# 3GPP TSG GERAN2#47bis

## Vienna, Austria, 19-22 October, 2010
## Chairman's Summary

NOKIA

Guillaume SEBIRE (Nokia/Chairman)

Gert THOMASEN (MCC)

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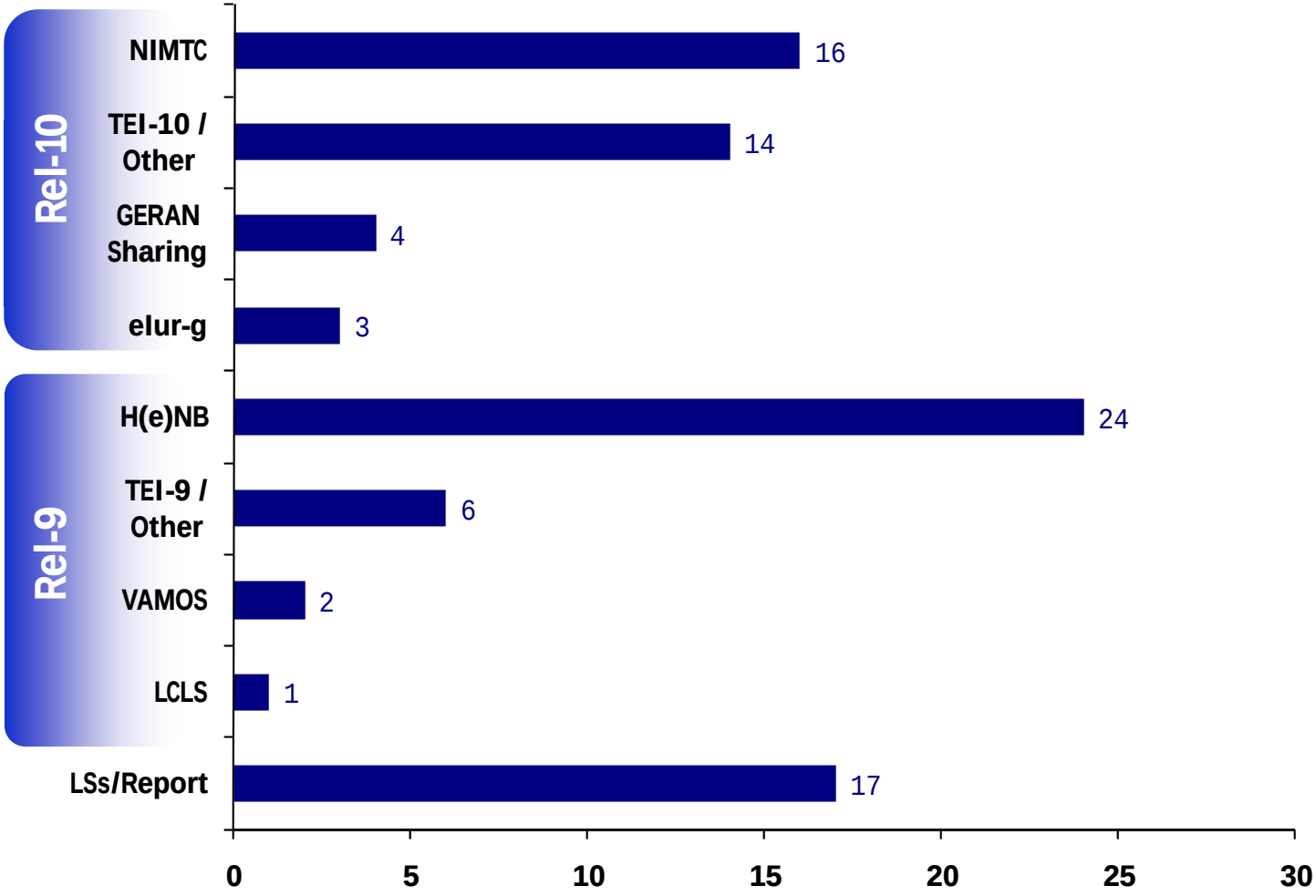
# Incoming Contributions




