

# Upstream PHY Discovery Preamble for 802.3bn

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# PHY Discovery Preamble 1 (Initial Ranging )

- DOCSIS 3.1 specification (section 7.4.16.2.6):
  - No sequence specified, only max number of subcarriers and symbols.
  - Preamble is a BPSK sequence configured by CMTS
  - 64 subcarriers max
  - 8 symbol max before duplication
- EPoC 802.3bn should select one PHY Discovery Preamble.

# PHY Discovery Preamble 2 (Initial Ranging )

- Propose using an unique PHY Discovery Preamble sequence (section 102.4.1.4):
  - PHY Discovery is 1.6 MHz (32 subcarriers) wide.
  - Preamble is BPSK 32 subcarriers by 4 symbol (before duplication). Sequence length is 128 b.
  - Sequence is PRBS  $X^7 + X^1 + 1$
  - Seed is 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 PHY Discovery preamble on slide 3 of montreuil\_3bn\_03\_0514.pdf.

Moved:

Seconded: