

Pay me Now or Pay me Later

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<http://archive.psg.com/060915.nanog-payme.ipv6.pdf>

You Just Heard the Poster Children, the Heros

[The Pioneers were in the Last Century]

What do I Want?

IPv6 feature parity with IPv4

IPv6 Performance parity with IPv4

Transition and Compatibility Tools

**Price parity with IPv4 with
no extra license fees!**

Yes, IPv6 Sucks

an IPv4 NATted

World Sucks

Much Worse

Get Over It

What Sucks?

- Routers do not have performance and feature parity with IPv4
- Security products and load balancers do not have performance and feature parity
- IETF transition tools are late late late
- CPE is weak, not \$50 at CompuCrud
- The IPv6 backbone is chaotic, has tunnels, MTU problems, and is sketchy (NTT to Hong Kong to get to G::gle!)

What Will Fix These?

- When there is money on the table
- When companies' income relies on it
- The user does not care, they just want their MTV
- We, the providers have the problem of delivering through IPv4 run-out
- So you and I have a choice

What Pushes the \$

- Your RFPs
- Operators pushing at the IETF
 - NAT-PT or whatever it is called now
 - A+P / DS-Lite
- Shaking out the software
- Shaking out the platforms
- IPv6 Traffic

Delay

Our Costs



Invest Slowly Now

Our Costs



Why?

- You will have **Experience**
- Your equipment will be on the upgrade path (see AT&T et al. Wednesday morning for what happens if you do not, death by NAT)
- Your software will be on the upgrade path
- Your knowledge will be on the upgrade path
- You will know the costs and trade-offs
- You can make intelligent decisions
- You can give management real data & options

External or Internal

- Move your external facing to Dual-Stack
 - SMTP
 - DNS
 - HTTP
- Pick an Internal piece, where you can experiment and gain experience without customer visibility/effect
- I like external as it will drive traffic and thus drive financial pressure behind IPv6

What Did I Learn?

- How to configure the equipment actually push IPv6 packets
- That DNS black-lists don't support IPv6
- IPv6 reverse is unpopulated, so do not check
- That ejabberd supports IPv6 but not on the same ports
- That I could convert SMTP, HTTP, and DNS in a day or two
- No AAAA unless all services over IPv6

What is the
Present Value
of Reducing Your
Future Cost
by 50%

You Can Pay
Less & Slowly Now
or
You Can Pay
a Lot More & Steeply
Later

See the Movie

<http://www.youtube.com/watch?v=Qh3i6lDqWBM>

Rumy, Alex, & Arno of the RIPE/NCC did a cute job and a lot of folk with the experience tell their stories