Proposal to add auto-negotiation to RTPGE objectives

IEEE 802.3bp – Interim Meeting - May 2014

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Supporters

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Current Status

▶ **There are 2 single pair PHYs in discussion in IEEE**

- **RTPGE (1000BASE-T1)**
- **1TPCE**

▶ **A fast synchronization mechanism was proposed in March 2014 meeting that can also be used for auto-negotiation**

- **Lo_3bp_03_3014.pdf**
- **Lo_3bp_04_3014.pdf**

▶ **Discussion in 1TPCE study group of having option to work in conjunction with auto-negotiation**

- **Does not want to do the development work on auto-negotiation**

▶ **General consensus that auto-negotiation is beneficial in some applications. Question is when and where should the work be done.**

Two options on when and where

▶ **Do it as part of RTPGE**

- **Need to add to objectives**
- **Same set of people likely to work on auto-negotiation is already in RTPGE**
- **Yet different set of expertise within RTPGE (i.e. state machine design vs. DSP) so work can progress in parallel**

▶ **Start a new study group**

- **More complicated procedurally**
- **Will take longer time to organize**

Proposal

▶ **Add auto-negotiation to the RTPGE objectives**

▶ **Develop auto-negotiation as part of RTPGE task force**

Will not slow down RTPGE development

▶ **Commitment from several individuals to solidify auto-negotiation proposal before Nov 2014 plenary meeting**
  - ▪ **Individuals from Marvell and Broadcom will contribute to the effort**
  - ▪ **Everyone is welcome to join the effort**

▶ **Good starting point exists for consensus building**
  - ▪ **Base state machines – Lo_3bp_04_0314.pdf**
  - ▪ **Improvements – Thaler_3bp_01_0514.pdf**

▶ **Other aspects of RTPGE may not be fully complete earlier than Nov 2014**
  - ▪ **Open issues:**
  - **Startup process, FEC, PCS and PMA state machines, PAM3 mapping, EEE**

Timeframe

Dates	Goal
Mid May 14 - Mid June 14	Reconcile Lo_3bp_04_0314.pdf and Thaler_3bp_01_0514.pdf Publish results to task force in June
Mid June 14 - Mid July 14	Prototype coding and simulations based on reconciled specs
July 2014 Plenary	Present progress reports
July - Sept 2014 meeting	Continue simulations. Exchange encrypted models for interoperability checking. Refine specs as needed.
Sept 2014 Interim	Present proposed specs to task force
Sept - Nov 2014 meeting	Offline discussion - refine as needed
Nov 2014 Plenary	Vote on auto-negotiation baseline Vote on adding auto-negotiation objective in CFI

Straw Poll

▶ **Should we add auto-negotiation to the RTPGE objectives and develop auto-negotiation as part of RTPGE task force**