

PHY Baseline Proposal Ad Hoc Report

Contribution to IEEE 802.3: 40GBASE-T Task Force

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Summary

- Two telephonic meetings held
 - 23 June 2014: 2 contributions –
 - [Clause 98 PHY TBDs and some proposals](#), George Zimmerman, CME Consulting
 - [Energy Efficiency and 40GBASE-T](#): Hugh Barrass, Cisco
 - 7 July 2014: 2 contributions
 - 40GBASE-T EEE, Jim Graba, Broadcom
 - 40GBASE-T discussion: startup, PBO, transmit jitter, common mode noise rejection, German Feyh & Ron DeGroat, Broadcom
- Progress made on proposals for Energy Efficient Ethernet and defining PHY parameters
- Result: Proposal contributions to this meeting

Path to Baseline – Items In Process or Done

- Selected Strawman - DONE
 - based on 4X Speed Clause 55
- Simplified PBO – BEING REVISITED
 - 2 or 3 steps, 0, -6dB, -12dB (TBD)
 - Do we need it for AFEXT mitigation?
- PHY PMA Architecture - DONE
- Coding Uncoded Bits – DONE
- Delay Constraints – DONE
- EEE modes – IN PROCESS
- PHY Electrical Tests – IN PROCESS

Path to Baseline – TO DO

- Resolve electrical tests & specifications
- Clause 55 deviations: no proposals = no change
 - Add THP update? – TBD (no contributions)
 - Simplifications to startup
 - Minor improvement to startup time requested
 - Any new management register issues (PMA speed select, autoneg, test modes)
- Determine & finalize MDI needs & channel requirements (needs PHY defined first)

Next Steps

- Build consensus & resolve studied issues
 - PBO, Common Mode Noise testing, Jitter, PSD, Alien Crosstalk
- Contributions solicited for studied items:
 - Timing of refresh in LPI mode (Jim Graba)
 - PBO thresholds (George Zimmerman & others)
 - Startup timing considerations (George Zimmerman & others)
 - EEE power savings opportunities in fast wake (general)
- Solicit Contributions on improvements, OR CONTRIBUTIONS SAYING NONE ARE NEEDED
 - Startup Timing, THP backchannel, Changes to management, autoneg, and test modes
- Next ad hoc meeting: Probably 2nd half August (TBD)
 - Time slot moved to Mondays, 10AM Pacific Time