

# Progress with HIP and Future efforts

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# Project Goal

- Total commitment to IPv6
  - Forget IPv4 and NATs
  - Use Teredo where only Ipv4 available
- Use HIPL code on Centos
  - 'Production' Linux
- Use SIP as the 'Compelling' application

# RFC 1925 Rule 8

- It is more complicated than you think
  - But not how I thought last year!
- Time to build HIPL code
  - Now available as RPMs
- Current Miredo code (Teredo for Linux)
  - Had to build it myself
- Lots of pieces of using HIP
  - The real lesson here

# Testbed

- Centos server for
  - RADVD and Miredo
  - Lots of VLANs and mobility by moving systems between VLANs
- Centos server with HIPL for
  - RVS
  - BIND, TLD of 'htt' used locally for testing
- Centos and Fedora 10 test systems
  - IPv6 only
  - Only Initiators are running HIP DNS proxy

# Status

- No testing with Teredo
  - Time/resource factors
- SIP client problems
  - IPv6 and other challenges
- VNC, an IPv4 only app, over Ipv6
- HIP/DNS integration
- RVS testing
  - RADVD lessons and VLANing

# Observations

- Need more thought about DNS and HIP aware and Legacy apps
  - HIPL DNS proxy working well for IPv6 and IPv4 legacy apps
  - HIPL DNS proxy interfering with HIP aware apps
    - RVS to FQDN fails as proxy only delivers HIT
- It is so easy for apps like VNC to run as if there is IPv4 over an IPv6 only network
- Creating DNS RR for HIs challenging, but anyone that can manage BIND can do this

# Next up – NEW DIRECTIONS!

- Real POC Possible
  - HIP for remote Bio Telemetry
    - Think HIP on a pacemaker and an Insulin pump. Will it fit?
    - For secure communications to Healthcare Provider
      - On the Cell Phone only may not comply with HIPPA
    - HITs as ACLs
  - HIP for Smart Utilities
    - Leverage off of Boeing SCADA?
  - HIP for Cloud Computing
    - Where is your service today?
    - HITs in X.509 certificates

# What will be needed

- ECC for HIs
- SAs survive power cycling
  - Secure storage for SAs? Hopefully not just TPM.
- DNSSEC or X.509
  - I would like to use DNS solutions where possible
  - How much can Cell Phone off load DNS components
- Where 802.15.4 devices have HIP, use it to key 15.4 security
- 2-tiered RVS?
  - In network
  - In Cell phone

Questions?