HomePath

IEEE Working Group

for EFM

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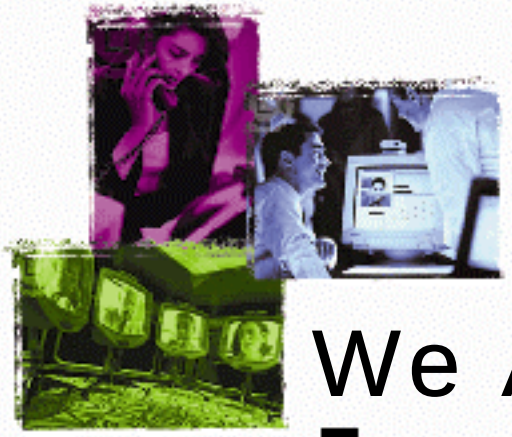

We Are Agreed

- Fiber vs copper, passive vs active, Ethernet vs ATM
- Ethernet offers lower cost, more ports and more vendors than other solutions
- Voice, video and data can be best delivered optically via FTTx
- Eliminates protocol conversions, provides clean IP from end-to-end

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.. For the Right Reasons

- Ethernet/IP PONs satisfy the business objectives of our customers
- PONs lower operational cost which improves everybody's bottom line
- Natural IP carrier that leverages the high volumes and low cost of Ethernet
- There is an available, cost-effective labor force
- The edge is waiting ..

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Comparison Snapshot

	Availability	Maintenance Costs	Bandwidth	1st Cost	Lifetime Costs
HFC with Cable modems & Cable telephony	Low	High	Low	Medium	High
Twisted Pair and DSL	Medium	High	Medium	High	High
First Mile Fiber	Low (Today)	Low	High	High but falling	Low

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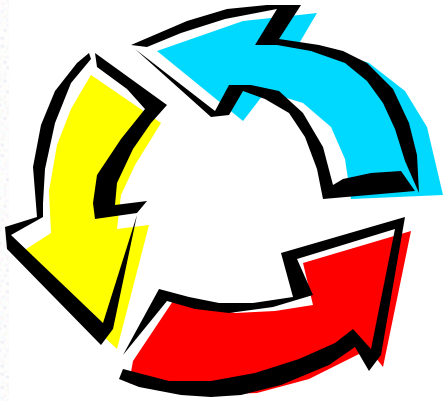
Drivers

Bandwidth

Processing



Services

Residential	SOHO
Video Local Stations CATV/Satellite HDTV Education Near VOD VOD Interactive Gaming MPEG4 Downloads & CD Burns	**Video** Video Conferencing Interactive Video Distance Learning & Training Local Stations Local Stations CATV/Satellite File Transfer Corporate Broadcast
Voice Lifeline POTS, Additional Lines CLASS Services Centrex Hot Line/Warm Line Long Distance Operator Services (via LD Carrier) Directory Services E911	**Voice** POTS (1FB) + Vertical Services CLASS Services Multiple Lines/Trunks/Hunting/ACD KTS/PBX/Centrex (DID Access) Hot Line/Warm Line Long Distance Operator Services Directory Services Leased Lines Fax
Data High-speed Web Access E-mail e-Commerce Home Banking/Bill Paying Interactive Games Education/Training IP Telephony	**Data** High-speed Web Access E-mail Financial Transactions Sourcing Education/Training IP Telephony Polling Services
Future Energy Management Alarm Monitoring Remote Home Management & Surveillance Meter Reading & Telemetry Video Telephony Seniors Health Monitoring 'Smart Home' + Appliances	

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Questions Remain

- If the choice is obvious, why are we here?
- Can we deliver 99.99 voice for the telcos?
- Should there be a new, possibly competitive standard? At the risk of stalling the market?
- What have we learned from the previous generation of broadband?

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Proposal

- *Need*: to extend Ethernet's benefits from the first to the last mile
- *Purpose*: to provide leadership among the optical access stakeholders in creating a protocol that assures interoperability
- *Scope*: TBD
- *Justification*: all glass, all services, all Ethernet, all the way

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Objectives

1. **Be patient**. No rush to judgment. There are many approaches, let alone specifications, to finding a solution to common problems.
2. **Embrace and extend**. Solicit participation along the entire value chain: silicon, system, component, hardware, software, device, content and application vendors.
3. **Be united and decisive**. Let each gathering increase consensus. Don't stall the market and postpone our own revenue.
4. **Build a bridge to FSAN**. Seek dual membership and deliver on the telcos business objectives.

FSAN

- ATM is not their fault. Don’t blame them.
- ILECs are among the few with CAPEX to spend
- They have momentum in high-speed access, particularly DSL
- We must understand and address their objectives, especially voice
- Reaction of FSAN membership to IEEE activity should be factored

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Summary

- We are agreed: all glass, all services, all Ethernet, all the way
- The scope of our efforts needs to be discussed and determined
- The revenue-generating benefits of E/IPON networks should drive our work
- We should open the EFM process to all stakeholders ..

  including FSAN ex-pats

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Thank You
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