



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



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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

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- 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