



Rel-16 Type B PDSCH extensions for LTE-NR coexistence

Agenda Item: 7.2.12

Source: Ericsson

Title: Rel-16 Type B PDSCH extensions for LTE-NR coexistence

Document for: Discussion

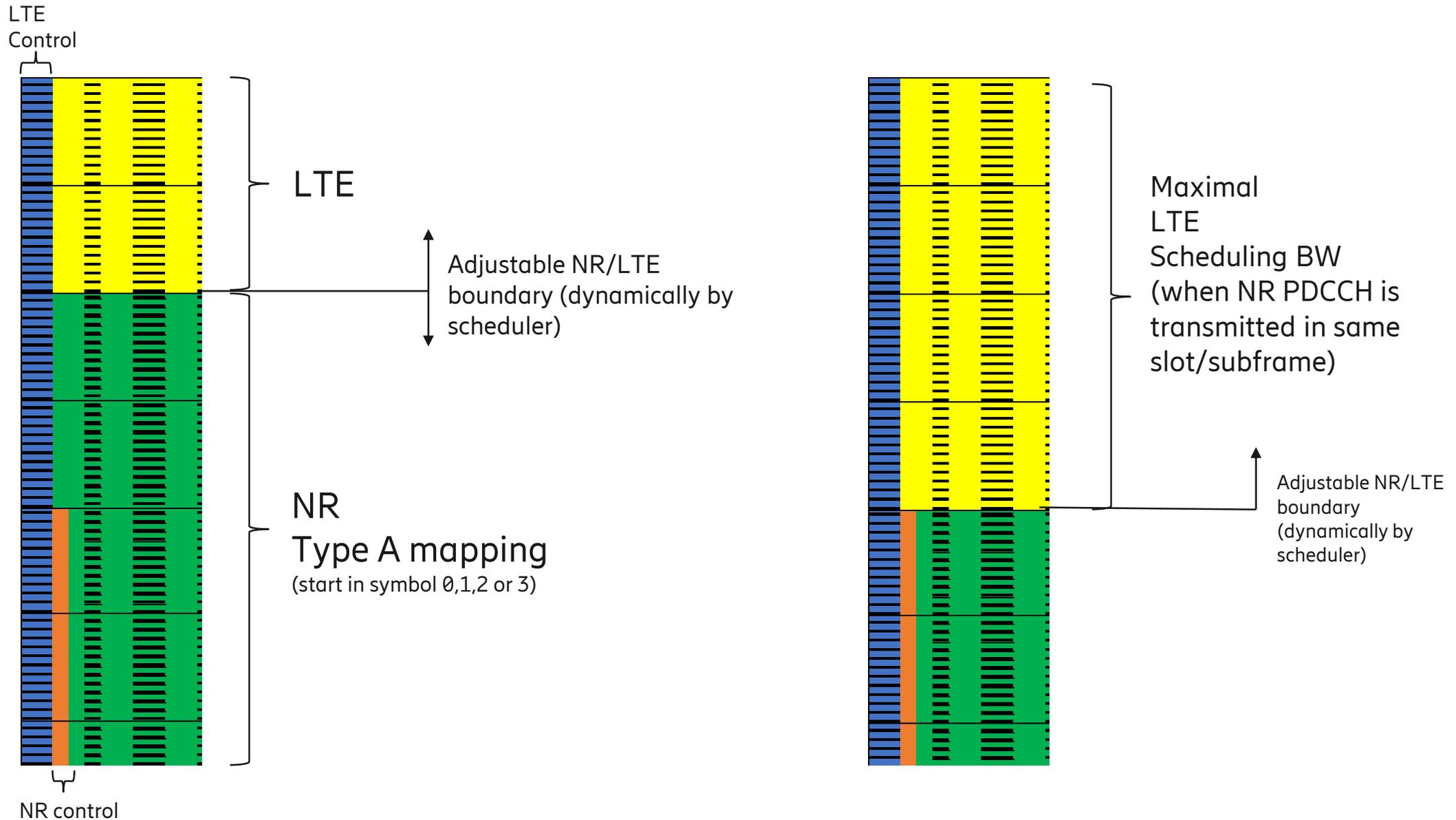
Purpose



The purpose of this tdoc is to provide information on an issue related to LTE-NR coexistence that require a solution in Rel-16.

