3GPP TSG GERAN2#41

St Julians, Malta, 17-19.02.2009

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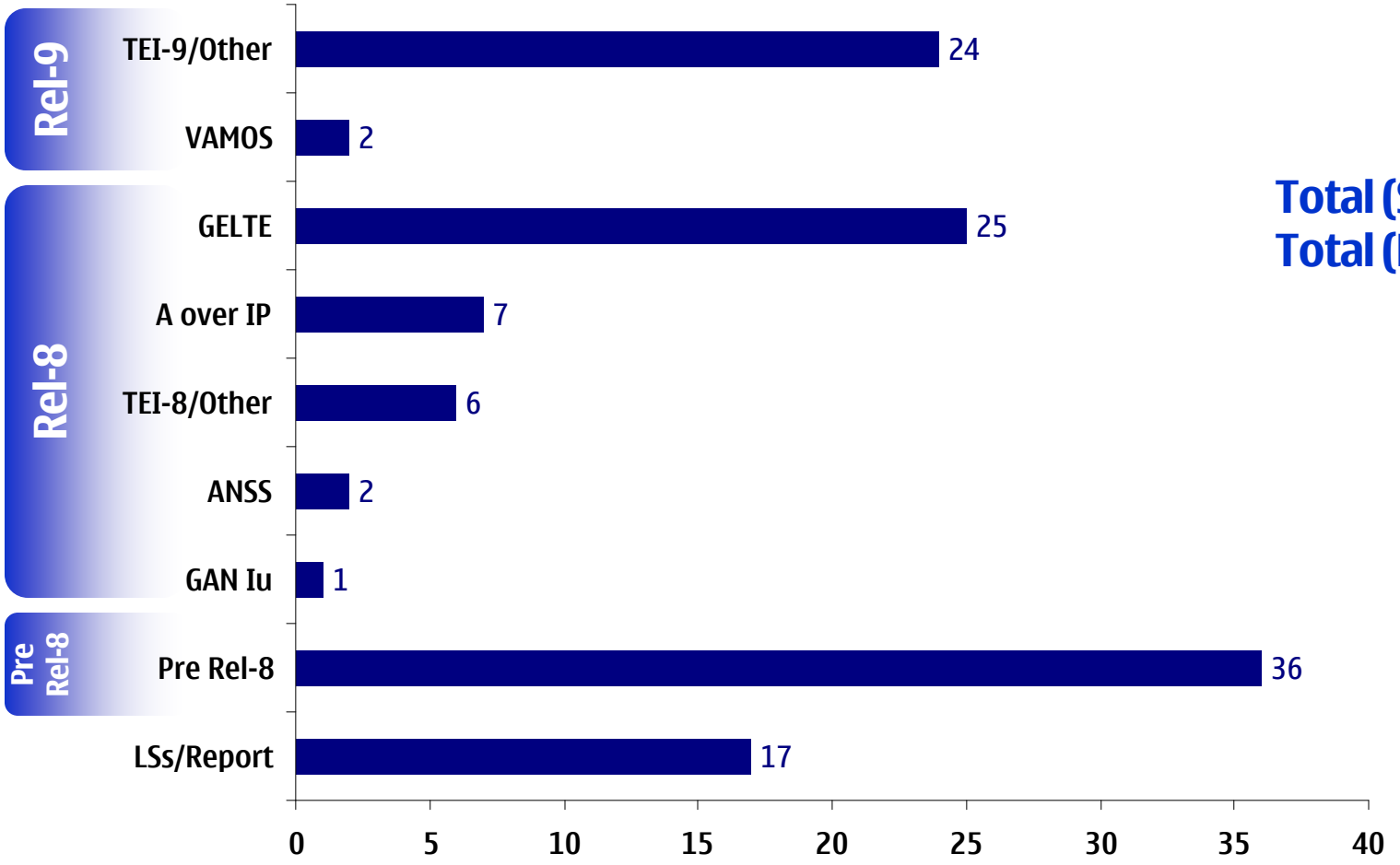
Chairman's summary

Chairman: Guillaume SÉBIRE (Nokia-Devices/Helsinki)
Secretary: Gert THOMASEN (MCC)

