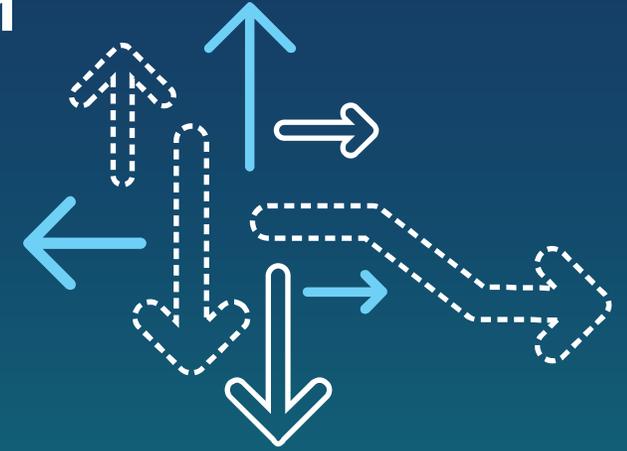


3GPP SA #75

Dubrovnik, Croatia, March 8-10, 2017

Agenda item: 7.2

SP-170201



Way Forward on Light Connection

Qualcomm Incorporated

Status of Light connection in various TSGs

- RAN
 - RAN2: CRs submitted for **approval**
 - RAN3: has two sets of CRs; no possibility to down-select due to concerns over CN dependencies that are yet to be fully resolved (even if they turn out to be small)
- CT
 - CT1: 3 CRs co-signed by Qualcomm, Huawei, HiSilicon, Intel and Vodafone to address the NAS impacts of LTE light connection were marked as “**technically correct**” in CT1 but not agreed due to uncertainty about the status of the feature in SA2
 - CT6 CR submitted for **approval**
- SA
 - SA2: There was no agreement in SA2 to conduct normative work for Light Connection for LTE/EPC, and no normative is agreed
 - SA2#118bis: SA2 produced list of system impacts and potential resolution that was circulated with LS to RAN WGs, CT1, CT4, SA3-LI
 - SA2#119: Normative WID for Light Connection/EPC and SID proposals for RRC_INACTIVE in 5GS were noted due to lack of consensus
 - Qualcomm, Huawei, HiSilicon, Intel submitted CRs for TS 23.401 and TS 23.272 in SA2#119 but were not treated

Rationale for Light connection

- Light Connection **is NOT a CIOT feature**
 - Not meant for “infrequent small data”
- Light Connection is **NOT meant to compete with and/or “replace” CIOT EPS UP Optimisation** (that is a CIOT feature) since Light Connection is meant to work with the UE in ECM-CONNECTED, while the CIOT EPS UP Optimisation is working with the UE in ECM-IDLE state
- Light connection is meant as **fast** connection and **frequent** data traffic patterns,
 - In this respect Light connection is meant more for “smartphones”, i.e. UEs that require “low latency”, and send frequent data....
- As per above the starting point is CN/system need to consider this basic principle: **the UE in Light Connection is in ECM-CONNECTED state in CN**
 - **ECM-CONNECTED state is the only current state that meets the low latency / frequent data requirement at all times.**
 - **Light connection aims to reduce the signalling and power consumption from ECM-CONNECTED.**
- **Why support of Light Connection in EPC is important?**
 - Low(ers) latency over LTE
 - “Goes well” with 5G NSA “option” 3 UEs (means to reduce “connection” latency)
 - Interworking with RRC_INACTIVE of NR, when RRC_INACTIVE is deployed provides “homogenous” low(er) latency areas i.e. even where 5GCN is not deployed

Working principles of 3GPP

- Cross TSG coordination **and collaboration** is the very foundation of 3GPP
- Raising issues with no constructive proposals how to solve or no willingness to enter the discussion to find a resolution, involving unnecessarily working groups not in original scope of work, raising issues that are either resolved already by another WG or clearly irrelevant for the ToR of the WG in order to delay the technical work ... causes damage to the reputation of 3GPP and should be discouraged
- The objectives/ “need for” a feature WID can be debated at time of approval in **one** TSG but not in various WGs (of various TSGs) after the feature WID is **already agreed** -- as means to stop or delay technical progress
- Technical objections (if any) need to be clear and **timely recorded** following resolution with normal working procedures
- **It is to the benefit of 3GPP to protect the “unwritten rules” of constructive collaboration amongst members and across TSGs**

Way Forward proposal

- RAN
 - Extend the Light Connection WID to rel.15 completion (June 2017 –pending SA2)
 - RAN put on hold CRs that come to plenary in various forms (approved, endorsed, company contributions etc)
 - Send LS to SA/SA2 to start a WID with rel.15 completion (June 2017)
 - Send LS to CT to extend the respective WID to rel.15 completion (June or Sep. 2017) and put on hold CRs that come to plenary in various forms
- SA
 - Approve SA2 **normative rel.15 WID** on Light Connection with completion date June 2017 to accomplish the documentation of Light Connection system impacts in SA2 specifications
 - SA2 discuss and approve CRs to TS 23.401 and TS 23.272 to document Light Connection feature