TSG GERAN Report
to
TSG-SA#14

TSG-GERAN Chairman
Niels Peter Skov Andersen
Motorola

Tdoc SP-010734

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TSG GERAN work area (1/2)

TSG GSM/EDGE Radio Access Network (TSG-GERAN)

- **GERAN Radio aspects, and interfaces**
- **RF aspects of GERAN**
- **Specifications for GERAN radio performance and RF system aspects**
- **GERAN Radio Layer 1 specification**
- **GERAN Radio Layer 2 specification**
- **GERAN Radio Layer 3 RR specification**
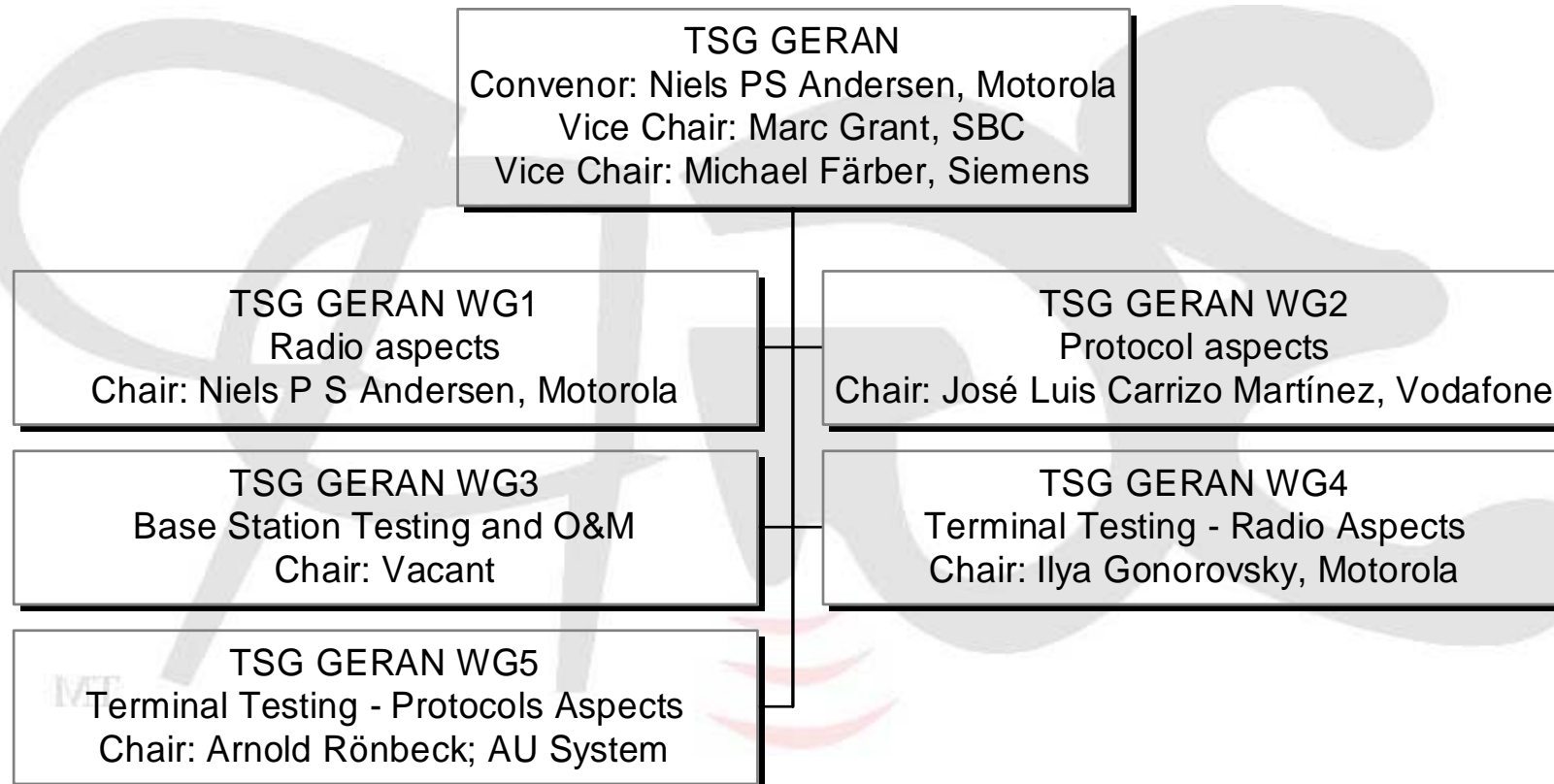
TSG GERAN work area (2/2)

- **A interface specification, Gb interface specification**

- **Internal GERAN interface specifications such as Abis, and Ater (CCU-TRAU)**

- **Conformance test specifications for testing of all aspects of GERAN base stations**

- **Conformance test specifications for testing of all aspects of GERAN terminals**

- **GERAN specific O&M specifications for the nodes in the GERAN**

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Organisation of TSG GERAN (1/4)

TSG GERAN
TSG SA#14

TSG GERAN
Convenor: Niels PS Andersen, Motorola
Vice Chair: Marc Grant, SBC
Vice Chair: Michael Färber, Siemens

TSG GERAN WG1
Radio aspects
Chair: Niels P S Andersen, Motorola

TSG GERAN WG2
Protocol aspects
Chair: José Luis Carrizo Martínez, Vodafone

TSG GERAN WG3
Base Station Testing and O&M
Chair: Vacant

TSG GERAN WG4
Terminal Testing - Radio Aspects
Chair: Ilya Gonorovsky, Motorola

TSG GERAN WG5
Terminal Testing - Protocols Aspects
Chair: Arnold Rönbeck; AU System

Organisation of TSG GERAN (2/4)

TSG GERAN WG1 – Radio Aspects
- **Chairman: Niels Peter Skov Andersen, Motorola**
- **RF aspects of GERAN**
- **GERAN radio performance and RF system aspects**
- **Ater (CCU-TRAU)**

TSG GERAN WG2 – Protocol Aspects
- **Chairman: José Luis Carrizo Martínez, Vodafone**
- **GERAN Radio Layer 2 specification**
- **GERAN Radio Layer 3 RR specification**
- **A interface specification, Gb interface specification**
- **Internal GERAN interface specifications such as Abis**

Organisation of TSG GERAN (3/4)

TSG GERAN WG3 – Base Station Testing and O&M

Chairman: Vacant

- **Conformance test specifications for testing of all aspects of GERAN base stations**
- **GERAN specific O&M specifications for the nodes in the GERAN**

Organisation of TSG GERAN (4/4)

TSG GERAN WG4 – Terminal Testing – Radio Aspects

Chairman: Ilya Gonorovsky

- **Conformance test specifications for testing of Lower layers including RLC/MAC**

TSG GERAN WG5 – Terminal Testing – Protocol Aspects

Chairman: Arnold Rönbeck, AU System

- **Conformance test specifications for testing Protocol aspects above the RLC/MAC**

GPRS/EGPRS

- **Lower layers: Only simple corrections and clarifications**

- **"Early Classmark Sending option" indication missing on PBCCH**

    - **R97/R98: Multiple options for the terminals – Issue documented in GSM 09.95**

    - **R99$\rightarrow$: Use of early classmark sending indication (ECSC flag) introduced in PSI2 on PBCCH
    The 3G ECSR flag was also introduced**

GPRS/EDGE

- **Agreement on Release and Feature markers obtained with TSG CN (WG1)**

- **Version of protocol not increased for Rel 4**

- **One feature packet introduced for Release 4**

  – **Extended uplink TBF**

  – **NACC**

  – **Packet SI/PSI Status**

Progress on support of I$_u$

RRC agreement on most concepts

- **PBCCH mandatory for I$_u$ mode**

- **PBCCH capacity sufficient for Release 5(6)**

- **Paging concepts agreed**

- **I$_{u-cs}$ – issue of service awareness still open**

RLC/MAC

- **Update exisitng specification**

- **Generally good progress**

LCS

- **Numerous correction to Release 98/99/4 agreed**

- **LCS for GPRS (G_b mode)**
  - **Complete except for a few smaller issues**

- **LCS for I_u operation**
  - **Stage 2 updated**
  - **Work ongoing on stage 3**

3G–2G Interworking

- **Dual-mode terminal monitoring of neighbour cells**
  - **Clarification of number of cells and frequencies to monitor**
  - **Checking of understanding of UTRAN cell monitoring before next meeting to verify specification**
- **Backwards compatibility problem in SI2ter messages fixed**
- **Transparent container changes agred and coordinated with TSG RAN WG2**

3G–2G Interworking

- **One new potential problem**
  - **Lack of requirements for after handover to resend Non Access Stratum messages awaiting uplink transmission**
    - **Uplink NAS message loss during inter-system Handover**
    - **Duplication avoidance functionality compromised**
    - **Signalling between terminal and MSC interrupted**
  - **Downlink signalling messages could also be lost upon a UTRAN to GSM handover**

Support for codecs

- **Performance requirement for NB-AMR Release 98→ questioned**
  - Contribution received claiming errors in the simulations used to produce the requirement
  - Request to correct the results
  - Impact would in several case corresponds to 2 dB relaxation. In some cases even more
  - Next TSG GERAN WG1 to assess the full impact of the problem
- **Further correction of RATSCCH**
- **WB-AMR stable (RATSCCH still missing)**
- **Half Rate 8-PSK specified for NB-AMR**

Testing

- **Work plan for LCS testing updated**
- **Concern that LCS requirements in are to tight for testing**
- **Suggestion for A-GPRS accuracy testing – however no core specification requirements exists**
- **Numerous smaller corrections to GPRS and EDGE**
- **There is an urgent need to start work on testing for the GSM/EDGE RAN Evolution**

Release 5 A/Gb mode

- **Extension of NACC to work for Inter BSC/RNC**
  - **Changes to 3GPP TS 48.018 reviewed**
  - **Error handling needs further review**
- **I_u flexibility**
  - **Detailed discussions delayed due to work load**

GERAN Release 5, 6 etc (1/3)

- **New high multislot classes introduced**
- **Discussions with TSG SA WG1 on support of codecs**
  - **TSG GERAN suggested for I_u mode operation of GERAN that EFR should be mandatory to allow reuse for legacy transceiver – But S1 only included AMR in their specifications**
- **For CS data services GERAN legacy transceivers migh only support n*9.6 kbit/s data rates – Lowest data rate supported over I_u is 14.4 kbit/s**
  - **Might also cause problem for UTRAN-GSM handover, e.g., for transparent CS Data service**

GERAN Release 5, 6 etc (2/3)

TSG GERAN
TSG SA#14

- **Technical Report on support of optimised voice being drafted**
- **Integrated VoIP application not requiring header regeneration assumed for Optimised Voice**
- **Requirements for Optimised Voice not fully clear**
- **Call set-up and in call signalling is within the bandwidth of the actual call bandwidth has been assumed**

GERAN Release 5, 6 etc (3/3)

- **GERAN still missing full information about SIP procedures – critical for time schedule for signalling bearers (FACCH and SACCH equivalents)**

- **GERAN regards SIP compression as necessary to obtain reasonable call set-up times**

- **GERAN has reviewed MBMS stage 1**

- **Work plan TSG GERAN updated (see attachment)**

Lists of CR status at TSG-GERAN #06 is attached

Specification and version numbering

- **Old specification numbers and version numbers are kept for Phase 1, Phase 2, Release 96, Release 97, Release 98, and Release 99**

- **For Releases after Release 99 specification numbering to follow 3GPP format xx.yyy and version number aligned with other TSGs, e.g next release will be version 4.x.y.**

- **New specification numbers to be derived from the old specification number**

    ab.cd=> (40+ab).0cd

    e.g

    05.08 => 45.008

Future TSG GERAN Plenary meetings

TSG GERAN #08   4-8 February 2002, Rome

TSG GERAN #09   15 - 19 April 2002, USA

TSG GERAN #10   24 – 28 June 2002, ??

TSG GERAN #11   26 - 30 August 2002, ??

TSG GERAN #12   18 – 22 November 2002, ??

3G TR 50.099 V0.13 (2001-11)

Project schedule

GSM/EDGE RAN (GERAN)
Project scheduling and open issues for GERAN

Contents

Foreword

New due to the change to 3GPP

Scope

The purpose of this document is to describe the schedule of the GSM/EDGE radio access network (GERAN) standardisation process and to view it's current state and open issues that are still under discussion. It also lists the new standards and necessary amendments to the 3GPP specifications for the technical realisation of the functions. GERAN is a term used to describe a GSM and EDGE based 200 kHz radio access network. The GERAN is based on GSM/EDGE release 99, and covers all new features for GERAN R4 and subsequent releases, with full backward compatibility to previous releases. This document focuses in the standardization activities around the issues of:

- IP Multimedia (real-time end-to-end IP)

- Alignment with UMTS/UTRAN architecture, bearer services and QoS handling

- Spectrum efficiency and performance improvements

- Specification flexibility for future enhancements

which are seen as the essential parts of the GERAN and have been identified by TSG GERAN. Other activities are handled in separate project plans and are not covered here.

Abbreviations

EDGE   Enhanced data rates for GSM Evolution

GERAN   GSM/EDGE radio access network

COMPACT Deployment of services in spectrum below 1 MHz

Support of specification work

This document is a 'living document' and permanently updated by the editor. Proposals for change shall be forwarded to editor (direct contact details are on the last page), where the latest version can be obtained at any time. The specification rapporteurs should make sure that this document always reflects the latest status of work.

Latest versions of the material are available to interested parties within 3GPP. Specification and Change Request rapporteurs should ensure the latest versions of their material is made available for review and comment by the following mechanisms:

3GPP FTP Server (ftp://ftp.3gpp.org/TSG_GERAN/TSG_GERAN/AD-HOCs/Releases%204-5/):

- GERAN adhoc meeting reports, most input and all output documents from the former ad-hoc.

General

The GERAN work item(s) will provide a platform to provide the four UMTS bearer classes: conversational, streaming, interactive and background. This includes IP end to end voice and multimedia services. According to the current plans GERAN will be standardized in two releases:

Release R5:

- IP Multimedia (real-time end-to-end IP)

    - Support for simultaneous, multiple radio access bearers with different QoS profiles

    - New protocol stack to support the four radio access bearer classes

        - conversational (including optimized voice service using AMR)

- streaming

- interactive

- background

- Development / adaptation of a PDCP-based protocol

- Development / adaptation of a RLC/MAC protocol, including an evaluation of:

  - Separation of the RLC and MAC

  - Fast resource allocation procedures

- Optimized physical layer design for radio bearers (with a priority on voice for existing and future AMR modes)

- Development of a control plane protocol stack

  - Hand over for the PS domain

    - Design of new control channels for hand over signalling

    - Design of new hand over procedures

    - Design of new messages and measurements

    - Apart from the above radio interface related changes, hand over has to be supported in the remainder of the network and is RAN controlled.

  - Development of other RR signaling procedures and support for MM

    - e.g. on attach and access procedures, as well as broadcast messages.

- Alignment with UMTS/UTRAN architecture, bearer services and QoS handling

  - The same type of services as offered by UTRAN should be offered with GERAN
    - Alignment of bearer classes with UTRAN
    - Alignment of QoS mechanism with UTRAN.
  - Common RAN – CN interface and functional split for UTRAN and GERAN
  - Support of inter system hand over

- Spectrum efficiency and performance improvements

- Specification flexibility for future enhancements

Release R6:

It is proposed to perform a feasibility study during 2000/2001 for performance enhancements (e.g. statistical multiplexing, interference cancellation, space time coding).

Requirements

The radio requirements for GERAN have been approved and are attachted to appendix 2.

Functional description

The concept proposal for the GERAN is available as a first draft in 43.051, the GERAN stage 2 description. For normative information review the specifications named in the sections below.

Technical realisation and amendments

Documentation Structure Overview

With the introduction of GERAN the bearer concept of UMTS is being introduced. Therefore GERAN will be introduced mainly in the existing specifications and stage descriptions. When it comes to the protocol layers and connection to the core network a few new specifications might be necessary to be introduced.

Phased Introduction of Capability

In order to allow a fast introduction of GERAN in the specifications, GERAN has been split in two phases. Release R5 will establish the new bearer classes and provide basic voice over IP capability, release R6 will provide larger performance enhancements.