**Total: 87**

**Total (End): 130**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| | Monday | Tuesday | Wednesday | Thursday | Friday |
|---|---|---|---|---|---|
| 8am | | | | | |
| 9am | | LSs | LCLS | MTC | Revisions |
| 10am | | | GERAN Sharing | | |
| | | Coffee | Coffee | Coffee | Coffee |
| 11am | | VAMOS | GERAN Sharing | MTC | Revisions |
| 12pm | | H(e)NB | eIur-g | | |
| 1pm | | Lunch | Lunch | Lunch | Lunch |
| 2pm | | H(e)NB | TEI-10 | MTC | Revisions |
| 3pm | | TEI-9 | | | |
| | | Coffee | Coffee | Coffee | Coffee |
| 4pm | | TEI-9 | TEI-10 | MTC | |
| 5pm | | | | | |
| 6pm | | | Other | | |
| 7pm | | | | Social Event | |
| 8pm | | | | | |

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# Pre-Release 9

- None


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# Rel-9 – VAMOS

- **G2-100342, G2-100343** CR 44.018 agreed: Clarification that for VAMOS operation in DTM, the PS slots use the same TSC number as on the CS slot but always from TSC set 1 (in line with GERAN#47 agreement)


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# Rel-9 – H(e)NB Enhancements (1/4)

- **Misc.**
  - **G2-100290, G2-100291** CR 44.060 postponed: clarification of requirements for reporting CSG cells in PCCN message: further discussions needed offline in particular to clarify the link with §5.6.3.9 that outlines conditions for reporting of CSG and hybrid cells
- **PLMN ID Reporting**
  - **G2-100296** (update of GP-101480) proposing the reporting of the Selected PLMNid as opposed to always reporting the primary PLMNid of the target CSG cell to address the case when the CSG cell is shared.
  - **G2-100355** argues otherwise that the primary PLMNid need to be reported as the CSG ID is only valid within this PLMN, but also indicates that not all UEs are supporting UEs (for RAN sharing). It also highlights that RAN sharing for home cells is not defined in RAN stage 3 specs.
  - No agreement can be reached that RAN sharing is supported or not in Rel-9
  - **Working assumption** that the primary PLMN id is reported. This may be revisited should feedback from other groups indicate that this is not ok. LS in **G2-100392**
  - **G2-100383, G2-100384** CRs 44.060 conditionally agreed according to the working assumption above
    - Condition: positive feedback from other groups on the working assumption


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# Rel-9 – H(e)NB Enhancements (2/4)

- **PCCO to CSG cells (NC2 when PS HO not supported):**
  - GERAN#47 agreement that PCCO to CSG cells shall be supported in the standard (NC2 mode when PS HO not supported)
  - General disclaimer: Mechanism need to be simple and make sense
  - **G2-100351** and **G2-100293** discussed
  - Reporting measurement results for CSG cells: discussion and decision needed in GERAN1
    - Five companies in favour (among which one not willing to preclude it)
    - Two companies not in favour
    - Other companies (six) without an opinion
  - Identification of the CSG cell: further discussions needed
    - Single bit reporting (without measurement results) or
    - Physical layer parameters with one toggling bit to discriminate cells
  - Whether to apply measurement reporting criteria or reselection criteria for reporting a CSG cell is to be discussed in GERAN1
  - Whether to apply any other restriction to minimize reporting of CSG cells is to be discussed in GERAN1
  - **Decisions on the above items needed at GERAN#48**

  - **G2-100294, G2-100295, G2-100278, G2-100279, G2-100280, G2-100281** CRs 44.060, 44.018 postponed


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# Rel-9 – H(e)NB Enhancements (3/4)

- **Hybrid cells**
  - **GERAN#47**
    - GERAN2 agreement that a detected hybrid cell is reported as a CSG cell in HO scenarios when CSG Id on MS's *"CSG Whitelist"* (i.e. same as CSG reporting rules) – to address PSC/PCI confusion
    - No agreement whether a detected hybrid cell is reported as a CSG cell in HO scenarios when CSG Id is not on "*CSG Whitelist*"
      - A *possible* way forward is to allow an MS implementation to report routing parameters of a detected hybrid cell in this case (could e.g. be based on the MS knowing confusion exists, or any other implementation-specific criteria)
      - Decision expected at GERAN2#47bis
    - In other scenarios, a hybrid cell is always reported as a macro cell (i.e. the cell is not detected as a hybrid cell) as per legacy behavior (no specification work needed)
  - **G2-100277**: Agreement reached that detected hybrid cells of which the CSG ID is not on the CSG Whitelist are reported as macro cells
    - **G2-100303, G2-100304** CRs 44.060 agreed
    - **G2-100338, G2-100339** CRs 44.018 agreed


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# Rel-9 – H(e)NB Enhancements (4/4)

