IXPs, the Latin America Experience

Roque Gagliano

ANTEL - Uruguay

IXPs in Latinamerica

- We sometime use the term "NAP": Network Access Point.
- Specific policies at LACNIC to get allocations for NAPs or IXP (stats, web).
- Total 21 NAPs in 11 countries.
- 9 located in Brazil.
- Pioneers started in 1998.
- Some NAP with more than 1Gbps of switching traffic.

Services that could be found

- IPv4 Public and/or private peering.
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- Multicast Peering.
- Anycast Root Servers.
- AS112.
- RIS (RIPE) Project.
- Looking Glass/Route servers.

NAPLA (Naps of Latin-America)

- Annual meeting where IXPs of the region exchange their experiences.
- First meeting in 2002
- Logistic support from LACNIC.
- Mailing list: napla@lacnic.net
- One Cordinator…me.
- Next Meeting (6th): May 22nd Isla Margarita, Venezuela.

Regulation/ Government / ISPs Policies

- Varies Country to Country:
  - Chile: Every IP Operator MUST be connected to a NAP.
  - Brasil: CGI runs the PTT project.
  - Many: ISP Associations decide to set up a NAP.
  - Argentina: Only national routes.
  - Cuba: Helped getting cheaper transit prices to ISPs.

Some Issues: Example Haiti IXP
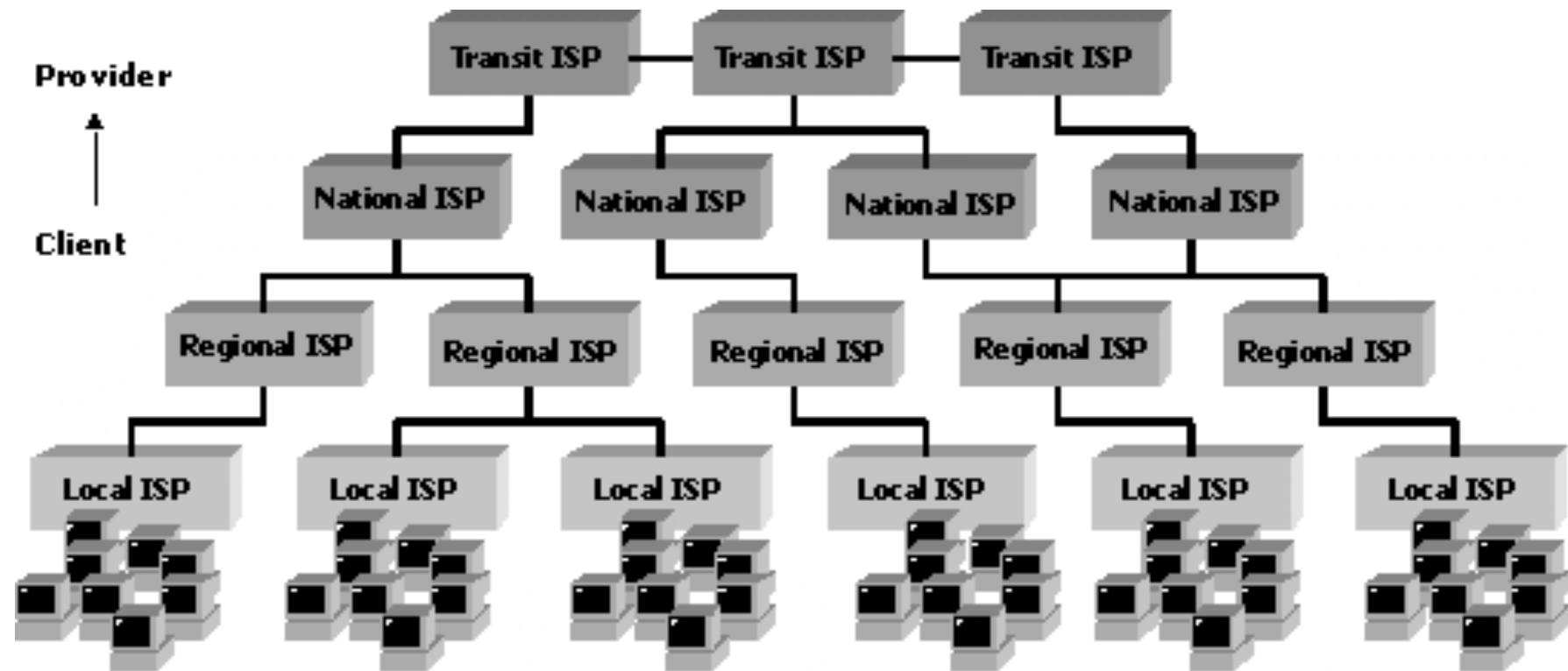
Issues:

- No interconnection between the ISP's
- Any communication between 2 different customers has to go twice the satellite path.
- Important delay.
- Bad quality of the connection.

Consequences:

- Unable to support some applications like VoIP, Video Conference.
- Expensive where and when available (about 1500 U$ installation fee and 400-800 U$ recurrent for 128 Kbps).
- Other ordinary services like Web Mail Hosting can't be provided.
- Web servers are hosted overseas particularly in the United States because of better prices and services reliability.
- Less market for the ISP's and the local web developers.
- Barriers and obstacle to the development of ICT.

Solutions:

- In September 2002, RDDH (Haitian Network of Sustainable development) a UNDP project finances a Study on a possible way to interconnect Haitian ISP's.

- Exchange Point Hosting: Boutiliers, a hill that surrounds the Metropolitan area of Port-au-Prince and where each ISP already has at least a Point of Presence.

- Power and Security for the IXP for a concern.

- However…a new player arrived…with Microwave connections to Domenic Republic and became a carrier for most ISPs.

Big Players do Play…

- CABASE Argentina in 2004: the G4 group (similar to RBOCs) reduced the speed of its links to the IXP (public peering) causing them links to saturate.

- Big QoS problem.

- As a policy the IXP was not allowed to delete their route.

- Solution: They approved a SLA policy and the G4 were disconnected.

Regional Interconnectivity

- The NAPs solve the Metro connectivity problem.

- Most ISP solve the national connectivity.

- Most traffic between countries in ALAC goes through Miami (NAP of the Americas). ¿why? ¿how can we solve it?

- Recently: NAP of the Caribbean with the support of the Domenic Rep. Gov. Done by Terramark.

- This is a hard problem with multiple interest groups.

Thanks.

Roque Gagliano
rgaglian@antel.net.uy