

The logo for SAGE2 features the word "SAGE" in a bold, green, sans-serif font, followed by a large, black, stylized number "2". A small "TM" trademark symbol is positioned to the upper right of the "2".

SAGE²™

10th Annual Birds of a Feather
Meeting - 2018



Laboratory for Advanced Visualization & Applications

University of Hawai'i at Mānoa & Hilo

Jason Leigh, Dylan Kobayashi, Francis Cristobal, Jared McLean

Electronic Visualization Laboratory

University of Illinois at Chicago

Maxine Brown, Luc Renambot, Lance Long,
Arthur Nishimoto, Krishna Bharadwaj, Andrew Burks



SAGE in 2005



SAGE2TM

SAGE2 User Community 2018

96 Sites: 45 International + 51 National

AUSTRALIA

- Monash University
- RMIT, (VX)Lab
- University of Sunshine Coast (3)
- University Southern Queensland
- University of Technology Sydney

BRAZIL

- Bahia School Med. & Public Health
- Catholic University of Salvador
- Federal University Paraíba, LAViD
- Federal Univ. Rio Grande do Sul
- Mackenzie University, LabCine
- National Institute of Space Research
- RNP, Rio de Janeiro (2)
- University of Campinas, Cinema
- University of Sao Paulo, LARC
- University of Sao Paulo, LASSU (2)

CANADA

- Ciena Research Labs
- Simon Fraser University, IRMACS

CHINA

- Tianjin University of Technology

CZECH REPUBLIC

- CESNET and Czech Technical Univ.
- CESNET, Mobile SAGE
- Masaryk University, Cyber-Exercise & Research Platform Proj.
- Masaryk University, Lab of Adv. Networking Technologies (2)
- Mavenir, Network Ops Center

FRANCE

- INRIA, ILDA

ITALY and SWITZERLAND

- University Urbino and ETH Zürich

JAPAN

- National Institute of Advanced Industrial Science & Technology (2)
- NTT Network Innovation Labs
- Osaka Univ., Cyber Media Center

KOREA

- Gwangju Institute of Science & Tech
- KISTI, KREONET Center

NETHERLANDS

- Air France-KLM, CIO Tech Office
- SURFsara, Collaboratorium
- University of Amsterdam, SNE

NEW ZEALAND

- REANNZ

SOUTH AFRICA

- University of Cape Town, Informatics and Visualisation Lab

TAIWAN

- National Center for High-performance Computing
- National Chung Hsing University
- National Museum of Marine Science and Technology

UNITED KINGDOM

- Imperial College London

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UNITED STATES

- Adler Planetarium
- Argonne National Laboratory, ALCF
- Caterpillar Inc.
- Catherine Cook School
- Chaminade Univ. of Honolulu (2)
- Digital Manufacturing and Design Innovation Institute
- Hawaii State Energy Office
- Honolulu Community College
- Jackson State University, ECE
- Kamehameha Schools
- NASA Marshall Space Center, SPoRT
- Northern Illinois University
- Northwestern University, iCAIR
- Stanford University, HIVE
- University of Alaska Fairbanks

- Univ. of Calif, Merced
- Univ. of Calif, San Diego, Calit2-QI
- Univ. of Calif, Santa Cruz, CITRIS/Banatao Institute
- University of Chicago, RRC
- Univ. of Florida Gainesville, ACIS
- University of Hawai'i at Hilo (3)
- University of Hawai'i at Mānoa, Applied Research Laboratory
- University of Hawai'i at Mānoa, Data Science Institute
- University of Hawai'i Mānoa, HIGP
- University of Hawai'i at Mānoa, Information Technology Center
- University of Hawai'i Mānoa, i-LAB
- Univ. of Hawai'i at Mānoa, LAVA (3)

