement	✓	

* *Science On a Sphere®: Cross-Site Summative Evaluation, Sept. 2010*

