Channel Model Ad Hoc:
Agenda and General Information

Channel Model Ad Hoc Teleconference

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If you are present on today's call, please send me an e-mail indicating your attendance.

Schedule of Events

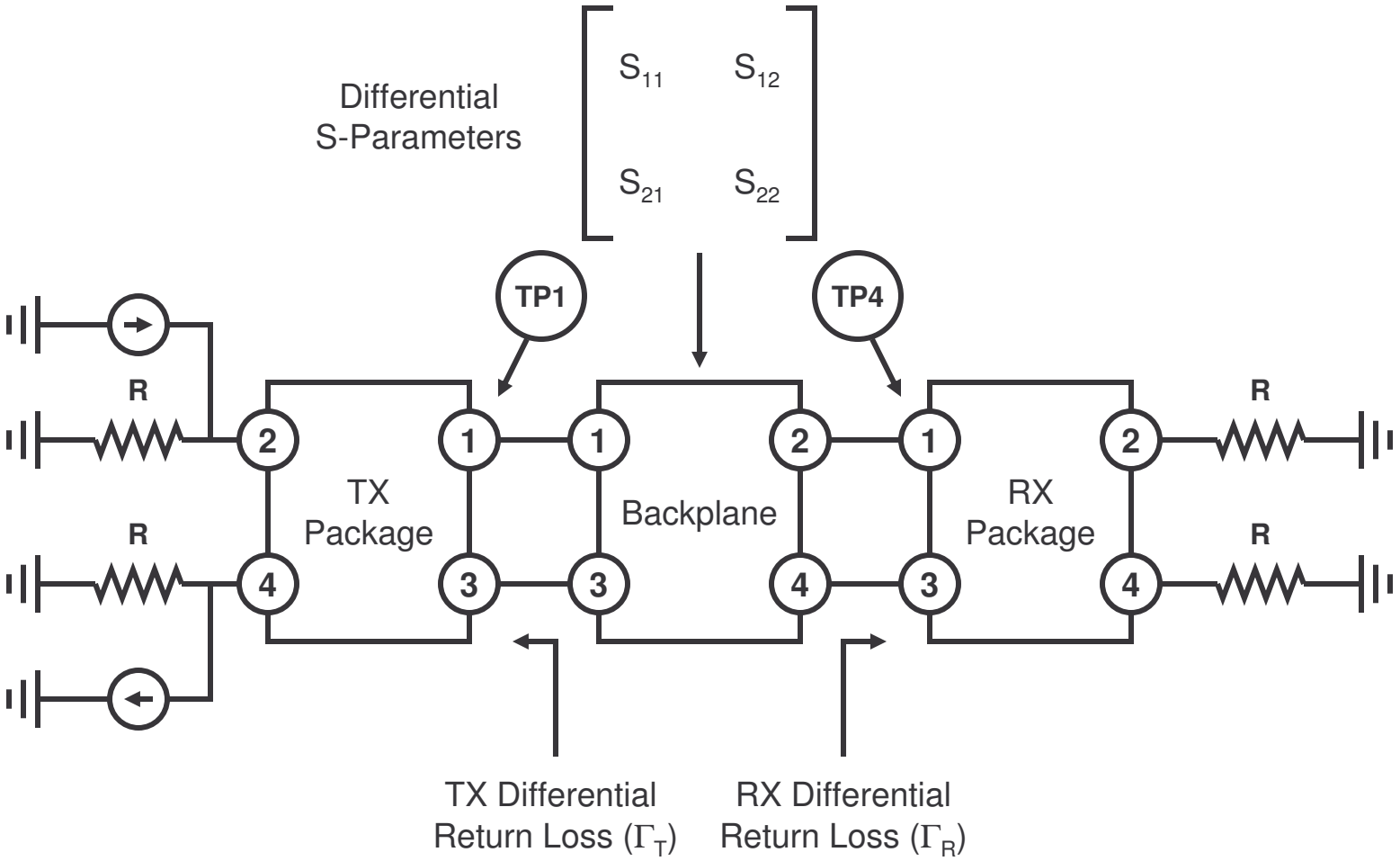
- Teleconference: Thursday, February 10 (10am PST)
  - Methodology to derive time-domain data.
- Teleconference: Wednesday, February 23 (10am PST)
  - Identify time-domain parameters.
- Teleconference: Wednesday, March 2 (10am PST)
  - Crosstalk.
- Wednesday, March 9 (midnight EST)
  - Deadline for requests for presentation time.
- Tuesday, March 15 – Thursday, March 17
  - IEEE P802.3ap Task Force Meeting
  - Hyatt Regency, Atlanta, GA

Meeting Agenda

- Carry-over items
- New business
  - Moore, “Computing the effect of crosstalk using convolution”.
    http://ieee802.org/3/ap/public/channel_adhoc/moore_c1_0305.pdf
  - Brunn, “Proposal for S-parameter extraction to DC”
    http://ieee802.org/3/ap/public/channel_adhoc/brunn_c1_0305.pdf
- Walk-in items

Carry-Over: Package Effects

- "Explicit" Methodology



Observations

- Packaging effects are already included in TP1 and TP4 specifications.
  - Cascade of ABCD parameters double-counts package transfer effects.
- A more appropriate approach may be the voltage transfer function first referenced by Mellitz.

  http://ieee802.org/3/ap/public/channel_adhoc/mellitz_c1_0904.pdf

$$\frac{V_o}{V_i} = \frac{\frac{S_{21}}{2}(1+\Gamma_R)(1-\Gamma_T)}{1-S_{11}\Gamma_T - S_{22}\Gamma_R - S_{21}S_{12}\Gamma_T\Gamma_R + S_{11}S_{22}\Gamma_T\Gamma_R}$$

- This could apply equally to the informative frequency-domain methodology.

Remaining Questions

- Option #1: Explicitly include source/load mismatch in channel impulse response.
  - Definition Γ_T and Γ_R?
- Option #2: Do not explicitly include source/load mismatch in the impulse response, but add a line item to the link budget to provide margin for mismatch.
- More study likely required to determine appropriate definition of Γ_T and Γ_R, or appropriate value for link margin.