## GENI Update and Future Planning Process

Mark Berman mberman@bbn.com www.geni.net





### Welcome to Tempe!



#### Thank you to:

- Our hosts: Violet
   Syrotiuk and ASU.
- Our sponsors, Ciena and Matrix Integration.
- All of today's speakers, demo teams, and panelists.





### Speakers This Session



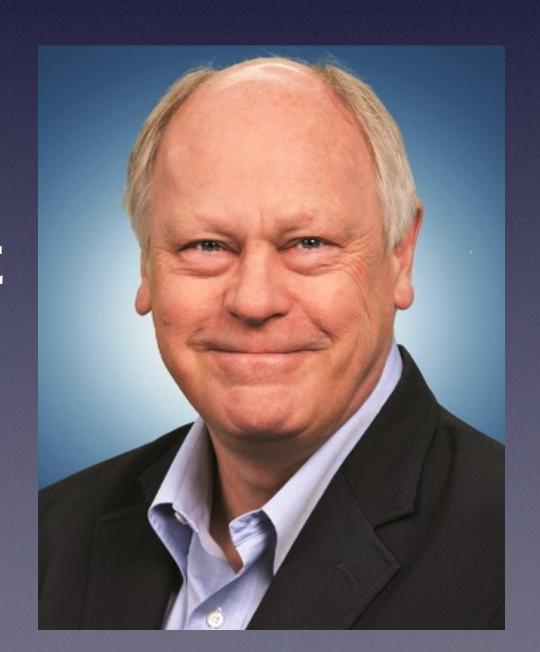
Sandeep Gupta ASU

Nancy Forbes
NITRD NCO



Chip Elliott
BBN





Jim Kurose NSF





### Welcome



Sandeep Gupta ASU





