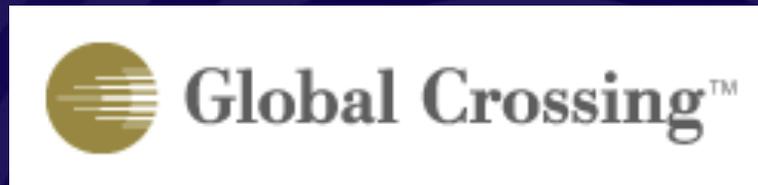


Heidi Alvarez
heidi@fiu.edu

Presents...

***AmericasPATH to the
Inter American Development Bank
Washington D.C.
December 7, 2001***



Florida International University

AMPATH

The AMPATH Project

- AMPATH is a project led by FIU, in collaboration with Global Crossing (GC), to interconnect the R&E networks in South and Central America, the Caribbean and Mexico to US and non-US R&E networks via Internet2's Abilene network.
- GC's terrestrial and submarine optical-fiber networks (SAC, PAC and MAC) are used to build the AMPATH network.



Industrial Donations

- GC has donated up to 10 DS3s for the AMPATH project representing a \$30M donation over three years.
- Cisco donated a GSR 12012 router valued at \$390,400.
- Lucent donated a CBX-500 ATM switch listing for \$523,000.



Industrial Donations

- Terremark and FIU have an agreement for the AMPATH POP to be located in the NAP of the Americas, operated by FIU
- Juniper Networks donated an M10 router valued at \$275,000.
- Epik Communications became the first Gigabit Industrial Affiliate donating \$25,000 to support a scholarship and advance the goals of the AMPATH project.



AMPATH Project Management

- FIU offers cost-effective solutions for bandwidth and operational services.
- FIU offers its commitment, leadership and expertise to the success of the project.



AMPATH Project Goals

- To enable participating countries to contribute to the research and development of applications for the advancement of Internet technologies.
- To extend the Internet2 research and education community for high-performance networking to South and Central America, the Caribbean and Mexico.



Florida International University

- Doctoral/Research University-Extensive.
- A member of the State University System of Florida with 32,000 students.
- One of the nation's largest doctoral-granting majority-minority universities.
 - Largest contingent of Hispanic students of any doctoral-granting university in the country.
- Internet2 GigaPOP with the University of Miami and Florida Atlantic University.



Global Crossing



- GC is a world-class telecommunications service provider and a carrier's carrier.
- GC is building and offering services over the world's first global fiber-optic network with over 101,000 route miles, serving five continents, 27 countries and more than 200 major cities.





