**3GPP TSG-RAN Meeting #89-e RP-20XXXX**

**Electronic, Sept 14-18, 2020**

**Agenda item:** x.x

**Source:** Moderator (R2 Chairman)

**Title:** Email discussion [89E][06][SIB24]

**Document for:** Information

# Introduction

An introduction can be found in RP-201966.

The following aspects of the R2 endorsed CR were discussed on-line. We attempt to make some clarity in this email discussion, before Wednesday Come-back.

- Intention of CR: Which UEs need to be upgraded, which networks need to be upgraded.

- Risks of CR: What can reasonably go wrong, what need to be further verified?

- Urgency of CR: To what extent do the CR need to be approved at current RP vs postpone one quarter?

In addition, the following aspect is discussed:

- Proposal to capture the limitation in the TS, that SIB19+ SIBs cannot be multiplexed in a SI message with SIB18- SIBs (by Samsung). Moderator: There seems to be consensus that this can be done also without Standards impact, so the urgency seems less than the previous topics. Can discuss what would be the reasons to capture such limitation.

# Discussion

## Intention of CR: Which UEs need to be upgraded

MODERATOR UNDERSTANDING:

- In principle, all UEs that need SIB19+ will need to be upgraded, No exceptions, as UEs may roam.

- All Rel-15 UEs that need SIB 24+ will need to be upgraded.

- As this problem hasn’t surfaced until introducing Rel-15, it is assumed that SIB19, 20, 21 features of Rel-12 - Rel-14 hasn’t been deployed yet, so it is assumed that in practice no legacy UEs Rel-12 - Rel-14 need to be upgraded.

*In case companies has opinions, please provide below:*

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| **Company** | **Comments** |
| Vodafone | The Moderator’s understanding aligns with ours on this point.  Without the CR, it is believed that transmission of SIB 24 can cause problems to faulty release 8 (and later) devices. |
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## Intention of CR: Which Networks etc need to be upgraded

MODERATOR UNDERSTANDING:

- In principle: Networks that need to support SIB19+ and that has legacy problematic UEs need to be upgraded.

- The CR support two methods of provisioning of scheduling info for SIB19+, the legacy extension (that causes problems to legacy problematic UEs), and a new extension (with which legacy problematic UEs can co-exist). The intention is that a cell uses one of these options, not both. By supporting both, operators can choose when/how to deploy this, potentially temporarily in conjunctions with one of the identified work-arounds.

*In case companies has opinions, please provide below:*

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| **Company** | **Comments** |
| Vodafone | The Moderator’s understanding aligns with ours on this point.  Vodafone believe that it is important that the CR maintains the existing R12-R15 signaling as well as adding the new method for scheduling SIB19+.  Without the CR, changes to network equipment are likely to be needed to provide the “inefficient” network workarounds. |
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## Risks of CR: What can reasonably go wrong, what need to be further verified

MODERATOR UNDERSTANDING:

- In principle: The CR is correct and should not cause problems to correctly implemented UEs.

- However, as the legacy problematic UEs had issues with one extension in SIB, maybe it is reasonable to check whether they can actually tolerate the new extension that is implemented in the CR (maybe some operator can confirm).

*In case companies has opinions, please provide below (Moderator: please explain in detail not just a vague opinion that everything must be verified for every kind of UE)*

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| **Company** | **Comments** |
| Vodafone | The CR seems to be based on established, already deployed extension mechanisms, so the risk of it causing problems to legacy devices should be low, but clearly non-zero.  The design of the current CR allows it to be removed in a subsequent meeting if deployment issues are shown to exist. |
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## Urgency of CR: To what extent do the CR need to be approved at current RP vs postpone one quarter

MODERATOR UNDERSTANDING:

- In principle: Proponents are explaining that R15 UEs that need SIB24+ are being deployed now, and every delay makes upgrades more cumbersome.

*In case companies has opinions, please provide below*

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| **Company** | **Comments** |
| Vodafone | If we are use this CR to change the specifications to accommodate faulty devices, then it is important to do this as soon as possible. This is because we understand that UEs are already being sold that support “5G StandAlone” functionality and therefore, the longer we delay any change, the more 5G-SA devices that will need to be OTA updated.  However, it is important to verify that the functionality added by the CR does not generate adverse behaviour with any existing LTE device. Therefore, it makes sense that CR approval at RAN#89e is conditioned on companies having until RAN#90e to perform such verification. This avoids delay in upgrading 5G-SA devices, whilst ensuring a robust outcome. |
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## Other Comments on CR

*Other Comments on the R2 endorsed CR, please provide below*

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| **Company** | **Comments** |
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## SI message multiplexing restriction

MODERATOR UNDERSTANDING: this seems somewhat less urgent, but it would be good to get a common view.

On the Proposal to capture in the TS the limitation that SIB19+ SIBs cannot be multiplexed in a SI message with SIB18- SIBs (by Samsung).

*Comments below:*

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| **Company** | **Comments** |
| Vodafone | Roaming is one of the key aspects of the 3GPP systems and shall be properly supported by our specifications.  Input documents to RAN 2 and RAN plenary have highlighted that this fault impacts some IoT devices that are difficult to OTA update. At least within Europe, many (most?) IoT devices (have IMSIs from HPLMNs that have no RAN equipment and therefore) are permanently roaming.  Hence it is important to HPLMNs that VPLMNs are correctly configured to enable the IoT devices to continue to operate. |
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# Summary

# References