**3GPP TSG RAN WG1 Meeting #104bis-e R1-210xxxx**

**April 12th – April 20th, 2021**

**Agenda item: 7.2.2**

**Source: Moderator (Qualcomm Incorporated)**

**Title: FL summary for initial access signals and channels for NR-U**

**Document for: Discussion and Decision**

# Introduction

This paper summarizes the CR proposals for initial access signals and channels for NR-U.

To summarize:

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| --- | --- | --- |
| Issue # | Area of proposal | Contributions |
| Init-1 | Invalid SSB for PDSCH rate matching for FBE | [1] |
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# Issue Init-1. Invalid SSB by SSB positions in burst for FBE

In [1], it is proposed to add clarification to capture earlier conclusion on invalid SSB for FBE for PDSCH rate matching purpose. The current spec is believed to define a wrong behavior without explicitly capture the conclusion

Conclusion:

For semi-static channel access, SSBs that (partially) fall in the idle region of a fixed frame period should be considered as invalid. No PDSCH rate matching and no RLM/RRM measurement will be done for those candidate SSB positions.

The proposed solution is to add in 38.214 that the SSB candidate positions partially overlap with idle periods are not expected to be valid, no matter what *ssb-PositionInBurst* indicates.

==============TP for 38.214 4.1 v.16.5.0=====================

==============Start of TP=====================

4.1 Cell search

-------Unchanged text omitted---------------------------

For operation with shared spectrum channel access, a UE assumes that transmission of SS/PBCH blocks in a half frame is within a discovery burst transmission window that starts from the first symbol of the first slot in a half-frame. The UE can be provided per serving cell by *DiscoveryBurst-WindowLength* a duration of the discovery burst transmission window. If *DiscoveryBurst-WindowLength* is not provided, the UE assumes that the duration of the discovery burst transmission window is a half frame. For a serving cell, the UE assumes that a periodicity of the discovery burst transmission window is same as a periodicity of half frames for receptions of SS/PBCH blocks in the serving cell. The UE assumes that one or more SS/PBCH blocks indicated by *ssb-PositionsInBurst* may be transmitted within the discovery burst transmission window and have candidate SS/PBCH blocks indexes corresponding to SS/PBCH block indexes provided by *ssb-PositionsInBurst*. For semi-static channel occupancy [4.3, TS 37.213], the UE assumes a SS/PBCH block is not transmitted at a candidate SS/PBCH block if the candidate SS/PBCH block partially overlaps with the last before the start of the next period. If MSB , , of *ssb-PositionsInBurst* is set to 1, the UE assumes that SS/PBCH block(s) within the discovery burst transmission window with candidate SS/PBCH block index(es) corresponding to SS/PBCH block index equal to may be transmitted; if MSB is set to 0, the UE assumes that the SS/PBCH block(s) are not transmitted.

------------Unchanged text omitted----------------------

===============End of TP======================

# Reference

[1]. R1-2103142, Invalid SSB in FBE, Qualcomm Incorporated