The Global Crossing Network



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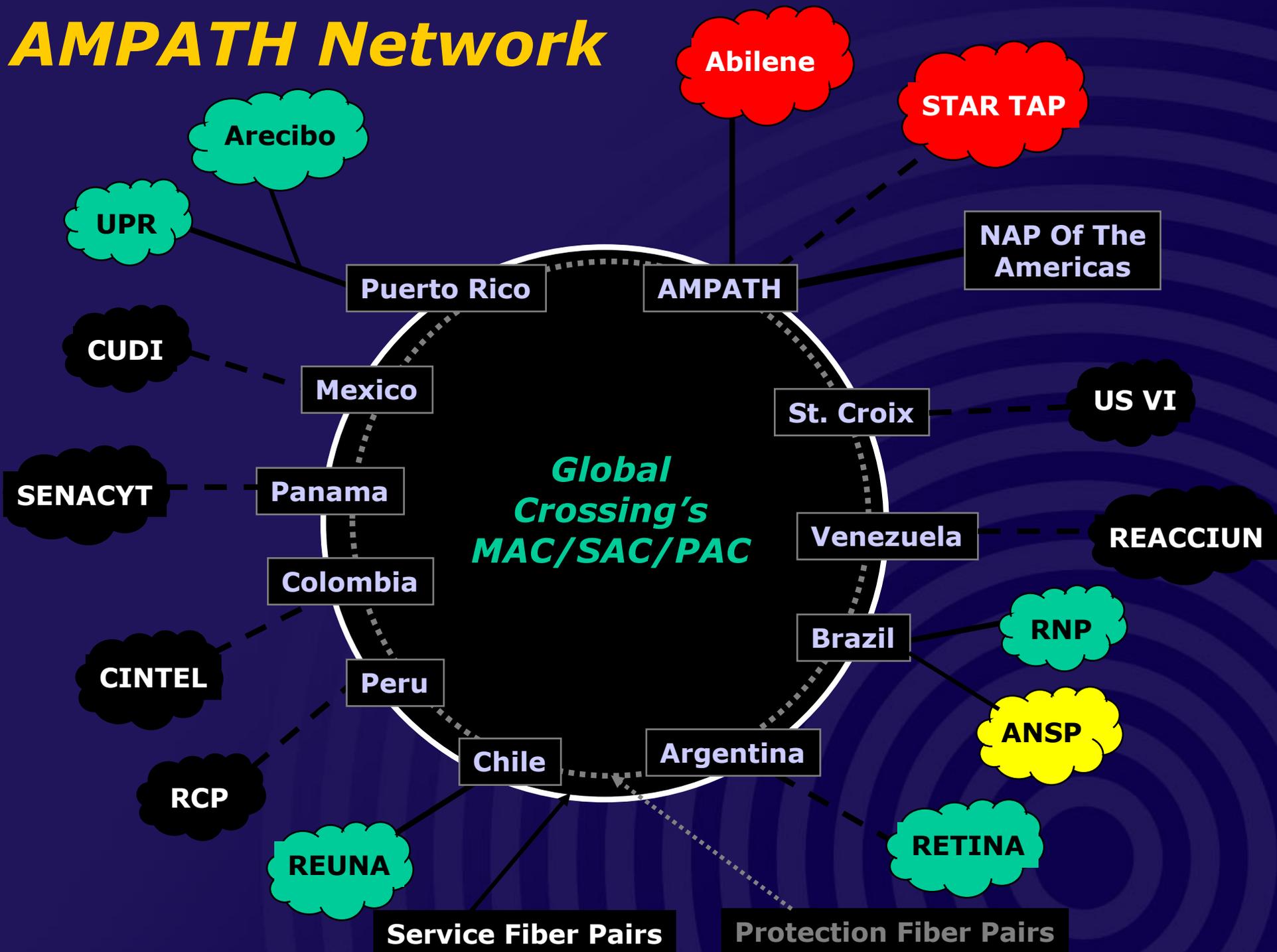
AMPATH

AMPATH Network

- Flexible and Scaleable
- SDH Infrastructure:
 - ✓ Avoids ATM overhead
 - ✓ Benefits Participant NRNs not using ATM
- ATM infrastructure:
 - ✓ PVCs, PVPs
 - ✓ Direct peering between Participants
- Optical infrastructure supporting wavelengths
- Direct layer 2 or layer 3 connectivity to other countries connected to the AMPATH network.

