

# OSG Discussions with Potential Industry Partners

## V2

Ruth Pordes, Council Chair

With thanks to Lothar Bauerdick for use of his slides from [ISGC'13](#)

and Rob Gardner for use of slides from the [CIC Workshop](#)

# Objectives for discussion

- Exchange information on “what we are about”
  - Assumes some existing knowledge of each others activities
- Explore a couple of potential areas of collaboration/mutual benefit.
  - Especially understand any beneficial interaction through the STTR/SBIR program



# Open Science Grid advances science through open distributed computing.

Multi-disciplinary partnership federating local, regional, community and national cyberinfrastructures to meet the needs of research and academic communities at all scales.

Project Operates high-throughput cyber-infrastructure. Provides integrated Software suite. Support consulting for users and sites.

**Consortium** *Includes all organizations and people who benefit from the OSG (use, supply, contribute, study etc.).*

**Council** *Governs the project and represents all Consortium members.*





# OSG, Partners, and Industry Partners

## Satellite projects

Independent activities with declared connections to OSG for mutually beneficial work. e.g. DOE ASCR funded dV/DT computer science research to provide new capabilities.

## Partners

Peers in ci, science, CS. E.g. OSG as an XD/XSEDE Service Provider.

## Industry Partners

New idea...open for discussion and trial

# Current Usage Models

# US component of the World Wide LHC Computing Grid

~2M Cpu-hours/day

60% LHC, rest to ~20 other physics and non-physics users

~1 Petabyte/day data movement

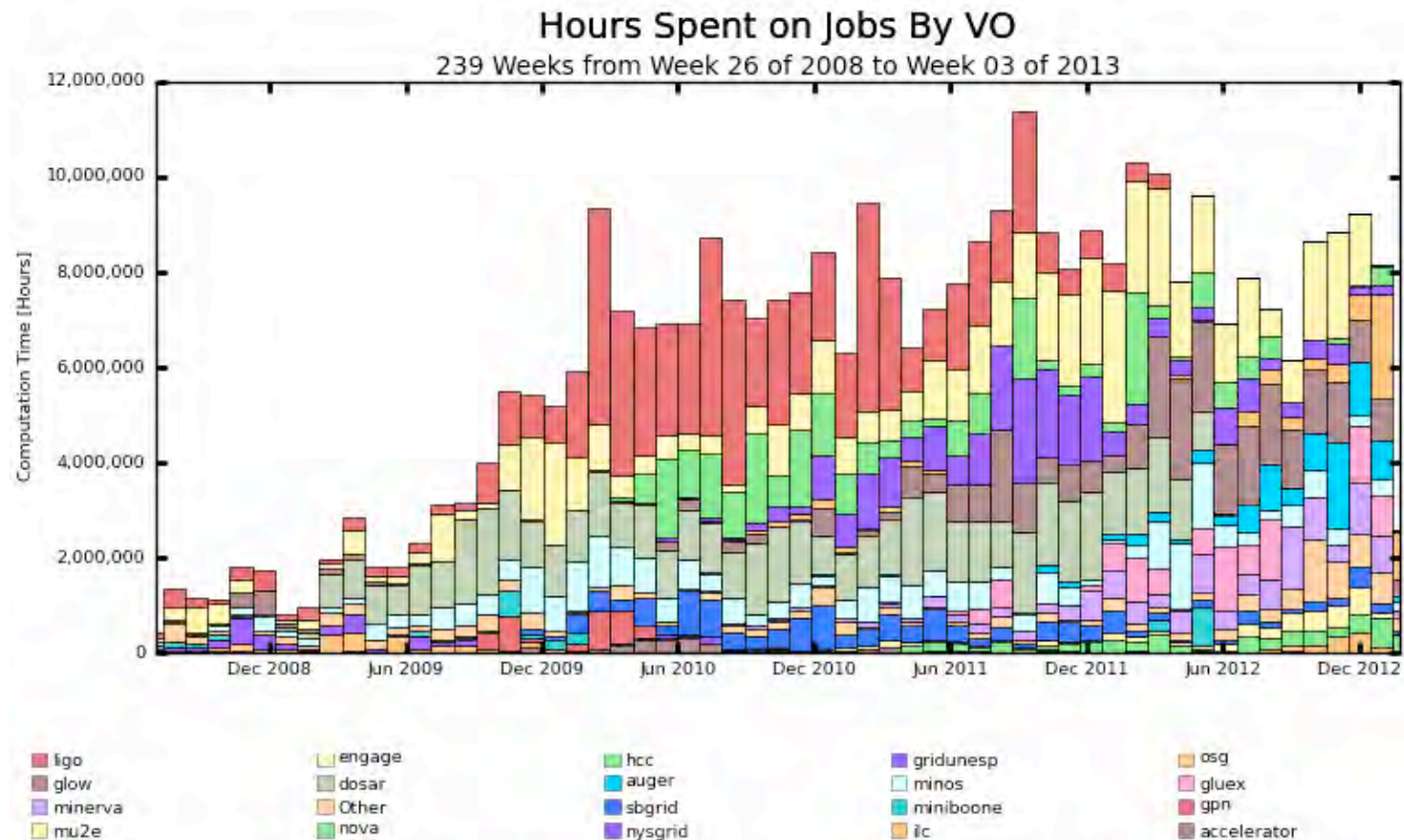
~100 Campuses





# Not Only the LHC

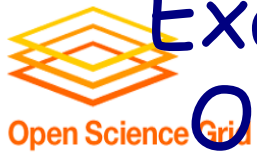
in 2012 ~100M cpuhours for ~20 other communities.



LATBauerdick/Fermilab

ISGC

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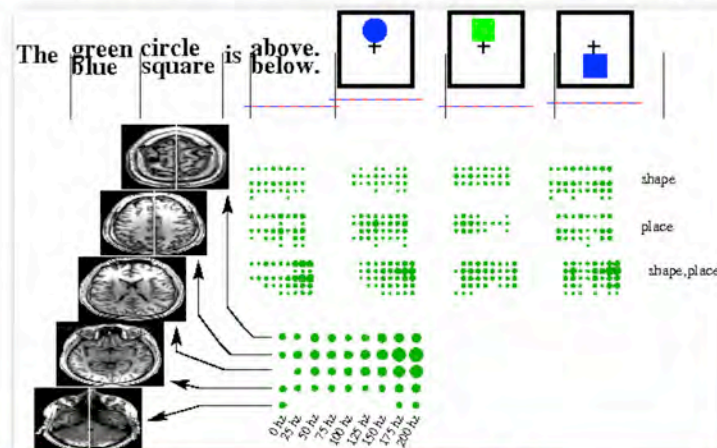
# Example of non-physics user, approaching OSG through XSEDE Allocation request

Request increasing  
to >10M  
CPUhours/year  
for this single  
user.

## Harnessing OSG Resources for Combating Concussions



- ◆ Brain Trauma Research Center (BTRC) at U. Pittsburg, Don Krieger
  - ★ Use magneto-encephalography (MEG) during task performance to look for disordered brain activity → to understand and treat concussion
    - ◆ Continuously record the extracranial magnetic field while the volunteer performs a cognitive task
  - ★ Use OSG resources to reconstruct brain activity



LATBauerdick/Fermilab

ISGC

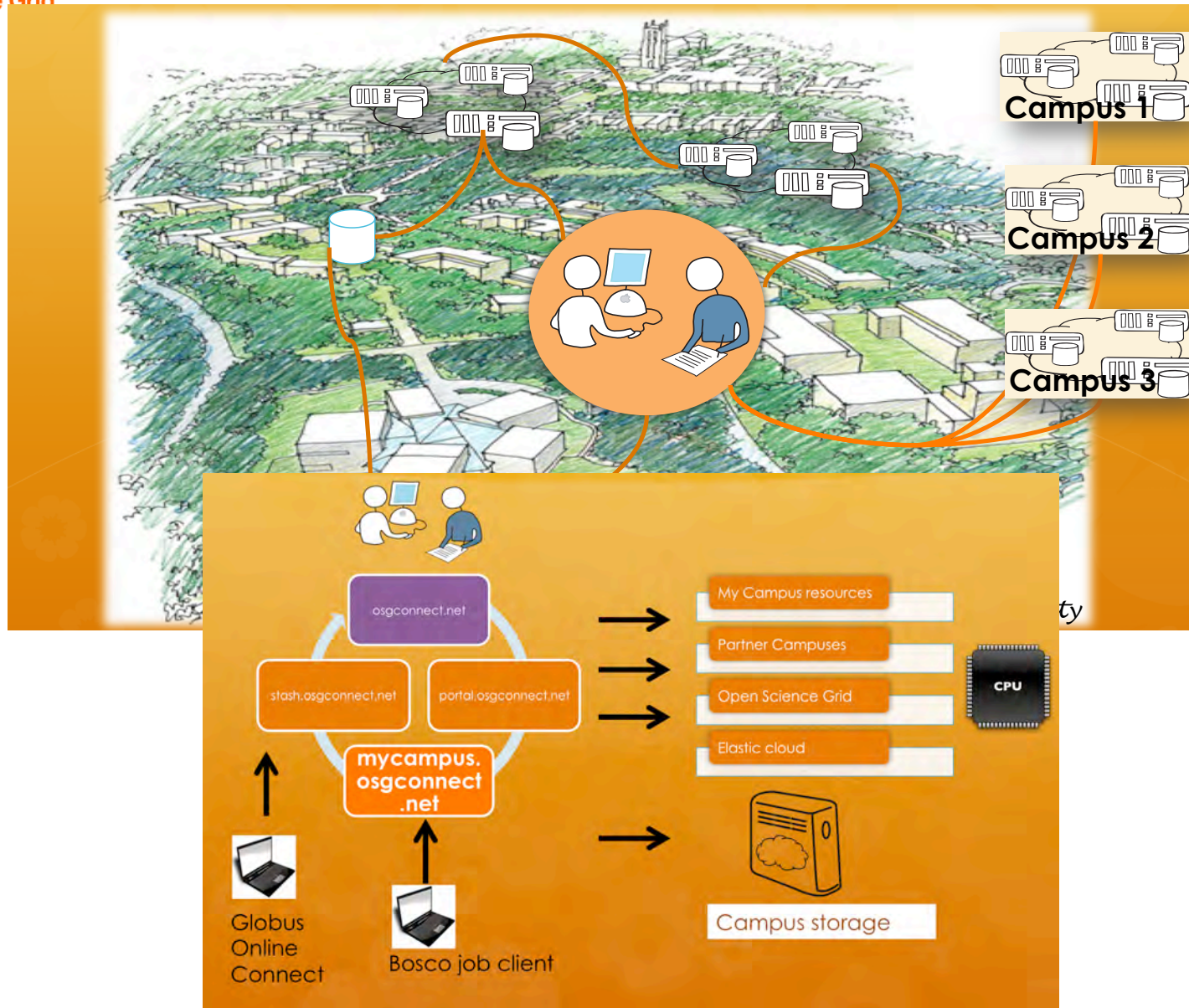
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# Campus Connections - focus in FY14/FY15



## Other current areas of work

Access to resources through cloud interfaces.

Explore new models for authentication and authorization.

Extend existing pilot to full use of multi-core and HPC.

Provide transparent federated data management for all types of resources.

Support for production use of virtualized resources.

Sustainability of open source software, including “orphans”