Work item status and approval time frame

In the TSG GERAN #1 meeting, refinded on the TSG GERAN #3 and TSG GERAN #4 meeting the GERAN work has been split in several work items (TDOC numbers marked light blue from TSG GERAN #1, #2 and #3)

Feature	Building block	Work task	Date of completion	Status
Evolution of transport (UTRAN Feature)	Evolution of transport in UTRAN and GERAN	Addition of transport mechanisms other than ATM for Iu • Identification of alternative transports • Specification of those alternative transports	Mar 2002?	Ongoing
GERAN/UTRAN interface evolution 1 GP-000481	Evolution of Iu ps	• Identification of GERAN requirements on Iu ps • Update of specifications	Nov 2001 Mar 2002	Ongoing
GERAN/UTRAN interface evolution 2 GP-010417	Evolution of Iu cs GP-000430	• Identification of GERAN requirements on Iu cs • Update of specifications	Nov 2001 Mar 2002	Ongoing
Low chip rate TDD option (UTRAN)	Low chiprate TDD interworking with GERAN GP-000432	• Handover and Cell Selection / Reselection to UTRA 1.28Mcps TDD		Ready for R4. Closed
GERAN improvements 1 GP-000433	Gb over IP GP-000434	IP-fication of Gb • Concept • Changes to 08.16, 08.18		Ready for R4. Closed
GERAN improvements 2 GP-012812	Gb enhancements GP-000436	Intra BSC NACC • Concept • Changes in 03.64 • Changes in 04.60 • Changes in 44.008		Ready for R4. Closed
	MS conformance test for Intra BSC NACC GP-012811	• Changes in 51.010	Apr 2002	Not started
GERAN improvements 3 GP-010418	Evolution of the transport for A GP-010910	• Definition of a new A/Ater Interface Transport Layer option based on the Iu Interface Transport Layer • Adaptation of the Layer 3 BSSMAP procedures as required.	Apr 2002	Ongoing
GERAN Improvements 4 GP-010363	Gb enhancements 2 GP-010363	Stage 2 Stage 3 (changes in 44.060) • Definition of enhanced countdown procedure • Definition of enhanced TBF release procedure		Ready for R4. Closed
GERAN Inter BSC NACC improvements over the Gb Interface GP-012313	Modificiation of Gb protocols for GERAN Inter BSC NACC over the Gb interface GP-012314	Stage 3 (changes to) • 48.018	Apr 2002	Ongoing

	Modification of core network protocols for GERAN Inter BSC NACC for Gb interface GP-011877	Stage 2 • Concept • 23.060 change – Definition of Inter BSC NACC Stage 3 (changes to) • 29.060	Nov 2001 Apr 2002	
GERAN support for IP multimedia GP-010420	GERAN Header adaptation GP-010421	Header adaptation: • Definition of compression and removal modes for PDCP protocol • Conceptual description in stage 2 • Necessary changes on stage 3 regarding header removal	Sept 2000 Oct 2001 Mar 2002	Ongoing
	GERAN Radio access bearer design for IP multimedia GP-010422	MuM control signalling for conversational multimedia services. • Identification of requirements • Necessary modifications due to SIP	Feb 2002 Jun 2002	Ongoing
	GERAN MS Conformance test for support of IP multimedia GP-010424	• MS test	Jun 2002	Not started
	GERAN BTS Conformance test for support of IP multimedia GP-010425	• BTS test	Jun 2002	Not started
Alignment of 3G functional split and Iu GP-012757	GERAN user / control plane GP-012756	Alignment with UMTS bearer concept • Stage 2 • Adoption of the UTRAN PDCP • Development of RLC / MAC • Development of GERAN RRC • Ciphering and integrity protection concept paper • Multiple TBF or equivalent Concept paper • Paging concept • Dedicated physical subchannels. Includes traffic and control channels • Iu support and broadcast concept • Impact of using RLC instead of LAPDm concept • Contention resolution, mobile-station identity, and access concept • PDCP concept • Downlink delayed TBF release • Add transparent RLC Concept • Handover concept	Jun 2001 Dec 2001 Apr 2002 Jun 2002 Feb 2002 Feb 2002 Oct 2001 Nov 2001 Feb 2002 Feb 2002 Nov 2001 Feb 2002 Oct 2001 Feb 2002 Feb 2002	Ongoing

		• Physical layer alignment with UMTS bearer concept • Control channels in 45.003 • Receiver performance in 45.005 for PDTCH/TCH and control channels	Jun 2001	
	Iu rg interface GP-010428	Inter BSS interface Identification of requirements Stage 2 Adoption of relevant parts from Iu r Complementation with GERAN specifics New stage 3	Apr 2002	Ongoing
		Inter BSS-RNS interface Identification of requirements Stage 2 Adoption of relevant parts from Iu r Complementation with GERAN specifics New stage 3	Apr 2002	Ongoing
	Voice over GERAN PS and CS concept GP-010432	Voice over GERAN PS and CS concept • Architecture for A, Iu cs and Iu ps • Handover • RTP payload	Nov 2001	Ongoing
	GERAN MS Conformance test for GERAN interface evolution GP-010434	• MS test	Dec 2002	Not started
	GERAN BTS Conformance test for GERAN interface evolution GP-010435	• BTS test	Dec 2002	Not started
Enhanced Power Control GP-012748	Realization of Enhanced power control and signaling support GP-012749	Concept Changes to 43.051 Changes to 44.004 Changes to 44.018 Changes to 48.058 Changes to 45.001 Changes to 45.002 Changes to 45.003 Changes to 45.008	Nov 2001	Closed for Rel 5
	GERAN MS Conformance test for Enhanced Power Control GP-012750	• MS test	Jun 2002	Not started
	GERAN BTS Conformance test for Enhanced Power Control GP-012751	• BTS test	Jun 2002	Not started
8PSK AMR HR GP-012752	Definition of channel coding, performance requirements and signaling support GP-012753	• Concept • Changes to 44.018 • Changes to 45.001 • Changes to 45.002 • Changes to 45.003 • Changes to 45.005 • Changes to 24.008 • Changes to 48.058	Feb 2002	Ongoing
	GERAN MS Conformance test for 8PSK HR GP-012754	• MS test	Jun 2002	
	GERAN BTS Conformance test for 8PSK HR GP-012755	• BTS test	Jun 2002	

GERAN enhancements for streaming services 1 GP-010430	GERAN enhancements for streaming services 1 GP-010430	• Concept • RLC protocol enhancement (SDU Discard)	Oct 2001 Nov 2001	Ongoing
GERAN enhancements for streaming services 2 GP-010429	GERAN enhancements for streaming services 2 GP-010429	Usage of ECSD Stage 2 Stage 3 • RLC PDU formats • MAC header	Jun 2001 Apr 2002	Ongoing
700 MHz spectrum support GP-000449	GERAN support for the 700 MHz band	• Signaling support • Physical layer definitions • Receiver performance and RF budget		Ready for R4. Closed
	GERAN MS Conformance test for 700 MHz band GP-000451	• MS test	Jun 2001	Closed
	GERAN BTS Conformance test for GERAN interface evolution GP-000452	• BTS test	Jun 2001	Ongoing
Real Time QoS for packet services including VoIP (UTRAN)	HOs: maintenance of real-time QoS while moving between cells in the PLMN including inter-SGSN change and SRNS relocation or possibly other mechanisms (UTRAN) GP-010431	Handover for the packet switched domain • Stabile RT handover report 25.936 including header removal • Update of stage 2 • Update of relevant stage 3 specs	Nov 2001	Closed (part of GERAN user / control plan now)
Wideband telephony services (UMTS)	Support of WB AMR in GERAN GP-000453	GMSK and 8PSK WB FR / HR support • Channel coding in 45.003 • Signalling for A interface • Signalling for Iu • Link adaptation in 45.009 • Receiver performance in 45.005	Jun 2001 Nov 2001 Feb 2002	Ongoing
	GERAN MS Conformance test for WB AMR GP-000454	• MS test	Jun 2002	Not started
	GERAN BTS Conformance test for WB AMR GP-000455	• BTS test	Jun 2002	Not started
Location service (UMTS)	LCS interoprability aspects to GERAN GP-000456	• Co-ordinated development of GSM LCS Phase 2 and UMTS LCS, S2 and GERAN		Ongoing
	Location service for GERAN R4 GP-010932	• Work for aligning LCS R4 CN and GERAN		Ready for R4. Closed

	Location Services (LCS) for GERAN in A/Gb Mode GP-011925	• GERAN LCS Stage Two • Gb interface support for LCS • L3 protocol support for LCS • Stage 3 specifications	August 2001(#6) April 2001(#4)	GERAN LCS Stage 2 complete Gb mode CRs ready Stage3 specifications ready. Ongoing due to few open issues.
	Location Services (LCS) for GERAN in Iu Mode GP-011926	• GERAN LCS stage 2 • Iu interface support for LCS • Iur-g interface support for LCS • RRC protocol support for LCS • Additional impacts on Broadcast of LCS data on packet channels • Stage 3 specifications	Stage 2- GERAN #8 Feb. 2002 Stage 3 – GERAN #9 April 2002	Ongoing GERAN LCS Stage 2 IU mode 50% complete Iug-r is FFS Stage 3 specifications needed RRC protocol support for LCS concept was discussed in GERAN(2)bis#6 Broadcast LCS data for IU mode: at GERAN #7 discussed and agreed that the capacity exists on the PBCCH to accommodate LCS Broadcast assistance data.
	GERAN MS Conformance test for LCS GP-000458	• Develop LCS MS test case work plan (Release 98/99/4) • Develop LCS MS test cases	August 2002 (#11)	Work plan agreed: GERAN #7 Test case development ongoing.
	GERAN BTS Conformance test for LCS GP-000459	• Develop LCS BTS test case work plan (Release 99/99/4) • Develop LCS BTS test cases	GERAN #12 November 2002	Work has not started
Uplink TDOA feasibility study GP-012794	Uplink TDOA feasibility study GP-012794	• Performing of a feasitibility study	Apr 2002	Started at GERAN #7

Concept papers

In order to prepare for the CRs planned below concept papers in different areas are established. Companies have been assigned to work with the issues in order to drive things forward.

Concept paper	Responsible company
Multiple TBF or equivalent	Siemens
Paging	Lucent
Dedicated physical subchannels. Includes traffic and control channels	Nokia
How do we indicate Iu-mode support in a cell? How does the mobile station select mode? Broadcast message content?	Ericsson
SDU discard	Nokia
Impact of using RLC instead of LAPDm	Nokia
Contention resolution, mobile-station identity, and access	Alcatel
Ciphering and integrity protection	Nokia
PDCP support. Provide the same services as UTRAN	Ericsson

RLC and MAC	
Downlink delayed TBF release	Ericsson
Add transparent RLC	Lucent
Handover	Nokia
Iu rg	Vodafone
Codec renegotation concept for GERAN	No volunteer yet
Support for ECSD channel coding in RLC/MAC	No volunteer yet

New Specifications

GSM No.	TDOC	CR	Subject	CR Comp. Resp.	TSG	Completion Date
43.051			**GERAN overall description**	S. Gillaume (Nokia)	**GERAN**	**Nov 00**
43.059			**Functional Stage 2 Description of Location Services in GERAN**	M. Livingston (Nokia)	**GERAN**	**April 2001**
44.118			**GERAN RRC**	S. Hamiti	**GERAN**	**June 2002**
50.099		TR	**GERAN project schedule and open issues**	F. Mueller	**GERAN**	**Dec 2002**
xx.xxx		TR	**Optimized speech in the IMS domain**	B. Guarino	**GERAN**	**?**

✔   **Approved**   †   **Set on hold**   → #29 **Send to SMG #29**   ~~CR0000A000~~   **CR has been cancelled**

Change Requests (GERAN release R5)

Here all change requests being handled on TSG GERAN level are listed below. Note only CRs providing new functionality are listed. Correction CRs from previous releases are not listed.

GSM No.	TDOC	CR	Subject	CR Comp. Resp.	STC	Completion Date	Status
43.051	GP-010041	001	Editorial corrections of sections 2 and 3		GERAN	#3	
	GP-010042	002	Corrections of section on GERAN architecture		GERAN	#3	
	GP-010044	003	Changes to clause 6		GERAN	#3	
	GP-010045	004	Clarification wrt TFI unicity		GERAN	#3	
	GP-010050	005	Definition of the MAC functions		GERAN	#3	
	GP-010051	006	Editorial corrections of sections 2 and 3		GERAN	#3	
	GP-010137	007	RLC/MAC for ECSD channels		GERAN	#3	
	GP-010220	008	Change of MAC modes into MAC states; corrections related to PDTCH on DPSCH		GERAN	#3	
	GP-010221	009	Clarification of RRC functions		GERAN	#3	
	GP-010319	010	Revision of working assumption on ciphering		GERAN	#3	
	GP-010891	011R1	TFI, RBid, DPSCH		GERAN	#4	
	GP-010890	012R1	Working assumptions for RRC design		GERAN	#4	
	GP-010632	013	Introduction of RRC connection mobility assumptions for GERAN		GERAN	#4	
	GP-010678	014	014 TBF Establishment and Reconfiguration on DPSCH – Withdrawn		GERAN	#4	
	GP-010883	015R1	Clarifications and corrections to section 6.3 and Annex C		GERAN	#4	
	GP-010605	016	Removal of physical layer muxing		GERAN	#4	
	GP-010887	017R1	RLC SDU Discard		GERAN	#4	
	GP-010762	018	Removal of the QR		GERAN	#4	
	GP-010603	019	Inclusion of the decision of adopting RLC/MAC as layer 2 on the control plane		GERAN	#4	
44.008	GP-010875	010R1	Introduction of AMR-WB		GERAN	#3	
	GP-010876	011R1	Circuit pools for AMR-WB		GERAN	#3	
44.018	GP-010880	027R1	Introduction of AMR-WB		GERAN	#4	
44.060	GP-010680	023	Paging Procedures for Iu Mode		GERAN	#4	
	GP-010754	029	Section 8: Inclusion of GERAN		GERAN	#4	
	GP-010755	030	RLC SDU Discard		GERAN	#4	
45.001	GP-010240	001	Addition of TCH/WFS		GERAN	#3	
45.002	GP-010241	007	Addition of TCH/WFS		GERAN	#3	
	GP-010761	013	Mapping of HR 8PSK channels		GERAN	#4	
45.003	GP-010130	044	Coding and Interleaving Proposal for O-FACCH/F and O-FACCH/H		GERAN	#3	
	GP-010333	A046R1	Channel coding for TCH/WFS		GERAN	#3	
	GP-010760	002	Channel coding for O-FACCH		GERAN	#4	
45.005	GP-010133	007	Introduction of new AMR speech channels and control channels on Half-rate channels with 8-PSK modulation		GERAN	#3	

45.008	GP-010243	014	Changes to link adaptation for TCH/WFS		GERAN	#3	
45.009	GP010332	A017	Changes to link adaptation for TCH/WFS		GERAN	#3	
48.058	GP-010938	A059R2	Changes due to WB-AMR		GERAN	#4	

✔ **Approved** † **Set on hold** ~~CR0000A000~~ **CR has been cancelled**

Possible CRs required (GERAN release R5)

The darkened fields indicate, that these CR's are already handled and approved by the responsible TSG. The textured fields indicate, that the work on these CRs have been started on workshop or TSG level.

Note, this list is a first draft and has to be reviewed in more detail.