- University of Hawai'i at West Oahu, Academy for Creative Media
- University of Illinois Chicago, ACM/LUG Student Chapters
- University of Illinois Chicago, Communication Dept.
- Univ. of Illinois Chicago, EVL (5)
- University of Illinois Chicago, Engineering Maker Space
- University of Illinois at Chicago, Innovation Center
- University of Illinois at Chicago, Learning Sciences
- University of Illinois at Chicago, Ophthalmology
- University of Illinois at Chicago, Pathology (2)

- Univ. Illinois Urbana-Champaign, NCSA
- University of Maryland, Baltimore County, ARC
- University of Oregon, Library
- Univ. of Pennsylvania, Idea Factory
- University of St. Thomas

SAGE2 User Sites 2018 Examples

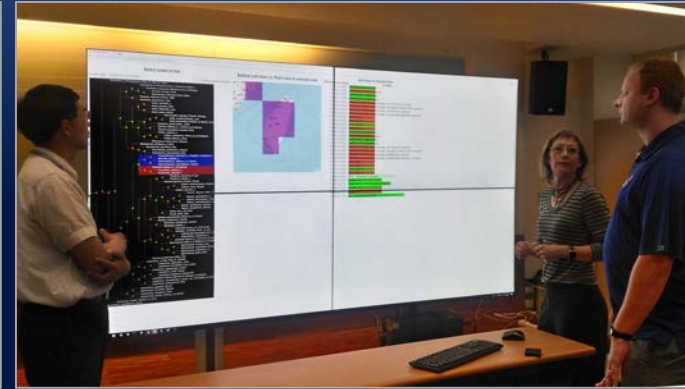
International



FRANCE, INRIA,
Interacting with Large
Data/Human-Centered
Computing (ILDA)



KOREA, KISTI,
KREONET Center



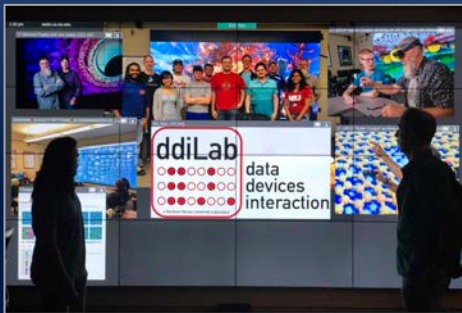
TAIWAN, National
Museum of Marine
Science and Technology

SAGE2 User Sites 2018 Examples

National



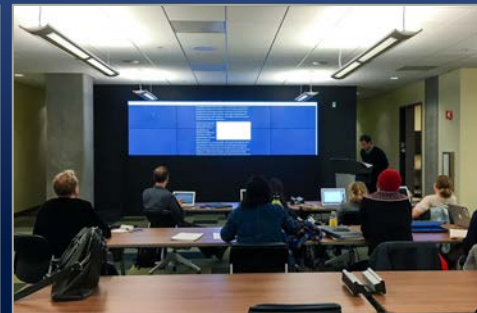
USA, Honolulu Community College



USA, Northern Illinois University



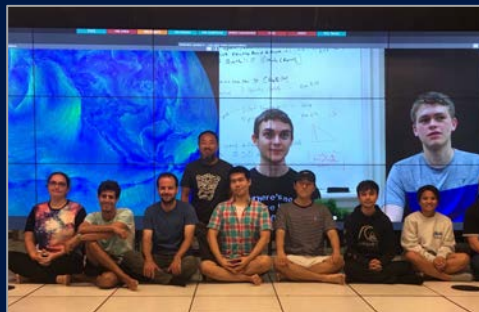
USA, Univ of California, Merced



USA, Univ of California, Santa Cruz, CITRIS/Banatao Institute



USA, University of Chicago



USA, University of Hawai'i at Mānoa, Data Science Institute



USA, University of Illinois at Chicago, Learning Sciences

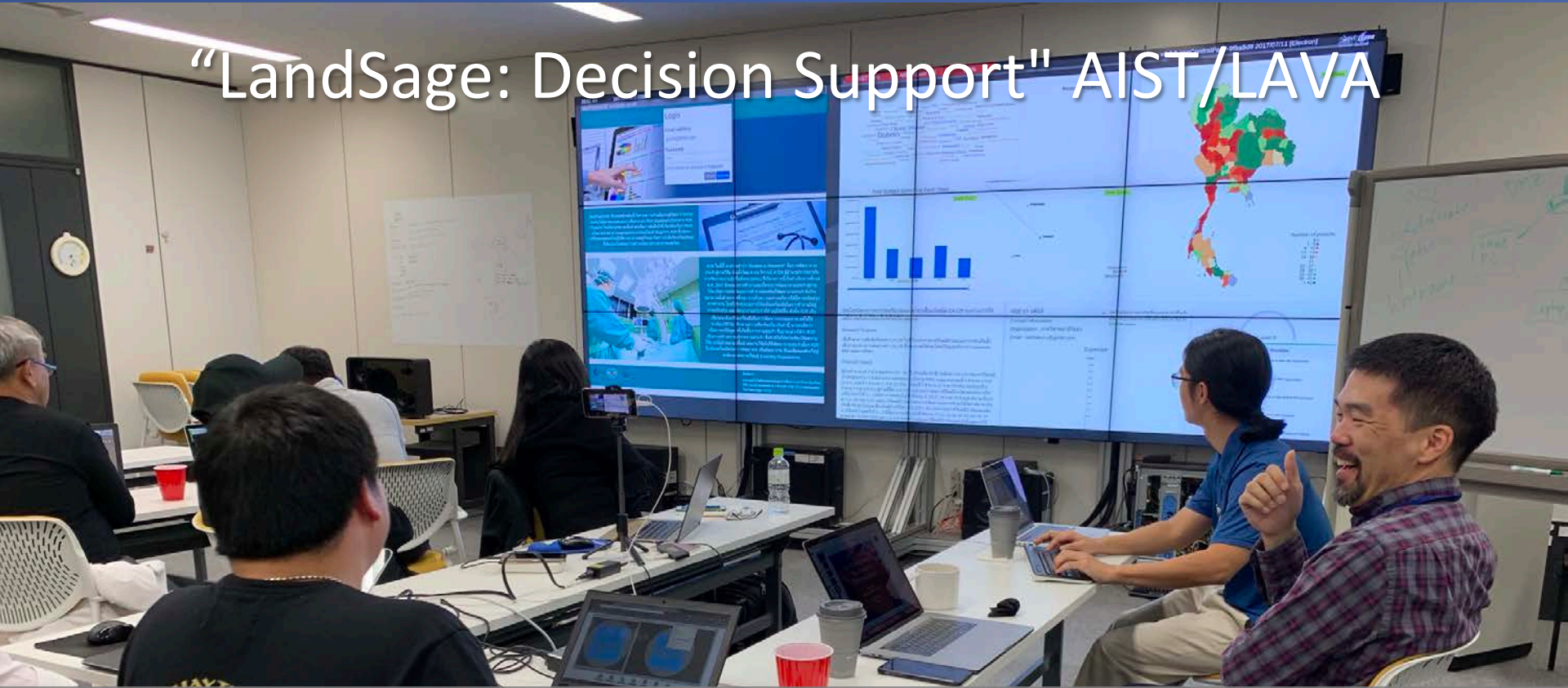


USA, University of St. Thomas

www.sagecommons.org

SAGE BOF 2018

"LandSage: Decision Support" AIST/LAVA



AIST (Japan) and LAVA (UHawaii) are funded by the Trans-Eurasia Information Network (TEIN) for the "LandSage: Decision Support" project, focused on monitoring and mitigating natural disasters in Southeastern Asia using CyberCANOE/SAGE2 visualization systems. AIST hosted a kickoff workshop on October 29-31, 2018 with partner institutes in Thailand, Vietnam, Laos, and Cambodia. TEIN aims to increase cooperation between European and Asian countries by connecting universities and research institutions with high-capacity networks, <http://www.tein-nsl.org/> www.sagecommons.org