- **Hybrid Cells (cont'd)**
  - **G2-100366, G2-100367** CR 44.060 agreed: misc corrections to reflect in control messages the handling of detected hybrid cells (of which the CSG ID is on the CSG Whitelist) in case of handover according to G#47 decision (i.e. same handling as for CSG cells)
  - **PSC/PCI Split**
    - **G2-100306** proposes that no PSC/PCI split for hybrid split be introduced on the radio interface but that a PSC/PCI split distinguishing between home and macro hybrid cells or a Cell Identity split may be needed in the BSS – further discussions needed


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# Rel-9 – TEI-9 / Other

- **CSFB with Redirection and System information**
  - **G2-100307** proposal to remove ambiguity from GERAN specifications to define the min SI messages needed to avoid BCCH acquisition in the GSM cell, and how the MS should proceed should some of these messages not be available
    - No agreement this is needed. Further discussion needed
  - **G2-100340, G2-100341** CRs 44.018 postponed


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# Rel-10 – Local Call Local Switch

- **GERAN#47** Open issue on whether SID frames should be transferred on the A interface or not
  - GERAN2#47bis: LS from CT4 indicating an agreement at CT4#50 that there is no need for the CN to receive SID frames and other non-user generated data on the A interface. CT4 agreed that no user plane data (other than required in HO Preparation and LCLS break) will be sent by the BSS to the CN unless explicitly requested via the LCLS-Configuration IE
- LS from CT4 in **G2-100363** and **G2-100365** highlighting the progress made
  - Stage 2 in progress (23.284 v0.1.0) and recommendation to proceed with *drafting* stage 3 changes
- **G2-100371** CR 48.008 postponed – good progress done on the basis of CT4 progress
  - Common basis for future work
- **G2-100388** LS to CT4

- Companies invited to consider whether this can remain in Rel-10 or should be moved to Rel-11 knowing at least Stage 2 (CT4) cannot be approved before December CT#50 plenary


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# Rel-10 – MTC Study Item (1/2)

- **GERAN#46:**
  - Focus in Rel-10 Study Item on investigating Overload control (radio network congestion), identifiers, within the scope of smart metering applications
  - Radio interface improvements, if any, should preferably be generic enough so they can be applicable to any [MTC] application
  - TR: the TR should follow a Stage 2 approach i.e. reflect agreements and it will be a living document (i.e. will be further updated in Rel-11). It will not be a collection of proposals / contributions

- **G2-100314** TR 43.868 v0.5.0 noted


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# Rel-10 – MTC Study Item (2/2)

- **General**
  - **G2-100352** Aspects of MTC Support in GERAN
    - Some of the aspects are already being studied. More evidence of problems to solve was requested
- **CCCH**
  - **G2-100299** – update of GP-101283: proposal to delay the sending of Channel Request by a given number of slots (TDMA frames): expansion of the legacy mechanism (T parameter) that spreads (initial) accesses over time
    - Somce concerns raised that delaying the transmission of data may be more appropriate at application level
  - **G2-100375** CCCH Capacity Evaluation: further discussion expected at GERAN#48
  - **G2-100329** Hybrid MTC Channel: proposal for a separate common control channel (shared with PDCH(s)) to avoid impact on CCCH
    - Misc concerns raised on the efficiency of this new channel. System level evaluation requested
  - **G2-100300** AGCH Enhancement and Performance comparison
    - Proposal to assign resources to two devices simultaneously.
    - Misc concerns raised
- **PDCH**
  - **G2-100324** Improving uplink multiplexing capacity by sharing a USF between multiple mobiles
    - Misc concerns raised e.g. on scheduling and the related two-stage approach this proposal requires (i.e. adding the need of PUAN message to schedule TBFs sharing the same USF). An evaluation of the gains was requested


