

# 3GPP TSG GERAN2#47

Kunming, P.R.China, 31<sup>st</sup> August – 2<sup>nd</sup> September, 2010

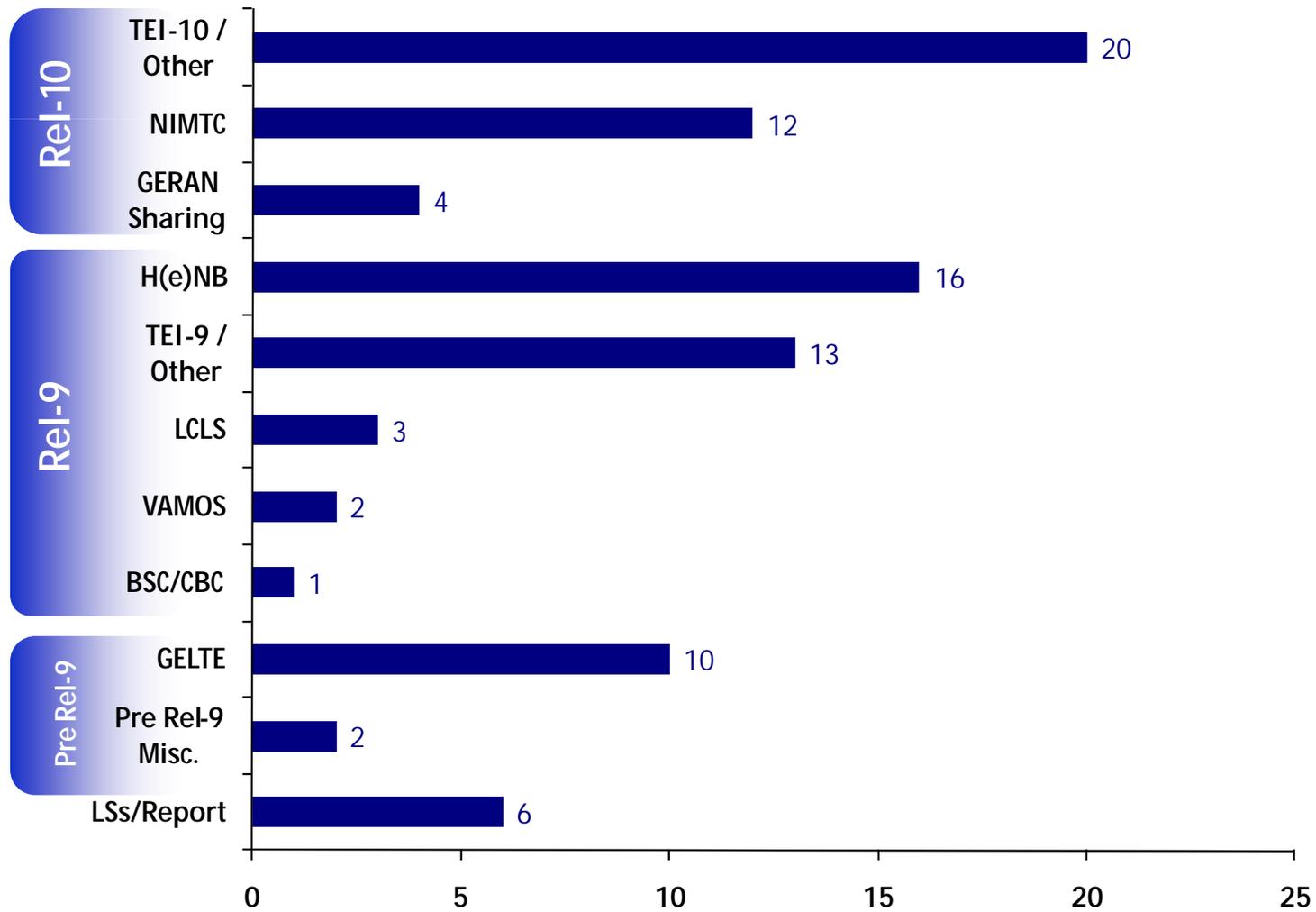
Chairman's Summary

**NOKIA**

Guillaume SEBIRE (Nokia/Chairman)