Taiwan's NMMST* First Uses New Mobile SAGE2 Wall for Lifemapper Tutorial and Lecture



* National Museum of Marine Science & Technology

• <http://sage2.sagecommons.org/2018/05/03/new-sage2-mobile-wall-at-taiwans-nmmst-first-used-for-lifemapper-tutorial-and-lecture/>

SAGE BOF 2018

www.sagecommons.org

Bringing the Hawaiian Islands Closer Together

The CyberCANOE* Club, November 27, 2017



- * Cyber-infrastructure enabled Collaborative Analysis Navigation and Observation Environment
- <http://sage2.sagecommons.org/2017/11/28/cybercanoe-club-provides-forum-for-hawaiians-to-collaborate-and-share-best-practices-regarding-tiled-displays-and-sage2/>

SAGE BOF 2018

www.sagecommons.org

Bringing Illinoisans Closer Together

Chicagoland Training, April 13, 2018

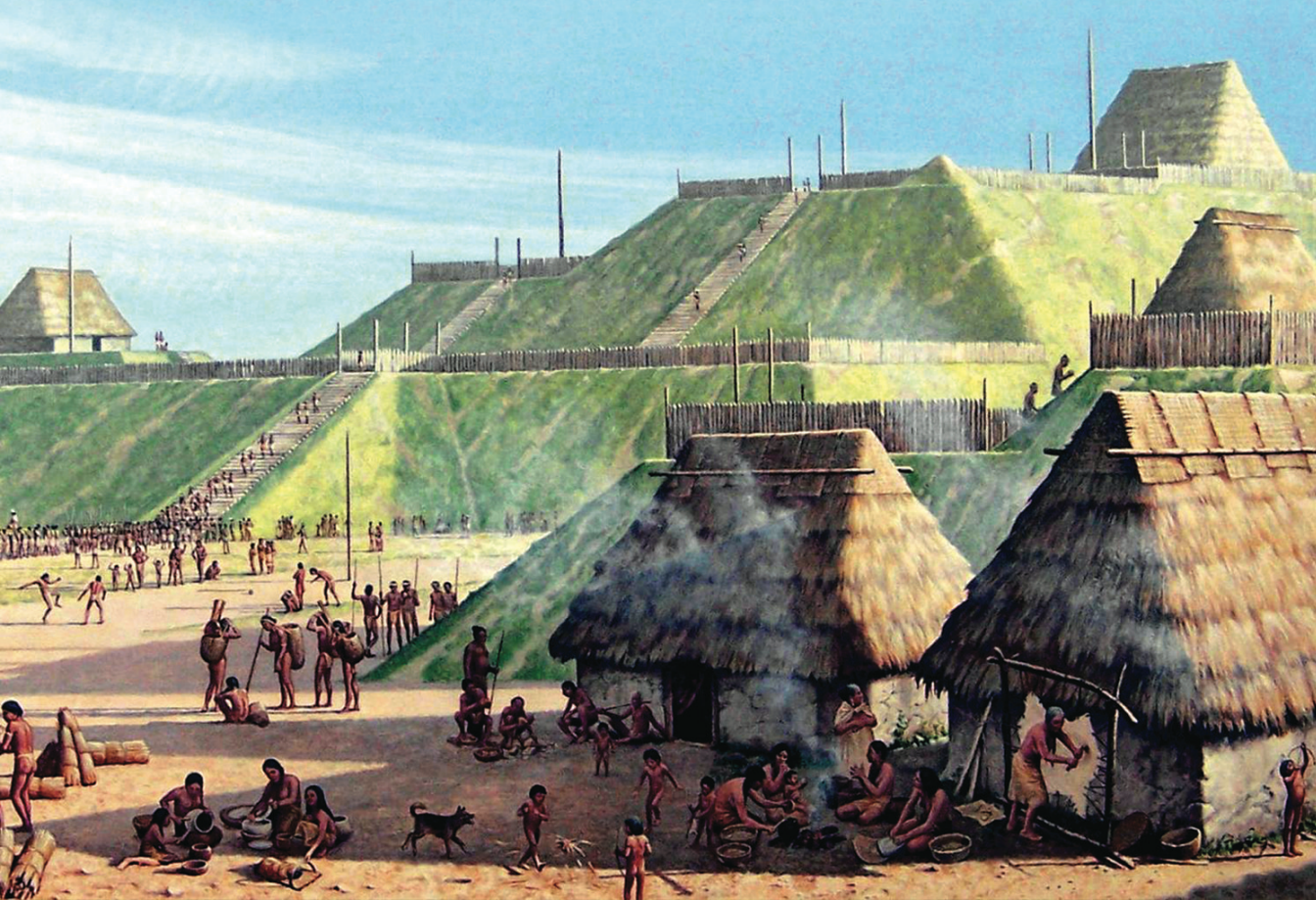


<http://sage2.sagecommons.org/2018/04/13/sage2-chicagoland-training-session/>

SAGE BOF 2018

www.sagecommons.org

New Release V4 'Cahokia'



cahokiamounds.org

www.sagecommons.org

Performance Improvements

- Hardware accelerated playback for smooth multiple 4K videos
- Desktop sharing now uses WebRTC for responsive interactivity
- Improved the speed of pointer for more interactive experience
- Better Web Apps integration with Webview

Quick Notes with Editor and styling



Dylan @ Nov 9th, 10:24 AM

h1 Heading

h2 Heading

h3 Heading

h4 Heading

Emphasis

Emphasis, aka italics, with asterisks or underscores.

Strong emphasis, aka bold, with asterisks or underscores.

Lists

Unordered list can use asterisks

- Or minuses
- Or pluses

Ordered list uses number

1. First ordered list item
2. Another item
3. Actual numbers don't matter, just that it's a number

Links

There are two ways to create links.

I'm an inline-style link

or just write a link <http://www.google.com>

Code

Inline code has back-ticks around it.

Blocks of code are either fenced by lines with three back-ticks:

```
var s = "Code" +  
"formatting" +  
"section";  
alert(s);
```

Write a Quick Note (text or markdown)

Note

Syntax

Anonymous

Color



Note

```
# Example  
* todo item 1  
* todo item 2  
* todo item 3
```

Close [ESC]

Make Note [Shift+Enter]

SAGE2's JupyterLab Extension

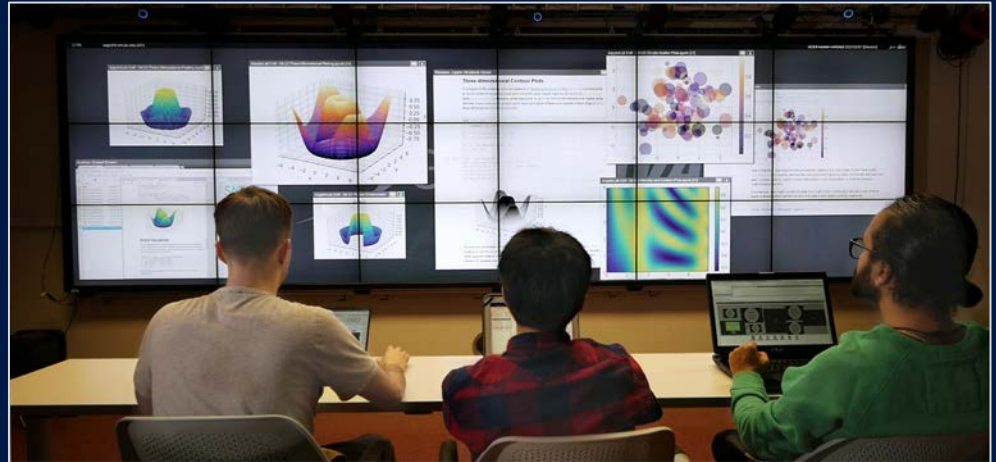
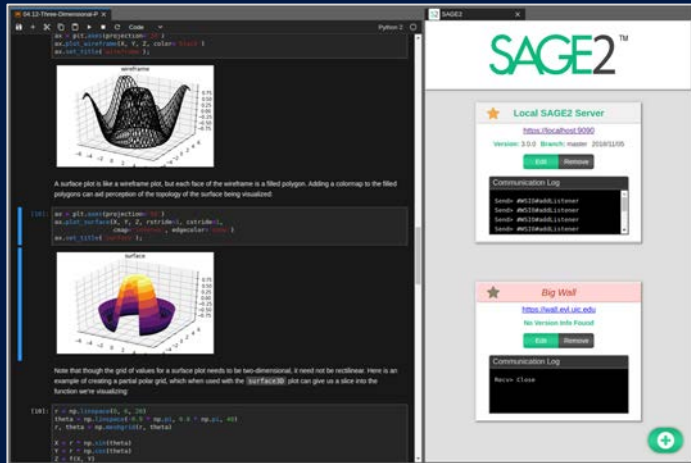


Andrew Burks (UIC)

- Why
 - Computational Notebooks are becoming popular, specifically Jupyter Notebooks
 - Exploratory analysis in notebooks can be further supported by large screen real estate provided by SAGE2
- How
 - **We developed an extension to the JupyterLab computational environment to closely integrate Jupyter notebook analyses into SAGE2 workspaces**

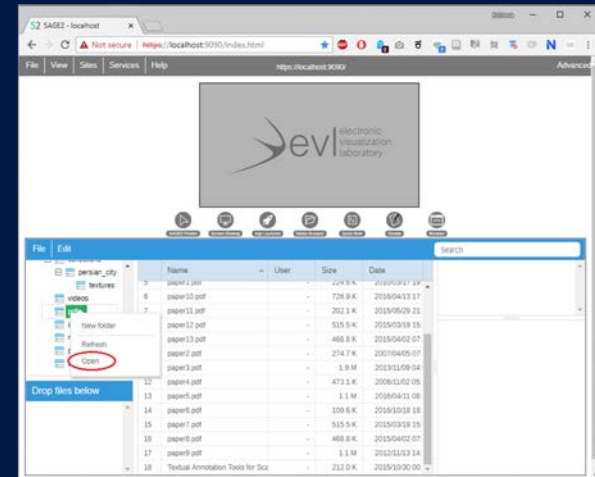
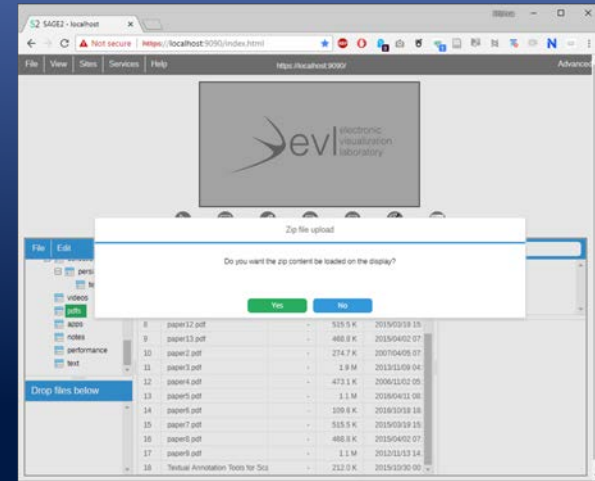
SAGE2's JupyterLab Extension

- Features
 - Dynamically share plots from Jupyter Notebooks to SAGE2
 - Share entire notebooks, rendered with **nbview** service
 - Simultaneously connect to multiple SAGE2 instances



Asset Management

- Enhancements to the SAGE2 asset manager to handle collections
- Drag/drop a ZIP file of documents and display the contents to the wall: PDFs, images, videos, ...
- Open a whole collection at once
- Useful for lectures, demonstration, impromptu meeting

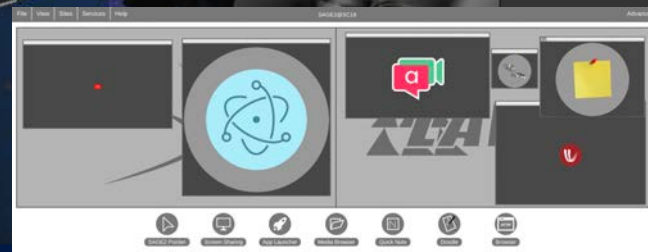


SAGE2 Unity3D

Drag-and-drop of zipped
Unity WebGL folder

Interact with Unity WebGL applications

Multiple SAGE pointers support



SAGE2 Identity Management and Security

- NSF supplement to SAGE2 NSF award
- Working with *TrustedCI* team at Indiana Univ.
- SAGE2 is a new kind distributed workflow with unique security challenges for Cyber Infrastructure
- Goal is to fully understand the complexity associated with SAGE2 distributed teams and user-centered design authentication and security model

Model for Cybersecure SAGE

<https://mm.tt/1173069736?t=V1SUCu36mn>



CILogon Test Integration

Welcome To The CILogon Op... x +

https://cilogon.org/authorize?response_type=code&scope=openid%20email%20profile%20org.cilogon.userinfo&client_id=cilogo...

CILogon

VM58b (SAGE2 Portal Delegation Prototype) requests access to the following information. If you do not approve this request, do not proceed.

- Your CILogon username
- Your name
- Your email address
- Your username and affiliation from your identity provider

Select An Identity Provider:

University of Hull
University of Iceland
University of Idaho
University of Illinois at Chicago

Search:

Remember this selection:

Log On

By selecting "Log On", you agree to [CILogon's privacy policy](#).

SAGE2 Central x +

Not Secure | https://vm58b.psc...

SAGE2 Launch Control

- Cyber Canoe (UH)
- Makani (UH)
- Pele (UH)
- EVL Classroom (UIC)
- EVL Meeting (UIC)



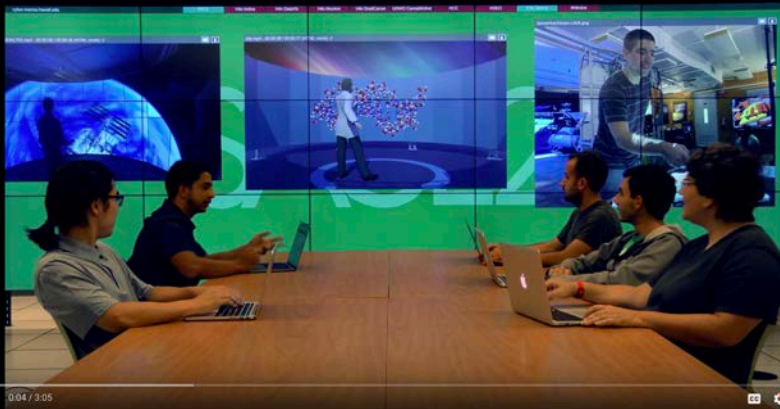
SC'18 Show Floor

- Booths
 - StarLight #2851
 - AIST #2409
 - Demo, tutorial, video
- SCInet 3 walls
 - SCInet Analytics, SCINews, and SC 30th anniversary booth



New Videos

- SAGE2 introduction
<https://youtu.be/Rmg9YnXLBsM>
- SAGE2 quick tips
<https://youtu.be/Dn-k7wAhY-I>





References



- Web
 - sagecommons.org
- Google group
 - <https://groups.google.com/forum/#!forum/sage2>
- Slack group
 - sage2.slack.com

NSF #OAC-1441963 SAGE2
NSF #OAC-1550126 CENTRA

NSF #OAC-1450871 StarLight SDX
NSF #CNS-1530873 MRI CyberCANOE