

SP-140715

TSG GERAN#64 STATUS REPORT

TSG GERAN Chair
Olof Liberg
Ericsson LM

TM

A GLOBAL INITIATIVE

TSG GERAN ORGANISATION



TSG GERAN officials

- Chairman:
 - Mr Olof Liberg
(Ericsson LM / ETSI)
- Vice chairs:
 - Mr Davide Sorbara
(Telecom Italia S.p.A / ETSI)
 - Mr Xinhui Wang
(ZTE Corporation / CCSA)
 - Mr Zhixi Wang
(Huawei Technologies Co Ltd / ETSI)
- MCC support: Mr Paolo Usai

TSG GERAN WGs officials

- TSG GERAN WG1
 - Chairman: Mr Olof Liberg (Ericsson LM / ETSI)
 - MCC support: Mr Paolo Usai
- TSG GERAN WG2
 - Chairlady: Ms Yang Zhao
(Huawei Technologies Co., Ltd / CCSA)
 - MCC support: Gert Thomasen
- TSG GERAN WG3new
 - Chairman: Mr Rémi Lascoux
(Sierra Wireless, S.A. / ETSI)
 - MCC support: Mr Ingbert Sigovich


GERAN#64 OVERVIEW

 In total 271 documents was dealt with.

- 5 incoming & 4 outgoing liaisons
- 78 Change Requests approved
 - 7 from WG1
 - 12 from WG2
 - 59 from WG3new
- Most input submitted under agenda item *Cellular System Support for Ultra Low Complexity and Low Throughput Internet of Things (FS_IoT_LC)*.

 9 work items ongoing

- 5 Features/Building blocks/Work tasks
 - 2 features completed.
- 5 study items

 At plenary 40 delegates, and in total 69 delegates participated during the meeting.

 WG reports (chairman & MCC reports)

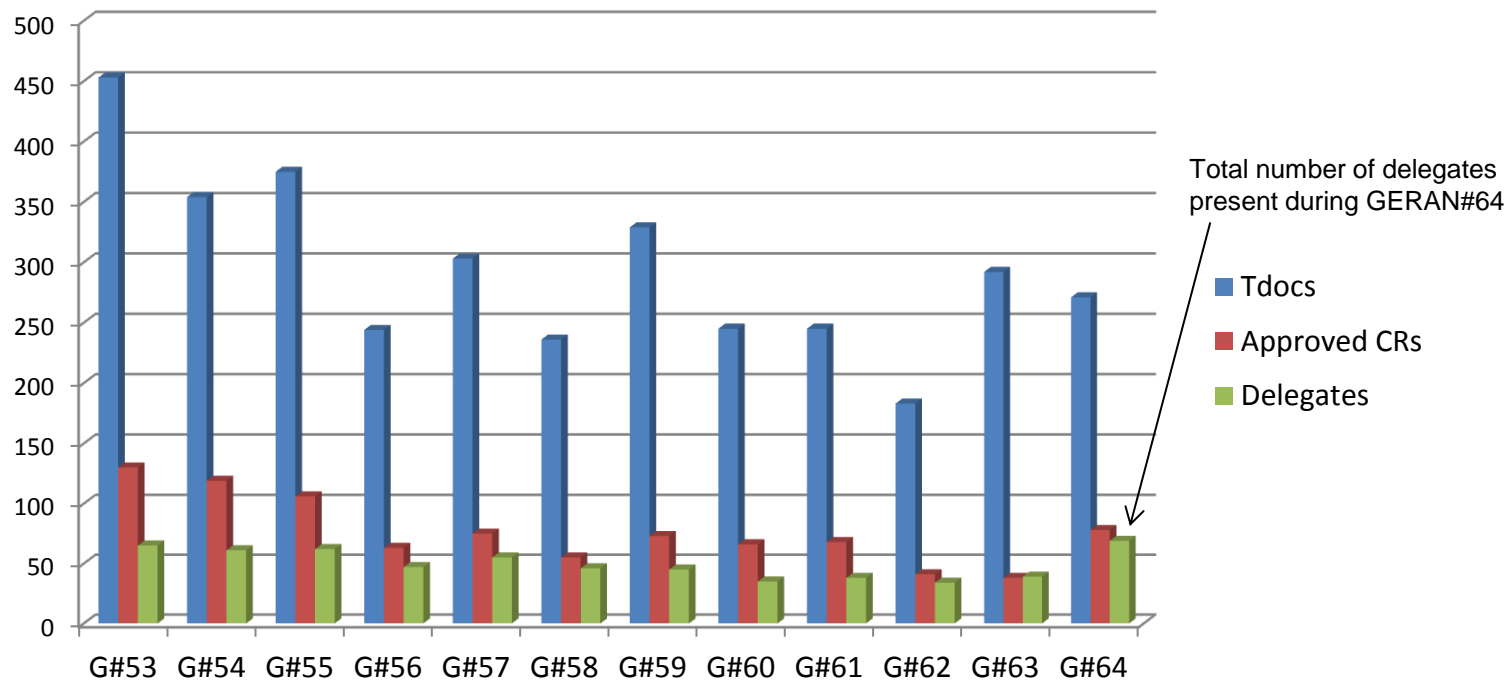
- WG1 in [0973](#) & [1000](#).
- WG2 in [0975](#) & [0972](#).
- WG3new (electronic meeting) in [0795](#) & [0796](#).

