

# Upstream Fine Ranging Preamble for 802.3bn

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# 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

Move to adopt Upstream Fine Ranging preamble on slide 3 of montreuil\_3bn\_01\_0514.pdf.

Moved:

Seconded: