3GPP TSG-RAN WG4 Meeting #94-e R4-2001003

Electronic Meeting, 24th Feb. – 6th Mar. 2020

Title: TP on channel arrangement for NR V2X

Source: vivo

Agenda item: 8.4.3

Document for: Approval

# Introduction

Based on [1] and [2], this document presents a TP for TR 38.886 v0.4.0 [3] updating the channel arrangement section for 5G V2X in Section 3 Annex.

# Reference

[1] [R4-2000567](file:///C%3A%5CUsers%5C3gpp%E6%96%87%E4%BB%B6%5C%E4%BC%9A%E8%AE%AE%E6%96%87%E7%A8%BF%5CRAN4%5CWG4-92%5CDocs%5CR4-1908423.zip), Remaining issues on channel raster for band n47, vivo, RAN4#94-e.

[2] R4-1913063, LS on sync raster for NR V2X, vivo, RAN4#92bis.

[3] 3GPP TR38.886 v0.4.0, V2X Services based on NR: User Equipment (UE) radio transmission and reception

# Annex: TP for channel arrangement in TR38.886

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

## 7.3 Channel arrangement

### 7.3.1 Channel arrangement in FR1

#### 7.3.1.1 Channel raster

##### 7.3.1.1.1 NR-ARFCN and channel raster

The NR-ARFCN and channel raster defined in subclause 5.4.2.1 in TS38.101-1 are applied for NR V2X.

For NR V2X UE, the reference frequency can be shifted by configuration.

FREF\_V2X = FREF + Δshift + N \* 5 kHz

where

Δshift = 0 kHz or 7.5 kHz indicated in IE (*frequencyShift7p5khz*), and

N can be set as one of following values {-1, 0, 1}, are signalled by the network in higher layer parameters or configured by pre-configuration parameters.

##### 7.3.1.1.2 Channel raster to resource element mapping

Channel raster to resource element mapping defined in subclause 5.4.2.2 in TS38.101-1 are applied for NR V2X.

##### 7.3.1.1.3 Channel raster entries for each operating band

The channel raster entries for each operating band defined in subclause 5.4.2.3 in TS38.101-1 are applied for NR V2X. The RF channel positions on the channel raster in each NR V2X operating band are given through the applicable NR-ARFCN in Table 7.3.1.1-1, using the channel raster to resource element mapping in subclause 7.3.1.1.2.

For NR V2X operating band n47, ΔFRaster = *I* × ΔFGlobal, where *I ϵ {1}.* Every *Ith* NR‑ARFCN within the operating band are applicable for the channel raster within the operating band and the step size for the channel raster in table 7.3.1.1-1 is given as <*I*>.

Table 7.3.1.1-1: Applicable NR-ARFCN for NR V2X operating band

|  |  |  |  |
| --- | --- | --- | --- |
| NR operating band | ΔFRaster(kHz) | Uplink range of NREF(First – <Step size> – Last) | Downlink range of NREF(First – <Step size> – Last) |
| n47 | 15 | 790334 – <1> – 795000 | 790334 – <1> – 795000 |
|  |  |  |
|  |  |  |

#### 7.3.1.2 Synchronization raster

There is no synchronization raster definition for NR V2X for both licensed bands and unlicensed bands.

### 7.3.2 Channel arrangement in FR2

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