Incoming Contributions per Agenda Item



Total (Start): 120 (136)
Total (End): 272

	Monday	Tuesday	Wednesday	Thursday	Friday
8am		Room set-up...	VAMOS	Pre Rel-8 EGPRS2 LQM, CPS, UTRA TDD Interworking	
9am		LSs	EMST		
10am		Coffee	Coffee	Coffee	
11am		Pre Rel-8 (- EGPRS2 LQM, CPS)	EFTA Other (Rel-9)	Revisions	
12pm					
1pm		Lunch	Lunch	Lunch	
2pm		Pre Rel-8, GAN Iu	GELTE	Revisions	
3pm		AoIP, ANSS			
4pm		Coffee	Coffee	Coffee	
5pm		TEI-8 (- UTRA TDD interworking)	GELTE	Revisions	
6pm		TEI-9			
7pm					
8pm					

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GERAN2#40bis

- All agreed CRs in GERAN2#40bis confirmed, with the exception of GP-090131 (revised, and agreed – See slide 10)

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Pre Release 7 corrections

- **GP-090509, GP-090510, GP-090511, GP-090512** CR 44.018 agreed: inclusion in IAX of the command to use compressed mode (Rel-5+)
  - Compressed mode (compressed INTER RAT HANDOVER INFO) defined as of Rel-5, but IAX was not updated
  - Mandated as of Rel-8 for terminals supporting compressed mode, optional otherwise

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Rel-7 Corrections (1/2)

- **Misc.**
  - **GP-090089, GP-090357** CR 44.005 agreed to reflect the usage of Unack mode on SACCH when SAPI=3 is used
  - **GP-090358, GP-090359** CR 44.031 MAP imports to refer to version 10 where velocity is defined (use of velocity was introduced in Rel-7)
    - Note GP-090359 is not a mirror of G2-090358
  - **GP-090360, GP-090361, GP-090362, GP-090363** CRs 44.060 agreed: correction to wrong implementation of a previous CR
- **RLC Non-persistent mode**
  - **GP-090279** highlights a possible problem with RLC NP and Unack modes. The loss of an RLC PDU containing the end of an LLC PDU (Length Indicator included) may trigger the loss of the next LLC PDU as there is no way for the network to determine that the end of the former LLC PDU was lost. A solution is proposed to explicitly indicate if an RLC PDU starts with a new LLC PDU
  - **GP-090550, GP-090551** CR 44.060 agreed
- **LATRED**
  - **GP-090364, GP-090365** CR 44.060 postponed: there could be potential issues with PAN interpretation
  - **GP-090494, GP-090495** CR 44.060 agreed: correction to FANR in PTR and MTTR

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Rel-7 Corrections (2/2)

- **EGPRS2**
  - **GP-090192, GP-090193** Draft CR 43.064 noted: Consistent and unambiguous definitions of modulation and coding schemes and families (incl. families with padding)
    - Content endorsed, however some editorial changes were needed (GERAN1)
  - **EGPRS to EGPRS2-B Level Change**
    - **GP-090261, GP-090262** CR 44.060 agreed to correct the MCS used after level change
  - **GERAN#40: Link Quality Reporting (RED HOT)**
    - GERAN1 endorsement of the reporting mechanism and criteria used for modulation priorities
    - **GP-090552, GP-090553** CR 44.060 agreed
      - GERAN2 would have preferred the reporting criteria be defined in 3GPP TS 45.008
  - **GP-090487, GP-090488** CR 44.060 agreed: correction to CPS field in downlink header type 4 to allow signalling of puncturing scheme P3
- **Dual Carrier**
  - **GP-090267, GP-090268** CR 44.060 rejected: proposal to change the functionality of the PACKET PDCH RELEASE message to allow releasing PDCHs on a different carrier than the one on which the message is received

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Rel-8 – GERAN/E-UTRAN Interworking (1/5)

- **SPID and Dedicated (individual) priorities**
  - **GP-090556** CR 44.018 Signalling of individual priorities
  - **GP-090559** CR 44.060 Signalling of individual priorities
  - **GP-090557** CR 48.008 Provision of SPID from the MSC to the BSS
  - **GP-090558** CR 48.018 Provision of SPID from the SGSN to the BSS

  - **GP-090440** on consideration for dedicated priorities
    - No impact to GERAN2 specifications, however a decision in GERAN1 is encouraged

  - **Not handled** (lack of time, very late contribution)
    - **GP-090458** noted

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Rel-8 – GERAN/E-UTRAN Interworking (2/5)

- **MS E-UTRAN Capabilities**
  - **GP-090171** proposal for default and optional MS capabilities for mobility with E-UTRAN endorsed
    - It was clarified that there is no intention to divert from existing mechanism for redirection (i.e. behaviour wrt ““Cell Selection Indicator after release of all TCHs and SDCCH” IE)
  - **GP-090518** Draft CR 24.008 endorsed
    - LS to CT1 in **GP-090564**
  - Impacts to 44.060, 44.018 are expected

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Rel-8 – GERAN/E-UTRAN Interworking (3/5)

- **Handling of E-UTRAN UE RAC**
  - DL DCCH is used to convey the *RRCConnectionReconfiguration* message as indicated by RAN2
    - **GP-090366** CR 48.018 agreed
    - **GP-090282** CR 44.060 agreed

  - **GP-090297** Proposal to retrieve missing capabilities in the BSS
    - UTRAN UE RAC (resp. E-UTRAN UE RAC) may not be received by the BSS during a handover from E-UTRAN (resp. UTRAN) thus preventing a further handover to UTRAN (resp. E-UTRAN)
    - Proposal to allow the BSS to request the missing capabilities by means of PS HO COMPLETE from the SGSN which in turn will request the MS to send the missing capabilities at RAU. The SGSN will in turn forward the capabilities to the BSS by means of the PS HO COMPLETE ACK
    - Will be investigated further

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Rel-8 – GERAN/E-UTRAN Interworking (4/5)

- **Measurement Reporting**
  - No new input pertaining to G2-090003 and G2-090004 i.e reporting prioritization and pseudo-white list
- **PCID Grouping per TA**
  - Principle endorsed in GERAN#41 opening plenary – see GP-090290
  - Aim at preventing reselection attempts to cells belonging to a given TA group if this TA was previously identified as forbidden
  - **GP-090503** CR 44.018 agreed
  - **GP-090504** CR 44.060 agreed
- **SRVCC**
  - **GP-090249** CR 48.008 postponed: proposal to include eNB id in HO Request (MSC>BSS) and HO Request Ack (BSS>MSC) within the *mandatory* Cell Identifier IE, thereby violating principles that SRVCC should avoid any impact to GSM network (GERAN, CN)
    - Discussions ongoing in SA2 to resolve the above issue while aiming at preventing impact on GERAN/2G CN
- **CSG Cells Handling**
  - Principle of PSC (UTRAN) / PCI (E-UTRAN) Split endorsed in opening plenary
  - **GP-090560** CR 44.018 agreed
  - **GP-090563** CR 44.060 agreed
  - MS Storage requirements for PSC / PCI Split(s) to be further investigated

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Rel-8 – GERAN/E-UTRAN Interworking (5/5)

- **Misc. corrections**
  - **GP-090496** CR 44.018 agreed: misc. corrections
  - **GP-090497** CR 44.060 agreed: misc. corrections
  - **GP-090570** CR 44.018 agreed: corrections to the signalling of not allowed cells in SI2quater
  - **GP-090555** CR 44.060 agreed: corrections to the signalling of not allowed cells in PSI3quater
  - **GP-090252** CR 44.018 agreed: CSN1 corrections to SI2quater
  - **GP-090253** CR 44.060 agreed: CSN1 corrections to Packet Cell Change Order, Packet Measurement Order
  - **GP-090286** CR 44.018 agreed: correction to the reporting of measurements results for E-UTRAN cells
  - **GP-090463**CR 44.018 agreed to unambiguously define PCID group coding in Measurement Information message

  - **Not handled** (lack of time, very late contribution)
    - **GP-090356** CR 48.018 postponed

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Rel-8 – TEI-8 (1/2)