Name	Title	Resp. TSG	Target date	Resource Names	Changes
CR Stage 2					
23.002	Network architecture	S2			Small: Inclusion of the GERAN architecture
23.003					GERAN identities
23.009	MSC				Handover scenarios
23.034	Highspeed circuit switched data – Stage 2	S2			?
23.060	GPRS stage 2	S2			Handover and cell reselection scenarios
23.221	Architectural requirements for release 5				
43.051	GERAN overall description	SMG2		Nokia, Guillaume Sebire	Major: Protocol modes and mapping on the physical layer, GERAN RAB requirements, sim to 03.60, 03.64 Handover and cell reselection scenarios
23.107	Quality of service, Concept and Architecture	S2			Optimized speech?
23.110	UMTS Access stratum	S2			?
23.821	Service principles?	S2			
33.102	Security architecture	S3			GERAN Mac I, PCU placement
23.228	IMS	S2			Optimized speech
CR Stage 3					
02.07	Mobile station capability				
24.008	Mobile radio interface layer 3 specification	N1			MS RAC, PDP contect activation, class mark, SIP call control
04.04	Layer one: General requirements			Siemens, Jean-Michel Traynard	Update Physical layer primitives
44.018	Mobile radio interface layer 3 specification	GERAN		Nokia, Shkumbin Hamiti	Major: Handover, RR enhancements GERAN Identities
44.060	"General Packet Radio Service; MS – BSS interface; Radio Link Control/Medium Access Control (RLC/MAC) protocol"	GERAN		Lucent, Al Sacuta (MAC)	Major: MAC procedures RLC procedures RR enhancements Block formats New messages Should we have a new spec for RLC, with separated MAC GERAN Identities
25.323	Description of the Packet Data Conversion protocol (PDCP)	R2		Motorola, Sandji Gubde	Minor, if any
25.413	UTRAN Iu interface RANAP signalling	R3			Renegotiation for GERAN BSS
25.420-25.427	UTRAN Iu r Interface	R3			Depending on the scope of Iu rg the Iu r specs have to be modified or alternatively a new spec has to be created
45.001	Physical layer on the radio path General description	GERAN			General GERAN impacts on 05 series
45.002	Multiplexing and multiple access on the radio path	GERAN			Major: New channel combinations and mapping of logical channels
45.003	Channel coding	GERAN		Ericsson, David Bladsjö	Major: Coding, Puncturing and interleaving for new bearers

45.005	Radio receiver performance	GERAN		Ericsson. Mats Samuelsson	Major: Receiver performance due to new coding and puncturing schemes. Need to specify all?
45.008	Radio subsystem link control	GERAN		Nortel, David Choukroun	Minor: New measurements?
05.09	Link Adaptation	GERAN			
11.10	Mobile test spec	GERAN			Testing of RF parameters
11.21	BTS test spec	GERAN			Testing of BTS RF parameters

1) Depending on what is planned for UTRAN Rel 5

Possible CRs required (GERAN release R6)

The darkened fields indicate, that these CR's are already handled and approved by the responsible STC. The textured fields indicate, that the work on these CRs have been started on workshop or STC level

Name	Title	Resp. STC	Target SMG	Resource_Names	Changes

A-1 GERAN radio requirements

A-1.1 Introduction

The GERAN provides a range of bearer services to mobile and stationary users in a variety of application areas and operating environments. The radio access network will be connected to the third generation core network and will as far as possible extend the services of the fixed networks to mobile users.

This document outlines the overall requirements for GERAN release 2000, which includes all GSM/EDGE work items of release 2000. More specific radio requirements, such as radio requirements for the AMR wide band speech codec, are included as references, if available, and are not discussed in this document. The requirements should be used as guidelines for the design of the radio access network.The requirements should be aligned with the requirements on UTRAN.

A-1.2 Definitions and Abbreviations

A-1.2.1 Definitions

GSM/EDGE RAN   GERAN is a term used to describe a GSM and EDGE based 200 kHz radio access network. The GERAN is based on GSM/EDGE release 99, and covers all new features for GSM Release 2000 and subsequent releases, with full backward compatibility to previous releases.

A-1.2.2 Abbreviations

3G	Third Generation
BER	Bit Error Rate
CN	Core network
CS	Circuit Switched
GERAN	GSM/EDGE Radio Access Network
RAN	Radio Access Network
RAB	Radio Access Bearer
RB	Radio Bearer
QoS	Quality of Service
PS	Packet Switched
UMTS	Universal Mobile Telecommunications System
UTRAN	UMTS Terrestrial Radio Access Network

A-1.3 High Level Requirements

The following high level requirements have been initially identified for the GERAN in responsibility of SMG2:

- All bearer classes (conversational, streaming, interactive and background) as defined for UTRAN shall be provided

- The same quality of service handling and radio access bearer service attributes shall be supported as required for UTRAN (as described in TS 23.107). Whether the same range of values of the service attributes as supported by UTRAN shall be supported by GERAN in Release 2000 is for further study

- Support for multiple QoS profiles in parallel shall be provided in the GERAN.

A-1.4 Bearer Definition

A-1.4.1 Radio Access Bearers

GERAN shall provide the same radio access bearers as UTRAN. However, voice is foreseen to be important future service and therefor it seen as important to optimize the conversational radio access bearer class for IP voice services.

It is required to have the GERAN support Adaptive Multi-Rate (AMR) CODEC speech and to be consistent with S2 requirements. Further, it is desired to have the GERAN support Tandem Free Operation (TFO)

services. Further, voice radio access bearers should be provided with quality and delay comparable to current digital cellular systems.

Figure 1 shows the UMTS QoS architecture. As illustrated in the figure the Radio Access Bearer Service is realized by a Radio Bearer Service and an Iu-Bearer Service.
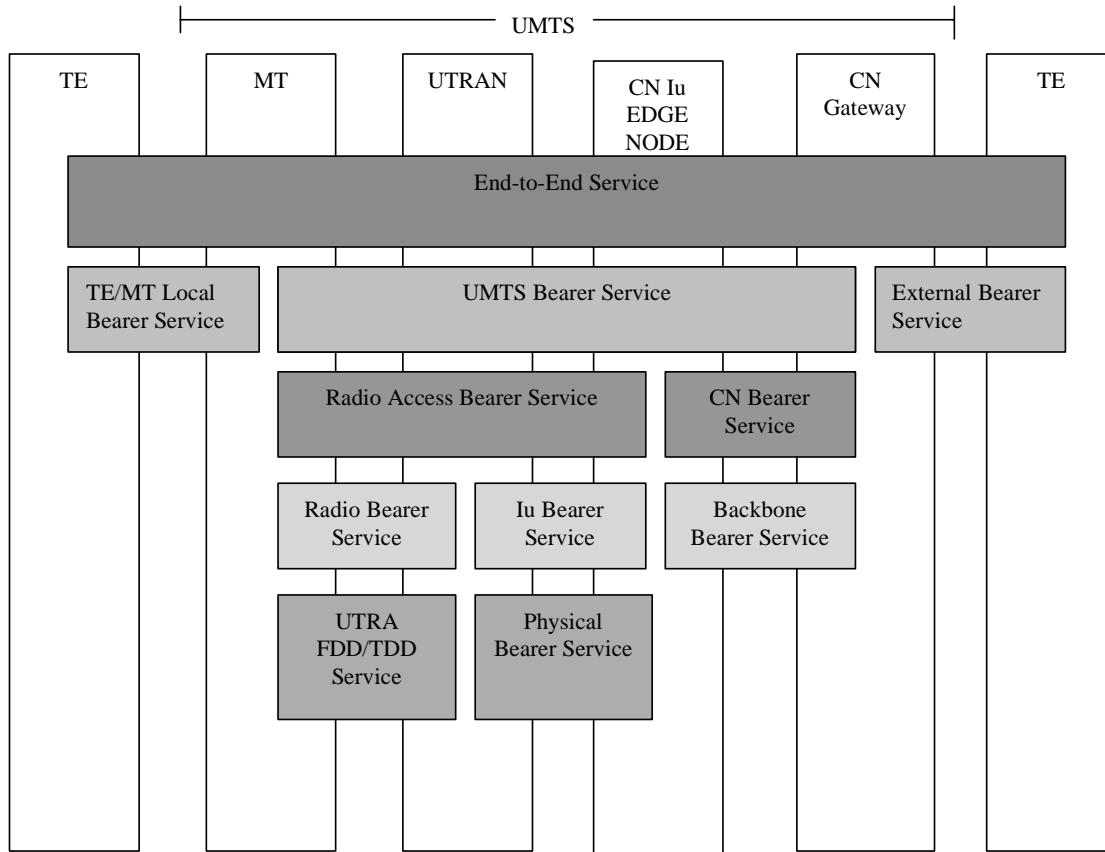
Figure 1. UMTS QoS architecture.

A-1.4.1.1   **Radio Access Bearer Attributes**

A set of attributes and their possible values are used to describe a radio access bearer capability. This set has been chosen so that a radio access bearer capability can be entirely defined by giving a value to each attribute of the set. In particular, the set and the associated allowed values enable characterization of future (not yet used or foreseen) transfer needs. For the GERAN the same set of attributes are chosen as for the UTRAN, which are defined in 23.107 [1]. The support of the different values may vary from the radio environment the user is in (indoor, urban, rural and etc.), see section A-1.4.2.1.

The values used by the 3G CN are as follows:

Table 1. Value ranges of the radio access bearer service attributes in UMTS.

Traffic class	Conversational class	Streaming class	Interactive class	Background class
Maximum bitrate [kbps]	<2000 (1) (2)	<2000 (1) (2)	< 2000 – overhead (2) (3)	<2000 - overhead (2) (3)
Delivery order	Yes/No	Yes/No	Yes/No	Yes/No
Maximum SDU size [octets]	<1500 (4)	<1500 (4)	<1500 (4)	<1500 (4)

SDU format information	(5)	(5)		
Delivery of erroneous SDUs	Yes/No/-	Yes/No/-	Yes/No/-	Yes/No/-
Residual BER	$5*10^{-2}$, 10^{-2}, 10^{-3}, 10^{-4} (6)	$5*10^{-2}$, 10^{-2}, 10^{-3}, 10^{-4}, 10^{-5}, 10^{-6} (6)	$4*10^{-3}$, 10^{-5}, $6*10^{-8}$ (6) (7)	$4*10^{-3}$, 10^{-5}, $6*10^{-8}$ (6) (7)
SDU error ratio	10^{-2}, 10^{-3}, 10^{-4}, 10^{-5} (6)	10^{-2}, 10^{-3}, 10^{-4}, 10^{-5} (6)	10^{-3}, 10^{-4}, 10^{-6} (6)	10^{-3}, 10^{-4}, 10^{-6} (6)
Transfer delay [ms]	80 – maximum value(6)	500 – maximum value (6)		
Guaranteed bit rate [kbps]	<2000 (1) (2)	<2000 (1) (2)		
Traffic handling priority			1,2,3 (8)	
Allocation/Retention priority	1,2,3 (8)	1,2,3 (8)	1,2,3 (8)	1,2,3 (8)
Source statistic descriptor	Speech/unknown	Speech/unknown	Speech/unknown	Speech/unknown

1) Bitrate of 2000 kbps requires that UTRAN operates in transparent RLC protocol mode, in this case the overhead from layer 2 protocols is negligible.

2) The granularity of the bit rate parameters must be studied. Although the UMTS network has capability to support a large number of different bitrate values, the number of possible values must be limited not to unnecessarily increase the complexity of for example terminals, charging and interworking functions. Exact list of supported values shall be defined together with S1, N1, N3 and R2.

3) Impact from layer 2 protocols on maximum bitrate in non-transparent RLC protocol mode shall be estimated.

4) Maximum SDU size shall at least allow UMTS network to support external PDUs having as high MTU as Internet/Ethernet (1500 octets). The need for higher values must be investigated by N1, N3, S1, R2, R3.

5) Definition of possible values of exact SDU sizes for which UTRAN can support transparent RLC protocol mode, is the task of RAN WG3.

6) Values are indicative. Exact values on Residual BER, SDU error ratio and transfer delay shall defined together with S1, N1, N3 and R2.

7) Values are derived from CRC lengths of 8, 16 and 24 bits on layer 1.

8) Number of priority levels shall be further analysed by S1, N1 and N3.

A-1.4.2 Radio Bearers

Mapping of radio access bearers onto radio bearers is up to the RAN as long as the requested QoS is achieved.

Each radio bearer will be mapped to one or more radio interface logical channels for the purposes of transmission over the GERAN. Suggested properties of the GERAN:

- The design of GERAN should allow for several radio bearers to be used simultaneously with single user equipment. This could be used for instance to provide support for multiple QoS profiles in parallel

- The design of GERAN should allow for optimised voice radio bearers in both the PS and the CS domain. The handling of TFO is for further study.

The design of GERAN should allow efficient support of the wide variety of services, including future services, which have yet to be defined.

A-1.4.2.1 Minimum radio bearer capabilities

Giving one of the possible values to each RAB service attribute defines a possible radio access bearer service. However, not all combinations are necessarily supported by the GERAN system. The following table shows potential combinations for the attributes that are expected to change dependent on the radio environment. The values given under the different QoS classes are Maximum bitrate/BER/Max Transfer Delay [1].

Table 2. Minimum radio bearer capabilities.

Operating environment	Propagation conditions	Conversational	Streaming	Background	Interactive
Rural outdoor (Terminal relative speed to ground up to 250 km/h)	HT100 850/900 Mhz: RA250 1800/1900 Mhz: RA130	T.B.D.	T.B.D.	T.B.D.	T.B.D.
Urban/ Suburban outdoor (Terminal relative speed to ground up to 120 km/h)	HT100 TU50	T.B.D.	T.B.D.	T.B.D.	T.B.D.
Indoor/ Low range outdoor (Terminal relative speed to ground up to 10 km/h)	Indoor TU3	T.B.D.	T.B.D.	T.B.D.	T.B.D.

A-1.4.2.2 RTP/UDP/IP Header adaptation

GERAN shall support header adaptation in order to provide an increase in spectral efficiency. In particular the header adaptation mechanism should not degrade the hand over performance and user perceived quality (e.g. header adaptation mechanism should not degrade the speech quality). Error propagation due to header adaptation should be kept to a minimum or avoided, if at all possible. In addition the header adaptation mechanism should operate under all expected BER and delay conditions.

A-1.5 Handover requirements

This section deals with both intra and inter GERAN handover and cell re-selection requirements. Cell re-selection refers to cell change when in idle mode or ready state, whereas handover refers to change of physical channel (in the same or possibly in a new cell) when in non-idle state.

The overall requirements on GERAN handover and cell re-selection are:

- For support of pre release 2000 terminals the GERAN should provide cell re-selection in the same way as (E)GPRS;

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[1] To complete the requirements the percentile for the values given in the table should be defined.

- For support of pre release 2000 terminals the GERAN should provide handover in the same way as GSM;
- Cell re-selection and handover should be in the responsibility of the radio access network[2];
- GERAN should support intra- (within a cell) and inter- (between cells) cell handovers;
- For the GERAN release 2000, handover performance should be no worse than for GSM circuit switched services. In particular, the transmission gap should be no more than 150 ms;

- In GERAN release 2000, other requirements related to the HO function shall be of same quality as in GSM release 99 (e.g. neighbourcell measurement rate).

Table on Intra GERAN handover and cell reselection

	GERAN R00 PS	GERAN R99 PS	GERAN R00 CS	GERAN R99 CS
GERAN R00 PS	HO CRS	CRS	No	No
GERAN R99 PS	CRS	CRS	No	No
GERAN R00 CS	No	No	HO	HO
GERAN R99 CS	No	No	HO	HO

HO   is for RT services
CRS is for NRT services
„No" means neither HO or CRS is supported

A-1.5.1   Interworking with other systems

Specific requirements are expected from SA2. The following table should be seen as the working assumption on required handover scenarios between different systems while waiting input from SA2.

Table on Inter GERAN handover and cell reselection

	ANSI 136	UTRAN R99 PS	UTRAN R99 CS	UTRAN R00 PS	UTRAN R00 CS
GERAN R00 PS	No	CRS	No	HO CRS	No
GERAN R00 CS	FFS	No	HO	No	HO

HO   is for RT services
CRS is for NRT services
„No" means neither HO or CRS is supported

A-1.6   Security issues

Specific requirements are expected from SMG10.

A-1.7   Operational requirements

A-1.7.1   Architecture requirements

Specific requirements are expected from SA2.

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2 Network controlled cell re-selection refers to cell re-selection as in GSM, where the cell selection procedure is controlled by broadcasted parameters.

A-1.7.2 Radio operation environments

GERAN should support all Radio Access Bearers in the radio environments specified in current GSM 05.05.

A-1.7.3 Radio access network planning

For a comparable services, GERAN should provide cell range at least as good as GSM Release 99. GERAN systems should not affect the performance of existing EGPRS/GSM systems.

GERAN should support frequency planning similar to GSM Release 99.

Note: Coverage for RT services of GERAN needs to be defined.

A-1.7.4 Interference Management

GERAN should support interference management at least similar to GSM Release 99. The GERAN solution should not preclude the use of smart antennas.

A-1.7.5 Frequency bands and licensing

GERAN systems should be deployable in at least those frequency bands defined in GSM 05.05 release 99.

A-1.8 Efficient spectrum usage

A-1.8.1 Spectral efficiency

For comparable services, GERAN systems should have significantly higher spectral efficiency as compared to Release 99. It is understood that implementation of increased spectral efficiency may be restricted by the requirement of creating a Release 2000 Standard.

