

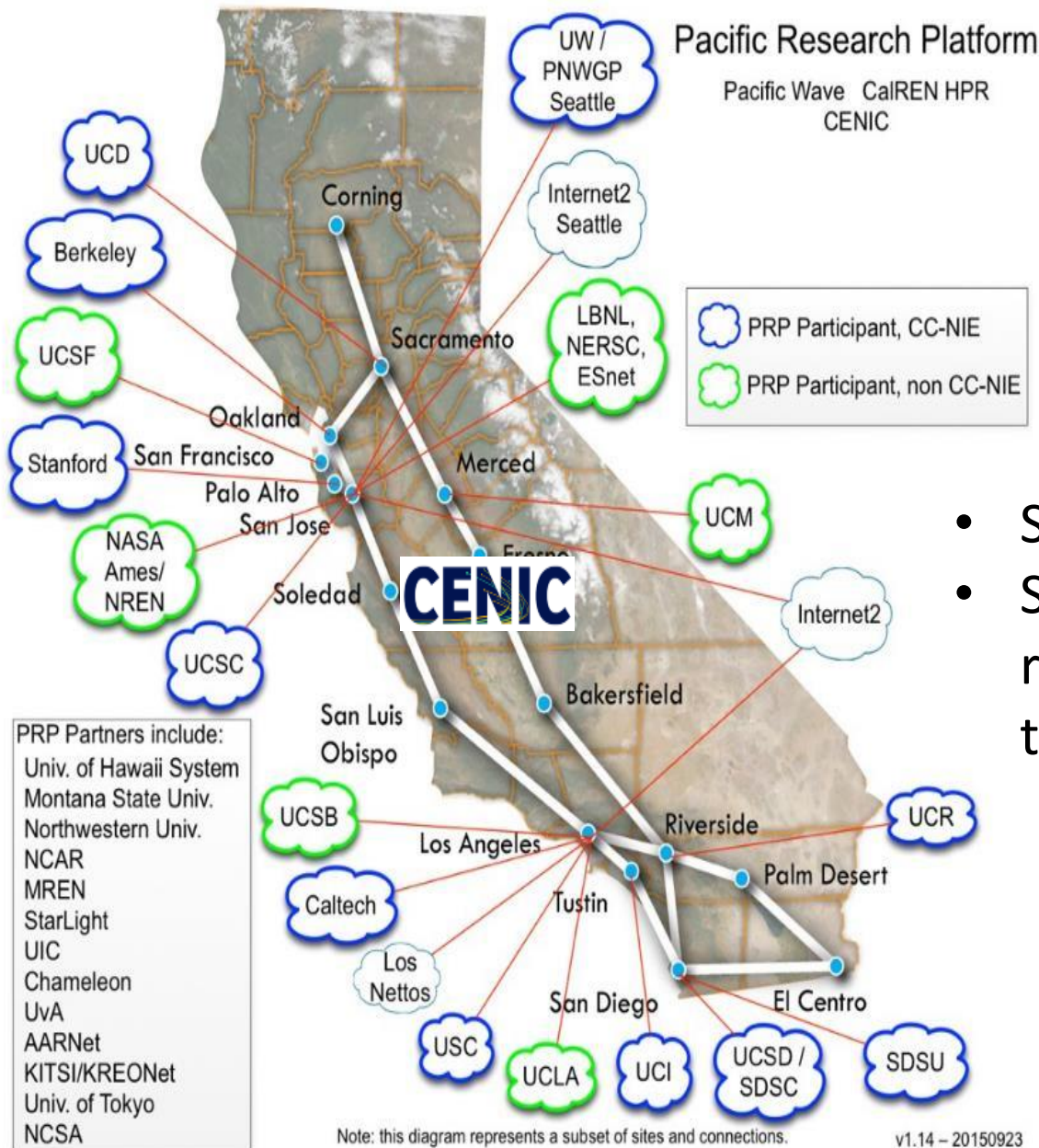
NESE

Northeast storage Exchange

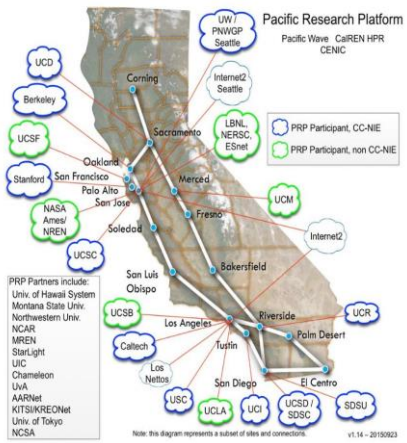
Saul Youssef
Boston University

First....Strategy...

The Pacific Research Platform

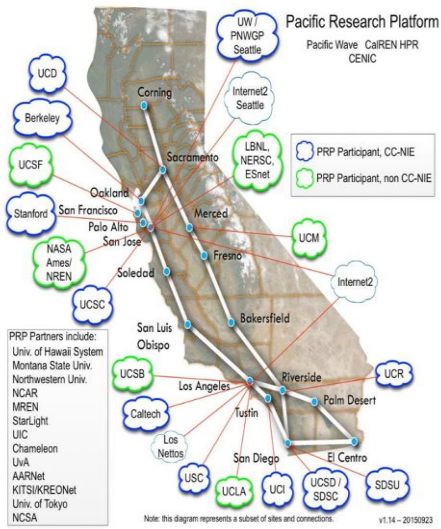


- Spans the pacific coast
- Spans top universities and research institutions in the U.S. and the world



Imagine shrinking PRP down to the size of a single building and compare with MGHPCC