EVOLUTION OF WORKLOAD

FROM GERAN#53 TO GERAN#64

Observations at GERAN#64

- Increased number of delegates, due to high interest in FS_IoT_LC study and GERANs first appearance at a Mega-meeting.



ONGOING WORK ITEMS



NAME [ACRONYM] / RESPONSIBLE GROUP(S) / COMPLETION LEVEL

Study items

Solutions for GSM/EDGE BTS Energy Saving [BTSEnergy]	WG1	95%
Downlink MIMO [FS_DOMIMO]	WG1	65%
Study of Power Saving for MTC Devices [FS_uPoD]	WG2	40%
Uplink MU-MIMO [FS_UL_MU-MIMO]	WG2	20%
Cellular System Support for Ultra Low Complexity and Low Throughput Internet of Things [FS_IoT_LC]	WG1	40%

Rel-12 Features/Building Blocks/Work Tasks

Downlink Multi Carrier GERAN – MS Conformance Testing [DMCG_Mstest]	WG3new	80%
MSRD for VAMOS [MSRD_VAMOS]	WG1	100%
MSRD for VAMOS – MS Conformance Test [MSRD_VAMOS-TEST]	WG3new	100%
Support for BeiDou Navigation Satellite System (BDS) for LCS in GERAN3new [LCS_BDS_GERAN-GERAN3new]	WG3new	80%
New Training Sequence Codes for GERAN [NewToN]	WG1	100%

APPROVED CHANGE REQUESTS

NewToN

- WG1 approved 5 CRs, WG2 approved 2 CRs

DMCG_Mstest

- WG3New approved 12 CRs

MSRD_VAMOS & MSRD_VAMOS-TEST

- WG1 approved 1 CRs, WG3New approved 1 CR

LCS_BDS_GERAN-GERAN3new

- WG3new approved 34 CRs

TEI 12

- WG1 approved 1 CR, WG2 approved 2 CRs

Pre-release 12

- WG2 approved 10 CRs, WG3New approved 12 CRs

LIASIONS

Incoming

- LS on Test Case Requirements Optimization, source GCF CAG (0801)
- LS on new work item on simple encryption procedure for IoT device security, source ITU-T Study Group 17 (0802).
- Reply LS on introducing the new RSRQ measurement definition, source RAN4 (0804).
- Response LS on the routing information for the unnecessary handover to another RAT detection, source RAN3 (0803)
- LS on Reply EAB initiation in BSC, source SA2 (0805).

Outgoing

- LS on Extended TSC support indicator, to CT1 (0978)
- Draft Reply LS working document towards a preliminary draft new ITU-R report on the smart grid project (IMT), to RAN ITU-R Ad Hoc (0974)
- Reply LS on new work item on simple encryption procedure for IoT device security, to ITU-T Study Group 17 (0967)
- Response LS on the routing information for the unnecessary handover to another RAT detection, to RAN (0951)

GENERAL INFORMATION

WG1 & WG2 FEATURES/BUILDING BLOCKS/WORK TASKS



TEI13

- Discussions paper on need to revise multi-constellation A-GANSS minimum sensitivity performance requirement presented (0806, 0845).
- CR to 45.005 (0989) on multi-constellation A-GANSS minimum sensitivity performance requirement was postponed.

Release 12 and earlier

- EARFCN extension
 - CRs to 48.008 (0932,0933) and 48.018 (0962,0962) to support extended EARFCN in case of Unnecessary IRAT HO approved.
 - Two proposals on extension of EARFCN value range in system information presented (0942,0846). CRs to TS 44.060 (0960,0961), 44.018 (0959,0931), 45.002 (0926,0927) and 45.008 (0928,0929) were postponed.
- CRs to TS 48.008 (0936,0937,0938) and 48.018 (0958,0940,0941) were approved to add Global eNB ID to the Source Cell ID IE used e.g. in the case of Unnecessary IRAT HO.
 - LS sent to RAN3 to inform them about these corrections (0951).

GENERAL INFORMATION

WG1 & WG2 FEATURES/BUILDING BLOCKS/WORK TASKS



MSRD_VAMOS

- CR to TS 45.005 (0911) approved to remove brackets from performance requirements.
- Exception sheet approved to extend work over GERAN#64 (0579) fulfilled.
- Feature completed.

NewToN

- TSC design framework and system level performance evaluation (0873), and discussion paper on the relation between NewToN and VAMOS (0872) presented.
- CRs presented to TS 44.018, 44.060, 45.001, 45.002, 45.008, 45.009 & 45.050 were approved (0955,0956,0945,0946,0947,0877,0997).
- CR to 24.008 endorsed and LS to CT1 approved (0949,0978)
- Exception sheet approved to extend work over GERAN#64 (0539) fulfilled.
- Feature completed.

GENERAL INFORMATION

WG1 & WG2 STUDY ITEMS

BTSEnergy

- Performance evaluation presented (0916), along with TR 45.926 text proposal on new candidate technique (0990,0994).