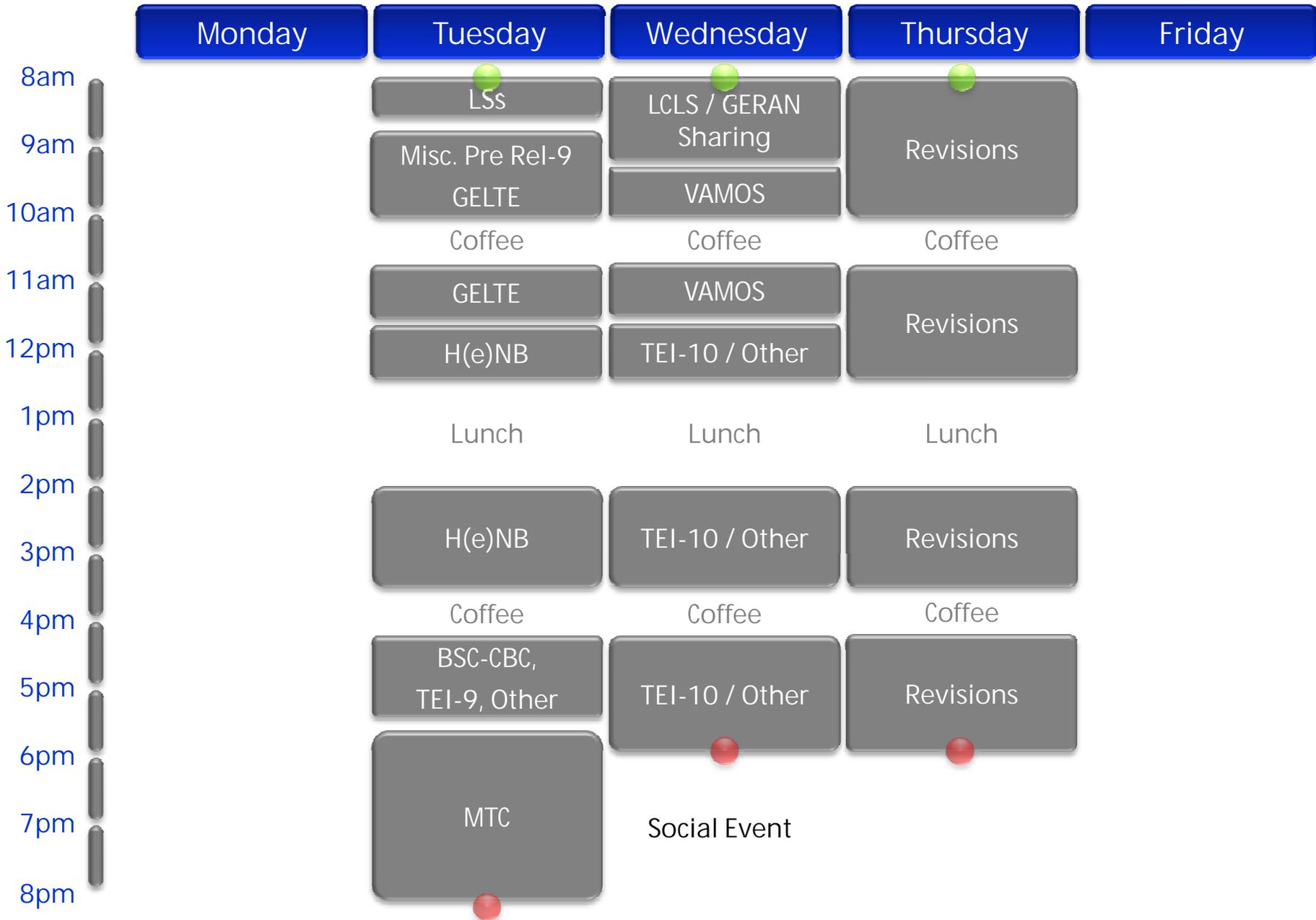
Gert THOMASEN (MCC)

# Incoming Contributions



Total: 89

Total (End): 156



# Pre-Release 9 (1/2)

- Misc. (Rel-8+)
  - **GP-101400, GP-101401** CR 44.018 agreed: CSN1 correction to PEMR message (position of spare padding)

