**3GPP TSG RAN WG1#100bis-e R1-**

**e-Meeting, April 20th – 30th, 2020**

**Agenda Item: 7.2.2.1.2**

**Source: Moderator (Lenovo)**

**Title: Text proposal for determining remaining channel occupancy duration (NR-U DL Signals and Channels)**

**Document for: Discussion, Decision**

# TP for 38.213 (based on v16.1.0)

### 11.1.1 UE procedure for determining slot format

This clause applies for a serving cell that is included in a set of serving cells configured to a UE by *slotFormatCombToAddModList* and *slotFormatCombToReleaseList*.

If a UE is configured by higher layers with parameter *SlotFormatIndicator*, the UE is provided a SFI-RNTI by *sfi-RNTI* and with a payload size of DCI format 2\_0 by *dci-PayloadSize*.

The UE is also provided in one or more serving cells with a configuration for a search space set and a corresponding CORESET for monitoring PDCCH candidates for DCI format 2\_0 with a CCE aggregation level of CCEs as described in Clause 10.1. The PDCCH candidates are the first PDCCH candidates for CCE aggregation level for search space set in CORESET .

For each serving cell in the set of serving cells, the UE can be provided:

- an identity of the serving cell by *servingCellId*

- a location of a SFI-index field in DCI format 2\_0 by *positionInDCI*

- a set of slot format combinations by *slotFormatCombinations*, where each slot format combination in the set of slot format combinations includes

- one or more slot formats indicated by a respective *slotFormats* for the slot format combination, and

- a mapping for the slot format combination provided by *slotFormats* to a corresponding SFI-index field value in DCI format 2\_0 provided by *slotFormatCombinationId*

- for unpaired spectrum operation, a reference SCS configuration by *subcarrierSpacing* and, when a supplementary UL carrier is configured for the serving cell, a reference SCS configuration by *subcarrierSpacing2* for the supplementary UL carrier

- for paired spectrum operation, a reference SCS configuration for a DL BWP by *subcarrierSpacing* and a reference SCS configuration for an UL BWP by *subcarrierSpacing2*

- a location of a RB set indicator field in DCI format 2\_0 that is a bitmap having a one-to-one mapping with the RB sets [6, TS 38.214] of the serving cell, where a value of '0' indicates that an RB set is available for receptions and a value of '1' indicates that an RB set is not available for receptions, by *availableRB-SetPerCell-r16*. The RB set indicator field includes $N\_{RB,sets}$ bits where $N\_{RB,sets}$ is the number of RB sets in the serving cell. An RB set remains available or unavailable until the end of the indicated channel occupancy duration

- a location of a channel occupancy duration field in DCI format 2\_0, by *CO-DurationPerCell-r16*, that indicates a remaining channel occupancy duration for the serving cell starting from the beginning of the slot where the UE detects the DCI format 2\_0 by providing a value from *CO-DurationList-r16*. The channel occupancy duration field includes $max\left\{\left⌈log\_{2}\left(COdurationListSize\right)\right⌉,1\right\}$ bits, where $COdurationListSize$ is the number of values provided by *CO-DurationList-r16*. If *CO-DurationPerCell-r16* is not provided, the remaining channel occupancy duration for the serving cell is a number of slots, starting from the beginning of the slot where the UE detects the DCI format 2\_0, that the SFI-index field value provides corresponding slot formats

- a location of a search space set group switching field in DCI format 2\_0, by *SearchSpaceSwitchTrigger-r16*, that indicates a group from two groups of search space sets for PDCCH monitoring for scheduling on the serving cell as described in Clause 10.4.

A SFI-index field value in a DCI format 2\_0 indicates to a UE a slot format for each slot in a number of slots for each DL BWP or each UL BWP starting from a slot where the UE detects the DCI format 2\_0. The number of slots is equal to or larger than a PDCCH monitoring periodicity for DCI format 2\_0. The SFI-index field includes bits where maxSFIindex is the maximum value of the values provided by corresponding *slotFormatCombinationId*. A slot format is identified by a corresponding format index as provided in Table 11.1.1-1 where 'D' denotes a downlink symbol, 'U' denotes an uplink symbol, and 'F' denotes a flexible symbol.

If a PDCCH monitoring periodicity for DCI format 2\_0, provided to a UE for the search space set by *monitoringSlotPeriodicityAndOffset*,is smaller than a duration of a slot format combination the UE obtains at a PDCCH monitoring occasion for DCI format 2\_0 by a corresponding SFI-index field value, and the UE detects more than one DCI formats 2\_0 indicating a slot format for a slot, the UE expects each of the more than one DCI formats 2\_0 to indicate a same format for the slot.

A UE does not expect to be configured to monitor PDCCH for DCI format 2\_0 on a second serving cell that uses larger SCS than the serving cell.

----------------------------------- UNCHANGED PARTS OMITTED ---------------------------------------------