A-1.8.2 Spectrum utilization

For initial deployment GERAN shall support all services in at least 2.4 MHz of spectrum. GERAN shall support all packet domain services (real and non real time) in COMPACT mode deployment. It is recognized that spectrum efficiency may be greater with larger spectrum deployments.

A-1.9 Deployment requirements

A-1.9.1 Deployment

GERAN should be flexible to support a variety of initial deployments.

It should be possible to deploy GERAN with a minimum of upgrades to GSM Release 99 radio equipment. GSM/EDGE RAN may be deployed as a contiguous coverage, Island coverage, or Spot coverage system. It is anticipated that GERAN will also be deployed on a city-by-city basis.

A-1.9.2 Backward compatibility

It should be possible to deploy GERAN in spectrum shared with GSM Release 99, as well as other GSM systems. GERAN should be deployable in carriers and time slots adjacent to those supporting GSM Release 99, at least with fixed division of time slots between GERAN and the other systems.

It is recognized that there may be advantages to dedicating radio resources system-wide to some types of GERAN operation.

A-1.9.3 Complexity / cost

It should be possible to provide a variety of MS as well as Base Station types of varying complexity, cost and capabilities in order to satisfy the needs of different types of operator and user scenarios. The Release 2000 is expected to imply the same RF properties as a Release 1999.

A-1.9.4 Terminal

GERAN systems should support a variety of terminal types, including advanced feature phones, PDA's, PCMCIA cards, and other terminal types. Hand portables and PCMCIA card sized GERAN terminals should be optimized in terms of size, weight, operating time, range, and the effective radiated power and cost/performance ratio.

A-1.9.5 Network

For further study

A-1.10 Requirements from bodies outside SMG

A-1.10.1 Electromagnetic compatibility

GERAN systems should cause no more interference to other equipment than current GSM-based systems.

A-1.10.2 RF radiation

GERAN systems should operate at RF emission power levels consistent with applicable recommendations and specifications for electromagnetic radiation.

A-1.10.3 Security

For further study

A-1.11 Evolution of GERAN

Release 2000 of GERAN should include efficient support of RT services in the PS domain and it should be aligned with UMTS. The GERAN shall be defined so that it can be implemented in phases with increasing functionality (for example making use of new technology), while allowing the maximum possible backwards compatibility. The introduction of new functions should be done in a manner that maximizes forward compatibility with enhancements expected in subsequent releases. The definition of GERAN should allow evolution to higher bit rates.

A-1.12 Open Issues

This section summerizes the open issues that have been identified in this document.

1. Is there support for multiple QoS profiles in parallel in R99

2. A discussion on the relation of TFO to the Transcoder (TRAU) position in the architecture highlighted the issue of how UTRAN deals with TFO. The following questions arose:
   1. Clarification on how TFO is handled in UMTS (This is a question for 3GPP TSG S4))
   2. What voice requirements will come from S2

3. Input from SA2 is expected on the RAB attribute value ranges.

4. The T.B.D. in table 2 need to be resolved. Another open issue in the table is whether other propagation models should be included, e.g. BUx.

5. Verify that the speech gap during handover should be no more than 150 ms is a GSM requirement.

6. The delay and data loss requirements on different handovers and cell re-selection shall be specified further. The requirements depend on the service and that should be reflected as well.

A-1.13 References

[1] TSG SA2, 23.107, "QoS Concept and Architecture".

A-2   History

Document history	
23th February 2000	First draft (V0.0.1)
2nd April 2000	Updated after GERAN #1 and EDGE WS #13 (V0.0.2)
8th May 2000	Updated after SMG2 #35 (V0.0.3)
22nd May 2000	Updated after SMG2 GERAN WS #2 (V0.0.4)
24th May 2000	Updated during SMG2 #36 (V0.0.5)
2nd August 2000	Updated for 3GPP S3 meeting (V0.0.6)
28th August 2000	Updated after SMG2 GERAN release 2000 and beyond Adhoc #1
9th October 2000	Updated after TSG GERAN #1 as 50.099 (V0.0.1)
6th November 2000	Updated after TSG GERAN Adhoc on release 2000 and beyond #2 as 50.099 (V0.0.2)
12th February 2001	Updated after TSG GERAN #3 (V0.0.5)
April 2001	Updated for TSG GERAN #4 (V0.06)
7th May 2001	Updated for TSG GERAN Adhoc on released 2000 and beyond #5 (V0.07)
11th May 2001	Updated during TSG GERAN Adhoc on release 2000 and beyond #5 (V0.08)
28th May 2001	Updated for TSG GERAN #5 (V0.09)
27th August 2001	Updated for TSG GERAN #6 (V0.10)
26th Nov 2001	Updated for TSG GERAN #7 (V0.11)
30th Nov 2001	Updated for TSG GERAN #7 (V0.12)
30th Nov 2001	Updated for TSG GERAN #7 (V0.13)

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Status of Change Requests presented to TSG GERAN#07

Tdoc	Title	Source	Status
GP-012505	CR 03.64-A083 Coding rate of MCS3 (R99)	Nokia	Approved
GP-012524	CR 03.64-A084 Clarification of EGPRS MS USF decoding (R99)	Ericsson	Approved
GP-012420	CR 04.08-A766 Alignment of ASSIGNMENT CMD, HO CMD and CH MOD MOD for AMR (R98)	Motorola	Revised
GP-012717	CR 04.08-A766 rev 1 Alignment of ASSIGNMENT CMD, HO CMD and CH MOD MOD for AMR (R98)	Motorola	Approved
GP-012429	CR 04.08-A768 Support of Early Classmark Sending by an PBCCH capable cell (R97)	Siemens	Withdrawn
GP-012430	CR 04.08-A770 Support of Early Classmark Sending by an PBCCH capable cell (R98)	Siemens	Withdrawn
GP-012678	CR 04.08-A772 Restoration of the SI 3 Rest Octets IE description (R97)	Siemens	Approved
GP-012679	CR 04.08-A774 Restoration of the SI 3 Rest Octets IE description (R98)	Siemens	Approved
GP-012573	CR 04.18-A226 rev 1 Backward compatibility problem in SI2ter Rest octets (R99)	Alcatel	Approved
GP-012516	CR 04.18-A228 Backward compatibility problem in SI2ter Rest Octets, alternative 2 (R99)	Ericsson	Withdrawn
GP-012315	CR 04.18-A229 Transparent UMTS specific information in Classmark Change (R99)	Ericsson	Revised
GP-012635	CR 04.18-A229 rev 1 Transparent UMTS specific information in Classmark Change (R99)	Ericsson	Revised
GP-012688	CR 04.18-A229 rev 2 Transparent UMTS specific information in Classmark Change (R99)	Ericsson	Approved
GP-012382	CR 04.18-A230 Clarification of the term primary scrambling code (R99)	Vodafone	Approved
GP-012387	CR 04.18-A231 Number of cells in the 3G Neighbour Cell list (R99)	Vodafone	Revised
GP-012833	CR 04.18-A231 rev 1 Number of cells in the 3G Neighbour Cell list (R99)	Vodafone	Withdrawn
GP-012414	CR 04.18-A232 RTD order/presence in Measurement Information and SI2Quarter (R99)	Motorola	Withdrawn
GP-012421	CR 04.18-A233 Alignment of ASSIGNMENT CMD, HO CMD and CH MOD MOD for AMR (R99)	Motorola	Revised
GP-012718	CR 04.18-A233 rev 1 Alignment of ASSIGNMENT CMD, HO CMD and CH MOD MOD for AMR (R99)	Motorola	Approved
GP-012440	CR 04.18-A234 Correction on Ciphering Mode Setting IE in HANDOVER COMMAND (R99)	Nokia	Revised

Tdoc	Title	Source	Status
GP-012700	CR 04.18-A234 rev 1 Correction on Ciphering Mode Setting IE in HANDOVER COMMAND (R99)	Nokia	Approved
GP-012431	CR 04.18-A236 Support of Early Classmark Sending by an PBCCH capable cell (R99)	Siemens	Revised
GP-012675	CR 04.18-A236 rev 1 Support of Early Classmark Sending by an PBCCH capable cell (R99)	Siemens	Approved
GP-012680	CR 04.18-A237 Support of Early Classmark Sending by an PBCCH capable cell (R99)	Siemens	Approved
GP-012795	CR 04.18-A238 Correction on GSM400 measurement parameter coding (R99)	Nokia	Approved
GP-012002	CR 04.31-A046 RRLP - Correction of Error Handling Procedures (R98)	Siemens	Approved
GP-012003	CR 04.31-A047 RRLP - Correction of Error Handling Procedures (R99)	Siemens	Approved
GP-011980	CR 04.31-A048 rev 1 Corrections to Rough RTD, Multiframe Offset and Expected OTD Ranges (R98)	Nokia	Approved
GP-011981	CR 04.31-A049 rev 1 Corrections to Rough RTD, Multiframe Offset and Expected OTD Ranges (R99)	Nokia	Approved
GP-012004	CR 04.31-A050 Expected OTD and its uncertainty values are missing from Assistance Data component. (R98)	Nokia	Approved
GP-012005	CR 04.31-A051 Expected OTD and its uncertainty values are missing from Assistance Data component. (R99)	Nokia	Approved
GP-012006	CR 04.31-A052 Correction to Toc and Toe ephemeris parameters (R98)	Ericsson	Approved
GP-012007	CR 04.31-A053 Correction to Toc and Toe ephemeris parameters (R99)	Ericsson	Approved
GP-012306	CR 04.31-A056 "Expected" Multiframe Offset (R98)	Ericsson, Siemens	Approved
GP-012307	CR 04.31-A057 "Expected" Multiframe Offset (R99)	Ericsson, Siemens	Approved
GP-012541	CR 04.31-A058 Correction of Reference Frame in Location Information Element (R98)	Motorola	Revised
GP-012815	CR 04.31-A058 rev 1 Correction of Reference Frame in Location Information Element (R98)	Motorola	Revised
GP-012844	CR 04.31-A058 rev 2 Correction of Reference Frame in Location Information Element (R98)	Motorola	Approved
GP-012542	CR 04.31-A059 Correction of Reference Frame in Location Information Element (R99)	Motorola	Revised
GP-012816	CR 04.31-A059 rev 1 Correction of Reference Frame in Location Information Element (R99)	Motorola	Revised
GP-012845	CR 04.31-A059 rev 2 Correction of Reference Frame in Location Information Element (R99)	Motorola	Approved
GP-012008	CR 04.35-A011 rev 1 Definition of RTD clarified. (R98)	Nokia	Approved
GP-012009	CR 04.35-A012 rev 1 Definition of RTD clarified. (R99)	Nokia	Approved
GP-011984	CR 04.35-A013 rev 1 Correction to Sectored Channels BTS ID Definition IE	Nokia	Approved

Tdoc	Title	Source	Status
GP-011985	CR 04.35-A014 rev 1 Correction to Sectored Channels BTS ID Definition IE	Nokia	Approved
GP-012010	CR 04.35-A015 Definition of Reference Time IE corrected. (R98)	Nokia	Approved
GP-012011	CR 04.35-A016 Definition of Reference Time IE corrected. (R99)	Nokia	Approved
GP-012012	CR 04.35-A017 rev 1 Defined range for Multiframe Offset Values IE. Range of 51 multiframe offset is 0 - 50. (R98)	Nokia	Approved
GP-012013	CR 04.35-A018 rev 1 Defined range for Multiframe Offset Values IE. Range of 51 multiframe offset is 0 - 50. (R99)	Nokia	Approved
GP-012014	CR 04.60-B035 rev 1 Countdown Value for EGPRS (R99)	Nokia	Approved
GP-012015	CR 04.60-B037 Clarification of TLLI_BLOCK_CHANNEL_CODING field (R99)	Ericsson	Approved
GP-012016	CR 04.60-B038 Correction of abnormal release without retry (R99)	Ericsson	Approved
GP-012424	CR 04.60-B040 rev 2 Support of Early Classmark Sending by an PBCCH capable cell (R97)	Siemens	Withdrawn
GP-012425	CR 04.60-B041 rev 1 Support of Early Classmark Sending by an PBCCH capable cell (R98)	Siemens	Withdrawn
GP-012426	CR 04.60-B042 rev 2 Support of Early Classmark Sending by an PBCCH capable cell (R99)	Siemens	Revised
GP-012683	CR 04.60-B042 rev 3 Support of Early Classmark Sending by an PBCCH capable cell (R99)	Siemens	Approved
GP-012584	CR 04.60-B043 rev 3 Clarification of EGPRS MS USF decoding (R99)	Ericsson	Approved
GP-012017	CR 04.60-B044 rev 1 Contention resolution at one-phase access for EGPRS (correction) (R99)	Nokia	Approved
GP-012597	CR 04.60-B046 Clarification regarding RRBP handling in the Packet Cell Change Order message (R99) - Withdrawn	Alcatel	Revised
GP-012631	CR 04.60-B046 rev 1 Clarification regarding RRBP handling in the Packet Cell Change Order message (R99)	Alcatel	Approved
GP-012224	CR 04.60-B047 Correction for Packet Enhanced Measurement Report (R99)	Nokia	Approved
GP-012385	CR 04.60-B048 Clarification of the term primary scrambling code (R99)	Vodafone	Approved
GP-012390	CR 04.60-B049 Number of cells in the 3G Neighbour Cell list (R99)	Vodafone	Revised
GP-012698	CR 04.60-B049 rev 1 Number of cells in the 3G Neighbour Cell list (R99)	Vodafone	Withdrawn
GP-012449	CR 04.60-B050 Removal of T3198 (R99)	Nokia, Ericsson	Revised
GP-012693	CR 04.60-B050 rev 1 Removal of T3198 (R99)	Nokia	Approved
GP-012510	CR 04.60-B051 Random distribution of PRACH messages (R99)	Ericsson	Approved
GP-012512	CR 04.60-B052 Training Sequence Code on PBCCH/PCCCH (R97)	Ericsson	Withdrawn

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GP-012513	CR 04.60-B053 Training Sequence Code on PBCCH/PCCCH (R98)	Ericsson	Withdrawn
GP-012514	CR 04.60-B054 Training Sequence Code on PBCCH/PCCCH (R99)	Ericsson	Withdrawn
GP-012599	CR 04.60-B055 Correction of minimum number of paging blocks "available" on one PCCCH (R99)	Alcatel	Withdrawn
GP-012606	CR 04.60-B056 EGPRS Compressed Receive Block Bitmap (R99)	Ericsson	Approved
GP-012633	CR 04.60-B057 Clarification of PSI Count High Rate(wrong CR implementation) (R99)	Siemens	Approved
GP-012671	CR 04.60-B058 Correction to Packet Timeslot reconfigure (R99)	Ericsson	Approved
GP-012799	CR 04.60-B059 Correction on GSM400 measurement parameter coding (R99)	Nokia	Revised
GP-012835	CR 04.60-B059 rev 1 Correction on GSM400 measurement parameter coding (R99)	Nokia	Approved
GP-012018	CR 04.71-A011 Correction of Reporting Period range IE in RIT Measurement Request message (R98)	Siemens	Approved
GP-012019	CR 04.71-A012 Correction of Reporting Period range IE in RIT Measurement Request message (R99)	Siemens	Approved
GP-012216	CR 04.71-A015 Correction of inconsistent text information in Location Service Message type IE (R98)	Siemens	Approved
GP-012217	CR 04.71-A016 Correction of inconsistent text information in Location Service Message type IE (R99)	Siemens	Approved
GP-012361	CR 05.01-A032 Correction of description AMR channel convolutional code rate (R98)	Ericsson	Approved
GP-012362	CR 05.01-A033 Correction of description AMR channel convolutional code rate (R99)	Ericsson	Approved
GP-012507	CR 05.01-A034 Coding rate of MCS3 (R99)	Nokia	Approved
GP-012300	CR 05.02-A190 E-OTD and Dummy Bursts on the BCCH Carrier (R98)	Ericsson	Rejected
GP-012301	CR 05.02-A191 E-OTD and Dummy Bursts on the BCCH Carrier (R99)	Ericsson	Rejected
GP-012519	CR 05.02-A192 Training Sequence Code on PBCCH/PCCCH (R97)	Ericsson	Rejected
GP-012520	CR 05.02-A193 Training Sequence Code on PBCCH/PCCCH (R98)	Ericsson	Rejected
GP-012521	CR 05.02-A194 Training Sequence Code on PBCCH/PCCCH (R99)	Ericsson	Rejected
GP-012598	CR 05.02-A195 Correction of minimum number of paging blocks "available" on one PCCCH (R99)	Alcatel	Withdrawn
GP-012628	CR 05.02-A196 Correction of minimum number of paging blocks "available" on one PCCCH (R99)	Alcatel	Rejected
GP-012358	CR 05.04-A012 Correction of tail bits for 8PSK normal burst (R99)	Ericsson	Approved
GP-012221	CR 05.08-A336 Clarification on Packet Enhanced Measurement Reporting (R99)	Nokia	Approved

