Ethernet in the Last Mile

Call For Interest

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Motivation

- Ethernet Everywhere
- ATM adds cost to DSL modem creating barrier to deployment
  - ATM causes price of ADSL modems >$200 price point
- DSL technologies can extend the reach of 10Mb Ethernet
- Copper dominates local loop, and MTU sector through 2004
  - MHU: 57%
  - MCU: 54%
  - MDU: 47%
Definition of the Last Mile

- Access point for individual subscriber
- Range of 10Mb symmetric on copper pair
- MTU space
- Future vertical market spaces
  - Hospitals
  - Lounges
  - Business/training centers
  - Retail Environments
  - Public Spaces
Technical Options

- Ethernet framing
- 10Mb symmetric?
- Up to 3000’ on a single copper pair
- High bit rate DSL based solution
- QoS -> MPLS IP?
Scope of Application

- **MTU**
  - Ethernet DSLAM moves from CO to on-premise
  - offer all services over Ethernet/IP infrastructure
  - VoIP, Video services
  - no POTS -> more data b/w

- **Local Loop (up to 3kft)**

- **Extended Reach Ethernet**

- **Conclusion: Significant market for on-premises equipment and link technologies.**
Benefits

- Stimulates deployment by reducing cost
- Extends the reach of Ethernet
- Increases presence of Ethernet at network edge
- Reduces ATM traffic in switching fabric
- Paves the way for 100Mb Ethernet solutions in last mile
Limitations

- Limited application to single family dwelling broadband access
  - 1/3 market for DSL is inside 12kft
  - does not completely obviate need for ATM