3GPP TSG-RAN WG2 Meeting #116bis Electronic R2-220xxxx

Online, 17 – 25 January 2022

**Agenda item: 8.24.1**

**Source: Nokia (Rapporteur)**

**Title: Offline 037 on FR2 CA BW class**

**WID/SID: NR\_RF\_FR2\_req\_enh2-Core – Release 17**

**Document for: Discussion and Decision**

# 1 Introduction

This document is the report of the following email discussion:

* [AT116bis-e][037][NR17] FR2 CA BW class (Nokia)

 Scope: Treat R2-2200118, R2-2200839, R2-2200840, R2-2200841, R2-2200843, R2-2201385. Progress the topic, Determine agreeable parts, for agreeable parts, agree CRs, approve reply LS out if agreeable.

 Intended outcome: Report, agreed in principle CRs, Approved LS out if applicable.

 Deadline: EOM (or earlier if online CB is needed, can CB W2).

# 2 Contact Points

Respondents to the email discussion are kindly asked to fill in the following table.

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| Company | Name | Email Address |
| Nokia (Rapporteur) | Amaanat | amaanat.ali@nokia.com |
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# 3 Discussion

There are the following input documents:

[1] R2-2200118 LS on release independence aspects of newly introduced FR2 CA BW Classes and CBM/IBM UE capability “both” (R4-2119966; contact: Nokia) RAN4 LS in Rel-17 NR\_RF\_FR2\_req\_enh2-Core To:RAN2

[2] R2-2200839 Introduction of FR2 FBG2 CA BW classes Nokia Italy CR Rel-17 38.331 16.7.0 2867 - B NR\_RF\_FR2\_req\_enh2-Core

[3] R2-2200840 Introduction of CBM/IBM UE capability “both” Nokia Italy CR Rel-17 38.331 16.7.0 2868 - B NR\_RF\_FR2\_req\_enh2-Core

[4] R2-2200841 Introduction of CBM/IBM UE capability “both” Nokia Italy CR Rel-17 38.306 16.7.0 0668 - B NR\_RF\_FR2\_req\_enh2-Core

[5] R2-2200843 Reply LS on release independence aspects of newly introduced FR2 CA BW Classes and CBM/IBM UE capability Nokia Italy LS out Rel-17 NR\_RF\_FR2\_req\_enh2-Core To:RAN4

[6] R2-2201385 Introduction of new FR2 CA bandwidth classes Xiaomi Communications discussion Rel-17 NR\_RF\_FR2\_req\_enh2-Core

The short background is that the LS in R2-2200118 contains two separate topics.

**Topic 1: Introduction of FR2 FBG2 CA BW classes**

With regards to the input documents in [2] and [6] respectively, before discussion on the CRs it is better to discuss the proposals in [6] first as they are quite good to have the alignment between companies.



**Proposal 1: When the UE indicates a new bandwidth class (i.e., R, S, T, U), the UE shall also indicate bandwidth class F.**

**Proposal 2: The indication of the new bandwidth classes (i.e., R, S, T, U) is via new capability signalling of *ca-BandwidthClassDL-NR-v17xy/ ca-BandwidthClassUL-NR-v17xy*.**

**Proposal 3: The indication of the new bandwidth classes (i.e., R, S, T, U) is allowed for early implementation from Rel-15.**

**Question 1: Do companies agree with P1 and P2 i.e., when the UE indicates a new bandwidth class among one of the new ones (i.e., R, S, T, U), the UE shall also indicate bandwidth class F (noting that if yes to P1 then automatically something like P2 is required at BandParameter level)?**

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| Answers to Question 1 |
| Company | Yes/No | Technical Arguments |
| Nokia | Yes | Due to the single enumeration, it seems that the legacy network that does not support the new bandwidth classes {R, S, T, U } will end up dropping a band combination. To interoperate with legacy networks, a UE is required to do this. |
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**Summary 1**: TBD.

**Proposal 1**: TBD.

**Question 2: Do companies agree with P3 i.e., the indication of the new bandwidth classes (i.e., R, S, T, U) is allowed for early implementation from Rel-15.**

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| Answers to Question 2 |
| Company | Yes/No | Technical Arguments |
| Nokia | Yes | This should be technically possible to allow, and we would be fine with this. |
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**Summary 2**: TBD.

**Proposal 2**: TBD.

**Topic 2: Introduction of capability for UE capable of both IBM and CBM**

The CRs in [3] and [4] introduce the capability required by the RAN4 incoming LS in [1].

**Question 3: Do companies agree to the intention of the CRs in [3] and [4] introducing a capability that indicates UE supports both IBM and CBM as required by the RAN4 incoming LS in [1]?**

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| Answers to Question 3 |
| Company | Yes/No | Technical Arguments |
| Nokia | Yes | This aligns to the intent of the RAN4 LS. |
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**Summary 3**: TBD.

**Proposal 3**: TBD.

**Question 4: Do companies agree to introducing the capability early implementable for UE capable of both IBM and CBM starting from Rel-16?**

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| Answers to Question 4 |
| Company | Yes/No | Technical Arguments |
| Nokia | Yes | This should be technically possible to allow, and we would be fine with this. |
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**Summary 4**: TBD.

**Proposal 4**: TBD.

# 4 Conclusion

Based on the outcome of the discussion above we can update the draft LS in [5]