

Ethernet in the First Mile: Would you like fries with that?

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Ethernet Paradigm Shift

Ethernet Focus

- Traditionally in the LAN
- Gigabit Ethernet moved into MAN
- 10GbE pushing into the WAN
- EFM pushing into the Home

End Users

- Traditionally datacom professionals
- MAN/WAN encompassing telecom professionals
- Looking to “Average Joe” ... non-technical

The New Ethernet

- ✍ **Not your typical Ethernet**
 - Still Ethernet MAC
 - No changes to MAC client
- ✍ **Moving out of traditional LAN environments**
- ✍ **Offering services to non-traditional users**
- ✍ **802.3ae, 802.3af and EFM are all part of the New Ethernet**
 - Bring non-traditional features

The New User

- ✍ Don't know what Ethernet is
- ✍ Don't care what it is
- ✍ Average household:
 - 2 televisions (video)
 - 1 computer (data)
 - 1 phone line (phone)
- ✍ Value proposition
 - Provide Ethernet to home that permits Service Providers to offer cafeteria services



End User Services

Bandwidth

- Data is not major bandwidth requirement
- Video is predominant bandwidth
- Voice is minimal bandwidth

Sensitivity

- Data is not time sensitive or lifeline sensitive
- Video is time, but not lifeline sensitive
- Voice is time and lifeline sensitive

Opening the Cafeteria

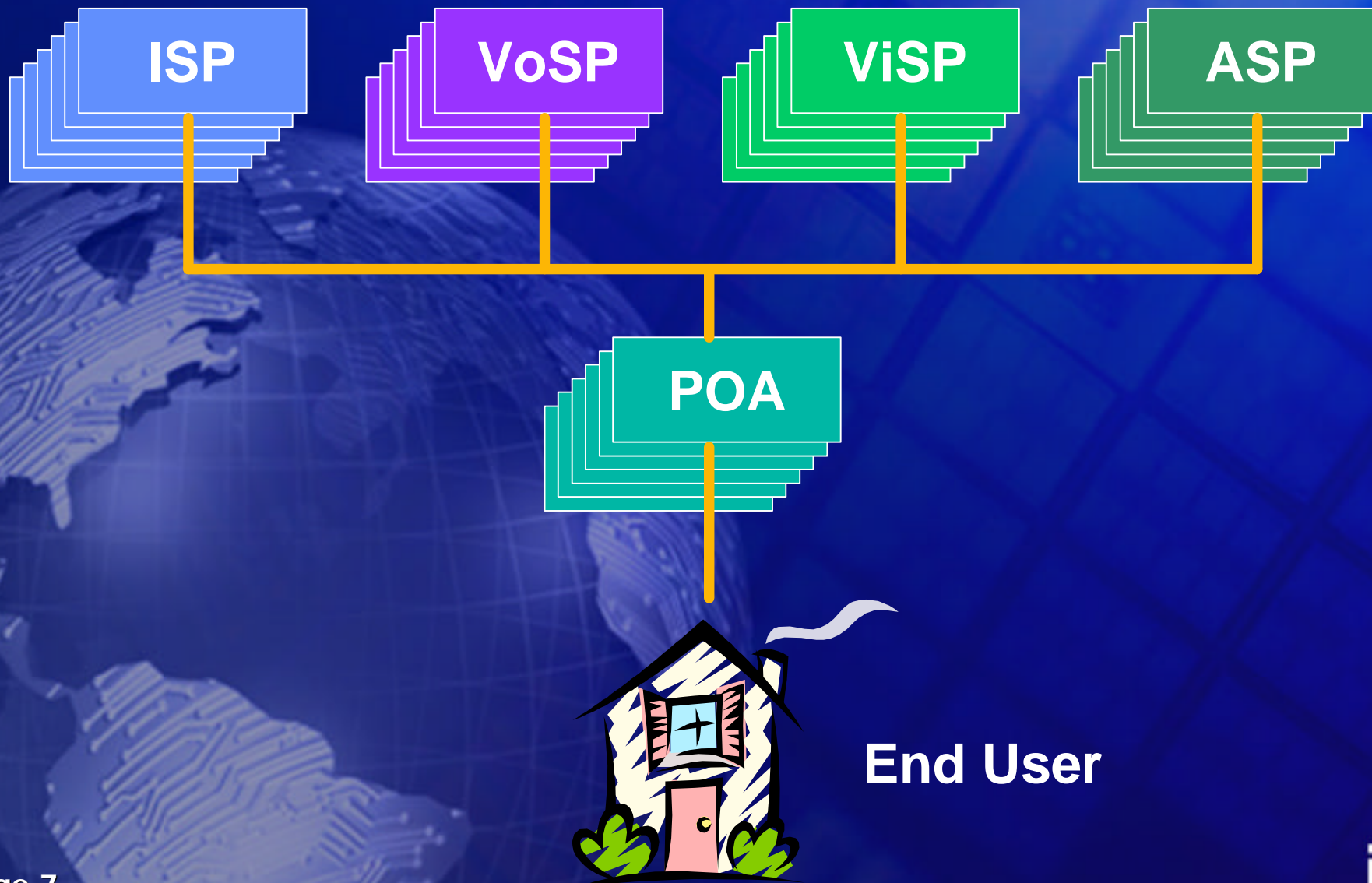
✍ Possibility to offer end user with multiple Points-of-Access (POA)

- Typical + Utilities... and others

✍ POAs provide End User with access to:

- Internet Service Providers (ISPs)
- Video Service Providers (ViSPs)
- Voice Service Providers (VoSPs)
- Application Service Providers (ASPs)
- New Generation Services...

Cafeteria Model



What does this all mean...

Things not to standardize:

- Voice over IP, Video over IP
- Things done above the MAC

Infrastructure

- Currently limited in capabilities
- Keep foresight in mind

KISS

- Better to offer services over Ethernet, rather than the other way around
- Look to utilize existing Ethernet equipment

Things EFM should study

✍ Study, not necessarily standardize

✍ MAC

- 802.1 Class of Service capabilities
- Flow control prioritization

✍ Physical Layers

- Link Aggregation via one link
- Re-use and Reduce

✍ Medium

- Hybrid cabling
- Reach, what do we really mean by EFM

Things to Remember

Ethernet

- Stick to what we know and do so well
- Increase market for existing equipment
 - Increased volume, lower costs
 - Increase the size of the pie

Ultimate goal or “Nirvana”

- Anyone can be a POA
- POAs provide access to cafeteria
- Simplicity... critical for end user

Thanks!

Questions?
Comments?