

Ampath Workshops:

Fostering Collaborations Across the Americas
Miami, January 28-31, 2003

Panama Connectivity Infrastructure Update

Azael Barrera, SENACYT

(Panama)



The “Network” build up

- **Global Crossing and UCAID agreement in mid 2000**
- **Infrastructure equipment procurement between beginning and second quarter in 2001 (\$760,000)**
- **Capacity building**
 - **Pre start in 1997-1998 with IP Multicast and Ipv6 interuniversity project**
 - **Training programs in three universities 2001**

The “Network” build up

- **Negotiations to create a true research and academic network**
- **First formal meeting in march 2002**
- **Last organizational meeting in september 2002**
- **Started 12 universities and two research oriented institutions**
- **Signed the formal agreement 10 universities and 3 institutions**

REDCYT

- **Fundación Red Científica y Tecnológica de Centros de Investigación y Universidades**

- **Foundation By Laws Universities signers**

- **Universidad de Panama**

- **Universidad Santa María La Antigua**

- **Universidad Latina**

- **Universidad Latinoamericana de Ciencia y Tecnología**

- **Universidad Interamericana**

- **Universidad Autónoma de Chiriquí**

- **Universidad Especializada de la Américas**

- **Fundación Red Científica y Tecnológica de Centros de Investigación y Universidades**
- **Foundation By Laws Research Institutes**
 - **INDICASAT**
 - **Gorgas Institute of Health Studies**
 - **Agricultural Research Institute (IDIAP)**
- **Foundation private sector observers**
 - **Cisco Systems**
 - **Cable & Wireless**
 - **Alionto Virus Group (DSinet)**

- **Infrastructure and knowledge capacity diagnostics of universities**
- **Individual procurement of equipment**
- **Last mile work in process to the NOC**
- **Block negotiations with carriers to provide reasonable cost of connectivity to members**
- **Start 5 Mbps for 4 research universities (4) and institutes (2)**

- **Slight advantage (not all from scratch)**
 - **There is an interconnecting neutral node built with the support of Organization of American States (INTERED) since 1997**
 - **The INTERED node interconnects all ISPs**
 - **Main purpose was to provide interconnectivity to academia via their ISPs and also keep local IP traffic local**

INTERED2

- **Evaluation of current capacity and feasibility for an INTERED2**
- **Upgrade the node and provide a 30 Mbps minimum between clear fiber between the node at Global Crossing and INTERED**
- **The INTERED node will need a switch upgrade**
- **Proposal has been presented to the Interamerican Developing Bank (IDB), a major overhaul to INTERED will also support new business applications for ISPs and their customers**

- **Things to do:**
 - **Put the plug into Global Crossing DS3 interface**
 - **Finish VPN link with three major universities and one institute**
- **Issues comprehend difficult topics:**
 - **Availability of cash flow**
 - **Resentment of sharing knowledge**
 - **Define other sources of funding and knowledge**

- **Meanwhile:**

- **An IP multicast virtual backbone between SENACYT, INDICASAT and three universities (UP, USMA and ULAT); USMA operates a intercampus IP Multicast backbone since 1998**

- **An IPv6 virtual backbone between SENACYT and one university (USMA), USMA operated the first IPv6 intercampus testbed in the country (1999)**

- **A VoIP backbone between SENACYT, INDICASAT and 5 Infoplazas**

- **Related Projects**

- **Center on Research in Optical and Wireless networking (Corea)**

- **Atmospherica & Oceanic Remote instrumentation**

- **Collaborative research with region neighbors**

- **e-Health**

- **K-20 projects**

- **Teaching and learning**

- **e-Inclusion (Digital Divide phase2)**



- **Contact**

- **Azael Barrera**

- **abarrera@senacyt.gob.pa**

- **David Bosquez**

- **dbosquez@senacyt.gob.pa**

- **Site**

- **www.senacyt.gob.pa/redcyt**

- **www.redcyt.org**