It is up to RAN plenary in December-18 on how to incorporate a solution in Rel-16 (e.g. TEI or new WI or in existing WI)

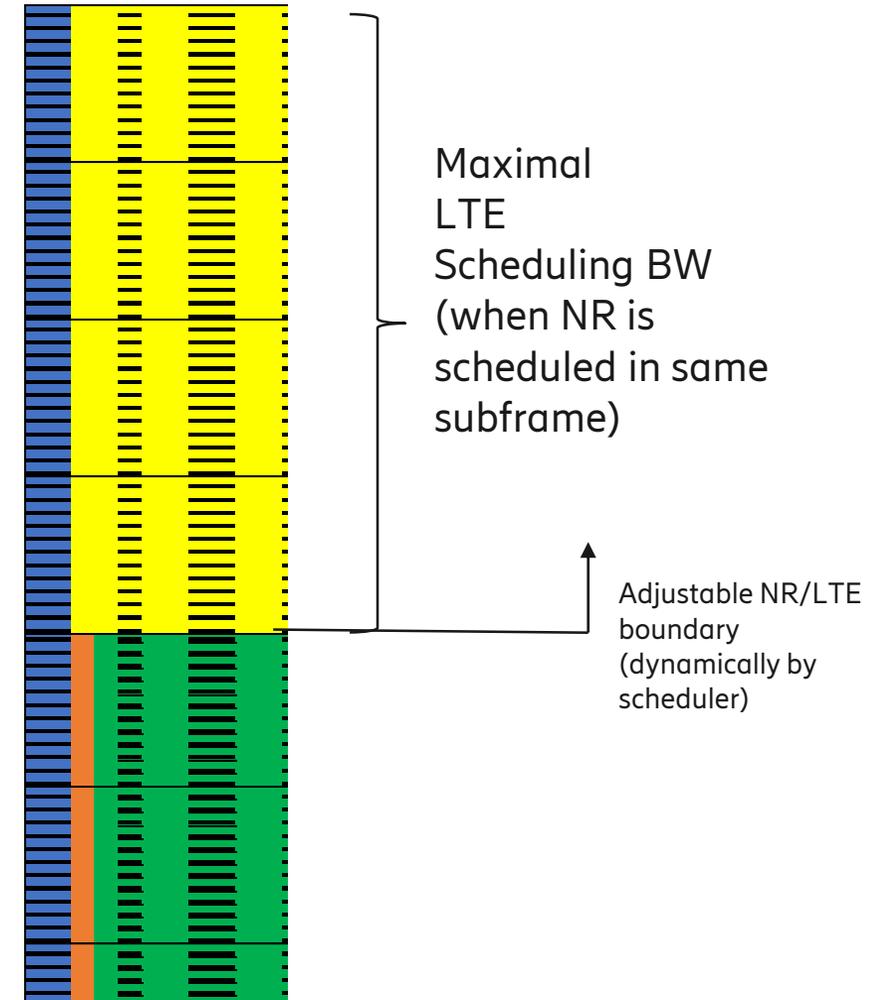
Rel-15 LTE & NR coexistence in same subframe/slot



Rel-15 coex issue

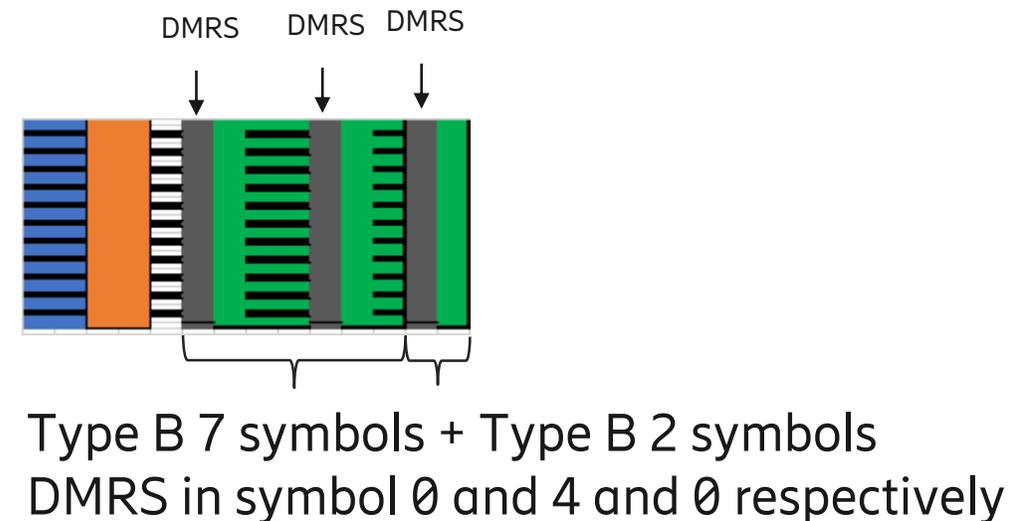
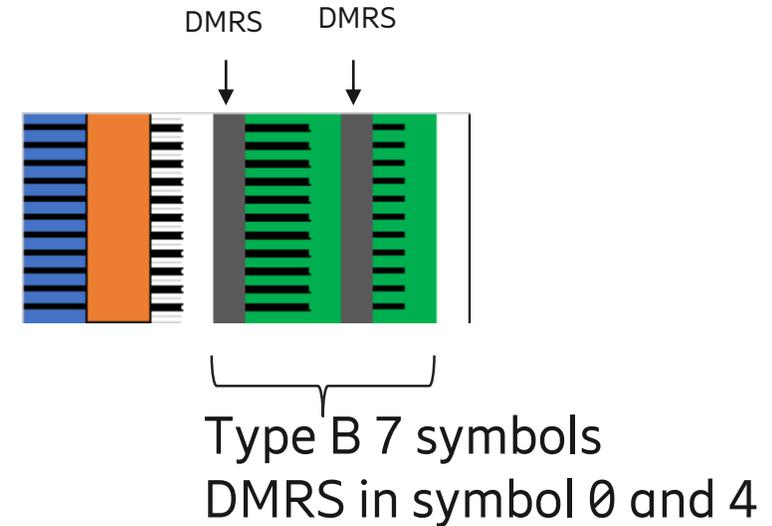


