**3GPP TSG-RAN WG2 Meeting #117 electronic R2-220abcd**

**Online, February 21 - March 3, 2022**

**Agenda Item: 9.4**

**Source: Vodafone (Rapporteur)**

**Title: Report of second phase [AT117-e][203][UPIP] LTE UPIP configuration and capabilities (Vodafone)**

**Document for: Discussion and Decision**

# Introduction

This document aims to be a place to record any discussions that can’t be simply reflected in updates to the CRs submitted to AI 9.4 “User Plane Integrity Protection support for EPC connected architectures”.

**Comment deadline: Monday Week 2, 1000 UTC.**

# Tdoc numbers of CRs *(to be completed)*

R2-2202717 36.331 CR4763 will be revised in R2-220xxxx

R2-2202718 38.331 CR2904 will be revised in R2-220xxxx

R2-2202719 36.300 CR1353 will be revised in R2-220xxxx

R2-2202720 37.340 CR0294 will be revised in R2-220xxxx

R2-2202721 38.323 CR0085 will be revised in R2-220xxxx

# Discussion

## 3.1 Handling of UPint key at handover

Please use the table below for any comments/discussion that can’t be addressed by just updating the revised CR

|  |  |
| --- | --- |
| **Company** | **comments** |
|  |  |
|  |  |

## 3.2 Overall process for release of UPIP=required bearers at handover to non-supporting eNB

Please use the table below for comments/discussion

|  |  |
| --- | --- |
| **Company** | **comments** |
| Vodafone (as meeting delegate) | Initial thoughts (and more research needed):  This might work in the same way as we do 5GS to R15/R16 LTE-EPC handovers for a UE that has two PDN connections, one with UPIP policy=required and one with UPIP policy=preferred… but that type of handover is always followed by a Tracking Area Update which enables NAS level to release the unsynchronised bearers.  With normal X2 handovers, I think that the S1-AP Path Switch Request message tells the MME a list of RABs-that-failed-to be established and the MME uses this to clean up resources (at the UE (?) and) PDN GW. Similarly, at S1 handover, the MME is informed of the RABs that could not be established on the target eNB. However, the source eNB does not normally do this clean up… But perhaps we can (for this UPIP=required situation) mandate (in RAN 3) that the source eNB sends RAB Release messages to the MME – but the timing of this release needs to be done carefully, e.g. in case the handover fails on the radio interface. |
| Qualcomm | If the target eNB does not understand UPIP configuration, it should issue fullConfig. So, the scenario we are looking at seems to be the case when the target eNB does understand the UPIP config (i.e. has been already upgraded), but does not want to continue UPIP for such bearer.  For DRBs with UPIP policy = required, our understanding is SA3 security requirements dictate that such RBs are not handed over to eNBs which cannot fulfil UPIP requirement. This is for the network to make sure.  For DRBs with UPIP policy = not needed, changing UPIP during HO seems to be a moot point.  So, the remaining question is for DRBs with UPIP policy = preferred. This should be a rare case. So, we think keeping the NR way should be fine instead of trying to optimize further for rare event. I.e. current draft CRs seem sufficient. |

## 3.3 Placeholder for discussion on CR to TS 36.331

Please use the table below for any comments/discussion that can’t be addressed by just updating the revised CR

|  |  |
| --- | --- |
| **Company** | **comments** |
| Qualcomm | Please check comments to updated draft CRs in the drafts folder. |
|  |  |

## 3.4 Placeholder for discussion on CR to TS 38.331

Please use the table below for any comments/discussion that can’t be addressed by just updating the revised CR

|  |  |
| --- | --- |
| **Company** | **comments** |
| Qualcomm | Please check comments to updated draft CRs in the drafts folder. |
|  |  |

## 3.5 Placeholder for discussion on CR to TS 36.300

Please use the table below for any comments/discussion that can’t be addressed by just updating the revised CR

|  |  |
| --- | --- |
| **Company** | **comments** |
| Qualcomm | Please check comments to updated draft CRs in the drafts folder. |
|  |  |

## 3.6 Placeholder for discussion on CR to TS 37.340

Please use the table below for any comments/discussion that can’t be addressed by just updating the revised CR

|  |  |
| --- | --- |
| **Company** | **comments** |
| Qualcomm | Please check comments to updated draft CRs in the drafts folder. |
|  |  |

## 3.7 Placeholder for discussion on CR to TS 38.323

Please use the table below for any comments/discussion that can’t be addressed by just updating the revised CR

|  |  |
| --- | --- |
| **Company** | **comments** |
| Qualcomm | Please check comments to updated draft CRs in the drafts folder. |
|  |  |

# 4. Summary

Based on the discussion, the rapporteur makes the following proposals:

*Text to be added…*

**Proposal 1: xxxx**

# 5. Contact information

(Includes people from round 1)

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| --- | --- |
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| Vodafone (Rapporteur) | chris.pudney@vodafone.com |
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