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GP-012393	CR 05.08-A337 Clarification of the cell-reselection to UTRAN (R99)	Vodafone	Withdrawn
GP-012395	CR 05.08-A338 Number of cells/frequencies to be monitored by a dual mode terminal (R99)	Vodafone	Approved
GP-012408	CR 05.08-A339 Correction of parameters related to enhanced and 3G measurements (R99)	Motorola	Revised
GP-012759	CR 05.08-A339 rev 1 Correction of parameters related to enhanced and 3G measurements (R99)	Motorola	Approved
GP-012488	CR 05.08-A340 Clarification on UTRAN FDD RSSI reporting (R99)	Nokia	Approved
GP-012491	CR 05.08-A341 Alignment of REPORT_TYPE parameter definition according to 04.18 & 04.60 (R99)	Nokia	Withdrawn
GP-012494	CR 05.08-A342 Clarification on the applicability of the SERVING_BAND_REPORTING (R99)	Nokia	Revised
GP-012763	CR 05.08-A342 rev 1 Clarification on the applicability of the SERVING_BAND_REPORTING (R99)	Nokia	Withdrawn
GP-012497	CR 05.08-A343 Alignment of predefined configuration handling according to RAN 2 views (R99)	Nokia	Approved
GP-012404	CR 05.09-A022 CHANNEL MODE MODIFY, phase and RATSCCH (R98)	Motorola	Revised
GP-012741	CR 05.09-A022 rev 1 CHANNEL MODE MODIFY, phase and RATSCCH (R98)	Motorola	Approved
GP-012405	CR 05.09-A023 CHANNEL MODE MODIFY, phase and RATSCCH (R99)	Motorola	Revised
GP-012742	CR 05.09-A023 rev 1 CHANNEL MODE MODIFY, phase and RATSCCH (R99)	Motorola	Approved
GP-012318	CR 08.08-A241 Transparent RRC containers in 2G-3G Handover Signalling (R99)	Ericsson	Revised
GP-012638	CR 08.08-A241 rev 1 Transparent RRC containers in 2G-3G Handover Signalling (R99)	Ericsson	Revised
GP-012830	CR 08.08-A241 rev 2 Transparent RRC containers in 2G-3G Handover Signalling (R99)	Ericsson	Approved
GP-012163	CR 08.18-A136 Correction of code points in IEI (R99)	MCC	Rejected
GP-012166	CR 08.18-A137 Correction of code points in IEI (R99)	MCC	Rejected
GP-012566	CR 08.71-014 Adding of Cell Identifier List related to Measurement report information (R99)	Alcatel	Revised
GP-012819	CR 08.71-A014 rev 1 Addition of Cell Identifier List related to Measurement report information (R99)	Alcatel	Approved
GP-012020	CR 08.71-A015 Correction of faulty reference (R99)	Ericsson	Approved
GP-012601	CR 08.71-A017 Correction of Cause IE reference (R99)	Siemens	Approved
GP-012600	CR 08.71-A018 Correction of Cause IE reference (R98)	Siemens	Approved
GP-012021	CR 09.31-A026 Define IE's order of appearance in BSSAP-LE message (R98)	Siemens	Approved

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GP-012022	CR 09.31-A027 Define IE's order of appearance in BSSAP-LE message (R99)	Siemens	Approved
GP-012211	CR 09.31-A028 Define number of keys in Deciphering Keys IE (R98)	Nortel Networks, Siemens	Revised
GP-012823	CR 09.31-A028 rev 1 Define number of keys in Deciphering Keys IE (R98)	Siemens, Nortel	Approved
GP-012212	CR 09.31-A029 Define number of keys in Deciphering Keys IE (R99)	Nortel Networks, Siemens	Revised
GP-012807	CR 09.31-A029 rev 1 Define number of keys in Deciphering Keys IE (R99)	Siemens,Nortel	Approved
GP-012625	CR 09.95-A003 Support of Early Classmark Sending by an PBCCH capable cell (R97)	Siemens	Revised
GP-012828	CR 09.95-A003 rev 1 Support of Early Classmark Sending by an PBCCH capable cell (R97)	Siemens	Approved
GP-012626	CR 09.95-A004 Support of Early Classmark Sending by an PBCCH capable cell (R98)	Siemens	Revised
GP-012829	CR 09.95-A004 rev 1 Support of Early Classmark Sending by an PBCCH capable cell (R98)	Siemens	Approved
GP-012124	CR 11.10-4-A006 Corrections for Test Case 27.22.4.7 (REFRESH) (R96) (G5-010107)	GERAN WG5	Approved
GP-012125	CR 11.10-4-A007 Corrections for Test Case 27.22.5.2 (SMS-CB Data Download) (R96) (G5-010108)	GERAN WG5	Approved
GP-012570	CR 24.008-354 rev 2 Introduction of a revision level indicator 2 in the MS Radio Access Capability IE and MS Classmark 3 IE (Rel 4)	Alcatel	Withdrawn
GP-012624	CR 24.008-510 Clarification on the EDGE parameters in the Mobile Station Classmark 3 IE (Rel 5)	Siemens	NA
GP-012419	CR 24.008-Axxx High multislot classes for type 1 mobiles (Rel 5)	BT, Motorola	NA
GP-012716	CR 24.008-xxx High multislot classes for type 1 mobiles (Rel-5)	BT, Motorola	NA - Withdrawn
GP-012484	CR 25.331-xxx Corrections to RRC containers	Ericsson	NA
GP-012485	CR 25.413-xxx Corrections to RRC containers	Ericsson	NA
GP-012459	CR 43.051-033 Introduction of support for MSC/SGSN in pool in GERAN Iu mode (Rel 5)	Ericsson	Postponed
GP-012460	CR 43.051-034 Inclusion of GERAN Iu Internal Cell Identity CI (Rel 5)	Ericsson	Revised
GP-012706	CR 43.051-034 rev 1 Inclusion of GERAN Iu Internal Cell Identity CI (Rel-5)	Ericsson	Revised
GP-012834	CR 43.051-034 rev 2 Inclusion of GERAN Iu Internal Cell Identity CI (Rel-5)	Ericsson	Approved
GP-012559	CR 43.051-035 Removal of Fast Random Access (Rel 5)	Nokia	Revised
GP-012705	CR 43.051-035 rev 1 Removal of Fast Random Access from GERAN Rel5 Iu	Nokia	Approved
GP-011988	CR 43.059-012 Inter NSE Cell Change for LCS for GPRS (Rel 5)	Ericsson	Revised

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GP-012710	CR 43.059-012 rev 1 Inter NSE Cell Change for LCS for GPRS (Rel 5)	Ericsson	Revised
GP-012801	CR 43.059-012 rev 2 Inter NSE Cell Change for LCS for GPRS (Rel-5)	Ericsson	Revised
GP-012836	CR 43.059-012 rev 3 Inter NSE Cell Change for LCS for GPRS (Rel-5)	Ericsson	Approved
GP-011992	CR 43.059-013 Correction of Perform Location Information (Rel 5)	Ericsson	Withdrawn
GP-011993	CR 43.059-014 Clean-up CR for LCS for GPRS (Rel 5)	Ericsson	Approved
GP-011997	CR 43.059-015 Correction of Inconsistent Text (Rel 4)	Ericsson	Approved
GP-011998	CR 43.059-016 Correction of Inconsistent Text (Rel 5)	Ericsson	Approved
GP-012209	CR 43.059-017 Error Handling for E-OTD and GPS (Rel 4)	Siemens	Approved
GP-012210	CR 43.059-018 Error Handling for E-OTD and GPS (Rel 5)	Siemens	Approved
GP-012215	CR 43.059-019 Use of TOM signaling to support LCS for Gb Mode (Rel 5)	Siemens	Revised
GP-012822	CR 43.059-019 rev 1 Use of TOM signaling to support LCS for Gb Mode (Rel-5)	Siemens	Approved
GP-012280	CR 43.059-021 Editorial revision definition section for TS 43.059 (Rel 5)	Nokia	Approved
GP-012576	CR 43.059-022 Inter NSE Cell Change for LCS for GPRS (Rel 5)	Alcatel	Withdrawn
GP-012506	CR 43.064-004 Coding rate of MCS3 (Rel 4)	Nokia	Approved
GP-012525	CR 43.064-005 Clarification of EGPRS MS USF decoding (REL-4)	Ericsson	Approved
GP-012226	CR 44.004-003 Removal of Enhanced Power Control (Rel 4)	MCC	Approved
GP-012310	CR 44.004-004 Editorial Corrections (Rel 5)	MCC	Approved
GP-012311	CR 44.004-005 Editorial Corrections (Rel 4)	MCC	Approved
GP-012357	CR 44.004-006 Enhanced Power Control Alignment with 48.058 (Rel-5)	Ericsson	Approved
GP-012574	CR 44.018-104 rev 1 Backward compatibility problem in SI2ter Rest octets (Rel 4)	Alcatel	Approved
GP-012575	CR 44.018-105 rev 1 Backward compatibility problem in SI2ter Rest octets (Rel 5)	Alcatel	Approved
GP-012023	CR 44.018-106 Removal of TOA positioning method (Rel 4)	Alcatel	Approved
GP-012024	CR 44.018-107 rev 1 Removal of TOA positioning method (Rel 5)	Alcatel	Approved
GP-012025	CR 44.018-110 rev 2 Introduction of Signalling for Adaptive multi rate speech channel at 8-PSK half rate (O-TCH/AHS) (Rel 5)	Nokia	Approved

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GP-012001	CR 44.018-111 Re-inserting of erroneusly deleted paragraphs in 44.018 (Rel 5)	MCC	Approved
GP-012169	CR 44.018-112 Editorial Corrections (Rel 5)	MCC	Approved
GP-012316	CR 44.018-113 Transparent UMTS specific information in Classmark Change (Rel 4)	Ericsson	Revised
GP-012636	CR 44.018-113 rev 1 Transparent UMTS specific information in Classmark Change (Rel 4)	Ericsson	Revised
GP-012689	CR 44.018-113 rev 2 Transparent UMTS specific information in Classmark Change (Rel-4)	Ericsson	Approved
GP-012317	CR 44.018-114 Transparent UMTS specific information in Classmark Change (Rel 5)	Ericsson	Revised
GP-012637	CR 44.018-114 rev 1 Transparent UMTS specific information in Classmark Change (Rel 5)	Ericsson	Revised
GP-012690	CR 44.018-114 rev 2 Transparent UMTS specific information in Classmark Change (Rel-5)	Ericsson	Approved
GP-012380	CR 44.018-115 Introduction of GPRS-State-dependant search/cell-reselection to UTRAN (Rel-5) - Withdrawn	Vodafone	Withdrawn
GP-012383	CR 44.018-116 Clarification of the term primary scrambling code (Rel-4)	Vodafone	Approved
GP-012384	CR 44.018-117 Clarification of the term primary scrambling code (Rel-5)	Vodafone	Approved
GP-012388	CR 44.018-118 Number of cells in the 3G Neighbour Cell list (Rel-4)	Vodafone	Revised
GP-012696	CR 44.018-118 rev 1 Number of cells in the 3G Neighbour Cell list (Rel-4)	Vodafone	Withdrawn
GP-012389	CR 44.018-119 Number of cells in the 3G Neighbour Cell list (Rel-5)	Vodafone	Revised
GP-012697	CR 44.018-119 rev 1 Number of cells in the 3G Neighbour Cell list (Rel-5)	Vodafone	Withdrawn
GP-012415	CR 44.018-120 RTD order/presence in Measurement Information and SI2Quarter (Rel 4)	Motorola	Withdrawn
GP-012416	CR 44.018-121 RTD order/presence in Measurement Information and SI2Quarter (Rel 5)	Motorola	Withdrawn
GP-012417	CR 44.018-122 RA colour vs RA code clarification (Rel 4)	Motorola	Revised
GP-012686	CR 44.018-122 rev 1 RA colour vs RA code clarification (Rel-4)	Motorola	Approved
GP-012418	CR 44.018-123 RA colour vs RA code clarification (Rel 5)	Motorola	Revised
GP-012687	CR 44.018-123 rev 1 RA colour vs RA code clarification (Rel-5)	Motorola	Approved
GP-012422	CR 44.018-124 Alignment of ASSIGNMENT CMD, HO CMD and CH MOD MOD for AMR (Rel 4)	Motorola	Revised
GP-012719	CR 44.018-124 rev 1 Alignment of ASSIGNMENT CMD, HO CMD and CH MOD MOD for AMR (Rel-4)	Motorola	Approved
GP-012423	CR 44.018-125 Alignment of ASSIGNMENT CMD, HO CMD and CH MOD MOD for AMR (Rel 5)	Motorola	Revised

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GP-012720	CR 44.018-125 rev 1 Alignment of ASSIGNMENT CMD, HO CMD and CH MOD MOD for AMR (Rel-5)	Motorola	Approved
GP-012442	CR 44.018-126 Correction on Ciphering Mode Setting IE in HANDOVER COMMAND (Rel 4)	Nokia	Revised
GP-012701	CR 44.018-126 rev 1 Correction on Ciphering Mode Setting IE in HANDOVER COMMAND (Rel-4)	Nokia	Approved
GP-012444	CR 44.018-127 Correction on Ciphering Mode Setting IE in HANDOVER COMMAND (Rel 5)	Nokia	Revised
GP-012702	CR 44.018-127 rev 1 Correction on Ciphering Mode Setting IE in HANDOVER COMMAND (Rel-5)	Nokia	Approved
GP-012446	CR 44.018-128 Correction on GSM400 measurement parameter coding (Rel-4)	Nokia	Approved
GP-012796	CR 44.018-128 rev 1Correction on GSM400 measurement parameter coding (Rel-4)	Nokia	Withdrawn
GP-012447	CR 44.018-129 Correction on GSM400 measurement parameter coding (Rel-5)	Nokia	Approved
GP-012797	CR 44.018-129 rev 1 Correction on GSM400 measurement parameter coding (Rel-5)	Nokia	Withdrawn
GP-012517	CR 44.018-130 Backward compatibility problem in SI2ter Rest Octets, alternative 2 (REL-4)	Ericsson	Withdrawn
GP-012518	CR 44.018-131 Backward compatibility problem in SI2ter Rest Octets, alternative 2 (REL-5)	Ericsson	Withdrawn
GP-012681	CR 44.018-132 Support of Early Classmark Sending by an PBCCH capable cell (Rel-4)	Siemens	Revised
GP-012826	CR 44.018-132 rev 1 Support of Early Classmark Sending by an PBCCH capable cell (Rel-4)	Siemens	Approved
GP-012682	CR 44.018-133 Support of Early Classmark Sending by an PBCCH capable cell (Rel-5)	Siemens	Revised
GP-012827	CR 44.018-133 rev 1 Support of Early Classmark Sending by an PBCCH capable cell (Rel-5)	Siemens	Approved
GP-012708	CR 44.018-134 Training Sequence Code on PBCCH/PCCCH (Rel-4)	Ericsson	Approved
GP-012709	CR 44.018-135 Training Sequence Code on PBCCH/PCCCH (Rel-5)	Ericsson	Approved
GP-012432	CR 44.018-136 Support of Early Classmark Sending by an PBCCH capable cell (Rel 4)	Siemens	Revised
GP-012676	CR 44.018-136 rev 1 Support of Early Classmark Sending by an PBCCH capable cell (Rel-4)	Siemens	Approved
GP-012433	CR 44.018-137 Support of Early Classmark Sending by an PBCCH capable cell (Rel 5)	Siemens	Revised
GP-012677	CR 44.018-137 rev 1 Support of Early Classmark Sending by an PBCCH capable cell (Rel-5)	Siemens	Approved
GP-012026	CR 44.031-011 RRLP - Correction of Error Handling Procedures (Rel 4)	Siemens	Approved
GP-012027	CR 44.031-012 RRLP - Remove references to NSS based SMLC (Rel 4)	Siemens	Withdrawn
GP-011982	CR 44.031-013 rev 1 Corrections to Rough RTD, Multiframe Offset and Expected OTD Ranges (Rel 4)	Nokia	Approved