- NR PDCCH transmissions limits the BW that can be used for LTE
 - Single NR PDCCH CORESET can occupy large part of the system bandwidth



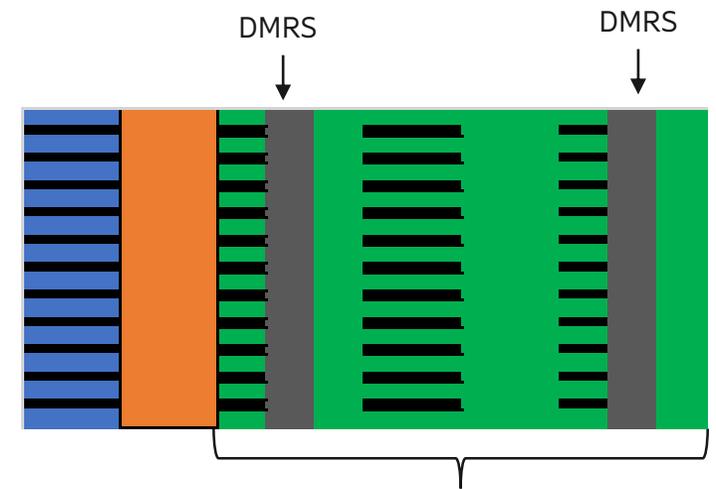
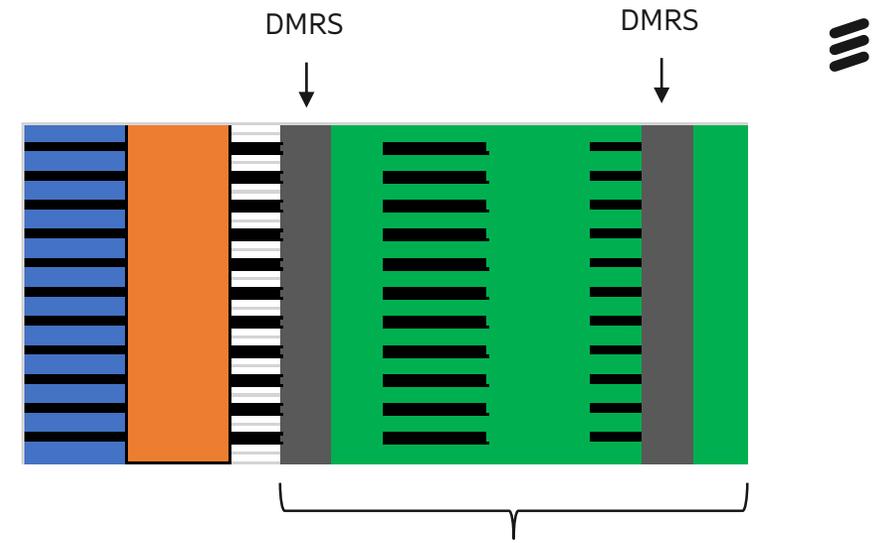
Current Rel-15 operation

- Use two NR PDCCH symbols to limit the footprint of NR PDCCH
 - More RBs available for LTE
- Utilize PDSCH Type B mapping (2,4 or 7 symbols in Rel.15)
- **Alt.1** Schedule a 7 symbol Type B
 - Leaves three symbols **unused** in the slot → resource waste
- **Alt.2 (Optionally supported for UE)** Schedule a 7 symbol plus a 2 symbol Type B
 - **DMRS overhead excessive**
 - PDCCH **overhead doubled** to schedule two PDSCH /slot



Rel.16 proposal

- Introduce a PDSCH Type B mapping of length 9 and 10
 - Length 10 implies full slot utilization but requires moving DMRS away from the 1st OFDM symbol in the PDSCH duration
- DMRS positions for Type B mapping is positioned to avoid CRS collision



Type B length 10