
IEEE 802.3ap Signaling Ad Hoc

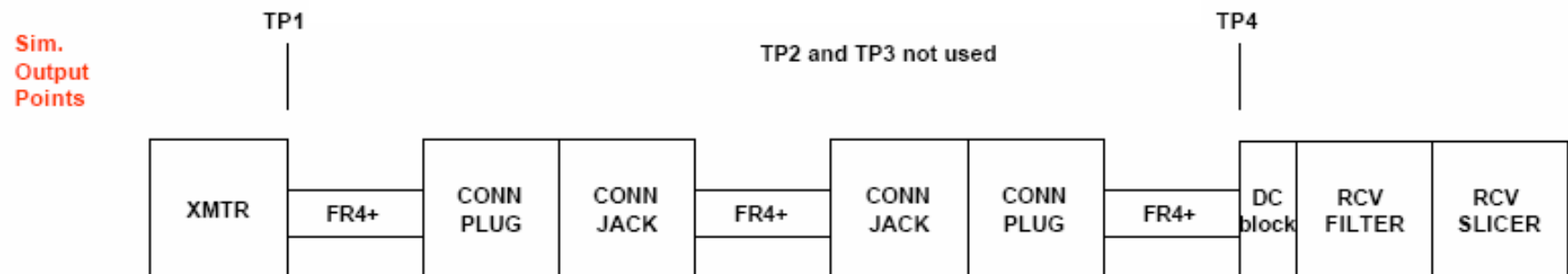
**IEEE 802.3ap Task Force
2 Sept'04**

Agenda

- **Discussion of channel simulation**
 - **Simulation presentations volunteered from last call (Hoppin, Moore)**
 - **Channel s-param suite (D'Ambrosia)**
- **Define link model, test points, and test patterns**
- **Define link model not covered by the channel ad hoc**
- **Review NEXT / FEXT considerations (definition of aggressors)**
- **Next Meeting(s)**
 - **Can/should we have an extra mtg on 9 Sept?**
- **Outcomes Today ☺**
 - **Finalize the channel simulation link model**
 - **Finalize all the link elements (in principal)**
 - **Finalize the treatment of agressors**

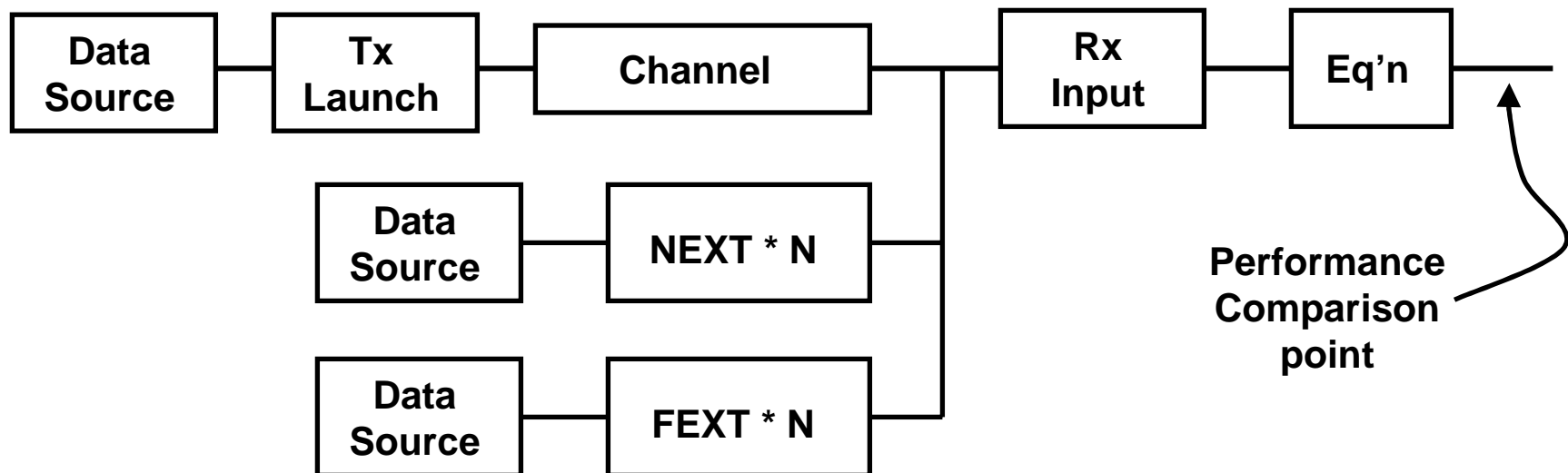
channel simulation model

- From the channel ad hoc, the physical channel looks like:



channel simulation model

- **Prototype simulation model can then look like:**
 - **Cascading blocks (Tx→channel → Rx) by ABCD matrix**
 - Channel, source and loads represented by suite of f-domain s-parameters
 - **NEXT/FEXT contribution by superposition at Rx input**
 - Cap included in Rx input
 - Uncorrelated or w/c data sources - $\sin(\omega t)$ or data



Input parameters

- **Data source**
 - PRBS, random, killer-packets (?)
- **Data coding**
 - Purpose? Candidates?
- **Line Coding**
- **Tx Conditioning**
 - Equalization, launch electrical characteristics
- **Channel (loss, NEXT, FEXT)**
- **Rx input**
 - Rx electrical characteristics
- **Rx Equalization**

Simulation Performance Metrics

- **SNR / BER**
 - Sensitivity to input noise
- **Jitter**
 - Timing recovery jitter sensitivity
- **NEXT / FEXT effects on signal quality**
 - SNR degradation

Meeting Schedule

- Thursday, August 5 (8:00AM PDT)
 - Signaling ad hoc introduction
 - Discuss initial work items for group
- Monday, August 23 (8:00AM PDT)
 - Channel simulation model draft - for early sims
 - Solution comparison criteria
- Thursday, September 2 (8:00AM PDT)
 - Continuation of channel simulation model details
 - Define link model, test points, and test patterns
 - Define sections of the link model not covered by the channel ad hoc
 - Review NEXT / FEXT considerations (definition of aggressors)
- Thursday, September 9 (8:00AM PDT)
 - Do we need another meeting?
- Thursday, September 16 (8:00AM PDT)
 - Finalize channel simulation models for studies
 - Use data from channel model ad hoc when available
 - Run sims and report results