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GP-011983	CR 44.031-014 rev 1 Corrections to Rough RTD, Multiframe Offset and Expected OTD Ranges (Rel 5)	Nokia	Approved
GP-012028	CR 44.031-015 Expected OTD and its uncertainty values are missing from Assistance Data component. (Rel 4)	Nokia	Approved
GP-012029	CR 44.031-016 Expected OTD and its uncertainty values are missing from Assistance Data component. (Rel 5)	Nokia	Approved
GP-012030	CR 44.031-017 Correction to Toc and Toe ephemeris parameters (Rel 4)	Ericsson	Approved
GP-012031	CR 44.031-018 Correction to Toc and Toe ephemeris parameters (Rel 5)	Ericsson	Approved
GP-012032	CR 44.031-019 Assistance data (Rel 5)	Siemens	Approved
GP-012033	CR 44.031-022 RRLP - Correction of Error Handling Procedures (Rel 5)	Siemens	Approved
GP-012034	CR 44.031-023 RRLP - Remove references to NSS based SMLC (Rel 5)	Siemens	Withdrawn
GP-012170	CR 44.031-024 Editorial Corrections (Rel 5)	MCC	Approved
GP-012219	CR 44.031-025 RRLP - Remove references to NSS based SMLC (Rel 4)	Siemens	Approved
GP-012220	CR 44.031-026 RRLP - Remove references to NSS based SMLC (Rel 5)	Siemens	Approved
GP-012308	CR 44.031-027 "Expected" Multiframe Offset (Rel 4)	Ericsson, Siemens	Approved
GP-012309	CR 44.031-028 "Expected" Multiframe Offset (Rel 5)	Ericsson, Siemens	Approved
GP-012543	CR 44.031-029 Correction of Reference Frame in Location Information Element (Rel 4)	Motorola	Revised
GP-012817	CR 44.031-029 rev 1 Correction of Reference Frame in Location Information Element (Rel-4)	Motorola	Revised
GP-012846	CR 44.031-029 rev 2 Correction of Reference Frame in Location Information Element (Rel-4)	Motorola	Approved
GP-012544	CR 44.031-030 Correction of Reference Frame in Location Information Element (Rel 5)	Motorola	Revised
GP-012818	CR 44.031-030 rev 1 Correction of Reference Frame in Location Information Element (Rel-5)	Motorola	Revised
GP-012847	CR 44.031-030 rev 2 Correction of Reference Frame in Location Information Element (Rel-5)	Motorola	Approved
GP-012035	CR 44.035-001 rev 1 Definition of RTD clarified. (Rel 4)	Nokia	Approved
GP-011986	CR 44.035-003 rev 1 Correction to Sectored Channels BTS ID Definition IE	Nokia	Approved
GP-012036	CR 44.035-005 Definition of Reference Time IE corrected. (Rel 4)	Nokia	Approved
GP-012037	CR 44.035-007 rev 1 Defined range for Multiframe Offset Values IE. Range of 51 multiframe offset is 0 - 50. (Rel 4)	Nokia	Approved
GP-012038	CR 44.060-061 rev 1 Countdown Value for EGPRS (Rel 4)	Nokia	Approved

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GP-012039	CR 44.060-066 Clarification of TLLI_BLOCK_CHANNEL_CODING field (Rel 4)	Ericsson	Approved
GP-012040	CR 44.060-067 Correction of abnormal release without retry (Rel 4)	Ericsson	Approved
GP-012041	CR 44.060-068 rev 1 Clarification of network behaviour for NACC (Rel-4)	Ericsson	Approved
GP-012042	CR 44.060-070 rev 1 FREQUENCY_DIFF field in Packet Cell CHange Order message (Rel 5)	Alcatel	Revised
GP-012695	CR 44.060-070 rev 2 FREQUENCY_DIFF field in Packet Cell CHange Order message (Rel-4)	Alcatel	Approved
GP-012427	CR 44.060-072 rev 1 Support of Early Classmark Sending by an PBCCH capable cell (Rel 4)	Siemens	Revised
GP-012684	CR 44.060-072 rev 2 Support of Early Classmark Sending by an PBCCH capable cell (Rel-4)	Siemens	Approved
GP-012428	CR 44.060-073 rev 1 Support of Early Classmark Sending by an PBCCH capable cell (Rel 5)	Siemens	Withdrawn
GP-012585	CR 44.060-074 rev 3 Clarification of EGPRS MS USF decoding (Rel 4)	Ericsson	Approved
GP-012560	CR 44.060-076 Rel 5 Chapter 8 (Rel 5)	Nokia, Siemens, Vodafone	Postponed
GP-012561	CR 44.060-077 Rel 5 Chapter 9 (Rel 5)	Nokia	Postponed
GP-012043	CR 44.060-078 rev 1 Contention resolution at one-phase access for EGPRS (correction) (Rel 4)	Nokia	Approved
GP-012225	CR 44.060-082 Correction for Packet Enhanced Measurement Report (Rel 4)	Nokia	Approved
GP-012381	CR 44.060-083 Introduction of GPRS-State-dependant search/cell-reselection to UTRAN (Rel-5) - Withdrawn	Vodafone	Withdrawn
GP-012386	CR 44.060-084 Clarification of the term primary scrambling code (Rel-4)	Vodafone	Approved
GP-012391	CR 44.060-085 Number of cells in the 3G Neighbour Cell list (Rel-4)	Vodafone	Revised
GP-012699	CR 44.060-085 rev 1 Number of cells in the 3G Neighbour Cell list (Rel-4)	Vodafone	Withdrawn
GP-012450	CR 44.060-086 Removal of T3198 (Rel 4)	Nokia, Ericsson	Revised
GP-012694	CR 44.060-086 rev 1 Removal of T3198 (Rel-4)	Nokia	Approved
GP-012448	CR 44.060-087 Correction on GSM400 measurement parameter coding (Rel-4)	Nokia	Revised
GP-012798	CR 44.060-087 rev 1 Correction on GSM400 measurement parameter coding (Rel-4)	Nokia	Approved
GP-012511	CR 44.060-088 Random distribution of PRACH messages (Rel-4)	Ericsson	Approved
GP-012515	CR 44.060-089 Training Sequence Code on PBCCH/PCCCH (Rel-4)	Ericsson	Revised
GP-012707	CR 44.060-089 rev 1 Training Sequence Code on PBCCH/PCCCH (Rel-4)	Ericsson	Approved

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GP-012453	CR 44.060-090 updated section 4 (Rel 5)	Siemens	Postponed
GP-012455	CR 44.060-091 Updated Section 7 (Rel 5)	Siemens	Postponed
GP-012565	CR 44.060-092 Correction on extended UL TBF (Rel 4)	Alcatel	Rejected
GP-012569	CR 44.060-093 Clarification regarding mandatory protocol extensions introduced in release 4 (Rel 4)	Alcatel	Withdrawn
GP-012607	CR 44.060-094 EGPRS Compressed Receive Block Bitmap (Rel 4)	Ericsson	Approved
GP-012558	CR 44.060-095 RLC/MAC Proposal for FACCH, SACCH and SDCCH (Rel 5)	Nokia	Postponed
GP-012627	CR 44.060-096 Clarification regarding RRBP handling in the Packet Cell Change Order message (Rel 4)	Alcatel	Approved
GP-012672	CR 44.060-097 Correction to Packet Timeslot reconfigure Rel-4	Ericsson	Approved
GP-012713	CR 44.060-098 Correction of minimum number of paging blocks "available" on one PCCCH (Rel-5)	Alcatel	Postponed
GP-012804	CR 44.060-099 Introduction of feature indicator (Rel 4)	Ericsson	Revised
GP-012824	CR 44.060-099 rev 1 Introduction of feature indicator (Rel 4)	Ericsson	Revised
GP-012848	CR 44.060-099 rev 2 Introduction of feature indicator (Rel 4)	Ericsson	Approved
GP-012044	CR 44.071-005 Correction of Reporting Period range IE in RIT Measurement Request message (Rel 4)	Siemens	Approved
GP-012218	CR 44.071-009 Correction of inconsistent text information in Location Service Message type IE (Rel 4)	Siemens	Approved
GP-012350	CR 45.001-004 Introduction of adaptive half rate speech channels with 8-PSK modulation (Rel-5)	Nokia, Ericsson	Approved
GP-012363	CR 45.001-005 Correction of description AMR channel convolutional code rate (Rel-4)	Ericsson	Approved
GP-012364	CR 45.001-006 Correction of description Wideband AMR channel coding (Rel-5)	Ericsson	Approved
GP-012366	CR 45.001-007 Correction of references to relevant 3GPP TSs (Rel-4)	Ericsson	Revised
GP-012766	CR 45.001-007 rev 1 Correction of references to relevant 3GPP TSs (Rel-4)	Ericsson	Approved
GP-012367	CR 45.001-008 Correction of references to relevant 3GPP TSs (Rel-5)	Ericsson	Revised
GP-012767	CR 45.001-008 rev 1Correction of references to relevant 3GPP TSs (Rel-5)	Ericsson	Approved
GP-012508	CR 45.001-009 Coding rate of MCS3 (Rel 4)	Nokia	Approved
GP-012509	CR 45.001-010 Coding rate of MCS (Rel 5)	Nokia	Approved
GP-012302	CR 45.002-023 E-OTD and Dummy Bursts on the BCCH Carrier (Rel 4)	Ericsson	Rejected

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GP-012303	CR 45.002-024 E-OTD and Dummy Bursts on the BCCH Carrier (Rel 5)	Ericsson	Rejected
GP-012351	CR 45.002-025 Introduction of adaptive half rate speech channels with 8-PSK modulation (Rel-5)	Nokia, Ericsson	Revised
GP-012746	CR 45.002-025 rev 1 Introduction of adaptive half rate speech channels with 8-PSK modulation (Rel-5)	Nokia, Ericsson	Approved
GP-012365	CR 45.002-026 Editorial correction of average number of symbol periods in a time slot (Rel-4)	Ericsson	Rejected
GP-012368	CR 45.002-027 Correction of references to 3GPP specifications (Rel-4)	Ericsson	Revised
GP-012768	CR 45.002-027 rev 1 Correction of references to 3GPP specifications (Rel-4)	Ericsson	Approved
GP-012369	CR 45.002-028 Correction of references to 3GPP specifications (Rel-5)	Ericsson	Revised
GP-012769	CR 45.002-028 rev 1Correction of references to 3GPP specifications (Rel-5)	Ericsson	Approved
GP-012413	CR 45.002-029 High multislot classes for type 1 mobiles (Rel 5)	BT, Motorola	Revised
GP-012762	CR 45.002-029 rev 1 High multislot classes for type 1 mobiles (Rel 5)	Motorola	Approved
GP-012522	CR 45.002-030 Training Sequence Code on PBCCH/PCCCH (Rel 4)	Ericsson	Rejected
GP-012523	CR 45.002-031 Training Sequence Code on PBCCH/PCCCH (Rel 5)	Ericsson	Revised
GP-012649	CR 45.002-031 rev 1 Training Sequence Code on PBCCH/PCCCH (Rel 5)	Ericsson	Approved
GP-012629	CR 45.002-032 Correction of minimum number of paging blocks "available" on one PCCCH (Rel 4)	Alcatel	Rejected
GP-012630	CR 45.002-033 Correction of minimum number of paging blocks "available" on one PCCCH (Rel 5)	Alcatel	Approved
GP-012370	CR 45.003-009 Correction of references to relevant 3GPP TSs (Rel-4)	Ericsson	Revised
GP-012770	CR 45.003-009 rev 1 Correction of references to relevant 3GPP TSs (Rel-4)	Ericsson	Approved
GP-012371	CR 45.003-010 Correction of references to relevant 3GPP TSs (Rel-5)	Ericsson	Revised
GP-012771	CR 45.003-010 rev 1 Correction of references to relevant 3GPP TSs (Rel-5)	Ericsson	Approved
GP-012283	CR 45.003-011 Update of channel coding and interleaving organization (Rel 5)	Siemens	Withdrawn
GP-012284	CR 45.003-012 Update of channel coding and interleaving organization (Rel 5)	Siemens	Revised
GP-012650	CR 45.003-012 rev 1 Update of channel coding and interleaving organization (Rel 5)	Siemens	Approved
GP-012504	CR 45.003-013 Addition of RATSCCH for TCH/WFS (Rel 5)	Nokia	Postponed
GP-012758	CR 45.003-014 Correction of interleaving index	Siemens	Approved

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GP-012359	CR 45.004-002 Correction of tail bits for 8PSK normal burst (REL-4)	Ericsson	Approved
GP-012360	CR 45.004-003 Correction of tail bits for 8PSK normal burst (REL-5)	Ericsson	Approved
GP-012372	CR 45.004-004 Correction of references to relevant 3GPP TSs (Rel-4)	Ericsson	Approved
GP-012352	CR 45.005-007 rev 2 Introduction of requirements for adaptive half rate speech channels with 8-PSK modulation (Rel-5)	Ericsson	Revised
GP-012747	CR 45.005-007 rev 3 Introduction of requirements for adaptive half rate speech channels with 8-PSK modulation (Rel-5)	Ericsson	Approved
GP-012373	CR 45.005-035 Correction of references to relevant 3GPP TSs (Rel-4)	Ericsson	Revised
GP-012772	CR 45.005-035 rev 1 Correction of references to relevant 3GPP TSs (Rel-4)	Ericsson	Approved
GP-012374	CR 45.005-036 Correction of references to relevant 3GPP TSs (Rel-5)	Ericsson	Revised
GP-012773	CR 45.005-036 rev 1 Correction of references to relevant 3GPP TSs (Rel-5)	Ericsson	Approved
GP-012777	CR 45.005-037 Correction to wideband AMR receiver performance tables	Nokia	Approved
GP-012793	CR 45.005-038 Introduction of AMR-WB Rx performance (Rel 5)	Nokia	Postponed
GP-012222	CR 45.008-060 Clarification on Packet Enhanced Measurement Reporting (Rel 4)	Nokia	Approved
GP-012223	CR 45.008-061 Clarification on Packet Enhanced Measurement Reporting (Rel 5)	Nokia	Approved
GP-012353	CR 45.008-062 Introduction of adaptive half rate speech channels with 8-PSK modulation (Rel-5)	Nokia, Ericsson	Approved
GP-012356	CR 45.008-063 Introduction of accuracy requirements for RXQUAL_EPC (REL-5)	Ericsson	Approved
GP-012375	CR 45.008-064 Correction of references to relevant 3GPP specifications (Rel-4)	Ericsson	Revised
GP-012774	CR 45.008-064 rev 1 Correction of references to relevant 3GPP specifications (Rel-4)	Ericsson	Approved
GP-012376	CR 45.008-065 Correction of references to relevant 3GPP specifications (Rel-5)	Ericsson	Revised
GP-012775	CR 45.008-065 rev 1 Correction of references to relevant 3GPP specifications (Rel-5)	Ericsson	Approved
GP-012392	CR 45.008-066 Introduction of GPRS-State-dependant search/cell-reselection to UTRAN (Rel 5)	Vodafone	Withdrawn
GP-012394	CR 45.008-067 Clarification of the cell-reselection to UTRAN (Rel 4)	Vodafone	Withdrawn
GP-012396	CR 45.008-068 Number of cells/frequencies to be monitored by a dual mode terminal (Rel 4)	Vodafone	Approved
GP-012397	CR 45.008-069 Number of cells/frequencies to be monitored by a dual mode terminal (Rel 5)	Vodafone	Approved

