IEEE 802.3ap
Signaling Ad Hoc

IEEE 802.3ap Task Force

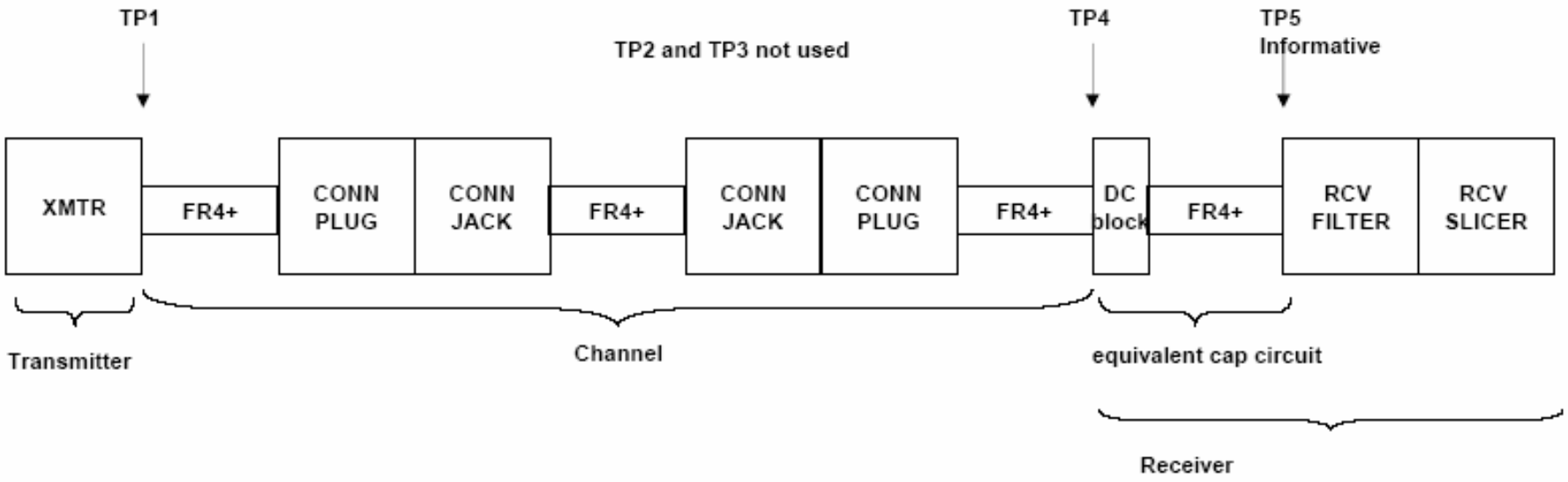
4 Feb'05

Today's Agenda

- Close model elements for signaling simulations
- Simulation model
- TP4→TP5 link discussion
- Package parasitic discussion

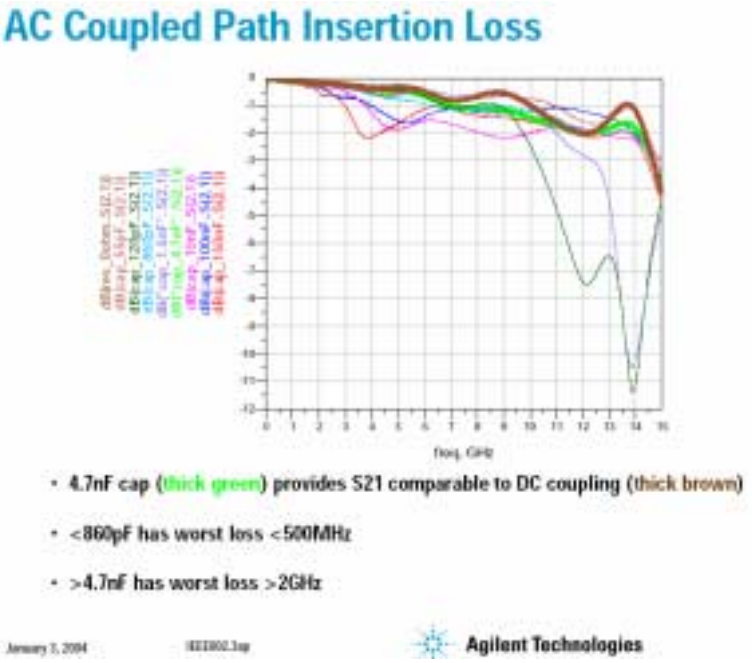
Channel Simulation Model

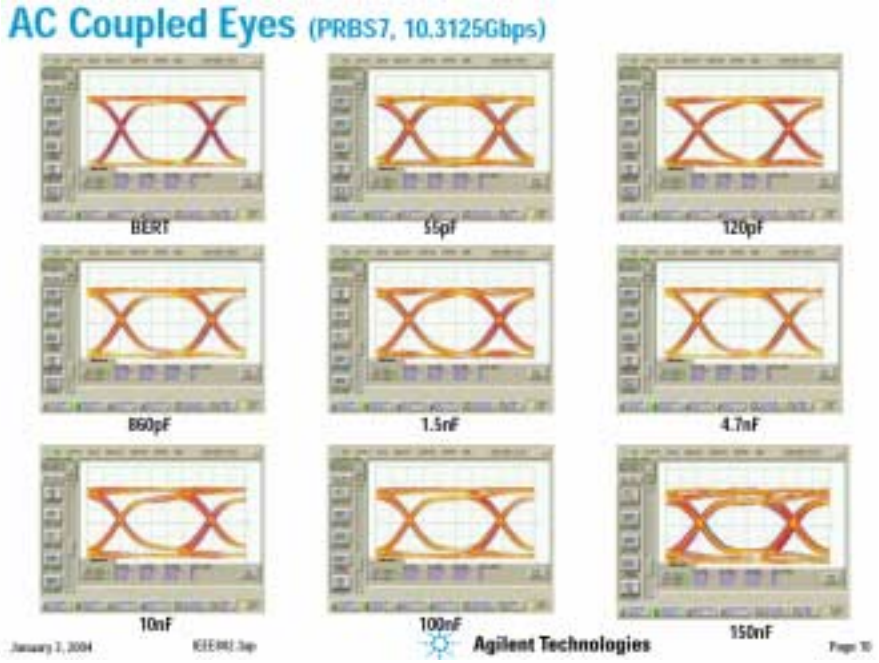
- **Current model with TPs from the channel ad hoc**



