

PAIX Status - October 1999

Paul Vixie <vixie@mibh.net>

<http://www.paix.net/>

Follow the Bouncing Ball

- PAIX created by DECWRL, ~1995
- Digital acquired by Compaq, ~1998
- PAIX acquired by Abovenet, early 1999
- Abovenet acquired by MFN, late 1999

Present Legal Status

- PAIX.net, Inc.
- Wholly owned subsidiary of MFN.
- Separate board of directors, officers.

Present Technical Status

- Three GIGAswitches, ~300Mb/s trunking.
 - ~50 FDDI customers.
 - ~10 10baseT customers.
 - ~10 100baseTX customers.
- Two PacketEngines 5200's, 2Gb/s trunking.
 - Inheriting all 10baseT, 100baseTX customers.
 - Feeding “GIGAswitch quarters”.
- Ground floor expansion now open.

Technical Futures

- Aggressively pushing customers to migrate from FDDI to 100baseTX.
- About to begin testing “fractional GBE”.
- Developing “exchange level peering”.
- Evaluating demand for ATM, DACS.

Migrating from FDDI

- Each GIGAswitch will be divided into 4 logical bridges.
- These 12 logical bridges will each be connected to a single FDDI port on a PE5200.
- We will migrate “busy pairs” to the same logical bridge, to avoid trunk congestion.
- Migrating to 100baseTX would be better.

Fractional GBE

- The PE5200 has a 2Gb/s limit for each slot.
- Two customers per slot is bad for business.
- A 6-port GBE card has 3:1 overcommit.
- Many customers want >100Mb/s and are using multiple 100Mb/s ports to get there.
- “Fractional GBE”, with a 350Mb/s speed limit, is a reasonable short term stopgap.

Exchange Level Peering (1)

- Trade rack for rack w/ another exchange.
- Each exchange puts a switch in the other.
- Each exchange pays for its own carriage.
- Real estate customers of one exchange can become port/peering customers of the other.
- New customers can divorce their real estate selection from their peering opportunities.

Exchange Level Peering (2)

- Requires a commitment to congestion-free trunking (not like Ames/MaeW).
- Exchange fabrics are not bridged - customer must explicitly connect to each switch.
- Aggregated (trunk-level, not port-level) statistics will be made available.

Exchange Level Peering (3)

- Pursuing agreements with Ames, MaeW.
- Offer will be open to colo providers like Abovenet, Exodus, GlobalCenter, etc.
- PAIX board has agreed in principal to pursue similar agreements with Equinix.
- *Someone* is going to add this kind of value to all this new dark fibre - may as well be us.

Potential Futures

- ATM?
 - Some customers have said that they like ATM's bandwidth management features.
 - This may or may not be easier than VLANs.
- DACS?
 - Customers using multiple T1 providers can't use "channelized T3" technology.
 - PAIX could act as a last-mile T1 aggregator.

Real Estate Futures

- The new corporate masters (MFN) have a lot of fibre meet points around the world.
- PAIX can put an exchange point anywhere that makes sense (“per customer demand”).
- Separation of colocation from exchange point businesses has clarified PAIX’s purpose: *peering is good - make it possible.*