



3GPP GERAN1-GERAN2 Cellular IoT ad-hoc

WG2 Chairman's Summary (GPC150129)

Chairman: Yang ZHAO (Huawei Technologies)

Secretary: Gert THOMASEN (MCC report in GPC150130)

Schedule

	Monday	Tuesday	Wednesday	Thursday	Friday
8:30		LSs	MAC Ericsson	Revisions	
10:30		Rapporteur			
11:00		Traffic Model			
		Coffee Break	Coffee Break	Coffee Break	
		Deployment	ACB	Revisions	
12:30	Lunch	Lunch	Lunch	Lunch	
14:00	SIGFOX	MAC Ericsson	Architecture	Work plan AOB	
	MAC Qualcomm		Cell (re)selection		
15:30		Coffee Break	Coffee Break	Coffee Break	
16:00	MAC Huawei	System information	Paging/DRX		
		MAC Ericsson			
19:30					
					Incoming contributions: 54
					Total contributions: 77

Incoming LSs

➤ **0096 Reply LS on Security Framework for Cellular IoT noted**

- SA3 has started to consider security for Cellular IoT (CIoT) and several questions have arisen during this work. GERAN2, SA1 and SA2 are requested to respond to these questions.
- **0120** reply LS to SA3 **agreed**

➤ **0097 LS on work split for Study on Cellular IoT noted**

- SA3 would like to ask SA plenary for guidance on what is the work split between SA and GERAN groups for the study on Cellular IoT.
- Corresponding LS in **0122** to SA plenary **agreed**

➤ **0098 Reply LS on paging for MTC noted**

- SA2 discussed whether any CN assistance can be provided to address the request from RAN1 of dealing with paging information for devices with low-complexity and in different coverage conditions.
- Cellular IoT study also has similar request and GERAN2 agrees to ask SA2 to consider GERAN request as well.
- Corresponding LS in **0108** to SA2 postponed for more investigation

Rapporteur work

- **0012 Telco#8 meeting report noted**
- **0095 Telco#9 meeting report noted**
- **0009 TR update noted**
- **0014 Principles for TR update noted**
 - GERAN2 agrees to have solution-specific living documents on MAC layer, system information design and cell (re)selection procedures
 - GERAN2 agrees to have common principles on paging/DRX and Access Class Barring
- **0128 updated work plan noted**
 - Proposal 2 -> pending on plenary decision
 - Proposal 3.2: solution description related to simulations should be provided at GERAN#65 from proponents agreed by GERAN2

Traffic model/Deployment scenarios

- **0109 Capacity evaluation methodology noted**
 - More work needed
- **0127 Deployment scenarios for Cellular IoT noted**
 - Deployment Requirement 3 and Deployment Requirement 4.2 **agreed** by GERAN2
- **0084 On mobility statistics for tracking applications noted**
 - Propose to focused more on speeds lower than 30 km/hr, and 10 km/hr may be a more appropriate target.

Mac Layer design (1/2)

- **0015 MAC layer design open issues noted**
 - GERAN2 agrees MAC layer is solution-specific

- **SIGFOX solution**
 - 0052 Cooperative Ultra Narrow Band technology for Cellular IoT noted
 - Work expected for solution adaptation following the agreed assumptions and targets in Cellular IoT study

- **Huawei solution**
 - 0038 Channel mapping noted, PCR in 0101 agreed
 - 0040 Random Access Procedure of MAC Layer noted, PCR in 0102 agreed
 - 0003 Cellular IoT Scheduling noted, PCR in 0103 agreed
 - 0042 NB M2M - MAC PDU Structure and Impact Evaluation on Upper Layer noted, PCR in 0105 agreed
 - 0044 Data Transmission and Retransmission noted, PCR in 0104 agreed
 - 0037 NB M2M - Overview of Coverage Class noted
 - 0114 PCR set agreed

Mac Layer design (2/2)

➤ Qualcomm solution

- 0069 Support of large cells **noted** -> G1 responsibility
- 0070 Channel Downlink control channel design **noted**
- 0071 PRACH content, 0072 PRACH capacity evaluation **noted**
- More investigation needed

➤ Ericsson solution

- 0054 General principles **noted**, PCR in 0125
- 0058 Multiplexing with legacy devices **noted**, PCR in 0125
- 0062 Accelerated System Access Procedure, 0074 EC-GSM, Random Access Procedure **noted** -> pending on G1 discussion
- 0078 PDTCH Resource Transmission Management, 0082 AGCH assignment message, 0079 PACCH Message Set **noted**, PCR in 0125
- 0083 RLC procedures **noted**, PCR in 0125
- PCR in 0125 [GERAN2 part] is **agreed**
- 0075 Battery Life Time Estimation -> more investigation needed
- 0076 Exception Report Latency **noted** -> pending on G1 confirmation on HARQ combination with repetitions

System Information Design

- **0017 System information design open issues noted**
 - Open issues can be treated in a later phase
- **Huawei solution**
 - **0046 System Information Broadcasting for Cellular IoT noted**, PCR in **0110 agreed**
 - **0048 Access Class Barring for Cellular IoT noted**
 - Whether to have different Access Class Barring with different priorities of UEs is FFS

Cell selection/reselection

➤ Huawei solution

- [0049 NB M2M - Cell Selection and Reselection](#) [noted](#)

Paging/DRX

- **0016 Idle mode procedures open issues noted**
- **Ericsson solution**
 - **0080 noted:** proposal to inform TDMA FN to the CN for synchronization of paging
 - **0081, 0086 noted:** paging group determination and eDRX and TDMA FN space wrap around, included in PCR **0125**
 - **0077 noted:** proposal to use Cell Update/RAU to inform the coverage class to the CN
- **Huawei solution**
 - **0005 NB M2M UE Operating Modes noted**
 - **0050 noted:** proposal to inform SGSN the coverage classes by UL_UNITDATA
- **Vodafone solution**
 - **0087 noted:** proposal to use different RAIs to indicate different coverage classes
 - Corresponding LS in **0108** postponed: more discussion needed
 - LS in **0115** postponed: more discussion needed

Architecture

➤ **Future proof 5G architecture discussion**

- [0049](#) Considerations on a future proof CloT architecture [noted](#)
- Proposals are NOT agreed by GERAN2 as this is seen out of GERAN CloT scope and GERAN scope

➤ **S1 optimization**

- [0006](#) Optimizations for S1-based architecture [noted](#)
- More investigation needed

➤ **Transmission efficiency evaluation**

- [0051](#) NB M2M - Evaluation of Transmission Efficiency [noted](#)
- More investigation needed

Outgoing LSs

➤ Source GERAN2

- GPC150120 Reply LS on Security Framework for Cellular IoT
- GPC150122 Response LS on work split for Study on Cellular IoT

Next Meetings

- GERAN2#65 09 - 13 Mar 2015, Shanghai, China
- WG1&2 adhoc 20 - 23 April 2015, Sophia Antipolis, France
- GERAN2#66 25 - 29 May 2015, EU



Thank You