- **Misc.**
  - **GP-090354** CR 43.055 endorsed: Correction to RAU procedure (Rel-8)
    - To define for NMOI in case of dedicated mode that when a CS connection ends in a Location Area or Routing Area different from the original, a combined RA/LA update *with IMSI attach* is performed
    - Note that CT1 did a corresponding change in 24.008 in Rel-6 even if the item is valid starting from R99
  - **GP-090367** CR 44.060 agreed: Mirroring a change in Rel-8 from Rel-7
  - **GP-090269** CR 48.008 agreed: Clarification for termination of Handover Resource Allocation to define the behaviour of the target BSC when a CLEAR COMMAND or a RESET message is received during an ongoing Handover Resource Allocation procedure
    - No problems were found after GERAN2#40bis
- **LCS**
  - **GP-090353** CR 44.031 agreed: Misc. corrections to Ephemeris Extension
  - **GP-090154** CR 44.031 rejected: Fine time indication in MS capabilities to allow the use of the "Time assistance measurement" feature
    - Another proposal is expected for GERAN1#42

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Rel-8 – TEI-8 (2/2)

- **UTRAN TDD Interworking - Removal of RSCPmin**
  - Concerns raised in GERAN2#40bis (**G2-090008**) on the introduction in GERAN#40 of RSCPmin for interworking with UTRAN TDD (TD-SCDMA specifically) – Recommendation to first reach a decision in GERAN1 before GERAN2 proceeds with the proposal
  - Proposal was submitted to and endorsed by GERAN1 in **GP-090095**
  - **GP-090546** CR 44.018 agreed to remove RSCPmin introduced at GERAN#40
  - **GP-090547** CR 44.060 agreed to remove RSCPmin introduced at GERAN#40

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Rel-8 – GAN Iu

- **GP-090489** CR 44.318 agreed: misc corrections for GAN Iu to UTRAN handover
  - Use of SRNS Relocation will be investigated further
  - Forwarding of EUTRAN UE RAC at handover to UTRAN will be investigated further

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Rel-8 – A interface over IP

- **GP-090283** CR 48.008 agreed to ensure the Call Identifier is not changed when an IP interface is used and the call is served by the same MSC and the same SCCP connection
- **GP-090284** CR 48.008 agreed to define that the reception of the ASSIGNMENT REQUEST message during Internal Handover preparation phase results in termination of the Internal Handover preparation phase
- **GP-090293** CR 48.008 agreed to define conditions of validity of the Codec Type in a Speech Codec Element, and to ignore the Speech Codec Element if the corresponding Codec Type is invalid
- **GP-090294** CR 48.008 agreed to indicate the use of HANDOVER FAILURE (instead of the wrongly stated ASSIGNMENT FAILURE) in case of handover resource allocation failure
- **GP-090295** CR 48.008 agreed to allow the BSS to treat calls as if DTX were activated in downlink when compressed" speech over RTP/UDP/IP or TFO is used
- **GP-090251** CR 48.008 rejected: removal of "Call identifier already allocated" from ASSIGNMENT FAILURE

Rel-8 – ANSS

- **GP-090075** CR 44.031 agreed to properly define the real-time integrity indication for modernized GPS satellites with L1C/A signal
- **GP-090370** CR 44.031 agreed: Correction to GANSS Positioning Method Element

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Rel-9 – VAMOS

- **GP-090379** CR 44.018 agreed: signalling for VAMOS
  - To allow assignment of TSC Set 2 for TCH+ACCH
  - **Note** that additional signalling will be needed for VAMOS-aware terminals in order to determine the TSC in use by the other user on the same channel
- **GP-090152** Soft pairing for VAMOS
  - GERAN1 review needed – gains to be evaluated
  - To be further investigated
    - RRM restrictions implied by having the two timeslots belonging to the same transceiver
    - Gains vs. existing fallback mechanisms
    - Potential security breach open by sending the same speech frame on two different resources using the same ciphering key with two different set of parameters

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Rel-9 – TEI-9 (1/7)

- **GP-090369** CR 48.006 agreed to prevent the MSC including the (BSSMAP) HANDOVER REQUEST message in the SCCP CR at SCCP connection establishment in case it would result in violating the maximum message length
- **DTX for conversational services**
  - **GERAN#40**
    - Proposal in **GP-081498** to allow DTX in uplink through usage of PTCCH/U and Search frames during silent periods to provide VAD indication and PANs
    - Performance evaluation lacking both for **multiplexing efficiency** and **delay**
  - **GERAN#41**
    - More data provided, however a number of questions raised on e.g.
      - PB TSC false detection performance
      - BTS impacts
      - Delay
      - Multiplexing efficiency etc.
    - Further investigations needed