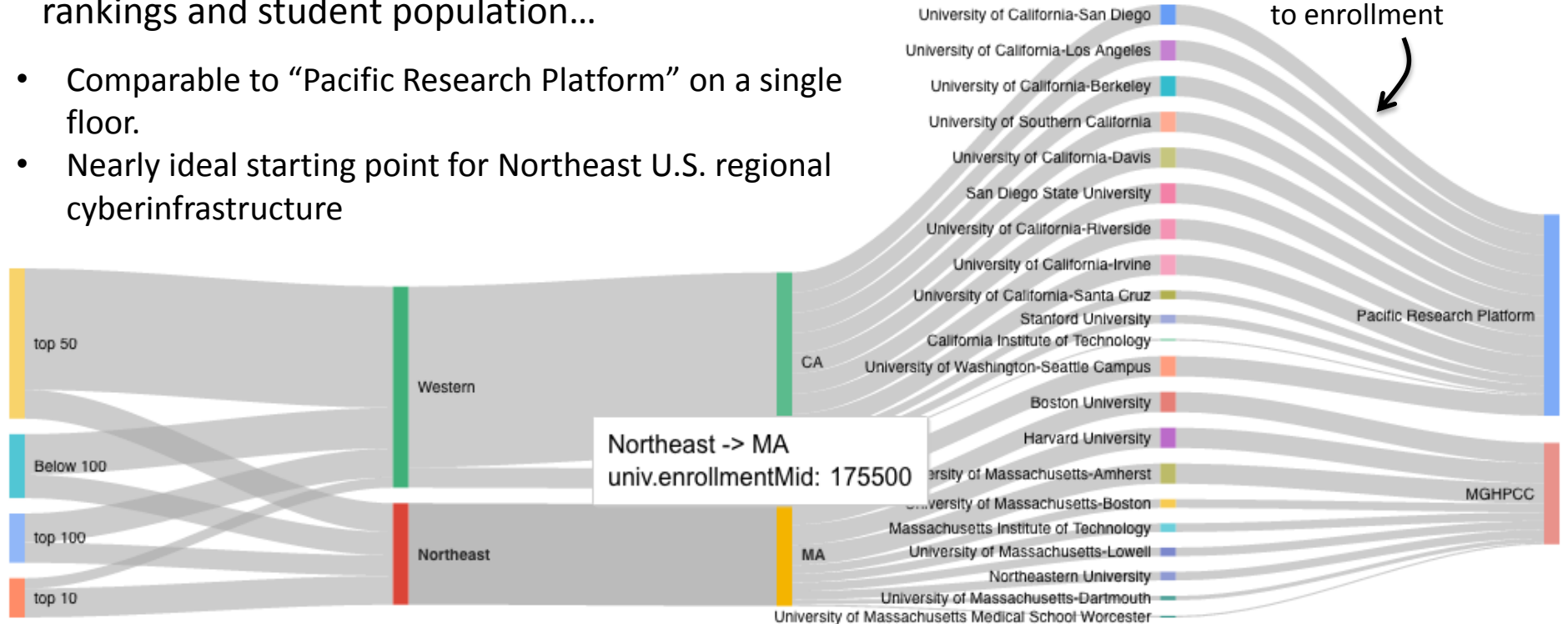
Imagine shrinking PRP down to the size of a building and compare with MGHPCC



Even though we are comparable to PRP in university rankings and student population...

- Comparable to “Pacific Research Platform” on a single floor.
- Nearly ideal starting point for Northeast U.S. regional cyberinfrastructure

Widths are proportional to enrollment



NESE project funded by NSF (\$4M over 4 years) started Nov. 1

- Large regional CEPH storage at MGHPCC
- Seed for regional cyberinfrastructure
- Motivation to re-design networking on the MGHPCC floor
- Major initial benefits go to BU/NET2

PI: James Cuff

Harvard, BU, MIT,
NEU, UMASS

Project NESE ▾

● Saul Youssef

🔍 All Threads

CHANNELS (2) +

architecture

nese-discuss

DIRECT MESSAGES +

♥ slackbot

● Saul Youssef (you)

○ Chris Hill

● Elizabeth Shepard

○ Glenn Bresnahan

● James Cuff

○ John Goodhue

○ Rajiv Shridhar

○ Ralph Zottola

● Scott Yockel

● Wayne Gilmore

+ Invite people

HARVARDgazette

SCIENCE & HEALTH > ENGINEERING & TECHNOLOGY

For bigger data, more storage

With Odyssey's expansion, Harvard and partner universities will have faster access to vast amounts of information

November 28, 2016 | ✓

By Alvin Powell, Harvard Staff Writer

As big data becomes a common analytical tool in fields from the sciences to the humanities, Harvard's computer infrastructure experts are turning their attention to an increasingly pressing question: How do you manage it all?



Kris Snibbe/Harvard Staff Photographer

James Cuff, assistant dean and distinguished engineer for research computing, is the principle investigator on a \$4 million NSF grant to develop the North East Storage Exchange, a collaboration of five local universities to provide easier storage and faster retrieval of massive quantities of data.

Maybe RH can consult now that RH and BU are besties?

We're still just starting, but...

- The main initial milestone of NESE is to serve as the main storage for NET2
- Try for a complete object store solution: S3 FTS endpoints + re-write LSM to use S3.
- Not straightforward because of the need of FTS to do 3d party transfers, however Globus/Gridftp/CEPH looks promising for this.
- NET2/NESE is instigating a needed re-thinking of networking at MGHPCC
- Other institutions in the region are already interested too...

BU Today

Science & Tech

BU and Red Hat Forge \$5 Million Partnership

Five-year research arrangement promises mutual benefits

← New BU partnership with Red Hat may be useful both for CEPH/NESE and Mass Open Cloud