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# Rel-10 – MTC Stage 3

- **G2-100318** discusses the "Low Priority Indicator" and "MTC Indicator" and proposes that there is no need to explicitly signal Low Priority and MTC Indicators at radio protocols – no agreement
- **Access Class Barring**
  - SA1 involvement and requirements required as to whether EACB is needed and if so how it is defined – RAN2 sent a LS in G2-100353 to address this (among others)
  - **G2-100316** Extended ACB for MTC need to be discussed in SA1
  - **G2-100317** Supplemental ACB for MTC need to be discussed in SA1
  - Companies encouraged to review these proposals offline and coordinate with their SA1 delegation
  - **G2-100319** Periodicity of Extended ACB on BCCH: will be considered should SA1 define EACB
  - **G2-100320** Sending Extended ACB on BCCH: will be considered should SA1 define EACB
- **G2-100336** M2M overload control proposes:
  - To identifiy MTC devices at random access: see also G2-100318 above. No agreement.
  - To allow granting access to one MTC device while rejecting at least one other MTC device at the same time at immediate assignment. Further discussions needed
  - To increase the wait time to retry random access for MTC devices that had rejected access. Further discussions needed
- **G2-100292** Channel Request procedure for MTC devices
  - Proposes to segregate MTC RACH hence allowing all free codepoints for MTC; or alternatively
    - Similar to G2-100329 segregating RACH access for MTC mobiles need to be evaluated
  - To use a new training sequence (TS3) for EGPRS PCR message to indicate MTC access (thus making all 11bits available)
    - Capabilities of a MTC MS are unclear at this stage: GPRS capable? EGPRS capable? And if so with or without 8PSK in uplink? This should be addressed

- Companies invited to review the proposals offline and provide feedback accordingly.


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# Rel-10 – GERAN Sharing (1/2)

- **GERAN#47:**
  - Principles proposed in **GP-101229** similar to the solution in RAN (w/ minor discrepancies)
    - General principles **endorsed** (some finetuning left on message names etc.)
  - It is recommended that CT1 and SA2 define the changes that fall under their responsibility in TS 24.008 and TS 23.251 (respectively) and that coordination with GERAN(2) be made to ensure a timely and coordinated progress across working groups
  - GERAN2 will focus on 48.008 and 48.018 and on reviewing GERAN matters as (and if) required by CT1/SA2 on 24.008/23.251
- **G2-100321, G2-100337** Proposals to include Manual PLMN selection within the scope of the WID – this needs to be discussed in GERAN as it would impact the Work Item
  - Late SA1 requirement in Rel-10 to support Manual PLMN Selection with network sharing
  - Not all companies agree that Manual PLMN selection ought to be supported with [GERAN] Network Sharing
  - However it is also open whether this work would be piggy-backed in the current WID (requiring a change of the WID) or not (requiring a new WID) and consequently whether a full solution for non-supporting and supporting MS is desired in the same release or not. Either way, it is bound to WID approval rules at GERAN#48.
    - NOTE: solution for non-supporting MSs is independent from that of supporting MSs
  - Offline discussions encouraged to reach a way forward for GERAN#48 - as per GERAN2 mandate the current WID need to progress according to GERAN#47 approval (until at least GERAN#48)
  - **G2-100337** proposal to support manual PLMN selection by either broadcasting multiple PLMN IDs (GERAN impact) or by using CN means: to be discussed offline as it would also impact the WID discussion above


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# Rel-10 – GERAN Sharing (2/2)

- **Good progress on Stage 3 drafting, however both CRs postponed**
  - **G2-100373** CR 48.008 postponed
  - **G2-100374** CR 48.018 postponed
- Note that updates to Stage 2 TS 23.251 are not yet approved, and will not be approved at least until SA#50 plenary in December


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# Rel-10 – Enhancements of Iur-g

- **G2-100276** proposal to reduce the scope of the WID towards CS domain only and towards TD-SCDMA RNC only
  - Endorsed (see below)
- **G2-100377** Working Assumptions on eIur-g principles endorsed by GERAN2
  - In particular, this includes the reduction of the scope of the WID as above
  - WID update expected at GERAN#48
- **G2-100328** Draft CR 43.130 noted – further work needed
- **G2-100372** Draft CR 43.051 withdrawn (GERAN Iu mode stage 2 will not be updated)

- LS to RAN3 in **G2-100386**


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# Rel-10 – TEI-10 (1/4)

- **Dynamic Timelsot Reduction**
  - **G2-100378** CR 44.060 postponed: misc corrections and clarifications addressing issues raised at GERAN#47
    - **G2-100346, G2-100347, G2-100349** CRs 44.060 rejected as already addressed by **G2-100378**
    - **G2-100350** Response to polls prior to entering DTR mode (corresponding CRs in **G2-100349**)
    - Aim is to deliver a single CR for GERAN#48
    - The CR will be further reviewed until GERAN#48 (protocol behavior, reaction time on entering DTR)
  - **G2-100345** CR 44.060 postponed to remove DTR info from RLC data blocks
    - May not be needed should **G2-100378** define a reasonable solution with handling of *DTR information*
  - **G2-100344** CR 44.060 postponed: MS indication that it does not wish to enter DTR
    - No support, misc. concerns raised
  - **G2-100348** CR 44.060 postponed: Entering DRX when leaving PTM/DTM in DTR
    - No support, misc. concerns raised