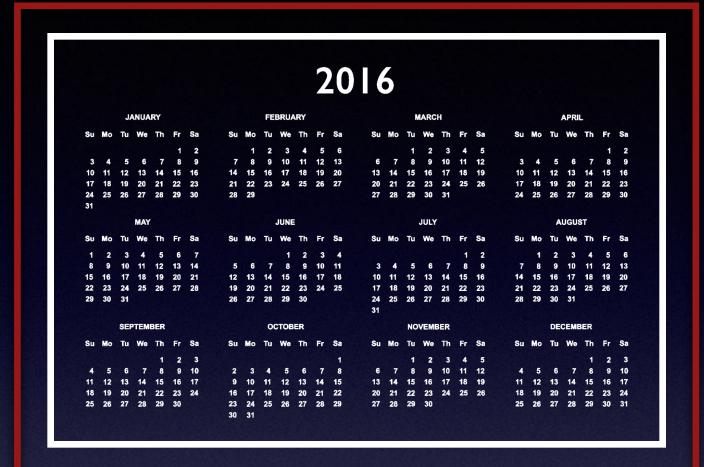




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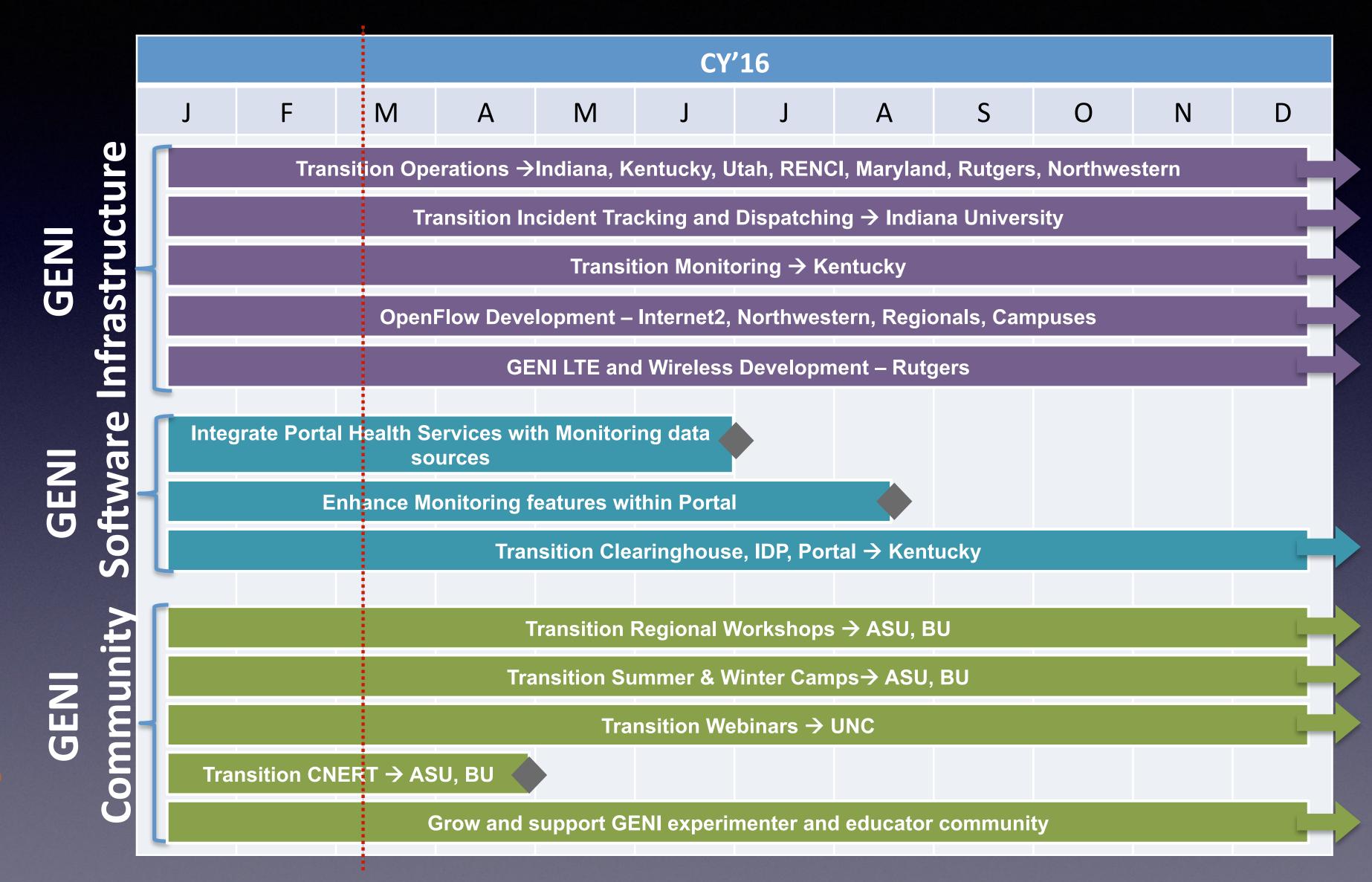


#### 2016 and 2017

- Ongoing research and development
- Operations and community engagement activities migrate from GPO to GENI community teams
- GPO continues in management role
- Explore, define, and implement transition to new oversight structure

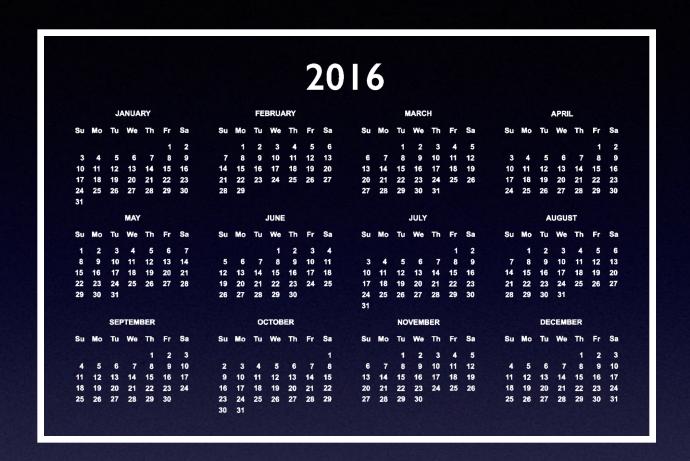
Focus on 2016 operations and engagement migration in transition session at 11:30.

