Reduced Twisted Pair Gigabit Ethernet
EMC Ad Hoc Status Report

Orlando, Florida

March 19, 2013

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EMC Ad Hoc

- To understand and accurately quantify the noise environment for automotive applications
- The overall noise may consist of
    - EMI (from low frequency up to GHz range)
    - Alien XTALK in the automotive harness
    - Impulse noise from various sources like motors and etc.
    - Background noise (?)
- Align & co-operate with the Channel Ad Hoc
- Communications via RTPGE reflector
- Meetings & conference calls
    - November 14th, December 17th, January 18th, March 4th

Work so far

- EMC Ad Hoc initial work plan was created & distributed to TF on 12/13/2012.

- Discussed possible inputs from Automotive OEMs.

- An EMC channel analysis & modeling technique was presented to the group during 01/2013 Phoenix interim meeting.

- Alien XTALK model scenarios were presented to the group during 01/13 Phoenix interim meeting.

- Held a joint conference call with the Channel Ad Hoc on 3/4/2012:
  - Test jigs were proposed for testing the channel and EMC parameters

Work so far (cntd..)

- During the conference call on 3/4/2012

  - In-car background noise measurement results were presented by Stefan Buntz (Daimler)

  - Ingress and egress noise models were discussed according to the work plan. As a result, a few individuals committed to provide further input for in-car noise measurements and ingress modeling.

Review of the work to do

- Further clarification for the operating environments
- Ingress modeling
  - Define the noise sources
  - Define the channel transfer function measurement/modeling methodology (Mehmet's presentation)
  - Define the background noise (Stefan's presentation)
  - Define the impulse noise (contributions are needed)
  - Define the Alien XTALK limit lines (based on Kirsten's input)
- Egress Modeling
  - Block diagram for PHY emissions
  - Define measurements to be made
- End-to-end EM ingress model
- End-to-end EM egress model