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# Rel-10 – TEI-10 (2/4)

- **GAN**
  - Support for Rove in/out from/to LTE
    - **G2-100288** Draft CR 43.318 noted
    - **G2-100286** CR 44.318 postponed
    - Note: no impact to RAN specs
    - Use case may need to be clarified for GERAN#48, however this is the same as GAN use case itself. Decision expected at GERAN#48 plenary
    - Companies invited to provide comments offline
  - Support for RFC4867 Bandwidth-Efficient mode to allow selecting between octet-aligned and BE mode for the GA-CSR traffic channel (linked to AoIP support)
    - **G2-100289** Draft CR 43.318 noted
    - **G2-100287** CR 44.318 postponed
    - Companies invited to provide comments offline


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# Rel-10 – TEI-10 (3/4)

- **SACCH Security** issues raised at GERAN#47 in GP-101243
  - A) "Known text" in SI5 (SACCH, ciphered) based on contents of SI2 (BCCH) due to *BCCH Frequency List IE*
  - B) "Known text" content in SI6 (SACCH, ciphered) due to "2B" *padding sequence* of rest octets
  - Solution to A) by allowing different description formats in repeated versions of SI5 while the selection of the format is (pseudo)random
  - Solution to B) by allowing randomizing of padding bits while still allowing future extensions
  - Concerns were raised on B) that the content of SI6 is also fairly easy to determine based on BCCH information and mostly fixed, so the proposal may not be robust enough whilst still making attacks more difficult
  - Proposal to add a CM3 bit to indicate the behavior has been tested, however the proposal ought to be compatible with MSs on the field anyway – whether this bit it is needed is not clear
  - It was also proposed that a possible way forward could be not to cipher the SACCH but this would not be compatible with legacy MSs
  - Decision expected at GERAN#48 – MS vendors requested to check the compatibility of the proposal with legacy MSs on the field. If no issue is identified, the proposal would then be specified and should be deployed asap, else a more complete solution would be required.


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# Rel-10 – TEI-10 (4/4)

- **SACCH Security (cont'd)**
  - **G2-100333** CR 44.018 postponed: alternating between different neighbor cell formats
    - Addresses A) in GP-101243
  - **G2-100334** CR 44.018 postponed: introduction of random fill bits in SI6
    - Addresses B) in GP-0101243 (See previous slide)
  - **G2-100335** CR 44.018 postponed: clarification of SI6 content
  - Known text is an issue in a number of RR messages and generally UI frames that leaves little room to maneuver to address legacy terminals on the field. Ciphering being at L1 (before modulation) implies that the number of known bits in CSN1 is rather low to trigger the security risk
  - Compatibility with legacy terminals to be checked until GERAN#48
  - **G2-100311** proposal to keep ciphering of SMS on SACCH while not ciphering at least system information messages (and other problematic RR messages) to eradicate the security issue above for new terminals
    - Feedback encouraged before GERAN#48.
    - (SMS) CPAck messages may also be predictable
  - LS to SA3 in **G2-100389** requesting feedback/guidance on the above so a decision can be reached in GERAN


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# Rel-10 - Other

- **G2-100310** endorsed: SDCCH Only Devices
  - Addresses the issue raised by GERAN3 at GERAN#47 (G2-100270) whether SDCCH only devices are allowed
  - Indicates that SDCCH only devices that do not support TCH/F in signalling mode are not allowed as per the current specifications – their behavior is unspecified
  - LS to GERAN3 in **G2-100361**
- **G2-100380** CR 44.060 agreed: wrong implementation of CR 1459 rev 1


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# Outgoing Liaison Statements

- **G2-100361** LS to GERAN3, GCF CAG, PTCRB on SDCCH only devices
- **G2-100392** LS to RAN2, RAN3, CT1 cc CT4, SA1, SA2 on RAN Sharing for Home(e)NB cells
- **G2-100387** LS to SA2 cc RAN2, RAN3 on PS Handover failure during SRVCC
- **G2-100386** LS to RAN2, RAN3 cc RAN, GERAN on Enhancements of Iur-g interface
- **G2-100388** LS to CT4 on LCLS Progress update
- **G2-100389** LS to SA3 cc GERAN on SACCH Security
- **G2-100394** LS to RAN3, CT1 cc SA2 on SPID handling


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# Future meetings

- **GERAN2#48** 23 – 25 November 2010 San José del Cabo, Mexico


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