#### Near-Term Transition Timeline









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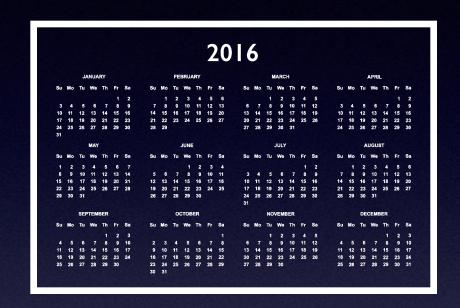
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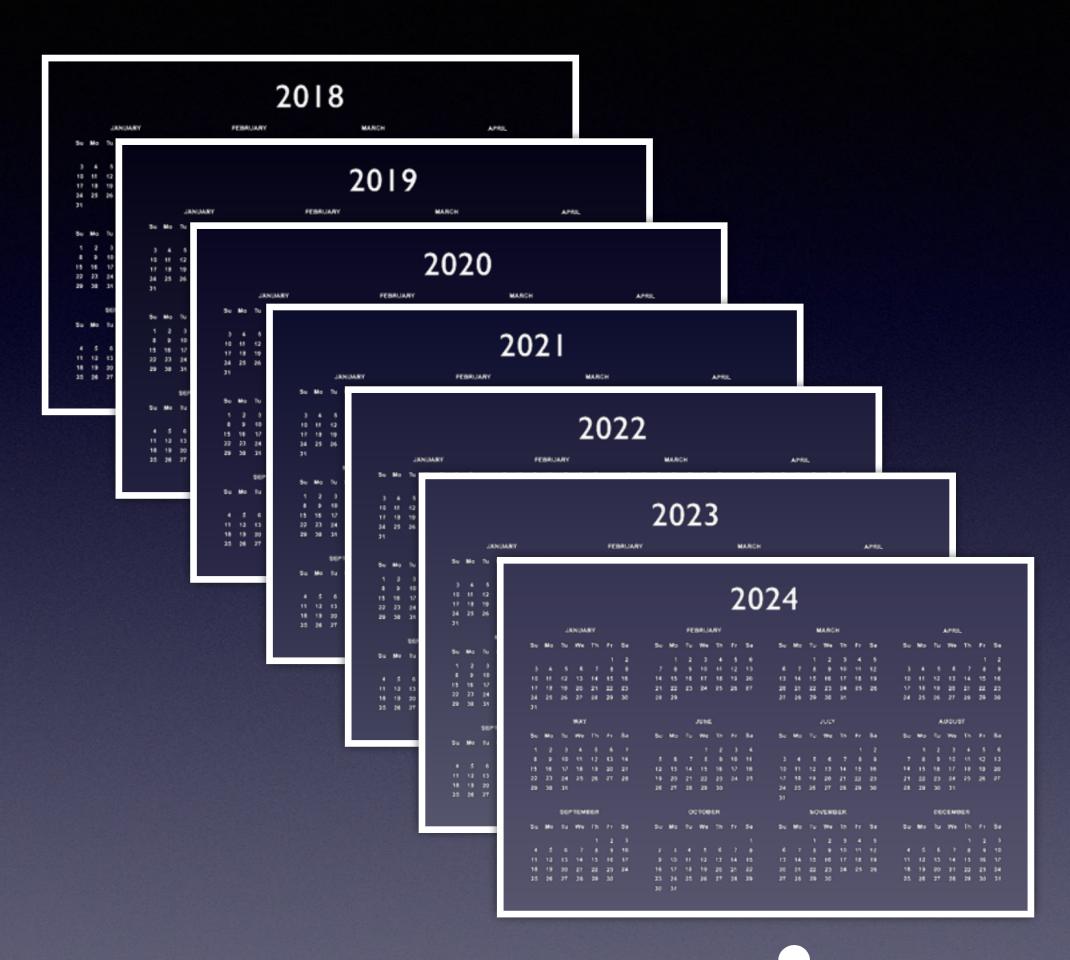
GENI 2018++