Link Elements

- **TP4→TP5 link (+ coupling cap)**
  - **Only cap data we have is in *sawyer_m1_0105.pdf (.zip)***
  - **Good performance found for ~4.7nF (file: *4_7nf.s4p*)**
  - **TF has not fixed a Cap value yet – can we use this?**





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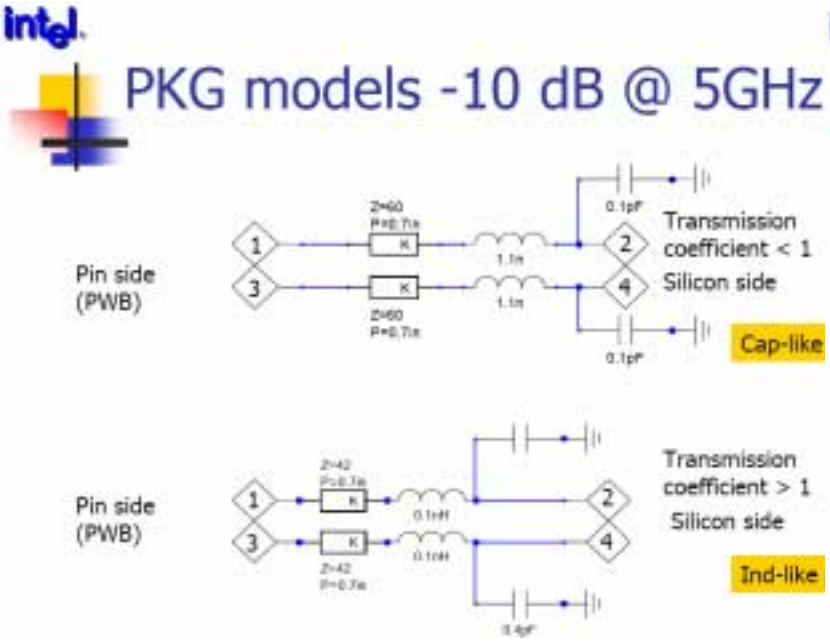
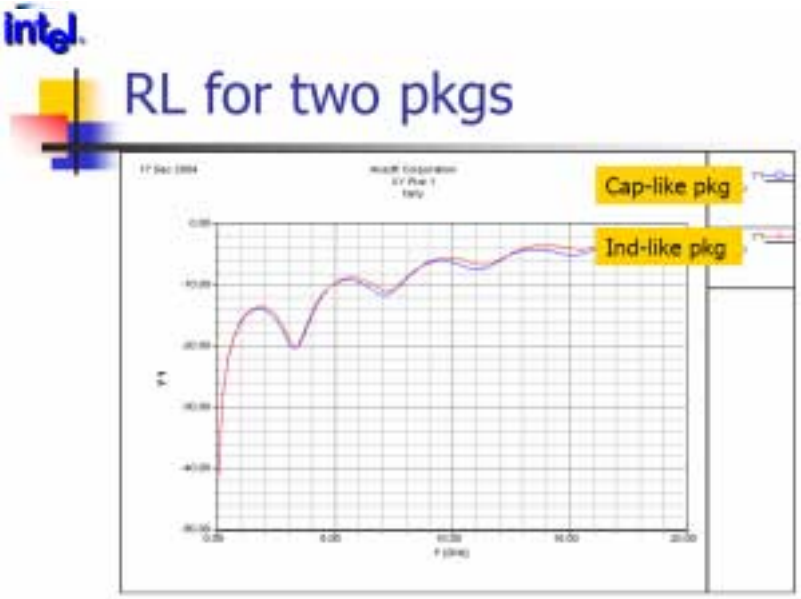
IEEE 802.3ap Task Force - 3-Feb-05

Link Elements

- **Package model**
  - **Only package models submitted for discussion are in *mellitz_m1_0105.pdf (.zip)***
    - ***Spec_RL_cap_like.s4p***
    - ***Spec_RL_ind_like.s4p***
- **Is there sufficient info here to define:**
  - **A simulation channel for our purposes?**
  - **Simulation conditions for our purposes?**





Link Elements – A few observations

- These segments can have serious overall link effects
- Our choices are limited
- We need to consider the large effects
  - Less focus on details to get a better 'big picture'

- Cascading the s-parameters has not been discussed in detail:
  - Simulators (ex. ADS) can cascade, Matlab (and similar) users will need to use a mapping step for correct response

    Sparam → ABCD → Sparam

Link Elements – Straw polls

- **TP4-TP5 link straw polls**
  1. **Should we use a model for TP4-TP5?**
  2. **Should we use a cap model from the selection in *sawyer_m1_0105.zip*?**
  3. **Should we use the 4.7nF model (4_7nf.s4p)?**

- **Package model straw polls**
  1. **Should our simulations use package models?**
  2. **Should we use the package models presented in *mellitz_m1_0105.pdf*?**