SUPPORTING RESEARCH AND EDUCATION IN SOUTH ASIA

AMERICA CONNECTS TO EUROPE (ACE) AND TRANSPAC3 (TP3):

SUPPORTING RESEARCH AND EDUCATION IN SOUTH ASIA

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TOPICS

- The US National Science Foundation and the International Research Network Connections Program [NSF IRNC]

- Indiana University, the GlobalNOC and International Networking at Indiana University [IN@IU]

- The ACE and TP3 projects

- Relevance for South Asian countries and their NRENs
THE US NSF AND IRNC


- IRNC (International Research Network Connections) – Program within the NSF Office of Cyberinfrastructure (OCI). Budget: $40 million over 5 years [2010-2015]; focus on providing production quality network infrastructure to increase/advance international science collaborations. See: http://irnclinks.net/

- The ACE and TP3 awards are funded by the NSF through OCI and administered by Indiana University.
  - IU is an 8 campus state university system; core campuses in Bloomington and Indianapolis. See: http://indiana.edu/
  - International Networking [IN@IU]: International face of GlobalNOC; engineering and operational support for ACE and TP3; science and services outreach
ACE AND TP3

- 5 year [2010-2015] NSF IRNC funded projects; $1M/year each; focus on production networking in support of R/E, but with support for network research also.

- TP3: US-Asia connectivity (Tokyo-LA 10G); extended into South Asia and to Europe by TEIN3; partnering with JGN-X

- ACE: Multiple 10G connections US->EU; balanced by similar EU->US connections; cooperative engineering and operations; cooperative technical planning via DICE.

- ACE+TP3 combined with GEANT, TEIN3, APAN and Internet2 create a globe-spanning network ring.
WHAT IT MEANS FOR SOUTH ASIAN COUNTRIES

- All except Maldives have at minimum shown interest or already have NRENs
  - Afghanistan: Silk Project connectivity, Kabul University, NATO interest
  - Bangladesh: BdREN (WB funding)
  - Bhutan: RUB
  - India: NKN, ERNET
  - Nepal: NREN
  - Pakistan: PERN2
  - Sri Lanka: LEARN
Ability to quickly connect to global NREN fabric is major motivator for investment in domestic infrastructure

- All except Afghanistan and Maldives are part of TEIN3 project (European Commission-funded): provides first-step connectivity to global NREN fabric
- ACE and TP3 provide Pakistan connectivity and next-step connectivity to East Asia, North America
SUPPORT FOR SCIENCE AND OTHER RESEARCH AND EDUCATION COLLABORATION

- Proving demand for and justifying investment in NREN domestic and international connectivity is critical
  - IN@IU has NSF funds to identify and develop India and Pakistan science collaborators and potentially others
  - 1st successful US-India Network-Enabled Research Collaboration Workshop
    - http://internationalnetworking.indiana.edu/us-india-workshop
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and

SCI – 0962973 - America Connects to Europe (ACE)