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Rel-9 – TEI-9 (2/7)

- **EFTA** i.e. to allow more Rx/Tx timeslots than provided by FTA (FTA allowed the "Sum" parameter of a Multislot Class to apply on an allocation basis rather than assignment basis)
  - **GP-090343** addresses the concerns raised at GERAN2#40bis
    - Some further concerns raised e.g.
      - Statistical error in the simulations
      - DTM Operation to be clarified in particular potential impact due to fixed CS timeslot
  - **GP-090455** Draft CR 24.008 noted
  - **G2-090456** CR 44.060 postponed
  - **G2-090346** Draft CR 45.002 noted
  - Offline discussions encouraged until GERAN#42

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Rel-9 – TEI-9 (3/7)

- **ETWS – GERAN2#40bis**
  - **Primary notification**
    - **Idle mode:** Primary notification sent on PCH in Paging Request Type 1 message using specific indication in P1 Rest Octets only
      - Primary notification segmented across several Paging Request Type 1 messages if required
      - MS enters non-DRX after reception of such message including primary notification for reception of missing segments – guard timer needed
    - **Dedicated mode:** Include primary notification in APPLICATION INFORMATION on main DCCH
    - **Packet transfer mode:** new distribution message on PACCH for delivery of primary notification, using (extended) RLC/MAC control message segmentation when required
    - **Duplicate detection:** CBS message ID and serial number to be used for this purpose
      - Whether these will be directly introduced in 44.018/44.060 specs or references will be made to CBS specs is to be further investigated
    - Transitions of RR mode to be addressed in the specification e.g. RR connection establishment takes precedence over Primary Notification reception in idle mode
  - **Secondary notification**
    - More information needed on the size of the secondary notification message to see whether any improvement is necessary over existing mechanism (i.e. CBS, SMS PTP)
    - An assumption is that primary notification will be passed to upper layers. Upper layers will then trigger further action as appropriate – this is believed not to have any impact on GERAN specifications, unless improvements are seen necessary

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Rel-9 – TEI-9 (4/7)

- **ETWS (cont'd)**
  - **GP-090375** CR 44.018 postponed: idle mode
  - **G2-090376** CR 44.018 postponed: dedicated mode
    - Feedback from CT1 pending (see below).
  - **G2-090377** CR 44.060 postponed: packet transfer mode
    - Concurrent transactions are limited to 2 in packet transfer mode, therefore we need to check that reception of Packet Notification does not affect any other RLC/MAC procedures
      - Packet Notification reception should be best effor
  - Offline discussions encouraged until GERAN#42

  - **GERAN2 recommendation** to define the primary notification message in 3GPP TS 23.041 (CT1) that can then be included by means of a container in RR and RLC/MAC control messages (Paging Request Type 1, Application Information, Packet Notification).
    - LS to be seen in **GP-090568 (Plenary)**

  - **Release issue**
    - 3GPP TS 23.041 assumes mechanisms to convey primary notification are available in Rel-8 in GERAN specifications
    - There is as of yet no primary notification mechanism specified in Rel-8 GERAN specifications i.e. Rel-8 GERAN specifications support only the secondary notification
    - ➲ **Should be brought up to SA plenary** – No WID was created in TSG GERAN for ETWS thus this discrepancy

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Rel-9 – TEI-9 (5/7)

- **Multiplexing enhancements for single TBF operation - EMST**
  - **GERAN2#41:** GERAN2 agreement that an MS supporting EMST shall support (in each direction)
    - One RLC entity per RLC mode
    - If the MS is NPM capable it shall support 3 RLC entities: 1 for each of RLC AM, RLC UM, RLC NPM
    - If the MS is non-NPM capable it shall support 2 RLC entities: 1 for each of RLC AM, RLC UM
  - **GP-090506** CR 44.060 postponed
  - **GP-090505** CR 44.060 postponed
  - **GP-090517** CR 44.018 postponed (was under conditional agreement of 506)
  - Open issue with uplink scheduling rules: offline discussions encouraged until GERAN#42
  - **GP-090549** Draft CR 24.008 endorsed
    - No LS sent to CT1, pending agreement of the CRs

