GENI

Welcome !

GENI Engineering Conference 15
University of Houston

Chip Elliott
www.geni.net

- **GEC 15: THANK YOU to *Dr. Deniz Gurkan***

- **GEC 16: March 19-21, 2013, in Salt Lake City**
  - ***With many thanks to Dr. Rob Ricci***

- Subsequent Meetings, open to all who fit in the room
  - Held at regular 4-month periods; see GENI Wiki for dates / places
  - Geographic rotation through US (central, east, west)
  - Held on / near university campuses – **volunteers?**
  - **Travel grants** for participant diversity (US academics only)

- ## **Dr. Rathindra N. Bose**

  Vice Chancellor for Research and Technology Transfer, UH System
  Vice President for Research and Technology Transfer, UH

- Tenured professor in the Department of Chemistry, with previous positions at Ohio, Northern Illinois and Kent State Universities.

- Created a new class of anticancer agents - Phosphaplatins - that exhibits superior efficacy with reduced toxicity in preclinical experiments compared to existing platinum anticancer drugs.

- Currently serves as chair of the Science Advisory Board of Phosplatin Therapeutics, and board member for Bio-Ohio and Southern Ohio Creates Company (SOCC).

- **Dr. Erwin Gianchandani**, Deputy Director

    Division of Computer and Network Systems
    CISE Directorate
    National Science Foundation

Taking stock and looking ahead

The GENI Vision

A national facility to explore radical designs for a future global networking infrastructure

- Large, wide-area footprint
- Edge / access technologies (e.g. sensor networks)
- Shared among researchers by virtualization & slices

- High capacity backbone and programmable core nodes
- Large clusters of CPUs and storage

Be bold! Be creative!
Drive the design forward!

All beginnings are difficult . . .

but we think you will get a surprising number of *great* prototypes and trial systems up and cycling within a year!