# Rel-8 – GERAN/E-UTRAN Interworking

- E-UTRAN “NCL” modification by PMO (**GP-101279**)
  - Clarification of additive and substitutive IEs in PMO (vs. BCCH) to remove any ambiguity from the specification
  - **GP-101599, GP-101454, GP-101455** CR 44.060 agreed
- SPID
  - **GP-101280** SPID transfer during handover: proposal endorsed by GERAN2
    - PS Handover: SPID sent by the CN to the target BSS during intra-SGSN or inter-SGSN/MME PS handover (unchanged)
    - CS Handover:
      - Proposal to transfer the SPID at MAP level during inter-MS-C handover.
      - SPID not sent in the transparent container
      - LS to CT1, CT4 in **GP-101459**
  - **GP-101271, GP-101272** CR 48.018 agreed: Position of SPID in DL-UNITDATA PDU corrected
- Removal of individual priorities from PCCO
  - **GP-101360, GP-101361, GP-101362** CR 44.060 rejected

# Rel-9 – VAMOS

- **GP-101473** CR 44.018 agreed: handover should not be initiated [by the network] if the resulting channel is in VAMOS mode and access bursts (Handover Access) have to be sent
  - Incl. acknowledgement by GERAN2 of the decision in GERAN1#46 that transmission of access bursts on a channel in VAMOS mode is not allowed
- **GP-101548** on TSC code in DTM when in VAMOS mode
  - Agreement from GERAN1, endorsed in GERAN2
    - If TSC n of TSC set 2 used on CS side, TSC n of TSC set 1 used on PS side
    - No TSC from TSC Set 2 used on PS side
  - No signaling changes expected, only clarifications to procedural description (G2#47bis)
- **GP-101552** Draft CR 24.008 endorsed: introduction of VAMOS capability in CM3
  - LS to CT1 in **GP-101583**

# Rel-9 – H(e)NB Enhancements (1/5)

- **GERAN#44:** Working Assumptions and Open issues in GP-092382
  - Open issues listed in WA#4, WA#7, WA#8, WA#9 and WA#10 are still open and need to be addressed
- **GERAN#45:** Further agreements made documented in **GP-100604**
- **GERAN#46:** GERAN2 endorsement not to introduce any new timer for reselection to CSG cells – T\_reselection will be reused (GP-100880)

# Rel-9 – H(e)NB Enhancements (2/5)

- **CSG Cells:**
  - Reporting:
    - PLMN ID reporting
      - GERAN#46: pending further investigation
      - No decision could be made pending yet further discussions – Decision expected at GERAN2#47bis however
      - **GP-101480** proposing the reporting of the selected PLMNid (to address the case when the CSG cell is shared) as opposed to always reporting the primary PLMNid of the target CSGcell: to be reviewed offline for GERAN2#47bis
      - **GP-101379, GP-101380, GP-101581, GP-101582** CRs 44.060 postponed
    - Explicit measurement command for CSG Reporting (**GP-101384**)
      - Proposal endorsed (with ref. only to latest SI2q message)
      - **GP-101585, GP-101586** CRs 44.060 agreed

# Rel-9 – H(e)NB Enhancements (3/5)

- **CSG Cells:**

- PCCO to CSG cells (NC2 when PS HO not supported)
  - GERAN#46: Some support expressed to allow PCCO to CSG cells in NC2 when PS Handover is not used – Further work needed
  - GERAN2 agreement that PCCO to CSG cells shall be supported in the standard (NC2 mode when PS HO not supported) - Solution TBD
  - **GP-101381, GP-101382, GP-101383** CRs 44.018, 44.060 postponed
  - **GP-101305** another proposal for supporting PCCO to CSG cells to be considered alongside the solution outlined in GP-101381, GP-101382, GP-101383
- **GP-101303, GP-101304** CRs 44.060 rejected: Signaling of CSG dedicated frequencies in Packet Measurement Order
  - No scenario identified where a CSG layer would be made available in packet transfer mode by PMO that would not otherwise be made available by SI2q

# Rel-9 – H(e)NB Enhancements (4/5)

## • Handling of Hybrid Cells

- Discussion in GP-101281, GP-101359
  - PSC/PCI Split for hybrid cells: (PSC/PCI of hybrid cells is part of the macro cell range ). The PSC/PCI Split would allow the MS to identify from the PSC/PCI whether the cell is a hybrid cell and could be used to trigger MIB/SIB reading. No agreement yet whether it is justified to modify BCCH or ptp messages to indicate the hybrid PSC/PCI split or not.
- Reporting rules
  - 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)
  - **GP-101460, GP-101461, GP-101462** CRs 44.018, 44.060 agreed