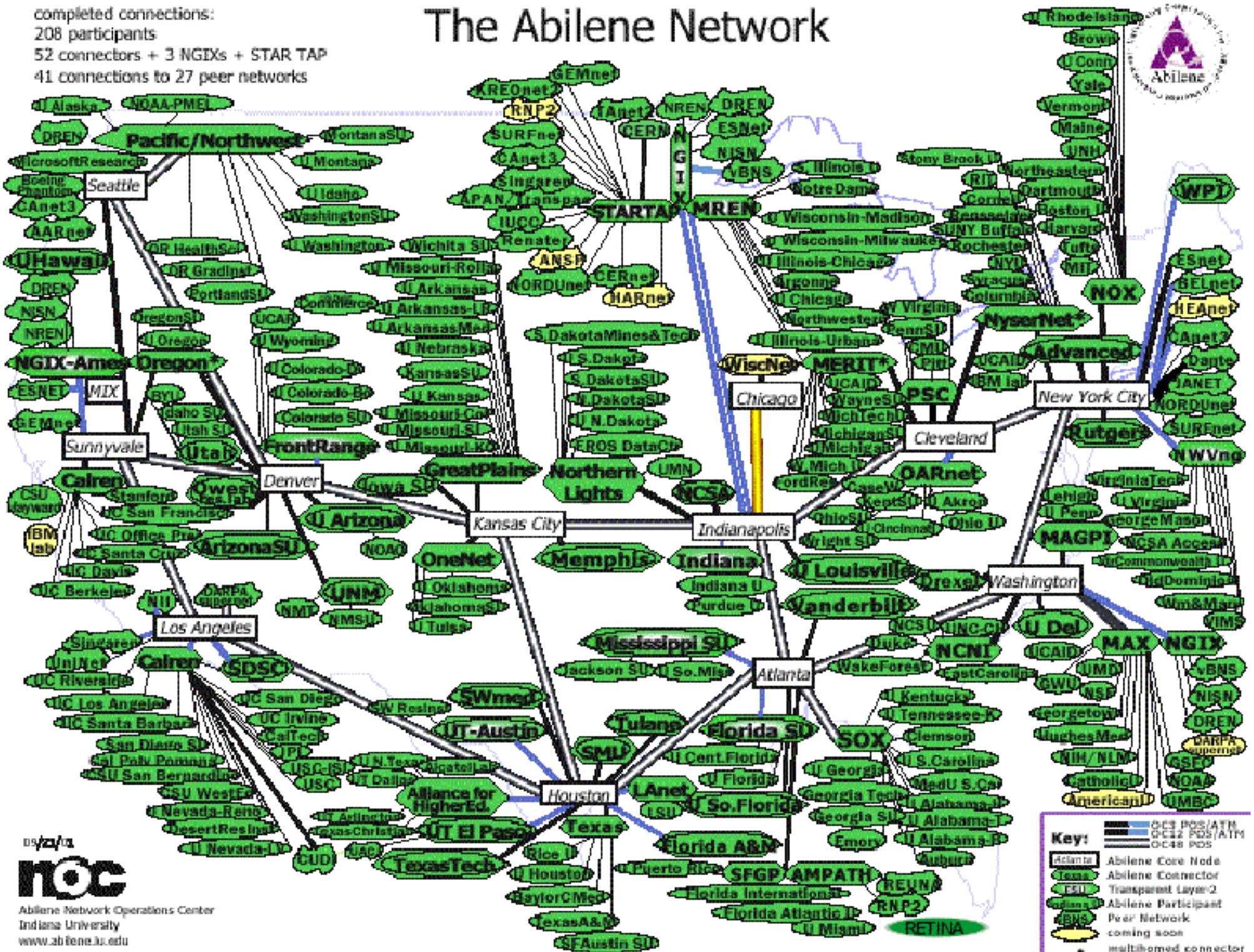


AMPATH Network



completed connections:
 208 participants
 52 connectors + 3 NGIXs + STAR TAP
 41 connections to 27 peer networks

