

Reorganizing the 802.3 Std.

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Presentation to
802.3 Maintenance Task Force
Albuquerque, Nov. 12, 2003

IEEE Std 802.3 if restructured



We could prune and reorganize!

I WOULD PROPOSE:

- **Move out obsolete pieces to a “reference only” standard.**
- **Break active standard into several pieces**
- **Discuss how to do all of this in Maint. Meeting this week**
- **Ref: Maint Request #1109 as a foundation for the work**

Slides after this are for
Wednesday

There are about **424 pages (~20%)** that could easily be pulled out of the active standard and put into a “senior reference” standard.

(List the standards and then pieces)

(See spreadsheet attached to CR1109)

Context for doing this as a project:

(Part of) 2004 REV

Time line for PAR and NESCOM meetings

Present concept to NESCOM in December and tell them we plan to present

For approval in March

IEEE Std 802.3 if restructured



We could prune and reorganize!

I WOULD PROPOSE:

- **Move out obsolete pieces to a “reference only” standard.**
- **Put EFM (and probably the WIS) into Carrier Grade**
- **Make EPON into a separate (yet still “Ethernet”) standard**
- **Make room for new work in new areas**

A proposed split of 802.3 for 2004

- Legacy / Enterprise
 - Part 1 - 'front matter' MAC definition & 10M, without clause 30
 - Part 2 - 100M
 - Part 3 - GigE & LACP
- Carrier
 - Part 4 - 10Gig
 - Part 5 - EFM minus PON
 - OAM
- Management
 - Clause 30 (Perhaps primary form is a database)
- PON
 - Part 5 - EFM Clauses 60, 64, 65, 66, 66A

DRAFT

Carrier Grade Ethernet (Proposed) Feature Set

- More/Better OAM
- Full duplex only (exclude CSMA/CD)
- Exclude 1, 10, and maybe 100MB/s
- L2 device recognition for “domain” separation
 - Carrier packets excluded from consumer ports
 - Carrier packets converted into consumer packets by
 - Tag stripping
 - De-encapsulation
 - Decrypting
 - Whatever...
 - Consumer packets converted to carrier packets by
 - Reversing process
- Ethertypes distinguish carrier vs. legacy
- Redundancy
 - Dual (or better) homing
- Extended Header
 - Slightly larger frame size
 - Tagging, encapsulation, encryption, redundancy?
 - Jumbo frames excluded. That is a different application space

Other types of Ethernet (Perhaps proposed)

- Backplane
 - Very short reach
 - CFI this meeting
 - Scope is subject of CFI
- Home Entertainment
 - Small network
 - Support local music distribution
 - Timed delivery of music, etc.
 - Excess bandwidth for traditional services
 - 1 Gigabit minimum link b/w
 - Anticipate CFI in 2004

The Point is:

- There “could be” additional flavors of Ethernet that:
 - Are not fully compatible w/ old Ethernet
 - Don’t modify the legacy standard
 - Have defined requirements for edge devices

This is big, non-trivial project

- Editing work
 - Macro decisions about what chunks go where
 - Lots of small decisions to track macros
 - Editing design and implementation
 - Review and balloting
- Procedural Work
 - Generate PARs and get approvals
 - Approval to split standards is not usual
 - Get approval for use of new “Stabilized” or “Senior” standards status from NESCOM & Stds Bd.
 - Get P&P for “Stabilized Standards” approved by IEEE.

This is big, non-trivial project (2)

- Much of the work is yet to be defined.
- Need transition plan for current projects.
- Need to determine how new projects are handled.
- Consensus has to be developed.
- Funding needs to be procured.
- Paid editing to be arranged.
- Lots of big and small decisions.

Who CARES?

- Show me the money!
- There are companies who can get something big out of this, e.g.:
 - Nortel (Features associated w/ “Carrier Grade”)
 - Intel (Backplane)
 - Gibson/Pioneer (Synchronous)
 - ???
- Propose that we seek funding from interested companies to support professional editing work

Who CARES? (2)

- Other standards groups need this to support current projects:
 - 802.1 Link Security
 - 802.1 Q-in-Q

PAR Matrix

- Put in here a x-y sheet which shows documents going and documents coming out with an X in each cross point where a PAR is required.
- (Now is the time to do this as we will have an approval gap after 802.3ah until new drafts start showing up for approval after mid 2005)

Action Items for today

- Generate a basic agreement to go forward
- Report for Thursday Plenary
- Motions for Thursday Plenary
- Motions for SEC
- Develop a volunteer team
- Action Plan thru March
- Action assignments thru March