Upstream Fine Ranging Preamble for 802.3bn

Leo Montreuil, Broadcom

Supporters

- Duane Remein, Huawei

Upstream Fine Ranging Preamble 1

- DOCSIS 3.1, section 7.4.16.2:
  - No sequence specified, only max number of subcarriers
  - 256 active subcarriers max (with exclusion band but span must not exceed 512 subcarriers)
  - 1 symbol before duplication

- EPoC 802.3bn should select one Fine Ranging Preamble sequence.

Upstream Fine Ranging Preamble 2

- Propose using an unique Preamble sequence (section 102.4.2):
  - Fine Ranging is 6.4 MHz (128 subcarriers) wide.
  - Preamble is 128 subcarriers by 1 symbol (before duplication)
  - Sequence is PRBS $X^7 + X^1 + 1$
  - Seed = 55 h
  - Sequence of length 128 is:

    ```
    1 0 1 0 1 0 1 1 1 1 1 1 1 0 0 0 . .
    . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
    1 0 1 1 1 0 1 1 1 0 0 1 1 0 0 1
    ```

Proposed Motion

- Adopt and incorporate in the draft the Upstream Fine Ranging preamble on slide 4 of montreuil_3bn_04a_0514.pdf

- Moved:
- Seconded: