

Security Level:

R15 WI proposal: Motivation of LTE Connectivity to 5G-CN

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Motivations

- LTE Connecting to 5G CN provides a smooth migration way towards NR:(Ref. TR 38.801)
 - LTE/EPC-> Option 3->Option 7->option 4/option 2;
 - LTE/EPC -> Option 2 + Option 5 -> Option 4/4a -> Option 2 ;
 - LTE/EPC -> Option 3/3a -> Option 1 + Option 2 + Option 7/7a -> Option 2 + Option 5 ;
 - LTE/EPC -> Option 5+Option7->Option 2 .
- LTE Connecting to 5G CN allows the benefits of the new functions to be fully realized in LTE including:
 - Network Slicing
 - New QoS Framework
 - New Security
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- Mobility is needed to keep service continuity including at least IDLE and Connected mode mobility. Handover via direct interface when both are connecting to NG-C provides high mobility performance.
- 5G CN new features have impact on existing features: e.g. dual connectivity and data forwarding enhancement is needed to support the new flow based QoS framework.

Objectives

Support of LTE Connectivity to 5G CN:

- The objective of this work item is to develop and specify necessary enhancements to connect E-UTRA to 5G-CN, including at least
 - Specify E-UTRA protocols enhancement to support 5G-CN functions as (RAN2) e.g.:
 - Network slicing;
 - Flow based QoS framework, including potential enhancement for the dual connectivity between eNBs using flow based QoS;
 - New security scheme (if any).
 - Specify the mechanism to support core network node selection functions, e.g. assist to perform initial NAS selection and NAS routing (RAN2).
- NG-C/U and Xn interfaces are specified in the WI New radio access technology, including also E-UTRA connected to 5G-CN. If any additional LTE only related impacts are identified, then those can be discussed in this WI.
- Inter RAT mobility between E-UTRA and NR when connected to 5G-CN is specified in the WI New radio access technology. RAN2 parts of E-UTRA to E-UTRA specific aspects can be discussed in this WI.
- Impact on LTE under EPC should be minimized.

Thank you

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