

Exploratorium.edu on Internet2

• Deb Hunt

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About the Exploratorium

Museum of Science, Art, and Human Perception

- Over 500 interactive exhibits
- Educator professional development programs
- ExNet museum partners
- <http://www.exploratorium.edu>



What is Internet2?

Internet2 is a university-led effort to develop advanced network applications for research and education, mostly via the Abilene Network. Abilene complements and peers with other high-performance research networks in the U.S. and internationally.

The Abilene Network

The Abilene Network supports the development of applications such as:

- virtual laboratories
- digital libraries
- distance education
- tele-immersion
- advanced networking capabilities

Over 25,000 K–12 schools and most large universities are connected to the Internet2 Abilene network.

Exploratorium on I2

- Connection made possible through the generosity of the National Science Foundation and the Corporation for Education Network Initiatives in California (CENIC)
- 100 Mbps connection to CENIC's CalREN (California Research and Education Network) Digital California network
- Networked locations: Webcast Studio, Learning Studio/Library, Microscope Imaging Station, conference rooms, individual workstations
- Internet2 Gateway: <http://www.exploratorium.edu/i2>

The background features a dark space filled with vibrant, flowing light trails in shades of red, orange, yellow, green, and blue. On the left side, there is a large, semi-transparent, lens-like shape that refracts and distorts the light trails behind it, creating a sense of depth and focus.

High Performance Network Activities

What are we doing?

- Webcasting
- Microscope Imaging Station
- Remote Collaboration
- Sharing Digital Collections





Webcasting

Webcasting

- We provide high-resolution video in multiple formats, including Real Player, Windows Media, Flash, and soon in MPEG2 Multicast
- We do a about 25 live events per year
- <http://www.exploratorium.edu/i2>

Microscope Imaging Station

A microscopic image showing a cell with a large, prominent nucleus. The nucleus is roughly spherical and contains a dense, granular chromatin structure. The surrounding cytoplasm is lighter and less dense. The cell is viewed through a circular field of view, likely from a microscope.

Microscope Imaging Station

- Research-grade microscopes in a museum setting
- Website provides high-resolution images & video:
www.exploratorium.edu/imaging_station
- Developing virtual microscope and classroom activities
- Planning live demonstrations and remote operation



Remote Collaboration

Remote Collaboration

- Project collaboration and public programs connecting museums, universities, research facilities, and K12 schools
- Center for Informal Learning and Schools: Exploratorium, King's College London & UC Santa Cruz
- Professional Development: Teacher Institute and Institute for Inquiry

Digital Collections



Digital Library

- So many resources! How does a teacher make sense of it all?
- Exploratorium Digital Library allows educators to search and browse our collections according to subject, grade level, resource type, etc. (We are working on aligning to standards.)
- <http://www.exploratorium.edu/educate/dl.html>

Future Directions



Future Directions

- Study use of Exploratorium resources by schools, universities, museums, libraries, and other partners with access to advanced networks
- Explore advanced videoconferencing applications
- Refine media production and project planning
- Develop new exhibits, Web resources, and museum programs that make use of advanced networks

Is your school on I2?

You can use the Internet Detective
<http://detective.internet2.edu/>
to see if you have I2 connectivity at
your school

More I2 Resources

- Internet2
<http://www.internet2.edu/>
- Internet2 K20 Initiative:
http://k20.internet2.edu/projectfinder_index.php
- Internet2 Resources:
<http://k20.internet2.edu/resources/index.html>

Is anyone here on I2?

What resources do you use?

What would you like to have made available to you or your teachers and students?

Questions? Comments?

You can view this PowerPoint at:

<http://www.exo.net/dhunt/IS2005/>

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