3GPP TSG-RAN WG4 Meeting #116 R4-25xxxxx

Bengaluru, IN, August 25th – 29th 2025

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| *CR-Form-v12.3* |
| **CHANGE REQUEST** |
|  |
|  | 38.104 | **CR** | draftCR | **rev** | -- | **Current version:** | 19.1.0 |  |
|  |
| *For* [***HELP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* |
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| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network | **X** | Core Network |  |

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|  |
| ***Title:***  | Draft CR to 38.104 on adding SBFD BS Types and Configuration Constraints |
|  |  |
| ***Source to WG:*** | Ericsson |
| ***Source to TSG:*** | R4 |
|  |  |
| ***Work item code:*** | NR\_duplex\_evo-Core |  | ***Date:*** | 2025-08-29 |
|  |  |  |  |  |
| ***Category:*** | **B** |  | ***Release:*** | Rel-19 |
|  | *Use one of the following categories:****F*** *(correction)****A*** *(mirror corresponding to a change in an earlier release)****B*** *(addition of feature),* ***C*** *(functional modification of feature)****D*** *(editorial modification)*Detailed explanations of the above categories canbe found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | *Use one of the following releases:Rel-8 (Release 8)Rel-9 (Release 9)Rel-10 (Release 10)Rel-11 (Release 11)…Rel-17 (Release 17)Rel-18 (Release 18)Rel-19 (Release 19) Rel-20 (Release 20)* |
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| ***Reason for change:*** | Adding SBFD BS type and configuration constraints |
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| ***Summary of change:*** | Clause 12.1.2, 12.1.3 are introduced to capture General SBFD Base Station Operating Requirements and SBFD Base Station Types and Configuration Constraints. |
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| ***Consequences if not approved:*** | The RF requirements for SBFD-capable BS are not completed. |
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| ***Clauses affected:*** | 12.1.2, 12.1.3 |
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|  | **Y** | **N** |  |  |
| ***Other specs*** |  | **X** |  Other core specifications  | TS/TR ... CR ...  |
| ***affected:*** |  | **X** |  Test specifications | TS/TR ... CR ...  |
| ***(show related CRs)*** |  | **X** |  O&M Specifications | TS/TR ... CR ...  |
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| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** |  |

------------------------------------------Start of change-----------------------------------------------------

12.1.2 General SBFD Base Station Operating Requirements

A SBFD-capable BS shall operate only SBFD subband configurations (i.e., DL/UL subbands) that have been declared in accordance with the provisions in this specification.

12.1.3 SBFD Base Station Types and Configuration Constraints

12.1.3.1 General

SBFD-capable BSs are categorized as either Type-A or Type-B according to the classification defined in Table 12.1.3-1. The classification is based on BS class and rated output power specified in clause 12.5.2.

**Table 12.1.3.1-1: SBFD-capable BS classification**

|  |  |  |
| --- | --- | --- |
| **BS Class** | **Rated Output Power (Prated,c,sys)** | **SBFD BS type** |
| FR1 WA BS | -- | Type-A |
| FR1 MR BS  | ≥ 36 dBm | Type-A |
| FR1 MR BS  | < 36 dBm | Type-B |
| FR1 LA BS | -- | Type-B |
| FR2 WA BS | -- | Type-B |
| FR2 LA BS | -- | Type-B |
| NOTE 1: A power level threshold of Prated,c,sys = 36 dBm is used to distinguish between Type-A and Type-B SBFD-capable BSs in the FR1 MR BS class. |

12.1.3.2 Type-A SBFD-Capable BS (Configuration-Limited)

For Type-A SBFD-capable BSs, the following requirements apply:

* For each channel bandwidth supported for SBFD operation, a maximum of three SBFD subband configurations may be declared.
	+ The three configurations shall cover all supported SBFD patterns, including both DUD and DU/UD cases.
	+ A single UL subband size used in both DU and UD configurations shall be counted as two configurations. For example, a UD 20-80 MHz and a DU 80-20 MHz configuration shall be counted as two SBFD subband configurations.
* For each supported channel bandwidth and for each supported UL subband size:
	+ Only one DL subband size may be declared and tested for the DU/UD pattern.
	+ Only one DL subband size may be declared and tested for the DUD pattern.
* A Type-A SBFD-capable BS shall not operate in any declared SBFD configuration (i.e., DL/UL subband) unless it has been tested.

12.1.3.3 Type-B SBFD-Capable BS (Configuration-Flexible)

For Type-B SBFD-capable BSs, the following requirements apply:

* There is no restriction on the number of UL subband sizes that may be declared.
* There is no restriction on the number of DL subband sizes that may be declared.
* For each declared channel bandwidth and for each declared SBFD pattern (i.e., DUD or DU/UD), the following configurations shall be tested:
	+ The configuration with the narrowest UL subband size, and the corresponding worst-case SBFD DL transmission bandwidth:
		- For DU/UD: the configuration with the largest NRB,SBFD,DL.
		- For DUD: the configuration with the largest NRB,SBFD,DL,1.
	+ The configuration with the widest UL subband size, and the corresponding worst-case SBFD DL transmission bandwidth:
		- For DU/UD: the configuration with the largest NRB,SBFD,DL.
		- For DUD: the configuration with the largest NRB,SBFD,DL,1.

------------------------------------------End of change------------------------------------------------------