

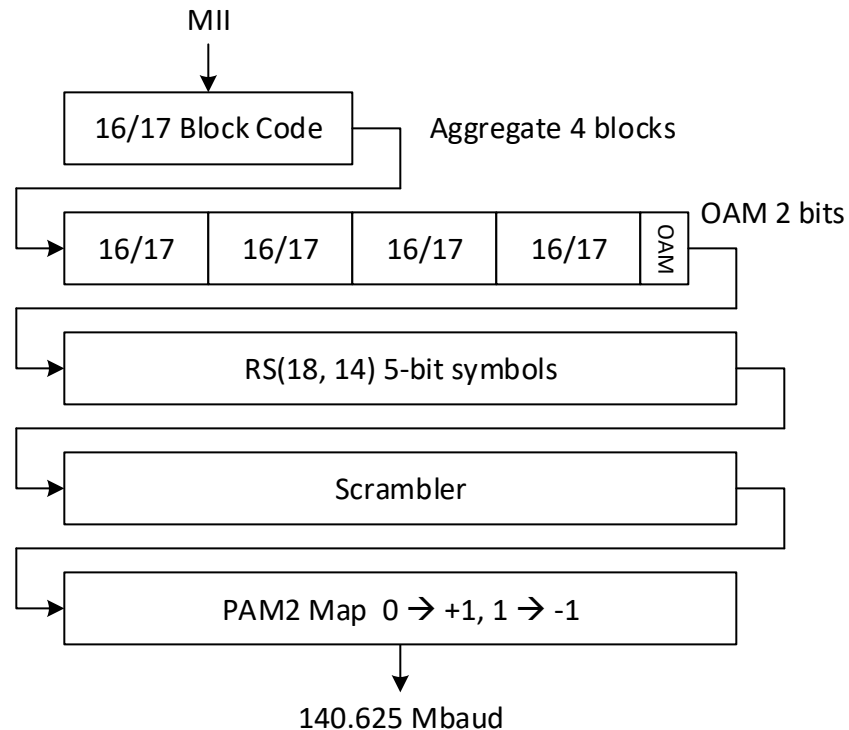
Proposed Training Sequence

William Lo

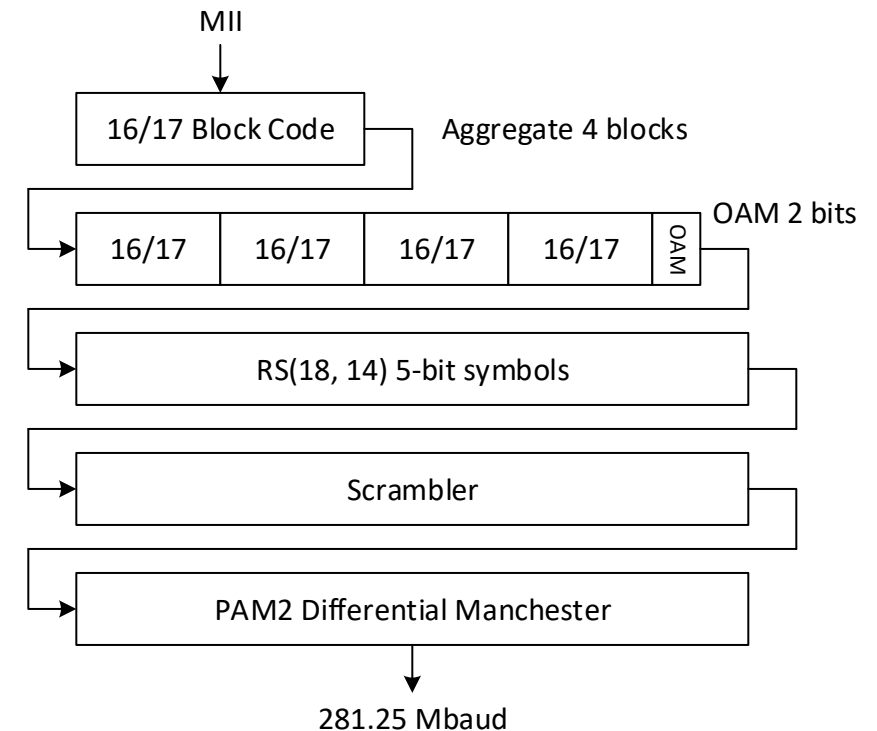
October 10, 2024

Training Sequence Based on Proposed ACT Modulation

- Downstream identical to 802.3ch (10GBASE-T1)
- Upstream
 - https://www.ieee802.org/3/dm/public/0924/Lo_3dm_02_0924.pdf



or



Size of RS Frames

- Upstream RS frame chosen to match 802.3ch
- Can use 802.3ch training sequence with modifications to upstream training frame