www.geni.net
Clearing house for all GENI news and documents

And now it's so close we can taste it

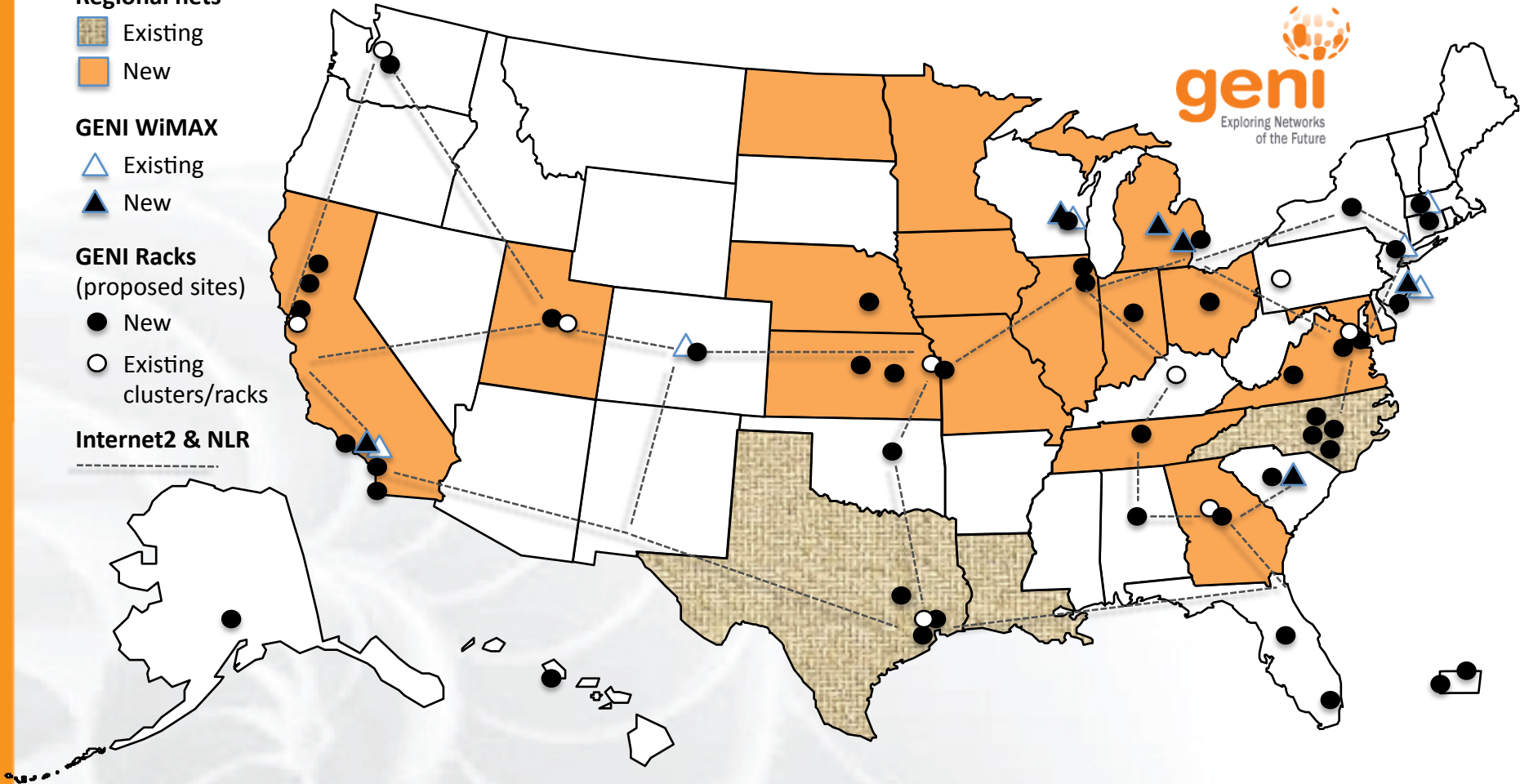**Regional nets**
- Existing
- New

GENI WiMAX
- Existing
- New

GENI Racks
(proposed sites)
- New
- Existing clusters/racks

Internet2 & NLR

(as proposed; actual footprint to be engineered)

- ## **OpenFlow / SDN**

- ## **GENI racks**

(*)

- ## **WiMAX (-> LTE)**

(*)

(*some indications)

Cumulative Unique Users Creating ProtoGENI Slivers (all sites)
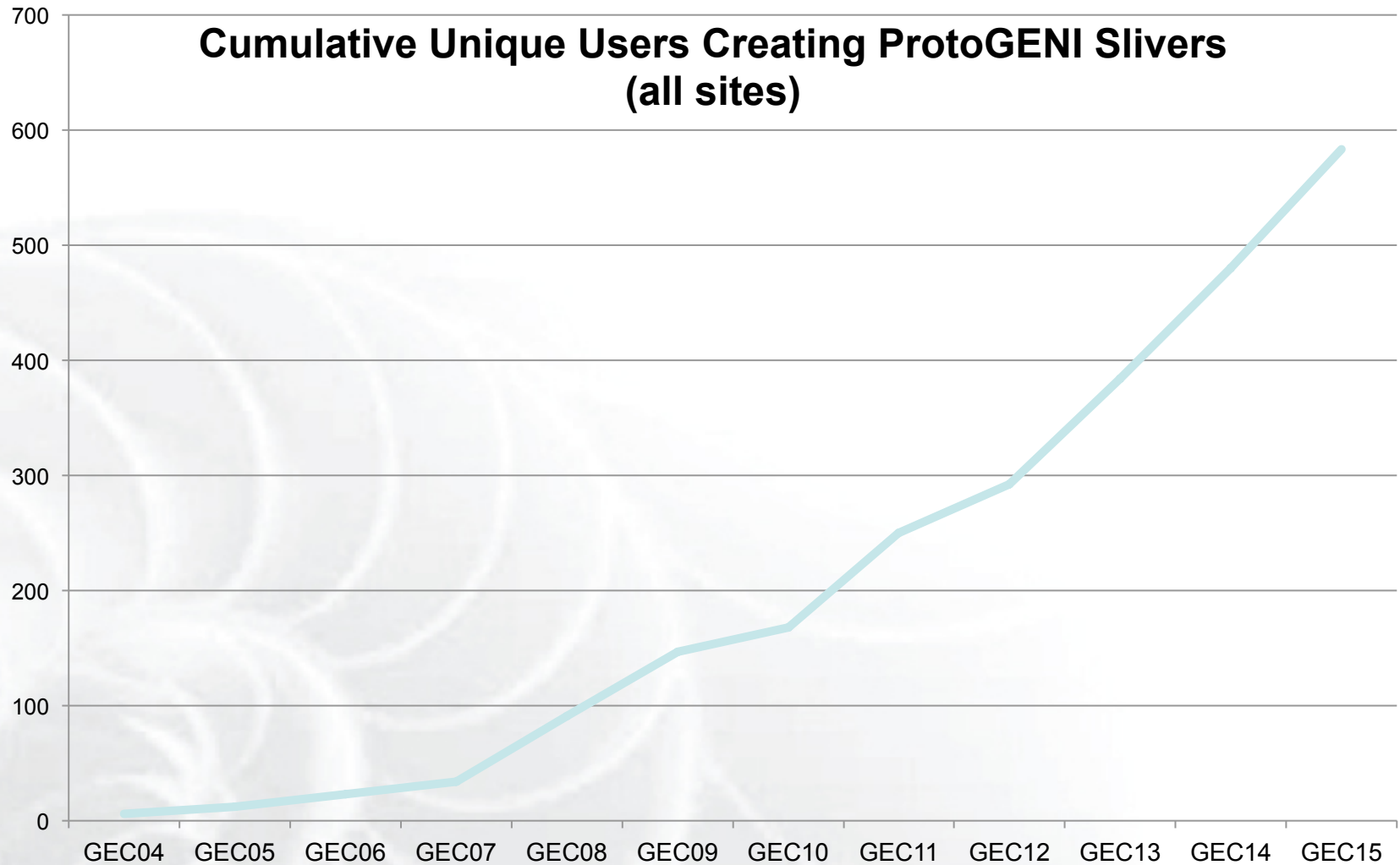
GENI campus expansion is accelerating