# Potential Industry Partnerships



# OSG contract to DigiCert for X509 certificate issuance a first example of depending on commercial operations services

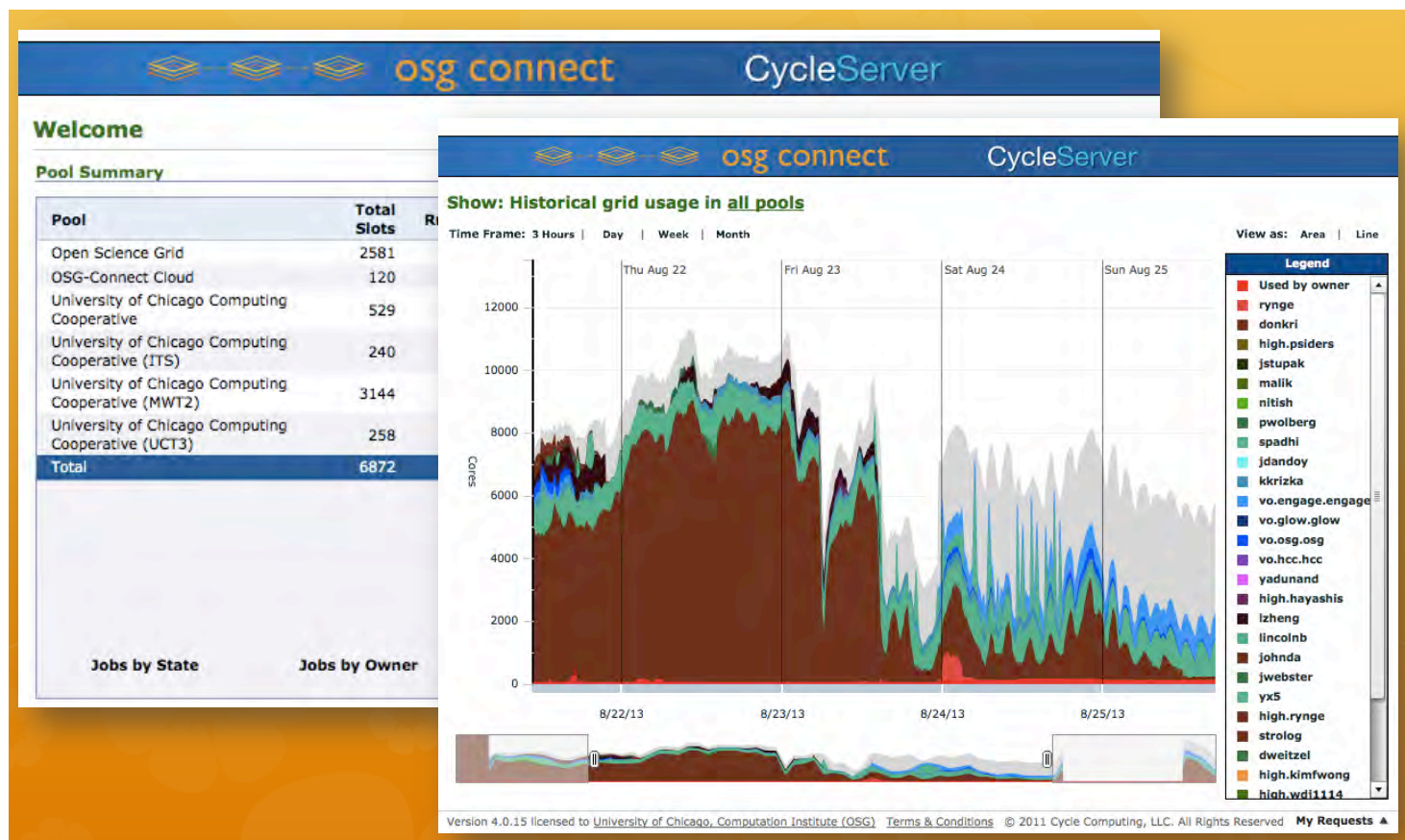
The screenshot shows the ESnet Energy Sciences Network website. The header includes the ESnet logo, a search bar, and navigation links like "MyESnet" and "Share". The main navigation bar has links for Home, Network, Services (highlighted), R&D, News & Publications, About ESnet, Contact Us, and Events. The breadcrumb trail reads "Home » Services » DOE Grids Service Transition". The left sidebar lists various services: Overview, ECS Audio/Video Conferencing, Fasterdata, IPv6 Network, Network Performance Tools (perfSONAR), ESnet OID Registry, PGP Key Service, Virtual Circuits (OSCARS), and DOE Grids Service (highlighted). The main content area is titled "DOE Grids Service Transition" and includes a "Background" section. The background text states: "ESnet has decided to transition support and management for the certificate services provided by the DOE Grids public key infrastructure (PKI) to the Open Sciences Grid (OSG). OSG and ESnet provide service to many of the same user communities, and have long been collaborators in the areas of identity and security. ESnet and OSG have evaluated a wide variety of options to meet the requirements of the DOE research community. OSG has established a replacement PKI supported by a contract with DigiCert, a commercial PKI provider." Below this is a "Background and Timeline" section. The right sidebar, titled "Contacts", lists three individuals: Ruth Pordes (OSG Executive Director, [ruth@fnal.gov](mailto:ruth@fnal.gov)), Von Welch (OSG CA Transition Program manager, [vwelch@indiana.edu](mailto:vwelch@indiana.edu)), and Lauren Rotman (Partnerships & Outreach Lead, [lauren@es.net](mailto:lauren@es.net)).





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## Individual Site usage of Cycle Server for monitoring and troubleshooting





# Increased encouragement to explore potential of SBIR/STTRs

Offers opportunities to extend and evolve to mutual benefit.

Today's meeting to explore the possibilities of these by engaging with several potential industry partners.