

Breakout 3

Partnerships

Breakout 3 participants

- Suman Banerjee (UW-Madison)
- Larry Landweber (UW-Madison)
- Ian Wong (NI)
- Vanu Bose (Vanu, NSC)
- Manu Gosain (BBN)
- Bryan Lyles (NSF)
- Michael Ha (FCC)
- Carl Kutsche (DOE, Dir of wireless test facility at Idaho)
- Changbo Wen (T-Mobile)

Partners

- Relationship between
 - Universities/cities
 - Spectrum agencies
 - Equipment vendors (base stations and UE)
 - Operators

Operator interest

Operators care about

- Access (coverage)
- Capacity
- Learn something new to enhance their products
- Use of (GENI) virtualization, slicing, etc. to enable new services

Challenges

- Few wireless operators (in US)
- Incumbents have less incentive to move away from current generation of technology
- Potentially slows down standardization
- Research could be left behind if they get stuck to a particular technology

What we can do

- Organize opportunities in which
 - University (city) + carrier can do something together
 - For example, enable WiFi offloads using university (city) infrastructure (**Access**)
 - Consider smart city applications
 - Leverage university networks --- Gigabit backhails, NSF Cloud infrastructure, compute racks, etc. (**Capacity**)
- Contained access facility
 - Within a campus may have more freedom on spectrum
- Open SAS

Multiple stages of development

- Isolated facilities, e.g., Idaho wireless range
 - “Test that new ideas does not bring down the power grid”
- Multiple university campuses with different focus
 - Some on core network
 - Some on RF
- Identify real users and scenarios