



Merged Synchronization State Machine

IEEE 802.3bp - Interim Meeting - May 2015

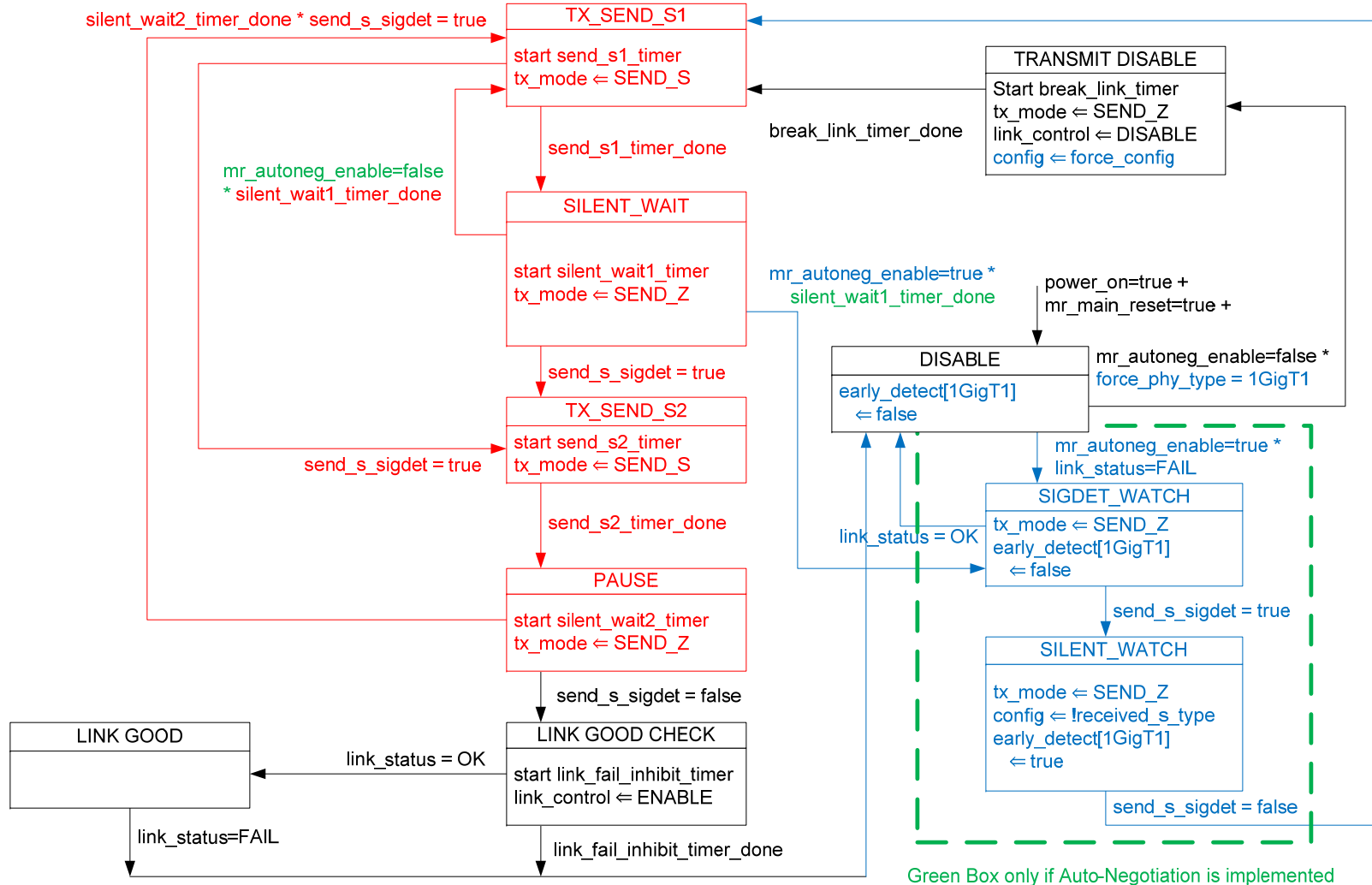
William Lo, Marvell

Objectives

- ▶ **Merges tu_3bp_03_0215.pdf page 8 and lo_3bp_01_0315.pdf page 5.**

Merged Synchronization State Machine

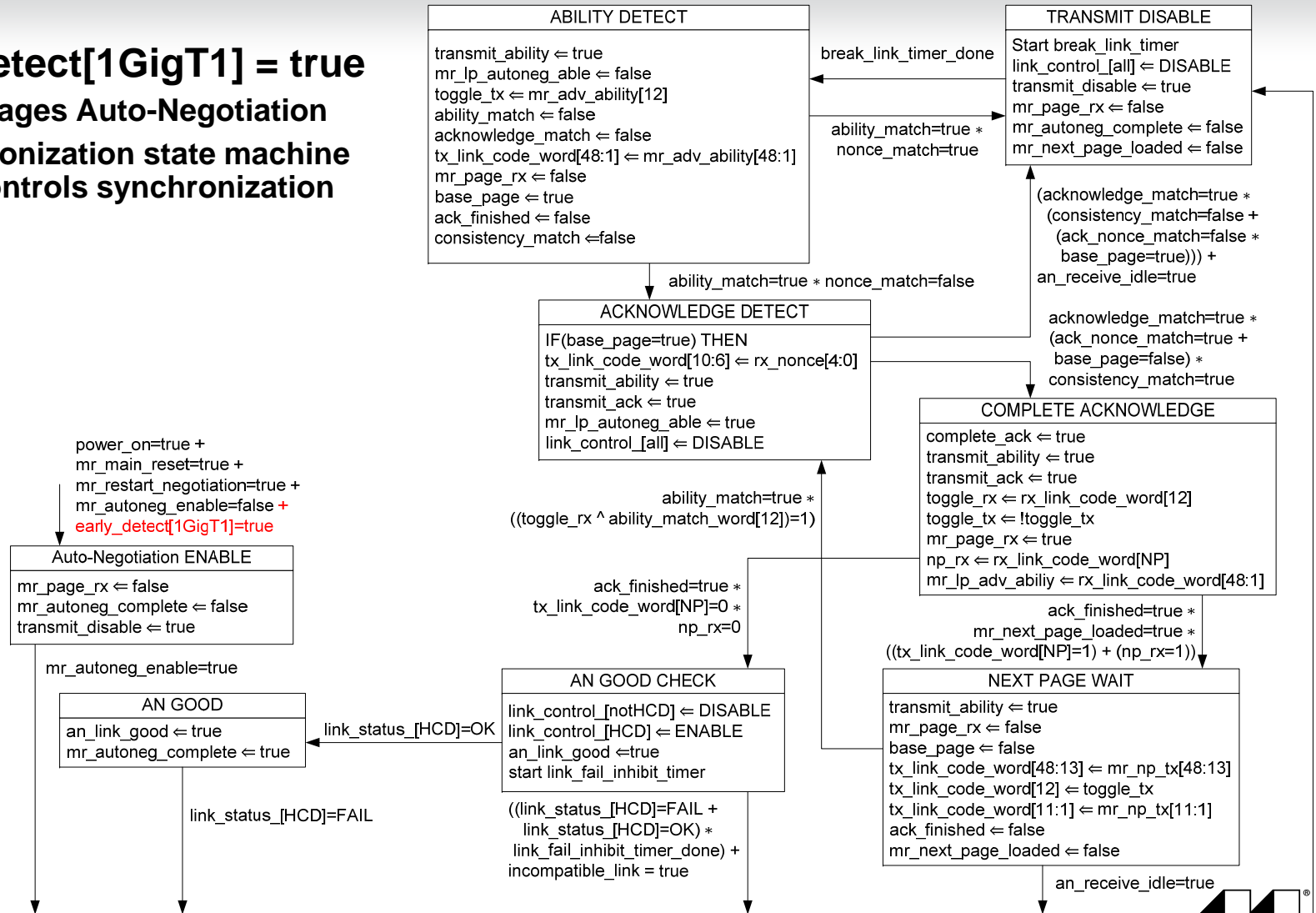
- ▶ Red – tu_3bp_03_0215.pdf, Blue – Lo_3bp_02_0315.pdf, Green - New



Auto-Negotiation Arbitration State Machine

▶ **early_detect[1GigT1] = true**

- Disengages Auto-Negotiation
- Synchronization state machine fully controls synchronization



New variables 97.6.1.1 and timers 97.6.1.2

Variables

force_config	Master/slave configuration when Auto-Negotiation is disabled Values MASTER SLAVE
force_phy_type	BASE-T1 Type configuration when Auto-Negotiation is disabled Values 1GigT1: Select 1000BASE-T1 type
early_detect[1GigT1]	See 98.5.1
received_s_type	SEND_S type of link partner. If received_s_type is MASTER then lreceived_s_type is SLAVE and vice versa. Values MASTER SLAVE

Timers

Delete send_s_timer and signal_wait_timer from D1.30 and add the following:

send_s1_timer	Timer used to control the duration SEND_S is transmitted in the TX_SEND_S1 state. The timer shall expire 1.4 us±0.04 us after being started.
send_s2_timer	Timer used to control the duration SEND_S is transmitted in the TX_SEND_S2 state. The timer shall expire 8.0 us±0.1 us after being started.
silent_wait1_timer	Timer used to wait for received signal to be active in the SILENT_WAIT state. The timer shall expire 4.0 us±0.1 us after being started.
silent_wait2_timer	Timer used to wait for received signal to be quiet in the PAUSE state. The timer shall expire 8.0 us±0.1 us after being started.

New variables 98.5.1

Variables

early_detect[x]

Early detection that link can operate in x type.

Values True: detection that link can operate in x type.
 False: no detection that link can operate in x type.

THANK YOU