Network Access

ITS 625

DSL

• Makes use of "spare" spectrum in the twisted pair local loop
• Originally developed as 2-wire T1 alternative
• Many speeds and "flavors"
  • Almost all are asymmetric
  • All are highly sensitive to distance and line quality

DSL at the CO


Overall Structure
Cable Modems

Today’s Cable Network

DOCSIS

Data Over Cable Service Interface Specification

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Physical Layer

Data Link Layer

Network Layer

Transport Layer

Application Layer

Summary

- ~800MHz capacity on the cable plant
- Downstream divided in 6MHz channels
- Programming or data channel of ~30Mbps
- Upstream ~45MHz at low end of spectrum
- ~3Mbps per MHz of spectrum, shared