  - **GP-090260** to mix BTTI and RTTI for a given TBF using EMST
    - More elaboration needed of the benefits

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Rel-9 – TEI-9 (6/7)

- **LLC Frame Size negotiation for GAN – GP-090257**
  - Proposal to mandate XID negotiation procedure in GAN A/Gb mode in order to set the LLC PDU size to ~match the GAN IP layer maximum transmission unit (MTU) size (+/- overhead due to LLC headers, GAN headers…) which would mitigate the impact of overhead on throughput
  - **GERAN2 conclusions**
    - Mechanisms are already in place to achieve the proposed behaviour *without* mandating it i.e. the MS can trigger XID negotiation according to the proposal, as of current specs
    - Other parameters in addition to LLC PDU size may be relevant as well to improve the performance
    - ➲ Proposal to mandate XID negotiation in GAN A/Gb mode as described in GP-090257 was rejected
- **Dynamic Timeslot Reduction – GP-090266**
  - Proposal to reduce timeslot monitoring during inactivity periods (delayed TBF release, extended UL TBF mode) through signalling in RLC PDUs of reduction of resources / resumption to original assignment
    - More investigations needed to clarify the gains, in particular vs. using existing RLC/MAC control signalling (i.e. PACKET TIMESLOT RECONFIGURE to reduce the number of timeslots during an inactivity period and PACKET TIMESLOT RECONFIGURE to resume normal operation – although such signaling is not required in delayed TBF release and ext.UL TBF mode)

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Rel-9 – TEI-9 (7/7)

- **GP-090107** on the validity period of differential corrections for GNSS
  - More elaboration on the benefits should be provided before a decision is reached
  - **GP-090108** CR 44.031 postponed

- **Not handled** (lack of time, very late contributions)
  - **GP-090492** CR 44.060 postponed
  - **GP-090493** Draft CR 24.008 noted

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Rel-9 – Other

- **Local Switch**
  - Proposal aiming at keeping the user plane (voice) traffic between the two parties of a local call (i.e. within the same BSS) in the BSS in order to save Abis and/or A interface resources
  - A common understanding is that local switch decision lies in the BSS and may be assisted by the MSC
  - ➲ **GERAN2 decision** to proceed with the definition of a standardized mechanism for local switch
    - It is understood this decision will not prevent proprietary solutions for local switching
    - WID endorsed by GERAN2 in **GP-090457** (plenary)
  - LS in **GP-090569** to be sent to CT4 cc CT1, CT3, SA3, ETSI TC LI
    - Study the impact on lawful interception
    - Study the impact on user plane
- **MBMS over GAN – GP-090153**
  - More clarifications needed on the proposal
    - i.e. whether the proposal aims at providing MBMS App. Services over GAN, which should be possible with today's GAN
    - or whether MBMS-like enhancements e.g. ptm transmission are intended in GAN, while GAN – Up protocol – is simply a layer 3 protocol relying on a generic IP access network (using WLAN, BT) with no control on radio resource usage in that access network

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AOB

- **GERAN2 MCC**
  - Gert Thomasen stepping down, replaced by Juha Korhonen as of GERAN2#42
  - Many thanks to Gert for his many years supporting the work of GERAN2 and welcome to Juha

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Outgoing LSs

- **GP-090564** LS to CT1 on definition of MS E-UTRA Capabilities
- **GP-090565** LS to SA2 cc RAN2, RAN3, CT1 on RAU/TAU following inter-RAT handover
- **GP-090566** LS to SA2 cc RAN2, CT1, CT4 on Sequence Number Handling
- **GP-090351** LS to SA3, CT4, CT1, RAN2, RAN3 on preventing inter-RAT HO for UE with SIM access
- **GP-090567** LS to RAN2 cc SA2 on handling of dynamic UE UTRAN capability during Handover
- **GP-090569** LS to CT4 cc CT1, CT3, SA3, ETSI TC LI on Local Switch

- **GP-090568** LS to SA, CT1, RAN2 cc SA2 on ETWS information in TS 23.041 (Plenary)

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Future meetings

• **GERAN #42**	**11 – 15 May 2009**	**Shenzhen, China**
• GERAN #43	31 August – 4 September 2009	Vancouver, Canada
• GERAN #44	16 – 20 November 2009	Sophia Antipolis, France

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