# Rel-9 – H(e)NB Enhancements (5/5)

- **Handling of Hybrid Cells**
  - Reselection rules
    - Pending GERAN1 decision

## Rel-9 – TEI-9 / Other (1/3)

- **E-UTRAN Cell re-selection enhancements** (see RAN2 LS in GP-100726)
  - **GP-101300, GP-101301, GP-101302** CRs 45.008 noted, 44.060 postponed: subject to GERAN1 decision
- **GP-101433** CR 44.060 postponed, pending GERAN1 decision on the principle of reducing RACH power according to the measured signal strength from the BTS.
- **GP-101398** CR 48.008 agreed: correction of the definition of the Codec List (MSC Preferred) as being the list of codecs allowed by the MSC for the given assignment / handover
- **GP-101402, GP-101465, GP-101466** CRs 44.018, 44.060 agreed: misc. CSN1 corrections

# Rel-9 – TEI-9 / Other (2/3)

- **EFTA**

- GERAN2 view that shifted USF should be applicable to EFTA (**GP-101406** endorsed)
- DLDC: an EFTA multislot capability reduction for DLDC is proposed (**GP-101407**).
  - **GP-101358** Draft CR 24.008 conditionally agreed (Rel-9), following GERAN1 decision. LS to CT1 in **GP-101464**

## Rel-9 – TEI-9 / Other (3/3)

- (CS) Security issues raised 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.
  - **GP-101242** CR 44.018 postponed

# Rel-9 – BSC/CBC Interface

- **Misc. corrections**

- **GP-101463** CR 48.049 agreed: addition of cell identification discriminators for LA Identification and LA Code in Failure List IE (and corresponding changes to Failure List IE size in related messages) allowing the BSC to report failures associated with LAI/LAC

# Rel-10 – Local Call Local Switch

- LS from CT4 in **GP-101468** highlighting the progress made
  - Completion of the Feasibility Study
  - TR sent for approval
- Little if any progress made
- Open issue on whether SID frames should be transferred on the A interface or not
- **GP-101588** CR 48.103 postponed (content endorsed): minor updates only (definitions and placeholders)
- **GP-101457** CR 48.008 postponed
- LS to CT4, SA3-LI in **GP-101469 Plenary**

# Rel-10 – MTC (1/4)

- **GERAN#46:**

- Focus in Rel-10 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

- **Workplan:** *expected in plenary*

- **Simulation assumptions**

- **GP-101378:** additional clarifications requested (RLC AM, Application acknowledgements)
- **GP-101238** highlights some interim conclusions on 23.888 v0.5.1 (Stage 2 TR Studies) and potential impact on GERAN – further work needed.
- **GP-101395** on MTC features in GERAN
  - Prioritization for Rel-10 agreed at GERAN#46 is still valid.
  - No requirement to support MTC features at this stage, however the ongoing study item addresses issues relevant to the MTC features listed in GP-101395

## Rel-10 – MTC (2/4)

- LS from SA2 received in **GP-101584** on the status of Rel-10 NIMTC progress in SA2
  - GERAN(2) to monitor the (evolving) progress of TR 23.888 (currently at v0.5.1)
    - List of foreseen impact is informal and bound to discussion and decision in GERAN(2)
    - Protocol details in GERAN(2) specs under GERAN(2) responsibility
    - Some system level conclusions expected to require changes to GERAN(2) specifications
  - Should [GERAN] normative stage 3 changes be required as a result of this non-complete TR (corresponding WID in GERAN would be needed), we should have the guarantee that the associated conclusions in the TR based on which a stage 3 change is done are final and not subject to change (untraditional for an incomplete TR)
  - The relation with the ongoing feasibility study should also be carefully considered

# Rel-10 – MTC (3/4)

- **Proposed solutions to avoid / tackle a potential RACH Congestion**

- **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.
  - Some interest raised to spread RACH accesses over time (see also GERAN#46 contributions), however evaluation pending based on [to-be-agreed] simulation assumptions
- **GP-101285:** “lottery” approach to consider a cell barred or not which can thus minimize the increase of RACH traffic from MTC devices
  - Further work needed
- **GP-101390, GP-101391, GP-101392:** two-layer approach to derive a permission to access the network through a first “super access class” for all MTC devices (of which the access is thus considered of equal importance), and a second “MTC access class” applicable when the 1<sup>st</sup> level permission is granted, giving access permission among selected MTC devices
  - More work needed
  - More data needed as to the expected granularity of these two-stage access classes to the impact on GERAN could be evaluated

