COM consensus meeting status:
Refer to comment #149 D1.1, #211 D1.1 and #57 D1.0

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IEEE P802.3 50 Gb/s, 100 Gb/s, and 200 Gb/s Ethernet Task Force Electrical Ad Hoc

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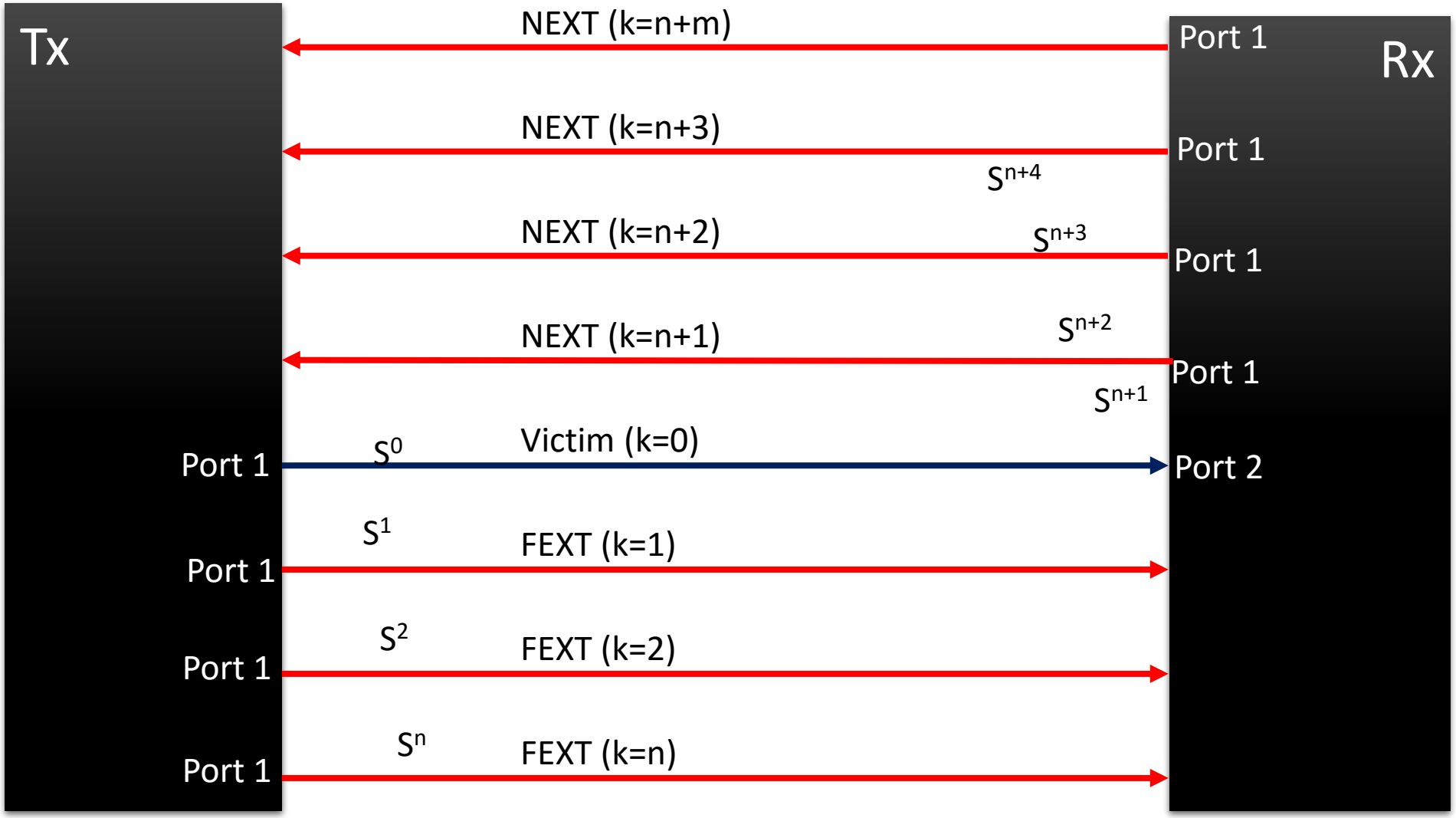
TOC

- ❑ Review of a channel and a few COM package parameters
- ❑ Status
- ❑ Recommendation

CHANNEL TOPOLOGY AND S-PARAMETER MEASUREMENTS

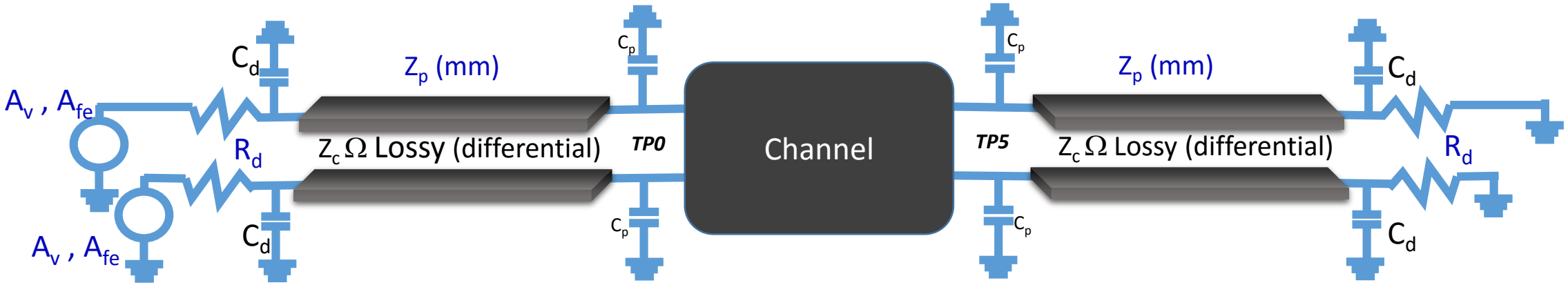


All next associated with port 1 use the same Tx package

All next associated with port 1 use the same Rx package

All channels use the same Rx package.

Present: 1 set of package parameters



A_v	C_d	Z_p	C_p
A_{fe}	R_d	Z_c	

Victim and FEXT Transmitter Drive and Package

Victim Channels
FEXT Channels

NEXT Channels

	C_d	Z_p	C_p
	R_d	Z_c	

Receiver Package

NEXT Transmitter Drive and Package

A_{ne}	C_d	Z_p	C_p
	R_d	Z_c	

Status:

- “Hole” in the standard
  - Computing COM by sweeping the package parameters suggests use of only 1 set of package parameter produces a “hole” in the standard
- No single worst case
  - There appears to be no “worst case” of package parameters which may be used for all possible channels
- Sweeping parameters takes many hours
  - COM computation for a single channel sweeping these parameter may take up to 6 hours of computation.
- 3 digits of drive swing precision may be required
  - 2 digits impacts COM by up to 0.4 dB
- A single set of parameters based on channel impedance promises to close the gap
  - The method is not fully vetted yet

OPTIONS

A. Keep D1.1 COM table
   A. Just accept the “hole”
B. Keep D1.1 COM table but adjust Rx testing COM and/or COM threshold
C. Require COM compliance for full grid of package parameters
D. Use COM augmented by Z_{dp} to determine package parameters
   A. Z_{dp} : Channel driving point impedance

Recommendation

- ❑ Not enough consensus to change D1.1 at this point in time
- ❑ Continue consensus work
- ❑ Review consensus work in Ad Hoc after Interim