
Protocol Identifiers in Std 802

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For detail see:

<http://www.ieee802.org/1/files/public/docs2020/maint-seaman-protocol-identification-0420-v00.pdf>

Protocol Identifiers in Std 802

A little history

- What was/is/is not in Std 802

Historical, but glaring, omissions

- LLC is there, but no LLC Addresses, 2014 changes emphasized that
- So no Protocol IDs for Spanning Tree, IS-IS, ...
- Not a useful basis for EPD/LPD guidance
- 802.1 has relied much more on .1D/.1Q, then .1AC

How to describe Protocol Identifiers

- Protocol Id values, EPD encoding, LPD encoding, translating
- Other things that need fixing

A little history

IEEE 802.3 Length/Type

- LLC expects, and other MAC types (.4, .5) deliver length for all frames (not just long ones)

Need to carry EtherType frames on non-802 media

- 802.1 adds 'SNAP SAP' (rfc 1042) to Std 802
- Full picture requires Std 802 + Std 802.2

The AppleTalk II bug

- 'Ethernet is not a standard' (802 EC)
- 802.1H – don't SNAP SAP EtherTypes on 802.3

802.1AC specifies EPD/LPD conversion

802.2 no longer a prime reference, but Std 802 never the full picture

What to do with Std 802

Could continue to ignore it, organizations that have built products know what to do

- Increasingly risky as organizational memory fades

Bring it back into alignment with 802.1Q and 802.1AC

- Clearly specify Protocol Identifiers in current use
 - Including both EtherTypes and LLC Addresses
- Specify how each is encoded in both EPD/LPD
 - Matching 802.1AC translation + encapsulation reqmts.
- Update subtyping/versioning advice to best practice

Initial suggestions in:

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Draft contribution, work in progress.