FS_DOMIMO

- TR 45.871 text proposal on performance evaluation agreed (0919,0991).

FS_UL_MU-MIMO

- Discussion paper on MS energy consumption model presented (0891).

FS_uPoD

- Discussion papers and TR text proposals on eDRX, PSM, short synch procedures, device capability, device trigger identification, uPoD device identification and MS energy consumption model presented (0890, 0894,0895,0896,0966,0898,0899,0900, 0905,0906,0907,0908,0910).
- Draft TR 43.869 agreed (0968).

GENERAL INFORMATION

WG1 & WG2 STUDY ITEMS: FS_IoT_LC

Technical report

- A draft TR capturing all agreements made at GERAN#64 was noted ([0822](#)).
- Assumptions on
 - Traffic model (0816,0909,0981,0970)
 - building penetration loss modelling (0815,0884,0992),
 - frequency offset modelling (0817,0828,0885),
 - device complexity evaluation (0818,0829,0827,0986), and,
 - Legacy GPRS reference performance (0838) included in draft TR.
- Physical layer design of the Narrowband M2M candidate technique included in the TR (0868, 0988).

At GERAN#64, in total four competing candidate techniques were presented.

- *Narrowband M2M,*
- *Narrowband OFDMA,*
- *Narrowband Hybrid Modulation, and,*
- *GSM Evolution.*

Updated Workplan presented where GERAN encourages companies to bring their concepts by GERAN#65, given the time sensitivity of the study ([0977](#)).

GENERAL INFORMATION

WG1 & WG2 STUDY ITEMS: FS_IoT_LC cont.

Narrowband M2M

- Discussion papers on Frame index, Coverage extension, L2S mapping, Cell search, Timing advance, interference scenarios, coding performance, cell (re-)selection and coverage classes presented (0861, 0862, 0943, 0864, 0865, 0944, 0867, 0848, 0860).
- Text proposals to TR on physical layer design agreed (0868, 0988).

Narrowband OFDMA

- A first concept on Narrow band OFDMA was presented (0839).
- Discussion papers on Random access, synchronization, Tone-Phase-Shift Keying modulation, power consumption and system level performance were presented (0840,0841,0842,0843,0984).

GENERAL INFORMATION

WG1 & WG2 STUDY ITEMS: FS_IoT_LC cont.

Narrowband Hybrid Modulation

- A TR text proposal on a first concept description was presented (0921).

GSM Evolution

- Contributions on FCCH, SCH and RACH performance, blind repetitions and UL capacity presented (0871,0887,0886,0882,0883).

Architecture & Security

- Proposal to only consider Gb interface for cellular IoT and let SA3 study security aspects noted (0922).
- Evaluation methodology of transmission efficiency on Gb and S1 agreed (0952)

Idle mode behavior

- Various proposals on paging presented (0924,0858,0854).

System information

- Proposals on SI design (0853) and network sharing considerations (0925) presented. Agreements summarized in 0969.

GENERAL INFORMATION

WG3NEW BUILDING BLOCKS

DMCG_Mstest

- 12 CRs to 51.010-1,-2 approved.
- Eight test cases remain to be specified.

MSRD_VAMOS-TEST

- Final CR approved (0760).
- Building block completed.

LCS_BDS_GERAN-GERAN3new

- 34 CRs to 51.010-1,-2 approved.
- Work expected to be completed at GERAN#65

Pre-release 12

- 12 CRs approved, including five correction CRs on Network Improvements for Machine-Type Communications (NIMTC_GERAN-MSConTest).

GENERAL INFORMATION

WG3NEW BUILDING BLOCKS



GCF Test Case reduction

- GCF has started a task to reduce the number of test cases to be executed in order to go through their certification process (0518). An LS from GCF (0801) seeking for technical expertise was noted.
- WG3new will try to provide input at GERAN#65.

FUTURE PLANNED MEETINGS

PLENARY AND AD-HOC MEETINGS



-  Adhoc on FS_IoT_LC#1, 2-5 Feb, 2015, Sophia Antipolis
-  GERAN#65, 9-13 March 2015, Shanghai, China
 - WG3new electronic meeting.
-  Adhoc on FS_IoT_LC#2, 20-23 April 2015, Sophia Antipolis
-  GERAN#66, 25-29 May 2015, Vilnius, Lithuania
 - WG3new electronic meeting.
-  GERAN#67, 10-14 Aug 2015, China
-  GERAN#68, 16-20 Nov 2015, USA [Co-located with RAN WGs]
 - WG3new electronic meeting.

SA GUIDANCE & INFORMATION

Guidance

- None

Information

- GERAN#64 was the first meeting where TSG GERAN have taken part in a Mega-meeting. This allowed for higher meeting participation, as delegates easily could move between working groups. All in all the Mega-meeting was a very positive experience.
- At GERAN#64 Chinese delegates experienced difficulties to obtain timely VISAs to the USA.
- Due to increased workload GERAN#65 will start WG sessions already on Monday afternoon.

THANK YOU

Olof Liberg

3GPP TSG GERAN Chairman

