

Open Access, and more ...

The background of the slide is a classical painting titled 'Blind Orion Searching for the Rising Sun' by Nicolas Poussin. It depicts a blind man, Orion, with a monkey on his shoulders, walking through a landscape towards a bright light in the distance. The scene is filled with trees and a cloudy sky.

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Blind Orion Searching for the Rising Sun. Nicolas Poussin (1594–1665)

"If I have seen a little further it is by standing on the shoulders of Giants." Bernard of Chartres (12th century),
Isaac Newton (17th century)

How Am I Supposed To:

- repeat other scientists' experiment without their
 - data,
 - algorithm, and
 - model?
- allow other scientists to repeat my experiment if I do not provide my
 - data,
 - algorithm, and
 - model?

Why Do We Only Publish Papers?

- (old) reward system!
 - Journal papers
 - Conference papers
 - Workshop papers
 - Invited talks
 - Citation indices
- (new) reward system?
 - **All that +**
 - Data
 - Algorithms
 - Models
 - Videos
 - Lectures

How Do We Accelerate The Pace and Depth of Discovery?

- Make a few cultural changes
 - New reward system
- Use the Internet to remove the cost of disseminating information by print
- Solve a few technical problems
 - On-line vs. off-line
 - Database storage vs. file storage
 - Metadata
 - Ontologies
 - Semantic Web

Sample Open Data Projects

- The Human Genome Project
- Open Data Consortium on geospatial data
- Open Chemistry project
- Open Knowledge Forums on open data in civic information and geodata
- Open Data in Crystallography
- XML, OWL, ...
- Earth System Curator

Earth System Curator

<http://www.earthsystemcurator.org>

- NSF Funded
- National Center for Atmospheric Research
- NOAA Geophysical Fluid Dynamics Lab
- MIT
- Georgia Tech (Spencer Rugaber, Leo Mark, Rocky Dunlap)

Earth System Curator - Goals

- Provide a transparent interface to climate simulations and their data
- Allow researchers to archive and query Earth system models, experiments, model components, and model output data
- Auto-generate component wrappers for multiple climate model integration
- Run models locally or on computational Grid
- Encourage Curator-like activity in other domains

Questions?

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