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TransPAC2

Enhancing Production Science Networking between Asia and the United States

Chinese American Networking Symposium
Miami, Florida
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Presentation Topics

- Some history – HPIIS and TransPAC
- IRNC solicitation
- TransPAC2 goals and architecture
- IRNC/TransPAC2 Cooperative Science Support
- TransPAC2 research areas

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History - HPIIS/TransPAC

1996 APAN formed

1997 NSF HPIIS Solicitation; Indiana University and APAN respond

1998 Three HPIIS awards made (Europe-EuroLink; Russia – MIRnet; Asia – TransPAC)

1998 TransPAC Project initiated [35Mbps ATM service]

2004 IRNC soliciatation released

2004 TransPAC Project ends [2 x 2.5G service]

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IRNC Solicitation

- 2004 – New NSF international networking solicitation (International Research Network Connections Program)
- Indiana University and a broad group of collaborators respond; many other groups respond covering the globe
- Indiana University proposal is selected to provide Asian service
- TransPAC2 Project is developed

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TransPAC2 Goals and Supporting Architecture

IRNC/TransPAC2 goals

- Deploy high-performance network technology to continue and expand scientific cooperation between the US and Asia
- In cooperation with the other IRNC awardees, develop the Trans Oceanic Production Science (TOPS) Network

TransPAC2 architecture

- Continue high-performance connectivity across the Pacific Ocean [2.5 G connection between US and Tokyo]
- Enhance international connectivity by assisting in the development of an inter-Asia backbone [Tokyo-Hong Kong-Singapore]

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IRNC/TransPAC2 Cooperative Science Support

- Significant (primary?) goal of the IRNC solicitation
- Immediate opportunity: Hong Kong hub presents many interesting possibilities
- For example: Japan-Russia cooperation via GLORIAD-TransPAC2
- Longer term: Singapore-Australia connection via PWave-TransPAC2

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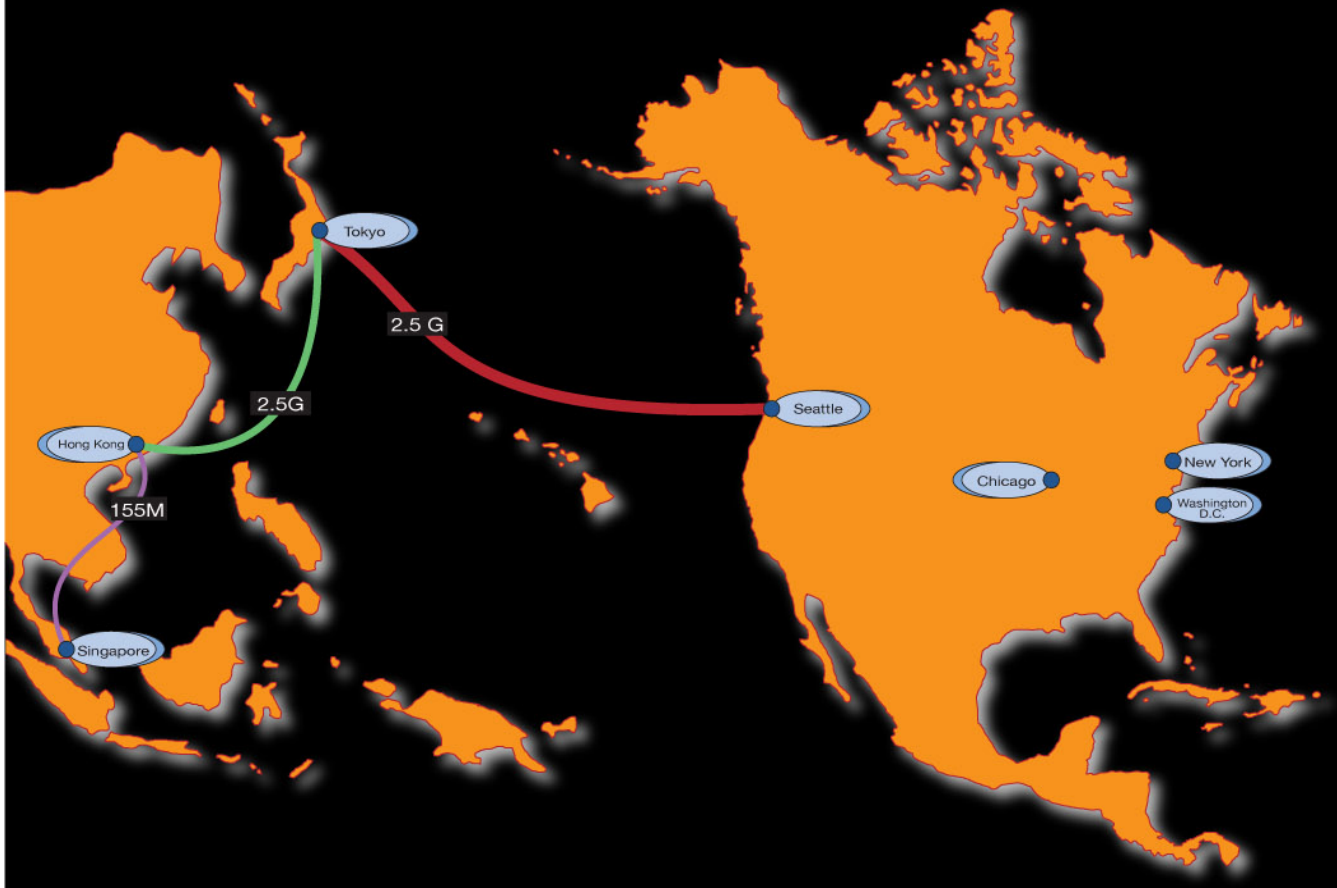
For more information, visit: *www.transpac.org*

TransPAC



TransPAC2

Building on the success of TransPAC, TransPAC2 will further expand research and education access to high-performance connectivity between the US and Asia. In partnership with our friends in Asia, TransPAC2 will make possible an intra-Asia network backbone from Tokyo to Hong Kong to Singapore. Not only supporting research and education collaborations between Asia and the US, TransPAC2 will also focus on such network research challenges as end-to-end performance measurement and security.

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TransPAC2 Research Areas

- Measurement, both capacity and end-to-end:

  Working with NLANR MNA group on passive and active measurement and working with Internet2 E2E piPEs project to help develop the measurement infrastructure within APAN

- Security:

  Encourage close cooperation between APAN and the US REN-ISAC Project (Research and Education Networking – Information Sharing and Analysis Center) and other global security efforts

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URLs

TransPAC2 Project (not quite ready yet)

National Laboratory for Applied Network Research (NLANR)
Measurement and Network Analysis (MNA)
http://www.moat.nlanr.net/
NLANR Active Measurement Project (AMP)
http://watt.nlanr.net
NLANR Passive Measurement Analysis (PMA)
http://pma.nlanr.net/

Internet2 End-to-End Performance Initiative Performance Environment System (E2E piPEs)
http://e2epi.internet2.edu/e2epipes/

REN-ISAC http://www.ren-isac.net/

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Questions??

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