**3GPP TSG-RAN WG1 #102-e R1-200xxxx**

**e-Meeting, August 17th – August 28th, 2020**

Title: Draft LS response on power sharing for LTE mobility enhancements

Response to: R1-2005211(R2-2006377)

Release: Rel-16

Work Item: LTE\_feMob-Core

Source: Ericsson [RAN1]

To: RAN2

Cc:

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**1. Overall Description:**

RAN1 would like to thank RAN2 for the LS on power sharing for LTE mobility enhancements.

RAN1 has discussed the LS and reached the following agreement:

**Agreement:**

* **UL power sharing is introduced for inter-band DAPS.**
* **The following optional UE capabilities are introduced to indicate support of power sharing (per band combination):**
  + **Support of power sharing for sync DAPS.**
  + **Support of power sharing for async DAPS.**
  + **NOTE: These capabilities are separate from the capability indicating DAPS support (i.e., a UE may indicate support of DAPS but no power sharing in a band combination)**
  + **(NOTE – not to be included in agreement: Per my understanding, DAPS is not supported for multiple CC in source and target, so the IEs for “supportedCellGrouping” are not needed, but we are open to discussing this).**
* **An RRC configuration parameter is introduced to configure DAPS power sharing with the same contents as PowerCoordinationInfo-r12 (up to RAN2 whether to reuse PowerCoordinationInfo-r12 or define a new IE)**
  + **p-MeNB-r12           INTEGER (1..16): power sharing parameter for target eNB.**
  + **p-SeNB-r12           INTEGER (1..16) : power sharing parameter for source eNB.**
  + **powerControlMode-r12: Indicates the power sharing mode.**
* **NOTE: Support for UL cancellation is not introduced in Rel-16**
* **NOTE: Behavior of UE’s not supporting power sharing is FFS.**

In the LS, RAN2 asked the following questions:

**Question 1:** Whether LTE DC uplink power sharing mechanism (i.e., mode 1 and mode 2) is applicable for both intra and inter frequency LTE DAPS HO?

**Answer to Q1**: RAN1 concluded that the LTE DC uplink power sharing mechanism (i.e., mode 1 and mode 2) is applicable for inter band LTE DAPS HO, i.e., for some inter-frequency cases.

**Question 2:** If specified, RAN2 requests RAN1 to provide a list of UL power sharing parameters to be used for LTE DAPS HO.

**Answer to Q2:** An IE with the same fields as PowerCoordinationInfo-r12 (up to RAN2 whether to reuse PowerCoordinationInfo-r12 or define a new IE) is introduced to configure UL power sharing for LTE DAPS. The IE would contain the fields (up to RAN2 to change field names):

* p-MeNB-r12: INTEGER (1..16): power sharing parameter for target eNB.
* p-SeNB-r12: INTEGER (1..16): power sharing parameter for source eNB.
* powerControlMode-r12: Indicates the power sharing mode

In addition, optional UE capabilities for the support of UL power sharing for LTE DAPS are required:

* Support of power sharing for sync DAPS.
* Support of power sharing for async DAPS.

A UE that supports LTE DAPS HO optionally supports power sharing via these capabilities.

**2. Actions to RAN2:**

RAN1 respectfully asks RAN2 to take the above information into consideration

**3. Date of next TSG RAN WG1 Meetings:**

TSG RAN WG1 Meeting #103-e 26th October – 13th November, 2020, online.

TSG RAN WG1 Meeting #104 1st – 5th March, 2021 GR