Power reduction mechanism verification

According to the May 2017 TCBC Workshop, Demonstration of proper functioning of the detection and triggering mechanisms is required to support the corresponding RF exposure conditions. The verification is through a base station simulator is used to establish a conducted RF connection and monitor output power under different operating conditions related to the power reduction mechanisms. Detail of power reduction mechanisms referring to Operational Description

1. Power Verification Procedure

The power verification was performed according to the following procedure:

1. A base station simulator was used to establish a conducted RF connection and the output power was monitored. The power measurements were confirmed to be within expected tolerances for all states before and after a power reduction mechanism was triggered.
2. Step 1 was repeated for all relevant modes and frequency bands for the mechanism being investigated.
3. Steps 1 and 2 were repeated for all individual power reduction mechanisms and combinations thereof. For the combination cases, one mechanism was switched to a 'triggered' state at a time; powers were confirmed to be within tolerances after each additional mechanism was activated.

General Note:

1. This device uses different Device State Indices (DSI) to configure different time averaged power levels based on certain exposure scenarios.

Exposure Condition	DSI	Trigger Conditions
Body SAR(Standalone)	DSI 3	Sensor On
Body SAR(Simultaneous)	DSI 5	Sensor On+WLAN
Sensor Off SAR	-	Sensor Off

2. The device implements Proximity sensors mechanism for the power management for SAR compliance at different exposure conditions (Body/Limbs).
3. Select the bands with the largest power reduction for power verification:
   a. Establish data connection monitor body/limbs power state.
      - GSM1900 is set to GPRS 2TX slot, LTE Band 7 is set at 'highest BW, 1RB, RB Offset = 0, QPSK' WCDMA II is set RMC 12.2Kbps, WLAN5GHz is set 802.11a 6Mbps.
      - Body Detect mechanism was performed for the in-hand and on a stationary object (placed on a table)
4. In this power validation purpose is to demonstrate of proper functioning of the detection and triggering mechanisms to support the corresponding RF exposure conditions.
5. Verification performed for one technology/Band to demonstrate that the power reduction applies for same technology/band and call origination.

2. Verification output Power Results

Body exposure condition

Sensor output Status:		Sensor OFF		Sensor ON	
Wireless technology	Antenna	Measured (dBm)	Max. Tune-up (dBm)	Measured (dBm)	Max. Tune-up (dBm)
GSM1900（GPRS 2 Tx slots）	Ant 3	29.72	30.50	23.18	23.50
WCDMA II	Ant 3	23.37	24.00	16.35	17.00
LTE Band 7	Ant 3	22.97	24.00	12.04	13.00
5.5GHz WLAN 802.11a 6Mbps Ch100	Ant 0	16.87	18.00	9.66	11.00