The Abilene Network



Abilene Network Operations Center
 Indiana University
www.abilene.iu.edu

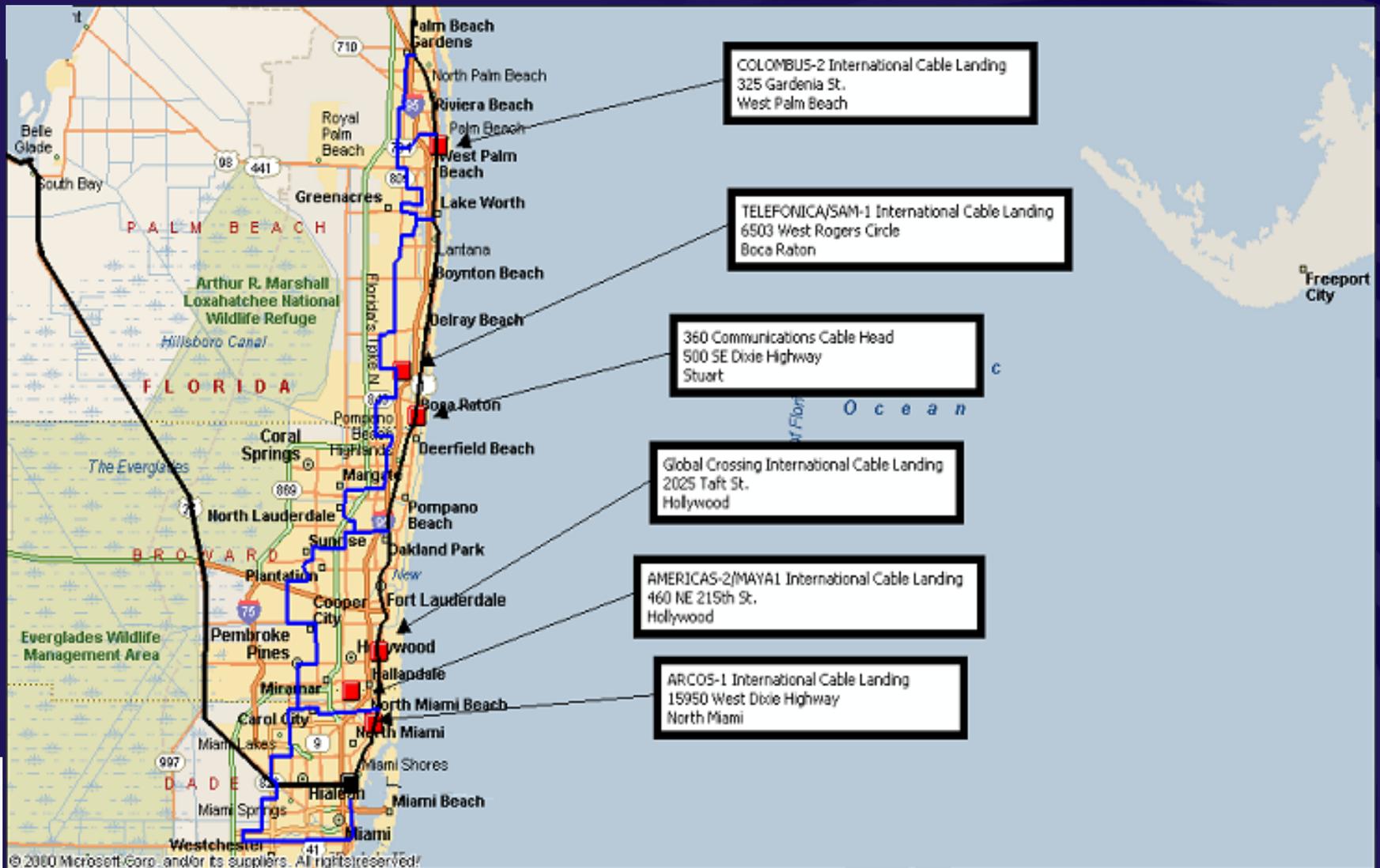
Key:

- OC2 POS/ATM
- OC12 POS/ATM
- OC48 POS
- Abilene Core Node
- Abilene Connector
- Transparent Layer2
- Abilene Participant
- Peer Network
- coming soon
- multi-homed connector

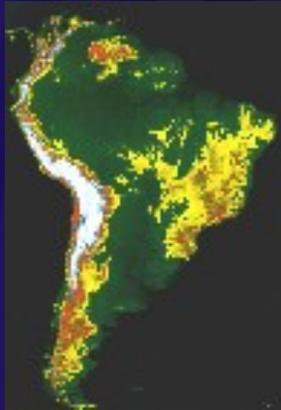


- **Fifth Tier-1 NAP**
- **Strategically located to serve Latin America, the Caribbean, Southern Europe and Africa**
- **Close to major carrier POPs and 7 worldwide undersea cable landings**

International Cable Landings



A Virtual Laboratory: NASA Astrobiology Institute, NASA Ames Research Center



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Contact:

Hector D'Antoni

NASA Ames

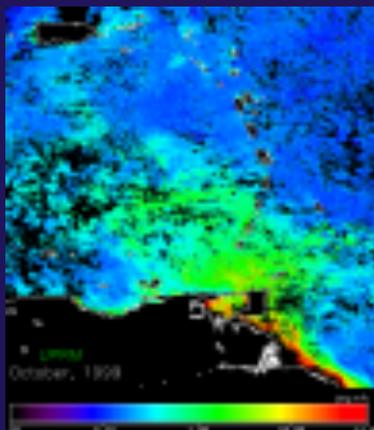
Research Center

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AMPATH

Remote Sensing Research and Digital Archives at the University of Puerto Rico



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TerraFly: NASA Regional Applications Center



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University

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Collaborators:

