

# Proposed modifications to the PN sequence used by the Base Stations and Relay Stations in a MR enabled network (Rev 2)

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Purpose:

For discussion and approval of inclusion of the proposed text into the P802.16j baseline document.

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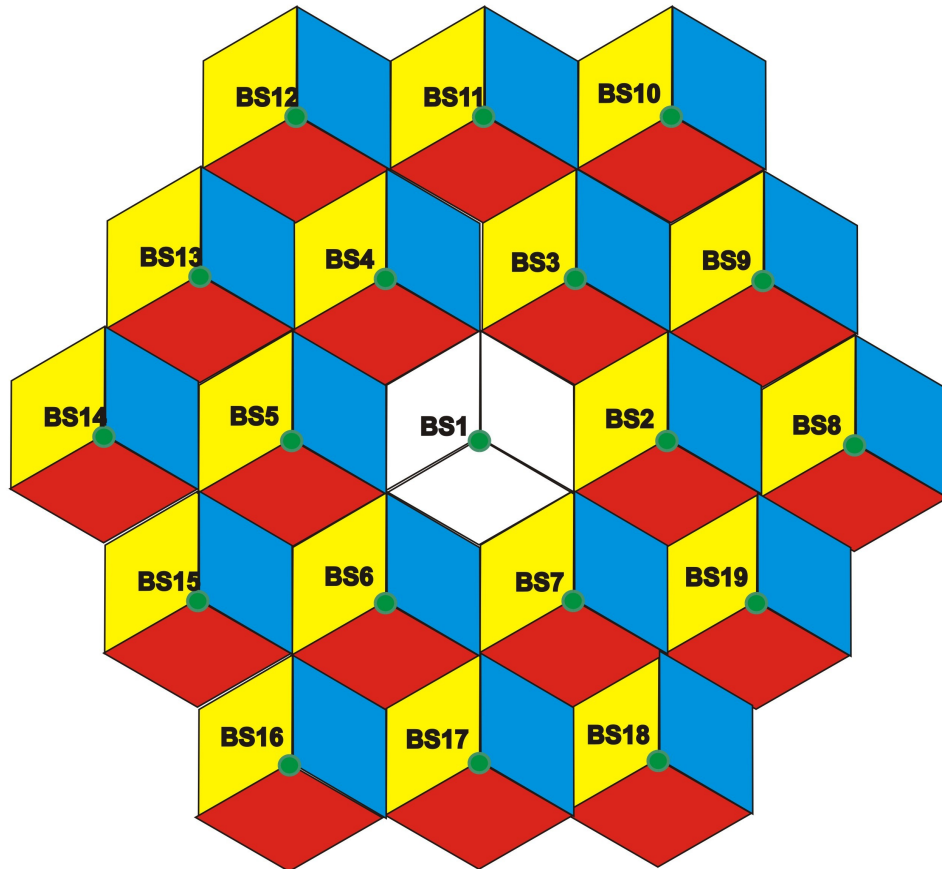
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# Introduction

- This contribution attempts to fix the following:
  - Speed-up the network entry and re-entry procedures
  - Re-organize the PN sequence as defined by 802.16e, without altering the PN sequence

# Preamble Allocation. Rationale.



-A RS entity attempting to enter the Network or during the scanning procedures is not allowed to run any power measurement on two BS entities (RS or BS) bearing the same Cell ID.

-It is up to the service provider how the Cell ID management is organized.

-In a tier 1+2 cluster of cell, the minimal distance between two identical BS entities, bearing the same CellID is  $8R$ . Therefore it is assumed that an RS shall not receive two signals from two different BS entities bearing the same IDCell.

# PN Sequence Re-organization.

BS/RS	Index	ID Cell	Segment
BS	0	0	0
BS	18	18	0
RS	19	19	0
RS	31	31	0
BS	32	0	1
BS	50	18	1
RS	51	19	1
RS	63	31	1
BS	64	0	2
BS	82	18	2
RS	83	19	2
RS	113	17	2

## **Advantages**

- A fast track time domain fast identification of a RS or a BS is made possible.
- No changes are performed on the 16e PN sequence.
- The process is transparent for a 802.16e MS.