- GENI operations continue with support from NSF and others
- New oversight structure
- GENI technology prominent in new cyberinfrastructure programs

Discuss at long-term planning session, 3:30pm today.







"Looking Beyond the Internet"

• Current research trends, along with key GENI concepts are enabling new thrusts in research cyberinfrastructure.

Chip Elliott will give a brief update in a few minutes.





### Changes to GENI Community Events





### Changes to GENI Community Events

## GENI Engineering Conferences have become overloaded

#### Learning GENI

• Hands-on tutorials and intro

#### Using GENI

- Research & education exchange
- Demos & posters

#### Building & improving GENI

Collaborative design





### Changes to GENI Community Events

Regional Workshops (3-4 per year)



GENI Engineering
Conferences



#### Learning GENI

- Hands-on tutorials and intro
- Baltimore & Chicago 2015
- Tempe, March 7, 2016, exceeded our cap of 80 participants
- Want to host a workshop? Write to help@geni.net or ...

#### Using GENI

- Research & education exchange
- Demos & posters

#### Building & improving GENI

- Collaborative design
- Demos & posters
- GEC24, March 8-9, Tempe AZ



Ibrahim Matta (BU) and Violet Syrotiuk (ASU) lead regional workshop team



### Upcoming events





#### **GENI Tutorials**



Tutorial at 2016 Wireless @ VirginiaTech Symposium and Summer SchoolJune 1-3, 2016

Jay Aikat (UNC) presents GENI-based course modules at SIGCSE, March 4



Photo courtesy Maureen Doyle, Northern Kentucky University



Interested in leading a GENI tutorial? Speak to the GPO.



#### CNERT 2016

#### The International Workshop on Computer and Networking Experimental Research Using Testbeds





#### The third CNERT workshop

- April 11, 2016, San Francisco, in conjunction with INFOCOM
- Successor to GREE workshop series



#### ITC 28 Demo Session



ITC 28 in Würzburg is including a new demo paper session

- Not a GENI event, but an opportunity for demo-based presentation of networking research
- Paper registration deadline: March II (Friday!)