US Geological Survey

NASA

National Science Foundation

IBM

URL: <http://TerraFly.fiu.edu>



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AMPATH

Use Of Metadata In Cross Language Information Retrieval For Multinational Counterdrug Agencies



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Collaborators:

US Southern Command

JIATF-E

Coast Guard

Customs

DEA

ONDCP

Department of State/INL



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AMPATH

Infrastructure Enabling Potential Areas of Collaboration Between the International Space Station and the Americas



Contact:

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256-544-2843



URL:

<http://www1.msfc.nasa.gov/NEWMSFC/station.html>

and

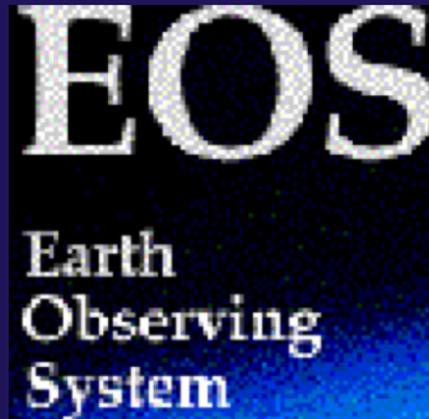
<http://spaceflight.nasa.gov/station/index.html>



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AMPATH

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Jose Bacellar

HSB Project INPE Brazil

Jose.Bacellar@dss.inpe.br

URL:

http://corn.eos.nasa.gov/performance/Net_Health/files/INPE-IDN.html

and

http://corn.eos.nasa.gov/performance/Net_Health/files/INPE-HSB.html



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AMPATH

eLearning
eWorkforce

eEducation
eBusiness

**Economic &
Social
Development
in the Region**

**Education and
Research**

**Latin American and
the Caribbean NRN's**

AMPATH



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AMPATH

IADB



Goals

- *Help accelerate economic and social development in Latin America and the Caribbean.*
- *A major opportunity for the IDB lies in becoming a bank which can support innovative development projects as well as a trusted political forum for working out the complexities of regional integration.*



<http://www.iadb.org/exr/corp/Ve.htm>

Continued...

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AMPATH

IADB



Mission

- a) To create and sustain a policy and investment environment conducive to robust economic growth; and,
- b) To achieve higher levels of human development for all their people, including groups and persons historically excluded from mainstream society.

<http://www.iadb.org/exr/corp/Ve.htm>



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AMPATH

The IADB & AMPATH

- The AMPATH advanced Research & Education networking infrastructure and connection point in Miami provides service to the IADB's areas of interest.
- FIU and the IADB can work together to get the AMPATH message out to the appropriate technology / telecommunications institutions in South and Central America and the Caribbean by:
 - Sponsoring & Collaborating with AMPATH on regional workshops
 - Providing in-country IADB program officers with National Research Network contact information



Challenges

- Identify National Research Networks (NRNs) in all AMPATH countries slated for a DS3 donation. For example:
 - Brazil has RNP
 - Chile has REUNA
 - Argentina has RETINA
 - Panama has SENYCET
- Extend the AMPATH Network to all Latin American and Caribbean countries. Inquiries exist now from:
 - Colombia, Venezuela, Peru, Nicaragua, Dominican Republic, Ecuador, Bolivia, Uruguay, Cuba, and the list goes on...



Challenges

- Help the universities and R&E centers in Latin America and the Caribbean connect to AMPATH through the NRNs
 - The AMPATH cost-sharing model charges the NRN in each country a % of FIU's operational costs.
- Funding
 - Hardware
 - Local loops (high-performance data circuits within each country)
 - Personnel (Administration, Network Engineers, Internet applications developers)

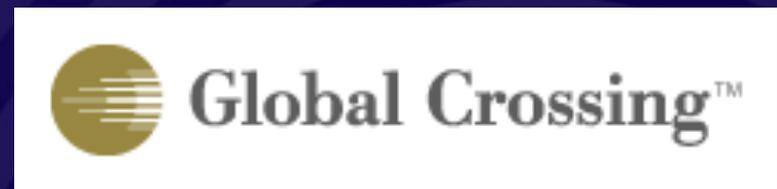


IADB Meeting, Dec. 7, 2001

THANK YOU!

For more information:

<http://ampath.fiu.edu>



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