

A Thin Full-duplex MAC

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Key Features

- Reduced version of existing MAC
- Removes Half-duplex
 - Collisions
 - Jam
 - Back-off
 - Retry
 - Carrier Extension
 - Bursting
- Makes Deference (IPG) optional

Confusion to reader

- Significant time spent learning about and implementing a feature rich MAC
- Full-duplex and P2MP implementations only use a handful of the functions
 - FCS
 - Data movement
 - TransmitFrame
 - BitTransmitter
 - TransmitBit
 - Deference (IPG)

Remove the Confusion

- Point to a new MAC clause/normative annex
- Re-write Clause 4, stripping out everything that is unnecessary
- See example text

Choice #1

Making Deference Optional

- **Option #1** – 16 in favor, 0 against
 - Add deferenceMode variable
 - In function TransmitLinkMgmt, defer only if deferenceMode
- **Option #2** – 1 in favor
 - Change the interFrameGap parameter to 0 for implementations that don't want to defer inside the MAC using the parameter table in 99.4.2
- 21 in the room

Choice #2

Rate-adapting the MAC

- Option #1 – 0 in favor
 - Use the ifsStretch equations from Clause 4
 - Calculate the ifsStretchSize and ifsStretchCount variables in BitTransmitter
 - Perform the stretch in Deference
- **Option #2** – 10 in favor – 0 against
 - Keep the CRS portion of CSMA/CD
 - Requires a shim layer to throttle for 10G WAN
 - EFM-cu could use this new MAC
- 22 in the room

Options

- **Annex 4A** – 20 (0) - 18
- Clause 68 – 0 (10)
- Clause 5 (Move 5.2.4 into Annex 4A) – 3 (5) - 1
- Clause 57 – 0 (12 + Wael)
- 23 in the room

Annex 4A Title Options

- **Simplified full-duplex media access control – 12 – 13 (1)**
- Deferring full-duplex media access control – 0
- Full-duplex media access control with deference - 2
- Media access control for EFM – 4 – 4 (4)
- Thin media access control – 0
- Flexible full-duplex media access control – 1