Dr. Larry Landweber, U. Wisconsin

- **"GENI-enabled" means . . .**
  OpenFlow + GENI racks, plus WiMAX on some campuses

- **Very strong interest from university CIOs**
  About 60 campus CIOs have expressed strong interest in "GENI-enabling" their campuses

- **NSF's CC-NIE grants**
  will enable more than a dozen campuses to immediately start "GENI-enabling" their infrastructure

- **"Spontaneous" GENI deployments**

Similar technologies are now going global
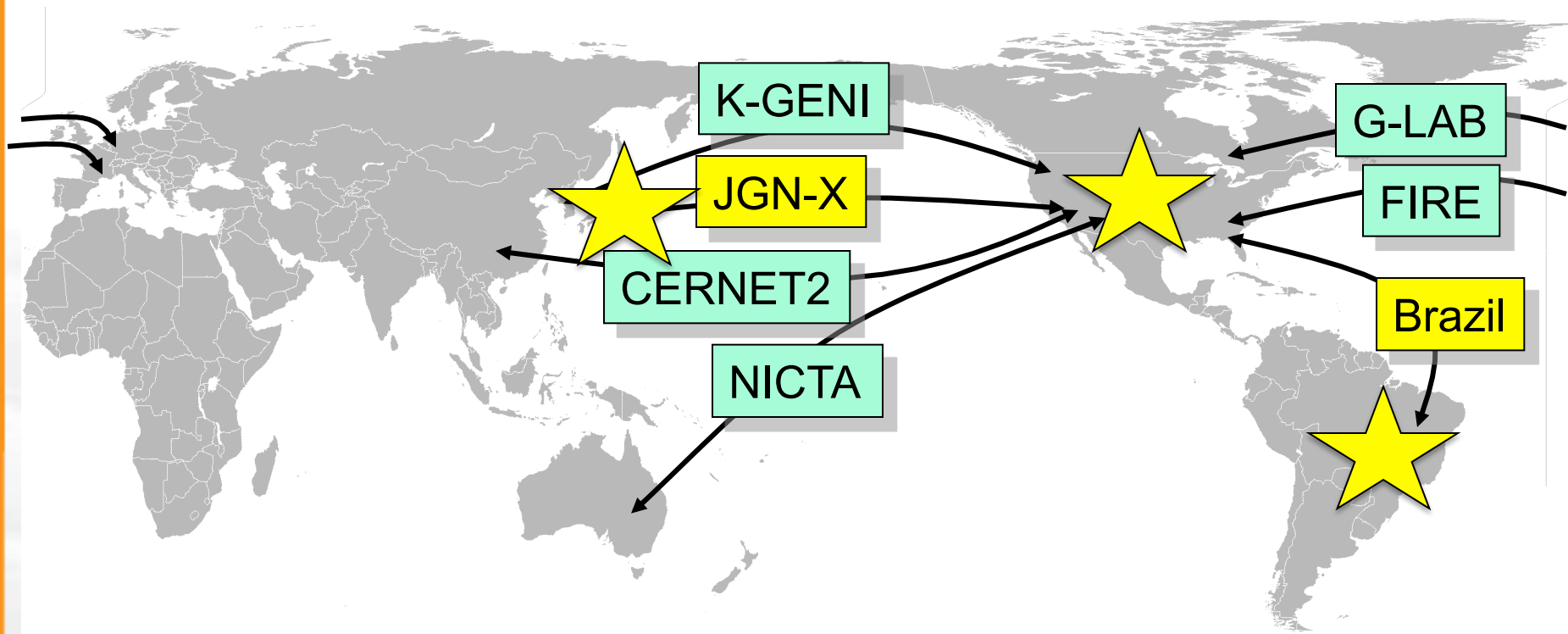
The GENI project is actively collaborating with peer efforts outside the US, based on equality and arising from direct, "researcher to researcher" collaborations.

- It is now clear that . . .

    – **GENI, and its allied technologies, are gaining very significant traction**

    – **Strategic level planning** is essential to ensure long term success

    – Both **strategic planning** and **day to day direction** of the GENI project are fulltime jobs

    – The time has come to separate them in order to ensure effective planning for leveraging GENI and the GENI community

- ## GENI Futures Director
  strategic level planning for "what comes after GENI," to maximize the impact and adoption of GENI technology and concepts

- ## GENI Project Director
  overall responsibility for GENI's technical direction and successful implementation