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GP-012409	CR 45.008-070 Correction of parameters related to enhanced and 3G measurements (Rel 4)	Motorola	Revised
GP-012760	CR 45.008-070 rev 1 Correction of parameters related to enhanced and 3G measurements (Rel 4)	Motorola	Approved
GP-012410	CR 45.008-071 Correction of parameters related to enhanced and 3G measurements (Rel 5)	Motorola	Revised
GP-012761	CR 45.008-071 rev 1 Correction of parameters related to enhanced and 3G measurements (Rel 5)	Motorola	Approved
GP-012411	CR 45.008-072 NDRX definition (Rel 4)	Motorola	Rejected
GP-012412	CR 45.008-073 NDRX definition (Rel 5)	Motorola	Approved
GP-012486	CR 45.008-074 Corrections and improvements for abnormal cell reselection (Rel 4)	Telia, Nokia	Rejected
GP-012487	CR 45.008-075 Corrections and improvements for abnormal cell reselection (Rel 5)	Telia, Nokia	Approved
GP-012489	CR 45.008-076 Clarification on UTRAN FDD RSSI reporting (Rel 4)	Nokia	Approved
GP-012490	CR 45.008-077 Clarification on UTRAN FDD RSSI reporting (Rel 5)	Nokia	Approved
GP-012492	CR 45.008-078 Alignment of REPORT_TYPE parameter definition according to 04.18 & 04.60 (Rel 4)	Nokia	Withdrawn
GP-012493	CR 45.008-079 Alignment of REPORT_TYPE parameter definition according to 04.18 & 04.60 (Rel 5)	Nokia	Withdrawn
GP-012495	CR 45.008-080 Clarification on the applicability of the SERVING_BAND_REPORTING (Rel 4)	Nokia	Revised
GP-012764	CR 45.008-080 rev 1 Clarification on the applicability of the SERVING_BAND_REPORTING (Rel 4)	Nokia	Withdrawn
GP-012496	CR 45.008-081 Clarification on the applicability of the SERVING_BAND_REPORTING (Rel 5)	Nokia	Revised
GP-012765	CR 45.008-081 rev 1 Clarification on the applicability of the SERVING_BAND_REPORTING (Rel 5)	Nokia	Withdrawn
GP-012498	CR 45.008-082 Alignment of predefined configuration handling according to RAN 2 views (Rel 4)	Nokia	Approved
GP-012499	CR 45.008-083 Alignment of predefined configuration handling according to RAN 2 views (Rel 5)	Nokia	Approved
GP-012354	CR 45.009-003 Introduction of adaptive half rate speech channels with 8-PSK modulation (Rel-5)	Nokia, Ericsson	Approved
GP-012377	CR 45.009-004 Correction of references to relevant 3GPP specifications (Rel-4)	Ericsson	Approved
GP-012378	CR 45.009-005 Correction of references to relevant 3GPP specifications (Rel-5)	Ericsson	Approved
GP-012406	CR 45.009-006 CHANNEL MODE MODIFY, phase and RATSCCH (Rel 4)	Motorola	Revised
GP-012743	CR 45.009-006 rev 1 CHANNEL MODE MODIFY, phase and RATSCCH (Rel 4)	Motorola	Approved
GP-012407	CR 45.009-007 CHANNEL MODE MODIFY, phase and RATSCCH (Rel 5)	Motorola	Revised

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GP-012744	CR 45.009-007 rev 1 CHANNEL MODE MODIFY, phase and RATSCCH (Rel 5)	Motorola	Approved
GP-012379	CR 45.010-001 Correction of references to relevant 3GPP TSs (Rel-4)	Ericsson	Revised
GP-012776	CR 45.010-001 rev 1 Correction of references to relevant 3GPP TSs (Rel-4)	Ericsson	Approved
GP-012045	CR 48.002-002 Correction of wrongly implemented CR (Rel 4)	G2-secretary	Approved
GP-012046	CR 48.008-034 rev 1 Introduction of Signalling for Adaptive multi rate speech channel at 8-PSK half rate (O-TCH/AHS) (Rel 5)	Nokia	Approved
GP-012319	CR 48.008-035 Transparent RRC containers in 2G-3G Handover Signalling (Rel-4)	Ericsson	Revised
GP-012639	CR 48.008-035 rev 1 Transparent RRC containers in 2G-3G Handover Signalling (Rel-4)	Ericsson	Revised
GP-012691	CR 48.008-035 rev 2 Transparent RRC containers in 2G-3G Handover Signalling (Rel-4)	Ericsson	Revised
GP-012831	CR 48.008-035 rev 3 Transparent RRC containers in 2G-3G Handover Signalling (Rel-4)	Ericsson	Approved
GP-012320	CR 48.008-036 Transparent RRC containers in 2G-3G Handover Signalling (Rel 5)	Ericsson	Revised
GP-012640	CR 48.008-036 rev 1 Transparent RRC containers in 2G-3G Handover Signalling (Rel 5)	Ericsson	Revised
GP-012692	CR 48.008-036 rev 2 Transparent RRC containers in 2G-3G Handover Signalling (Rel-5)	Ericsson	Revised
GP-012832	CR 48.008-036 rev 3 Transparent RRC containers in 2G-3G Handover Signalling (Rel-5)	Ericsson	Approved
GP-012171	CR 48.016-005 Editorial Corrections (Rel 5)	MCC	Approved
GP-011989	CR 48.018-047 rev 1 Inter NSE Cell Change for LCS for GPRS (Rel 5)	Ericsson	Revised
GP-012711	CR 48.018-047 rev 2 Inter NSE Cell Change for LCS for GPRS (Rel 5)	Ericsson	Revised
GP-012802	CR 48.018-047 rev 3 Inter NSE Cell Change for LCS for GPRS (Rel-5)	Ericsson	Approved
GP-012047	CR 48.018-048 Correction of Feature Bitmap IE (Rel 5)	Ericsson	Approved
GP-012048	CR 48.018-050 Cleanup for LCS for GPRS (Rel 5)	Ericsson	Approved
GP-012164	CR 48.018-051 Correction of code points in IEI (Rel 4)	MCC	Rejected
GP-012165	CR 48.018-052 Correction of code points in IEI (Rel 5)	MCC	Rejected
GP-012167	CR 48.018-053 Correction of code points in IEI (Rel 4)	MCC	Rejected
GP-012168	CR 48.018-054 Correction of code points in IEI (Rel 5)	MCC	Rejected
GP-012172	CR 48.018-055 Editorial Corrections (Rel 5)	MCC	Approved

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GP-012304	CR 48.018-056 LCS Capabilities refer to 24.008 (Rel 5)	Ericsson, Siemens	Approved
GP-012461	CR 48.018-057 Introduction of RAN Information Management (Rel 5)	Ericsson	Postponed
GP-012540	CR 48.018-058 Introduction of Global CN-ID when CS paging is done via the PS domain (Rel 5)	Ericsson	Postponed
GP-012577	CR 48.018-059 Inter NSE Cell Change for LCS for GPRS (Rel 5)	Alcatel	Withdrawn
GP-012578	CR 48.018-060 Alternative solution for Inter NSE Cell Change for LCS for GPRS (Rel 5)	Alcatel	Withdrawn
GP-012049	CR 48.051-001 rev 1 Correction of phrasing error (Rel 4)	G2-secretary	Approved
GP-012050	CR 48.058-003 Introduction of Signalling for Adaptive multi rate speech channel at 8-PSK half rate (O-TCH/AHS) (Rel 5)	Nokia	Approved
GP-012173	CR 48.058-004 Editorial Corrections (Rel 5)	MCC	Approved
GP-012051	CR 48.071-003 Correction of faulty reference (Rel 4)	Ericsson	Approved
GP-011996	CR 48.071-005 rev 1 Cell Identity for Measurement Report (Rel 4)	Ericsson	Withdrawn
GP-012567	CR 48.071-006 Adding of Cell Identifier List related to Measurement report information (Rel 4)	Alcatel	Revised
GP-012820	CR 48.071-006 rev 1 Addition of Cell Identifier List related to Measurement report information (Rel-4)	Alcatel	Approved
GP-012602	CR 48.071-007 Correction of Cause IE reference (Rel 4)	Siemens	Withdrawn
GP-012052	CR 49.031-007 Define IE's order of appearance in BSSAP-LE message (Rel 4)	Siemens	Approved
GP-012053	CR 49.031-008 Define IE's order of appearance in BSSAP-LE message (Rel 5)	Siemens	Approved
GP-012054	CR 49.031-009 Removal of invalid cross reference (Rel 4)	G2-secretary	Approved
GP-012055	CR 49.031-010 Removal of invalid cross reference (Rel 5)	G2-secretary	Approved
GP-011990	CR 49.031-011 rev 1 Inter NSE Cell Change for LCS for GPRS (Rel 5)	Ericsson	Revised
GP-012712	CR 49.031-011 rev 2 Inter NSE Cell Change for LCS for GPRS (Rel 5)	Ericsson	Revised
GP-012803	CR 49.031-011 rev 3 Inter NSE Cell Change for LCS for GPRS (Rel 5)	Ericsson	Approved
GP-011995	CR 49.031-012 rev 1 Cell Identity for Packet Measurement Report (Rel 5)	Ericsson	Postponed
GP-012568	CR 49.031-013 Adding of Cell Identifier List related to Packet Measurement report information (Rel 5)	Alcatel	Approved
GP-012821	CR 49.031-013 rev 1 Addition of Cell Identifier List related to Packet Measurement report information (Rel-5)	Alcatel	Withdrawn
GP-012174	CR 49.031-014 Editorial Corrections (Rel 5)	MCC	Approved

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GP-012213	CR 49.031-015 Define number of keys in Deciphering Keys IE (Rel 4)	Nortel Networks, Siemens	Revised
GP-012808	CR 49.031-015 rev 1 Define number of keys in Deciphering Keys IE (Rel-4)	Siemens,Nortel	Approved
GP-012214	CR 49.031-016 Define number of keys in Deciphering Keys IE (Rel 5)	Nortel Networks, Siemens	Revised
GP-012809	CR 49.031-016 rev 1 Define number of keys in Deciphering Keys IE (Rel-5)	Siemens,Nortel	Approved
GP-012063	CR 51.010-1-332 Clauses 26.6.5.3 and 26.6.5.4 - Handover / successful / finely synchronized (Rel-4) (G5-010045)	GERAN WG5	Approved
GP-012064	CR 51.010-1-333 Clause 27.x – Testing of SIM/ME interface. Alignment of Section 27.x with the core specifications (Rel-4) (G5-010044)	GERAN WG5	Approved
GP-012065	CR 51.010-1-334 Clause 31.11 - Specific message contents and ASN.1 codings (change apply for TC 31.2.1.1.1) (Rel-4) (G5-010041)	GERAN WG5	Approved
GP-012066	CR 51.010-1-335 TC 31.2.1.7.2 - Correction of Test procedure (Rel-4) (G5-010139)	GERAN WG5	Approved
GP-012067	CR 51.010-1-336 Clauses 31.8.3.1, 31.8.3.2.2, 31.8.4.1, 31.8.4.2.2 and 31.11 – Call Restriction (Call Barring) Activation/Deactivation (Rel-4) (G5-010140)	GERAN WG5	Approved
GP-012068	CR 51.010-1-337 TC 31.9.1.2 - Correction of step references in Expected Message Sequence and Specific Message Contents (Rel-4) (G5-010141)	GERAN WG5	Approved
GP-012069	CR 51.010-1-338 Clause 34.2.9.1 and 34.2.9.2 - Multiple SMS mobile originated (Rel-4) (G5-010040)	GERAN WG5	Approved
GP-012070	CR 51.010-1-339 Clause 6.2 – Full hopping lists invalid for GPRS Generic Procedures (Rel-4) (G5-010113)	GERAN WG5	Approved
GP-012071	CR 51.010-1-340 Clause 40 – GPRS default conditions, message contents and macros (Rel-4) (G5-010145)	GERAN WG5	Approved
GP-012072	CR 51.010-1-341 Clause 44.2.1.1.1 GPRS attach / accepted (Rel-4) (G5-010052)	GERAN WG5	Approved
GP-012073	CR 51.010-1-342 Clause 44.2.1.1.3: Modifications to Expected Sequence (Rel-4) (G5-010077)	GERAN WG5	Approved
GP-012074	CR 51.010-1-343 Clause: 44.2.1.1.4 GPRS attach / rejected / PLMN not allowed, 44.2.3.2.4 Combined routing area updating / rejected / PLMN not allowed (Rel-4) (G5-010146)	GERAN WG5	Approved
GP-012075	CR 51.010-1-344 Clause 44.2.1.1.6: Various Modifications (Rel-4) (G5-010078)	GERAN WG5	Approved
GP-012076	CR 51.010-1-345 Clause 44.2.1.2.2 (Rel-4) (G5-010147)	GERAN WG5	Approved
GP-012077	CR 51.010-1-346 Clause 44.2.1.2.3 (Rel-4) (G5-010162)	GERAN WG5	Approved
GP-012078	CR 51.010-1-347 Clause 44.2.1.2.4 Combined GPRS attach / rejected / IMSI invalid / illegal ME (Rel-4) (G5-010150)	GERAN WG5	Approved

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GP-012079	CR 51.010-1-348 Clause 44.2.1.2.5 (Rel-4) (G5-010151)	GERAN WG5	Approved
GP-012080	CR 51.010-1-349 Clause 44.2.1.2.6 Need to ensure mobile performs IMSI Attach procedure (Rel-4) (G5-010152)	GERAN WG5	Approved
GP-012081	CR 51.010-1-350 Clause 44.2.1.2.7 Combined GPRS attach / rejected / location area not allowed (Rel-4) (G5-010153)	GERAN WG5	Approved
GP-012082	CR 51.010-1-351 Clause 44.2.1.2.8 (Rel-4) (G5-010154)	GERAN WG5	Approved
GP-012083	CR 51.010-1-352 Clause 44.2.2.1.2: Correction of Expected Sequence (Rel-4) (G5-010084)	GERAN WG5	Approved
GP-012084	CR 51.010-1-353 Clause 44.2.2.1.2 GPRS detach / accepted (Rel-4) (G5-010059)	GERAN WG5	Approved
GP-012085	CR 51.010-1-354 Clause 44.2.2.1.3: Various Corrections (Rel-4) (G5-010085)	GERAN WG5	Approved
GP-012086	CR 51.010-1-355 Clause 44.2.2.1.4: Correction of Expected Sequence (Rel-4) (G5-010086)	GERAN WG5	Approved
GP-012087	CR 51.010-1-356 Clause 44.2.2.1.8: Correction of Expected Sequence (Rel-4) (G5-010087)	GERAN WG5	Approved
GP-012088	CR 51.010-1-357 Clause 44.2.2.2.1 GPRS detach / re-attach not required / accepted (Rel-4) (G5-010063)	GERAN WG5	Approved
GP-012089	CR 51.010-1-358 Clause 44.2.2.2.2: Correction of Expected Sequence (Rel-4) (G5-010088)	GERAN WG5	Approved
GP-012090	CR 51.010-1-359 Clause 44.2.2.2.5: Correction of Expected Sequence (Rel-4) (G5-010089)	GERAN WG5	Approved
GP-012091	CR 51.010-1-360 Clause 44.2.3.1.2 Routing area updating / rejected / IMSI invalid / illegal ME (Rel-4) (G5-010064)	GERAN WG5	Approved
GP-012092	CR 51.010-1-361 Clause 44.2.3.1.2 (Rel-4) (G5-010090)	GERAN WG5	Approved
GP-012093	CR 51.010-1-362 Clause 44.2.3.1.3 Routing area updating / rejected / MS identity cannot be derived by the network (Rel-4) (G5-010065)	GERAN WG5	Approved
GP-012094	CR 51.010-1-363 Clause 44.2.3.1.3 (Rel-4) (G5-010091)	GERAN WG5	Approved
GP-012095	CR 51.010-1-364 Clause 44.2.3.1.4 (Rel-4) (G5-010092)	GERAN WG5	Approved
GP-012096	CR 51.010-1-365 Clause 44.2.3.1.6 (Rel-4) (G5-010094)	GERAN WG5	Approved
GP-012097	CR 51.010-1-366 Clause 44.2.3.1.7 (Rel-4) (G5-010095)	GERAN WG5	Approved
GP-012098	CR 51.010-1-367 Clause 44.2.3.1.8 (Rel-4) (G5-010096)	GERAN WG5	Approved
GP-012099	CR 51.010-1-368 Clause 44.2.3.2.2 – Circuit switch call handover not indicated in test description (Rel-4) (G5-010157)	GERAN WG5	Approved
GP-012100	CR 51.010-1-369 Clause 44.2.3.2.3: Various Corrections of Test Procedure 2 (Rel-4) (G5-010097)	GERAN WG5	Approved