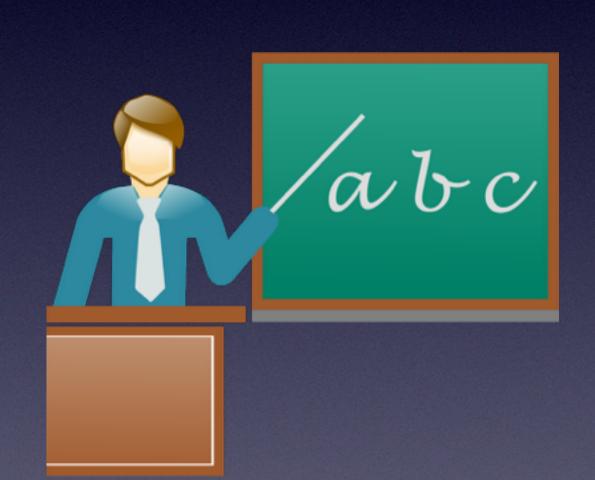


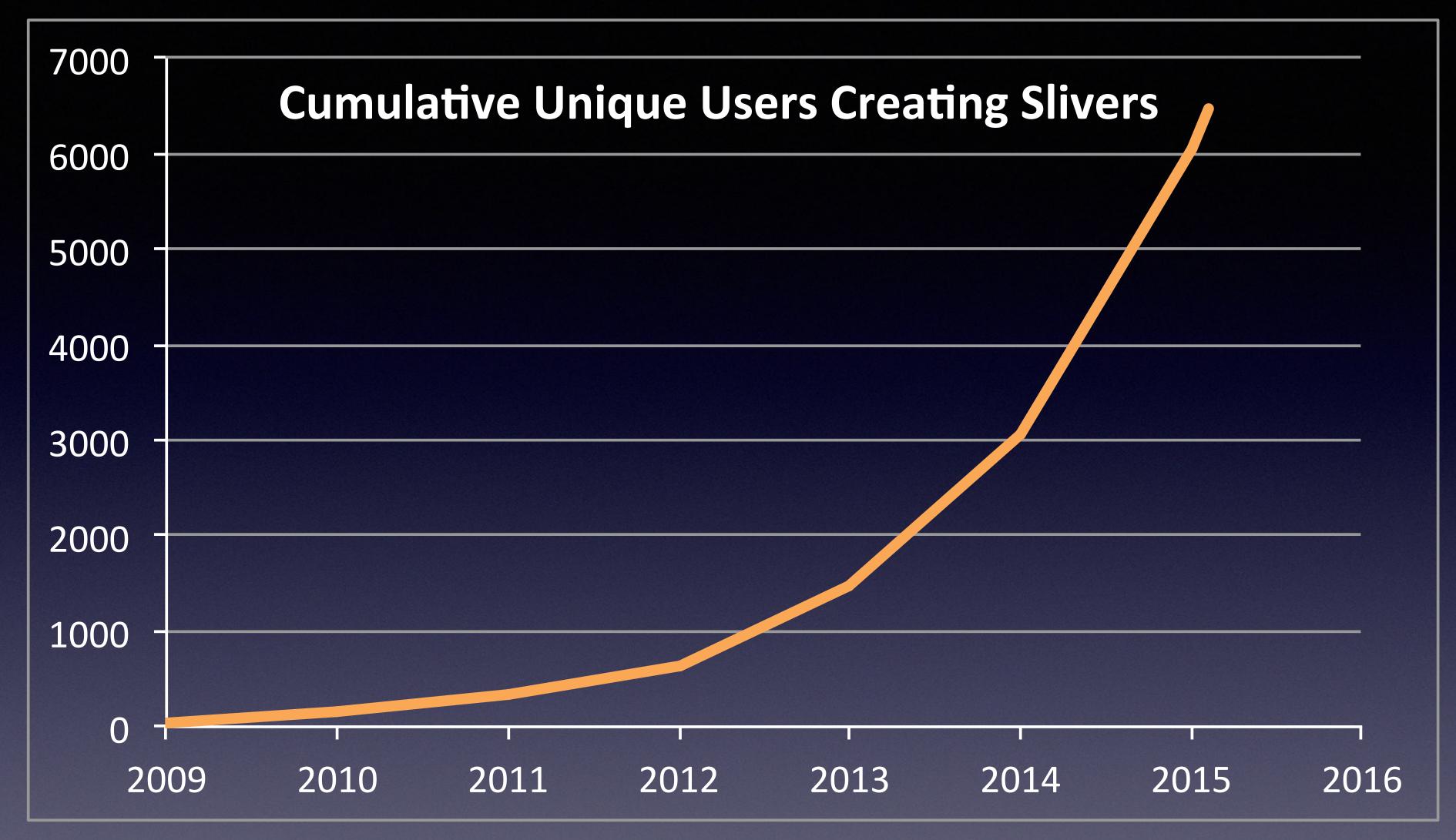
### GENI Usage Update

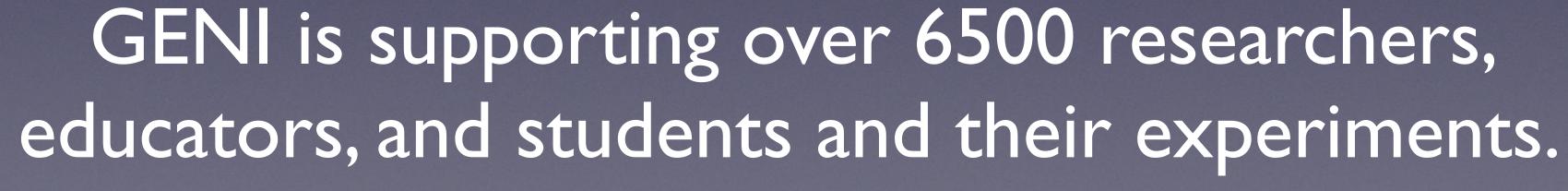
















### GENI Usage Patterns

Network research: future Internet architectures and protocols, cleanslate networking, IP-compatible and non-compatible experiments, cloud infrastructures, cellular wireless research