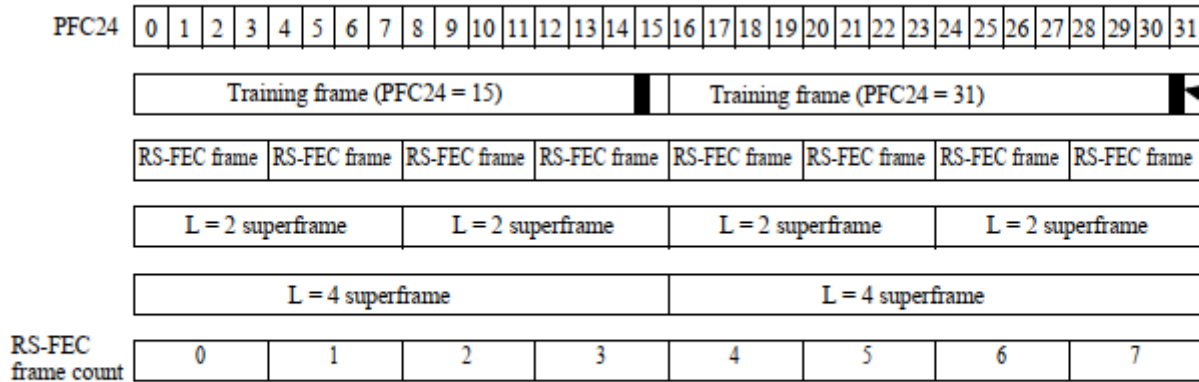
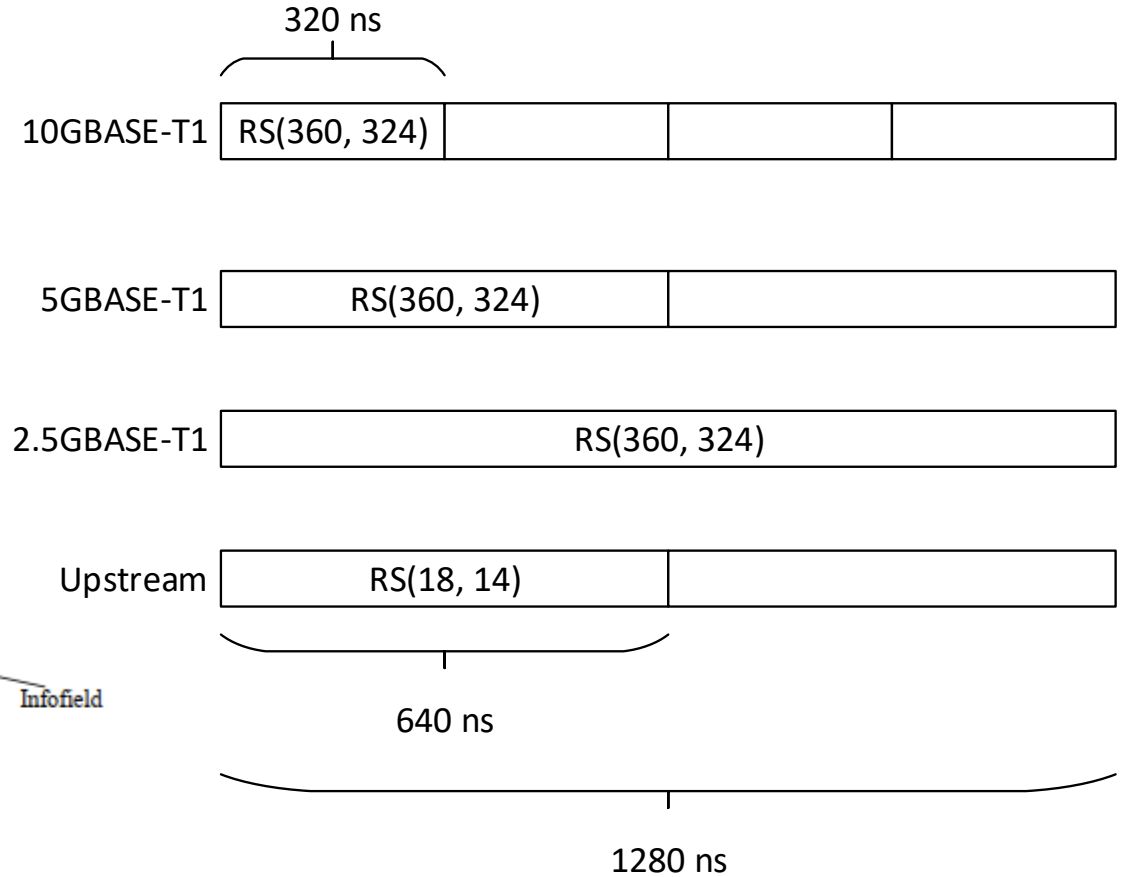
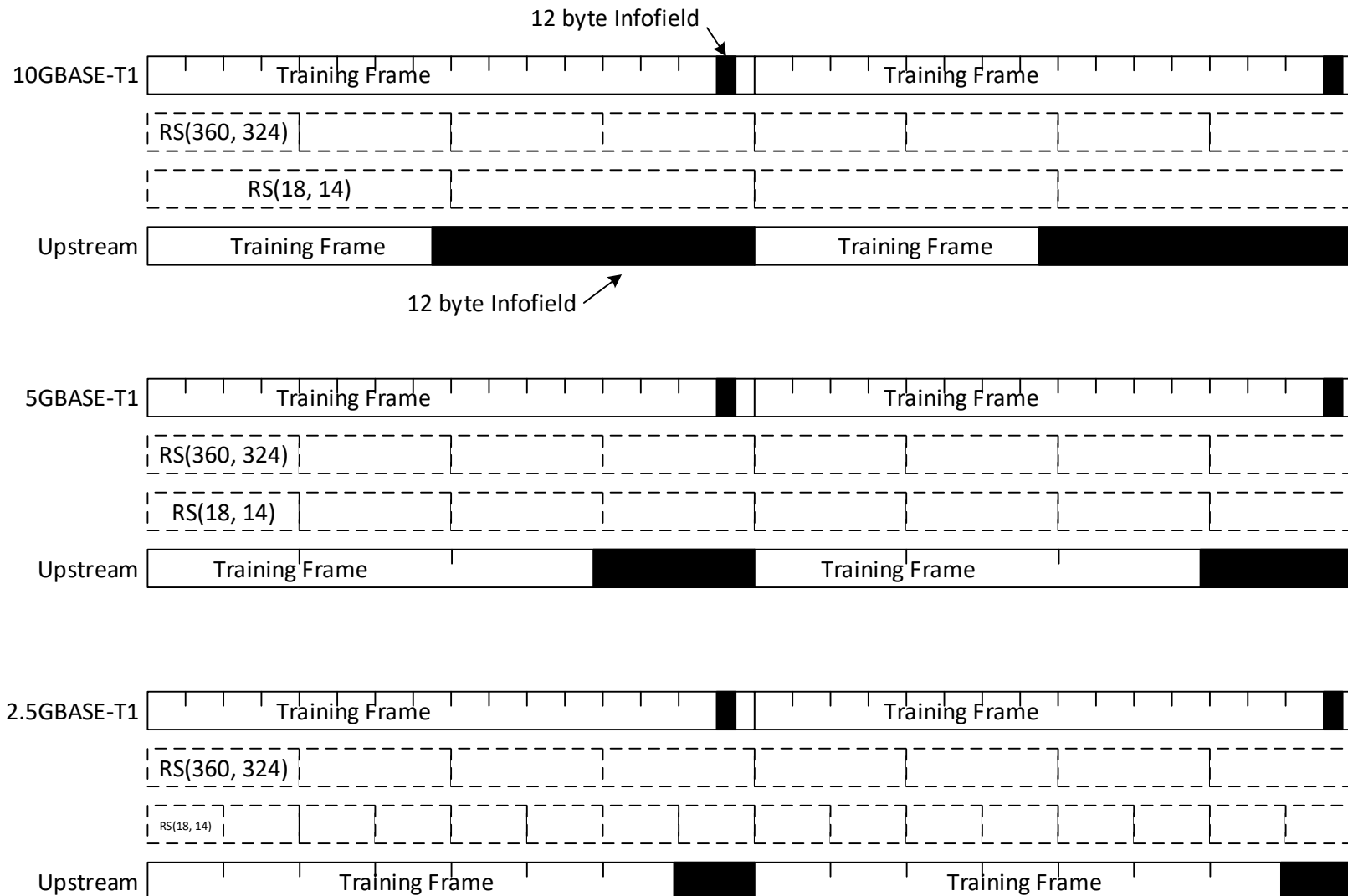


Figure 149–12—Timing relationship to PFC24



Upstream Training Frame Size Relative to Downstream



Size and Timing

- Downstream and upstream duration matched
- Propose same 96-bit info field
 - Possibly truncate first 6 bits to 90 bits to match RS(18, 14) size of 90 symbols
 - The first 24 bits of info field are constant values
- Can reuse same training mechanism as 802.3ch

	RS Frames	Symbols	Duration
10G Downstream Training Frame	4 - RS(360, 324)	7200	1280 ns
5G Downstream Training Frame	4 - RS(360, 324)	7200	2048 ns
2.5G Downstream Training Frame	4 - RS(360, 324)	7200	4096 ns
Upstream - when downstream is 10GBASE-T1	2 - RS(18, 14)	180	1280 ns
Upstream - when downstream is 5GBASE-T1	4 - RS(18, 14)	360	2048 ns
Upstream - when downstream is 2.5GBASE-T1	8 - RS(18, 14)	720	4096 ns

THANK YOU