## Rel-10 – MTC (4/4)

- Proposal on group handling overload control, addressing downlink configuration of MTC devices, in **GP-101306**
  - This is outside the scope of the current study item in GERAN (MTC features among which MTC Groups are not within the scope of the study)
- **GP-101428** Data transmission efficiency for Uplink TBFs confirms the remarkable discrepancies that exist between the L2 control plane and user plane when small amounts of data need to be transmitted (typical of smart metering applications)
- **GP-101429** Resource constraints for MTC TBFs
  - RACH might not be a bottleneck for MTC devices
  - Impact on non-MTC traffic (esp. voice) however cannot be dismissed and should be kept into account

# Rel-10 – GERAN Sharing

- 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
- Draft CRs to 24.008 (CT1) and 23.251 (SA2) in **GP-101590**, **GP-101591 (endorsed)** and sent to CT1 , SA2 cc SA1 in **GP-101598**

# Rel-10 – TEI-10 (1/2)

- **Dynamic Timelsot Reduction**

- **GP-101408** highlights a number of open issues, some of which should be addressed within the scope of DTR. Related additional discussion papers and associated CRs listed below
  - GP-101477 provides comments to GP-101408
- **GP-101410**: Ensure the specs are clear on how the MS behaves prior to  $V(R)=V(Q)$  (rx window empty)
- **GP-101412**: Ensure the specs are clear on how the MS behaves prior to poll response (e.g. new data are received / transmitted)
- **GP-101411**: MS should remain in DTR mode when an RLC data block sent only to prevent T3190 expiry is not received correctly – General agreement
  - **GP-101413** CR 44.060 postponed
- **GP-101420**: Proposal to enter DTR with non-empty Tx window: no agreement
  - **GP-101421** CR 44.060 postponed
- **GP-101409, 1414, 1415, 1416, 1417, 1418, 1419** Misc CRs 44.060 postponed

# Rel-10 – TEI-10 (2/2)

- **EMSR**

- **GERAN#46: GERAN2 Decision** that EMSR would be specified, however some outstanding issues needed to be addressed until GERAN#47
- **GP-101286** Some proposals for EMSR
  - No support expressed:
    - ➔ Legacy retransmission rules to be preserved
    - ➔ No prioritization of PDUs to be taken into account when building the ack/nack bitmap
- **GP-101589** CR 44.060 agreed
- **GP-101388** CR 44.018 agreed
- **GP-101389** Draft CR 24.008 endorsed. LS to CT1 in **GP-101475**

- **Misc.**

- **GP-101479** CR 44.060 agreed: clarification on event-based FANR that the status of a PDU need not be reported by the MS in a PAN and a poll response in the same radio block period
- **GP-101476** CR 44.060 agreed to remove ambiguity regarding T3192

# Rel-10 - Other

- **GP-101651** Proposed WID on Stage 3 for Iur-g enhancements endorsed
  - LS to RAN3 in **GP-101652** endorsed
  - **Plenary**

# Outgoing Liaison Statements

- **GP-101451** LS to SA2, RAN2 on support for Priority for terminating sessions for MPS
- **GP-101653** LS to RAN ITU-R AdHoc, SA1, SA2, RAN2 on Mobile Wireless access systems providing telecommunications for a large number of ubiquitous sensors and/or actuators scattered over wide areas in the land mobile service
- **GP-101459** LS to CT1, CT4 on transfer of SPID during Inter-RAT Handover
- **GP-101464** LS to CT1 on Multislot Capability Reduction for EFTA in DCCL configuration
- **GP-101469** LS to CT4, SA3-LI on LCLS Progress **[Plenary]**
- **GP-101475** LS to CT1 on Introduction of EMSR capability
- **GP-101583** LS to CT1 on Introduction of MS capability indication for VAMOS
- **GP-101598** LS to CT1, SA2 cc SA1 on GERAN Sharing
- **GP-101652** LS to RAN3 on Iur-g enhancements

# Future meetings

- GERAN2#47                    31 Aug – 2 Sep 2010                    Kunming, China
- GERAN2#47bis                19 – 22 October 2010                Vienna, Austria
- GERAN2#48                    23 – 25 November 2010                San José del Cabo, Mexico