Computer science & STEM education: remote, distributed classroom laboratory, curriculum modules

Novel distributed app & service development: shared data applications, low-latency (locavore) and real-time interactions

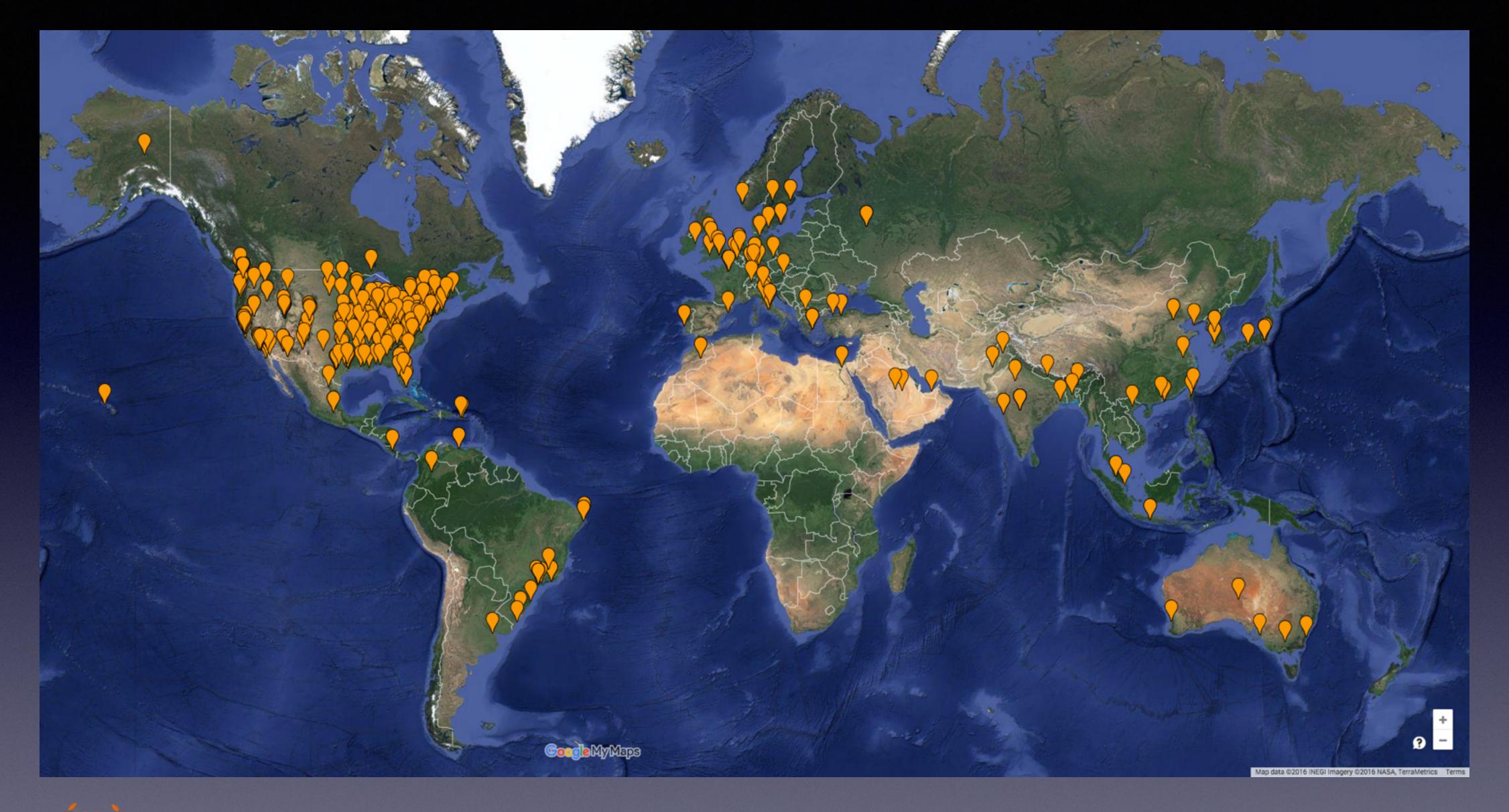
<u>Dynamic infrastructure</u>: software-defined exchanges & infrastructure (SDX/SDI), Science DMZ as a Service





