Suggested practices for reporting simulation results

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Motivation

- Simulations expected to be the basis for important discussions and decisions going forward
  - Multiple sources
- Foster consistent and complete disclosure of the simulation conditions
  - Better understanding of what simulation results mean
  - Facilitate independent verification of results
- Precedent
  - IEEE P802.3ap Signaling Ad Hoc
  - http://www.ieee802.org/3/ap/public/signal_adhoc/index.html

Guiding principles

- Not recommending values, just what should be reported
  - Submitter sets values based on expectations
- Not requiring that simulations include all specified parameters
  - But should disclose which parameters are omitted

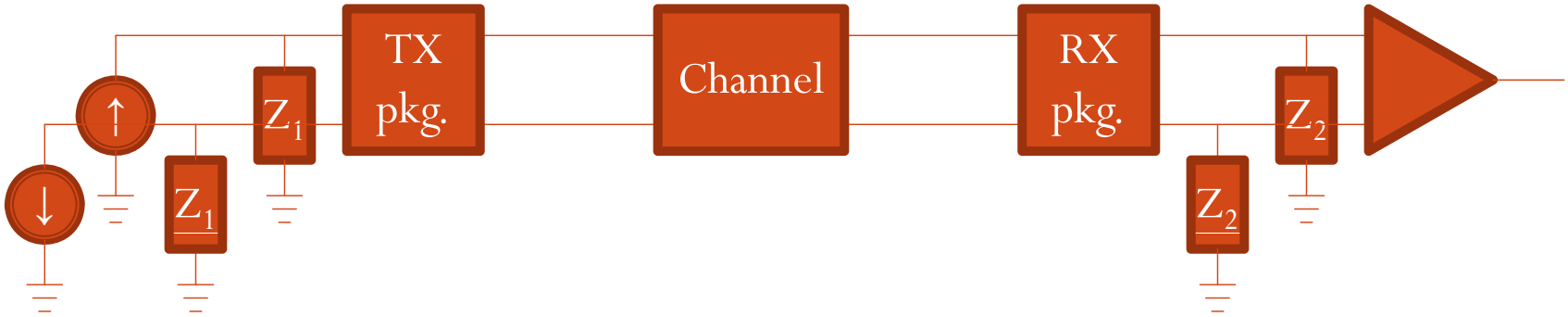
TX/RX parameters (example)

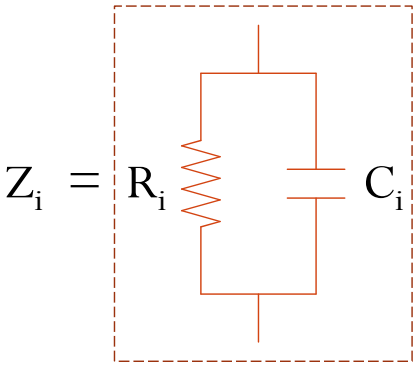
LINK
Bit rate
Modulation
Signaling rate
Number of symbols simulated
Target symbol error ratio

TRANSMITTER
Test pattern
Differential output voltage, peak-to-peak
Deterministic jitter, peak-to-peak
Deterministic jitter distribution
Duty cycle distortion, peak-to-peak
Random jitter, RMS

RECEIVER
Random noise, RMS
Deterministic jitter, peak-to-peak
Deterministic jitter distribution
Random jitter, RMS
Low-frequency gain

Channel parameters (example)





TRANSMITTER	RECEIVER
Device package	Device package
Single-ended resistance, R_1	Single-ended resistance, R_2
Single-ended capacitance, C_1	Single-ended capacitance, C_2

Next steps

- Preliminary set of parameters submitted for review and modification
- Derive consensus set of parameters to be reported