### GENI Users Span the US







### Supporting International Collaborations



### Jim Kurose NSF

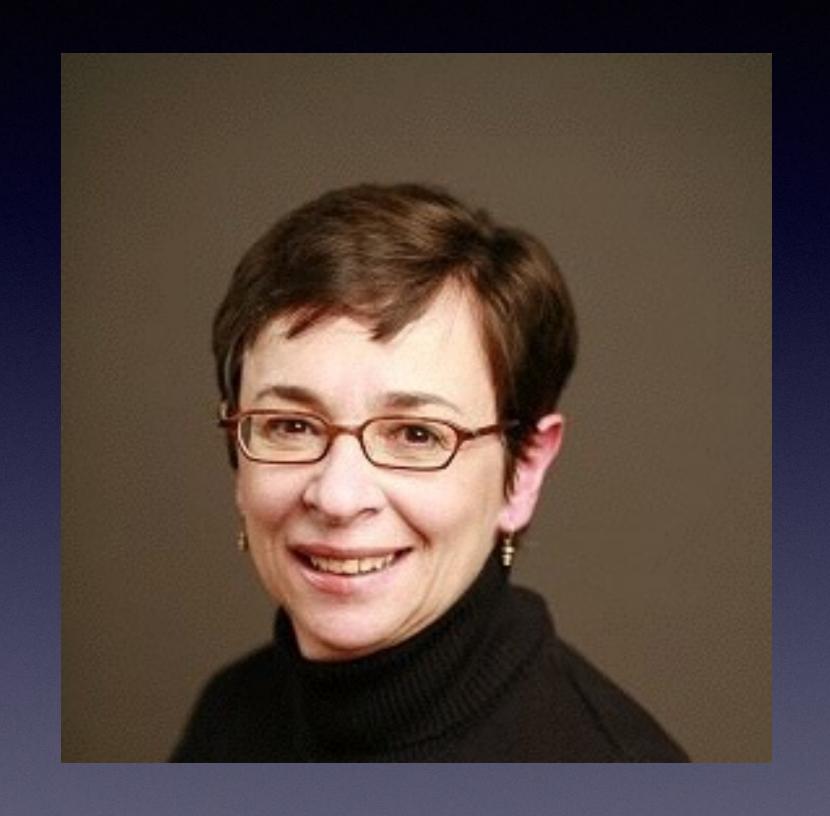






### Some thoughts on sustainability

Nancy Forbes
NITRD NCO







# Future Planning Workshops "Looking Beyond the Internet"

Chip Elliott
BBN