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GP-012101	CR 51.010-1-370 Clause 44.2.3.2.4 GMM Cause # 11 "PLMN Not Allowed" Used on HPLMN & MM Location Update for Non-Auto Attach MSs missing (Rel-4) (G5-010136)	GERAN WG5	Approved
GP-012102	CR 51.010-1-371 Clause 44.2.3.2.5 GMM Cause # 13 "Roaming Not Allowed in this Location Area" Used on HPLMN & MM Location Update for Non-Auto Attach MSs not included (Rel-4) (G5-010158)	GERAN WG5	Approved
GP-012103	CR 51.010-1-372 Clause 44.2.3.2.6: Various Corrections (Rel-4) (G5-010098)	GERAN WG5	Approved
GP-012104	CR 51.010-1-373 Clause 44.2.3.2.7: Various Corrections (Rel-4) (G5-010099)	GERAN WG5	Approved
GP-012105	CR 51.010-1-374 Update type should be 'combined RA/LA updating with IMSI attach ' in section 44.2.3.3.3 (Rel-4) (G5-010124)	GERAN WG5	Approved
GP-012106	CR 51.010-1-375 Clause 44.2.5.1.2 Authentication rejected (Rel-4) (G5-01070)	GERAN WG5	Approved
GP-012107	CR 51.010-1-376 Clause 44.2.5.2.2 Conformance Requirement 2 Inconsistent with Test Case Title and Expected Sequence (Rel-4) (G5-010138)	GERAN WG5	Approved
GP-012108	CR 51.010-1-377 Clause 45.2.1.1 – need to prevent MS starting update procedure (Rel-4) (G5-010010)	GERAN WG5	Approved
GP-012109	CR 51.010-1-378 Clause 45.2.1.1 Attach initiated by context activation/QoS Offered by Network is the QoS Requested (Rel-4) (G5-010071)	GERAN WG5	Approved
GP-012110	CR 51.010-1-379 Clause 45.2.2 – Extension of reject cause to match conformance requirement (Rel-4) (G5-010012)	GERAN WG5	Approved
GP-012111	CR 51.010-1-380 Clause 45.2.4.2 Collision of MS initiated and network requested PDP context activation (Rel-4) (G5-010160)	GERAN WG5	Approved
GP-012112	CR 51.010-1-381 Clause 46.1.2.2.2.2 Busy condition at the peer, with RR sent for resumption of transmission (Rel-4) (G5-010166)	GERAN WG5	Approved
GP-012113	CR 51.010-1-382 Correction to section 45.5.1 Error cases (Rel-4) (G5-010155)	GERAN WG5	Approved
GP-012114	CR 51.010-1-383 GPRS Attach Type in NMO I (Rel-4) (G5-010163)	GERAN WG5	Approved
GP-012115	CR 51.010-1-384 Clause 44.2.3.1.5 (Rel-4) (G5-010164)	GERAN WG5	Approved
GP-012229	CR 51.010-1-385 on clause 53.2.2.2 - Macro for downlink TBF establishment (PBCCH not present) Rel-4	TSG GERAN WG4	Approved
GP-012230	CR 51.010-1-386 on clause 52.2.4.2.1, Table 52.2.4.2.1/1b - Macro for uplink fixed allocation one phase access (PBCCH not present) Rel-4	TSG GERAN WG4	Approved
GP-012231	CR 51.010-1-387 on clauses 51.2.2.1 to 51.2.2.5 and 51.2.3.1 to 51.2.3.11 - Initiation of the packet access procedure and Packet immediate assignment / One phase packet access Rel-4	TSG GERAN WG4	Approved

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GP-012232	CR 51.010-1-388 on GSM 700 and GSM850 inclusion into clause 41 Rel-4	TSG GERAN WG4	Approved
GP-012233	CR 51.010-1-389 on 52.3.1.1.4 Incorrect Expected Sequence for Uplink TBF Establishment Rel-4	TSG GERAN WG4	Approved
GP-012234	CR 51.010-1-390 on 52.3.2.1.2 Violation of Ttb Class 2/3 MS Rel-4	TSG GERAN WG4	Approved
GP-012235	CR 51.010-1-391 on 52.3.3.1.3, Radio Priority for SMS Rel-4	TSG GERAN WG4	Approved
GP-012236	CR 51.010-1-392 on testcase 43.1.2.3 - Incorrect PDP context Rel-4	TSG GERAN WG4	Approved
GP-012237	CR 51.010-1-393 on testcase 43.1.2.4 - Incorrect PDP context Rel-4	TSG GERAN WG4	Approved
GP-012238	CR 51.010-1-394 on 42.5.2.2 Commencement of Downlink RLC Data Blocks & Completion of Downlink Data Transfer Rel-4	TSG GERAN WG4	Approved
GP-012239	CR 51.010-1-395 on 42.4.3.2.3 Packet Measurement Order Message Rel-4	TSG GERAN WG4	Approved
GP-012240	CR 51.010-1-396 on clause 42.1.2.2.3 - Packet Downlink Assignment / Frequency hopping Rel-4	TSG GERAN WG4	Approved
GP-012241	CR 51.010-1-397 on clause 42.3.4 - Invalid default Packet Timeslot Reconfigure Rel-4	TSG GERAN WG4	Approved
GP-012242	CR 51.010-1-398 on Test case 41.2.1.1 completely re-worked Rel-4	TSG GERAN WG4	Approved
GP-012243	CR 51.010-1-399 on Testcase 41.3.4.2 - Invalid setting of FBI bit in data blocks. Rel-4	TSG GERAN WG4	Approved
GP-012244	CR 51.010-1-400 on testcase 43.1.1.3 - Wrong sequence of flow of data blocks. Rel-4	TSG GERAN WG4	Approved
GP-012245	CR 51.010-1-401 on testcase 41.2.3.2 - Invalid test procedure for two message immediate assignment failure. Rel-4	TSG GERAN WG4	Approved
GP-012246	CR 51.010-1-402 on testcase 41.2.3.10 Access burst content is not correct Rel-4	TSG GERAN WG4	Approved
GP-012247	CR 51.010-1-403 on Specific Message Contents is not consistent in Test cases 42.1.1.1.2 Rel-4	TSG GERAN WG4	Approved
GP-012248	CR 51.010-1-404 on Sec 42 - Invalid use of Packet Timeslot reconfigure message in testcases 42.3.1.1.3, 42.3.1.1.4, 42.3.1.1.9, 42.3.2.2, 42.3.3. Rel-4	TSG GERAN WG4	Approved
GP-012249	CR 51.010-1-405 on Time of check is very long in Test case 41.1.4.2 Rel-4	TSG GERAN WG4	Approved
GP-012250	CR 51.010-1-406 on clause 42.1 - new test case - Non DRX Mode on PCCCH Rel-4	TSG GERAN WG4	Approved
GP-012251	CR 51.010-1-407 on clause 42.1 - new test case - Variable PBCCH and PSI Scheduling Rel-4	TSG GERAN WG4	Approved
GP-012252	CR 51.010-1-408 on 42.5.3.1- T3190 following TBF Starting Time & Completion of Downlink Data Transfer	TSG GERAN WG4	Approved
GP-012253	CR 51.010-1-409 on 42.5.1.2 & 42.5.2.3 - No Timing Advance Value Allocated & Completion of Downlink Data Transfer Rel-4	TSG GERAN WG4	Approved

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GP-012254	CR 51.010-1-410 on 42.5.4.1 & 42.5.4.2- No Timing Advance Allocated & Commencement of Downlink Data Blocks & MS Packet Idle Mode Not Checked Rel-4	TSG GERAN WG4	Approved
GP-012255	CR 51.010-1-411 on 42.5.1.1 No Timing Advance Value Allocated Rel-4	TSG GERAN WG4	Approved
GP-012256	CR 51.010-1-412 on clause 41.3.1 - TBF Release / Uplink / Normal / MS initiated Rel-4	TSG GERAN WG4	Approved
GP-012257	CR 51.010-1-413 on clause 42.3.1.1.5 - Dynamic Allocation / UplinkTransfer / Normal / Close-ended TBF Rel-4	TSG GERAN WG4	Approved
GP-012258	CR 51.010-1-414 on Sec 42.5.5.1 - Invalid calculation of value of timer T3192 Rel-4	TSG GERAN WG4	Approved
GP-012259	CR 51.010-1-415 on clause 43.1.2.4 - Acknowledged mode / Downlink TBF /Re-assembly / Length Indicator/ Incorrect PDP context Rel-4	TSG GERAN WG4	Approved
GP-012260	CR 51.010-1-416 on clause 41.1.1.5.1.3 - Requirement to re-attach the MS after first iteration of test Rel-4	TSG GERAN WG4	Approved
GP-012261	CR 51.010-1-417 on clause 41.2.3.3 - Requirement for Location Update at beginning of test for non auto attach mobiles Rel-4	TSG GERAN WG4	Approved
GP-012262	CR 51.010-1-418 on 52.4.1.2 Ready Timer and Cell Update Procedures Rel-4	TSG GERAN WG4	Approved
GP-012263	CR 51.010-1-419 on clause 41.2.2.3 - Random references for one phase packet access. Rel-4	TSG GERAN WG4	Approved
GP-012264	CR 51.010-1-420 on clauses 51.2.4 - Packet immediate assignment / Single block packet access Rel-4	TSG GERAN WG4	Withdrawn
GP-012265	CR 51.010-1-421 on clause 20.22 - GPRS Cell Selection and Reselection Rel-4	TSG GERAN WG4	Approved
GP-012266	CR 51.010-1-422 on S52.1 EGPRS Tests for MAC procedures on PCCCH in Idle Mode Rel-4	TSG GERAN WG4	Approved
GP-012267	CR 51.010-1-423 on Test cases 42.1.2.8.2.1 and 42.1.2.8.2.2 need more data to be triggered Rel-4	TSG GERAN WG4	Approved
GP-012268	CR 51.010-1-424 on 42.5.2.1.4 TIMING ADVANCE value in PACKET DOWNLINK ASSIGNMENT Rel-4	TSG GERAN WG4	Approved
GP-012269	CR 51.010-1-425 on 42.5.2.2.4 Wrong contents of CRTL_ACK in PCA of step 4 Rel-4	TSG GERAN WG4	Approved
GP-012270	CR 51.010-1-426 on No starting time in 42.5.4.1 Rel-4	TSG GERAN WG4	Approved
GP-012271	CR 51.010-1-427 on No starting time in 42.5.4.2 Rel-4	TSG GERAN WG4	Approved
GP-012272	CR 51.010-1-428 on Number of octets in data transfer of 43.1.1.4 Rel-4	TSG GERAN WG4	Approved
GP-012128	CR 51.010-1-429 EGPRS defaults, message contents and macros	Rohde-Schwartz	Revised
GP-012733	CR 51.010-1-429 rev 1 EGPRS defaults, message contents and macros	Rohde-Schwartz	Approved
GP-012136	CR 51.010-1-430 Clause 40 - PSI Scheduling Change From WG5#1 Not Necessary (Rel-4)	Anite Telecoms	Rejected

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GP-012137	CR 51.010-1-431 Clause 44.2.5.2.1 - No Need To Check For Ciphering At With LLC Page Response (Rel-4)	Anite Telecoms	Withdrawn
GP-012138	CR 51.010-1-432 Clause 42.1.2.1.5 - S/P Needs To Be Set (Dynamic Allocation) For Acknowledgement of Final Block (Rel-4) - WITHDRAWN	Anite Telecoms	Withdrawn
GP-012139	CR 51.010-1-433 Clause 42.1.2.1.6 - Test Case Needs To BE Aligned To Current Section 40 Defaults (Rel-4)	Anite Telecoms	Approved
GP-012140	CR 51.010-1-434 Clause 42.1.2.2.1 - Need To Align PSI2 Definition To Current Section 40 Defaults (Rel-4)	Anite Telecoms	Approved
GP-012141	CR 51.010-1-435 Clause 42.1.2.2.3 - There Is No RRBP In The MAC Header Of PACKET DOWNLINK ACK. (Rel-4)	Anite Telecoms	Revised
GP-012739	CR 51.010-1-435 rev 1 Clause 42.1.2.2.3 - There Is No RRBP In The MAC Header Of PACKET DOWNLINK ACK. (Rel-4)	Anite Telecoms	Approved
GP-012178	CR 51.010-1-436 clause 44.2.1.2.8 - Combined GPRS attach / abnormal cases / attempt counter check / miscellaneous reject causes (Rel 4)	Rohde & Schwarz	Approved
GP-012179	CR 51.010-1-437 clause 44.2.2.1.4 - GPRS detach / abnormal cases / GMM common procedure collision (Rel 4)	Rohde & Schwarz	Revised
GP-012655	CR 51.010-1-437 rev 1 clause 44.2.2.1.4 - GPRS detach / abnormal cases / GMM common procedure collision (Rel 4)	Rohde & Schwarz	Approved
GP-012180	CR 51.010-1-438 clause 44.2.3.1.4 - Routing area updating / rejected / location area not allowed (Rel 4)	Rohde & Schwarz	Approved
GP-012181	CR 51.010-1-439 clause 44.2.3.1.6 - Routing area updating / abnormal cases / change of cell into new routing area (Rel 4)	Rohde & Schwarz	Approved
GP-012182	CR 51.010-1-440 clause 44.2.3.2.5 - Combined routing area updating / rejected / roaming not allowed in this location area (Rel 4)	Rohde & Schwarz	Approved
GP-012183	CR 51.010-1-441 clause 44.2.3.2.7 - Combined routing area updating / abnormal cases / attempt counter check / procedure timeout (Rel 4)	Rohde & Schwarz	Withdrawn
GP-012184	CR 51.010-1-442 clause 44.2.3.3.3 - Periodic routing area updating / no cell available / network mode I (Rel 4)	Rohde & Schwarz	Withdrawn
GP-012185	CR 51.010-1-443 clause 46.1.2.2.2.4 - SACK frame (Rel 4)	Rohde & Schwarz	Approved
GP-012186	CR 51.010-1-444 clause 46.1.2.2.3.3 - SACK frame (Rel 4)	Rohde & Schwarz	Approved
GP-012187	CR 51.010-1-445 clause 46.1.2.7.8 - XID Response with out of range values (Rel 4)	Rohde & Schwarz	Approved
GP-012188	CR 51.010-1-446 Clause 44.2.2.2.1 - GPRS detach / re-attach not required / accepted (Rel 4)	Matsushita	Revised
GP-012657	CR 51.010-1-446 rev 1 Clause 44.2.2.2.1 - GPRS detach / re-attach not required / accepted (Rel 4)	Matsushita	Approved

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GP-012189	CR 51.010-1-447 Clause 44.2.1.2.9 - Combined GPRS attach / abnormal cases / GPRS detach procedure collision (Rel 4)	Matsushita	Revised
GP-012654	CR 51.010-1-447 rev 1 Clause 44.2.1.2.9 - Combined GPRS attach / abnormal cases / GPRS detach procedure collision (Rel 4)	Matsushita	Approved
GP-012190	CR 51.010-1-448 Clause 45.2.1.1 - Attach initiated by context activation/QoS Offered by Network is the QoS Requested (Rel 4)	Matsushita	Approved
GP-012192	CR 51.010-1-449 Correction to T3192 value in section 41.1.5.x - RR / Paging / on CCCH for GPRS service (Rel 4)	Nokia	Approved
GP-012193	CR 51.010-1-450 Correction to sections 41.2.2.3 - Random references for one phase packet access (Rel 4)	Nokia	Approved
GP-012194	CR 51.010-1-451 Correction to sections 41.3.1.1 - TBF Release / Uplink / Normal / MS initiated / Acknowledged mode (Rel 4)	Nokia	Approved
GP-012195	CR 51.010-1-452 Correction to sections 41.3.1.2 and 41.3.1.3 - TBF Release / Uplink / Normal / MS initiated (Rel 4)	Nokia	Approved
GP-012196	CR 51.010-1-453 Correction to section 42.1.2.1.8.1.1 - Packet Uplink Assignment / One phase access / Contention resolution / Inclusion of TLLI in RLC data blocks (Rel 4)	Nokia	Approved
GP-012197	CR 51.010-1-454 Correction to T3192 value in section 42.x - MAC (Rel 4)	Nokia	Approved
GP-012198	CR 51.010-1-455 Correction to section 51.2.4.1 - Packet immediate assignment / Single block packet access / Packet Resource Request (Rel 4)	Nokia	Approved
GP-012199	CR 51.010-1-456 Correction to sections 51.3.1.1 and 51.3.1.2 - TBF Release / Uplink / Normal / MS initiated (Rel 4)	Nokia	Approved
GP-012200	CR 51.010-1-457 Correction to T3192 value in section 51.x - (Rel 4)	Nokia	Approved
GP-012202	CR 51.010-1-458 Correction to section 52.2.4.2.2 - Macro for uplink fixed allocation two phase access (Rel 4)	Nokia	Approved
GP-012203	CR 51.010-1-459 On clauses 52.2.1.12 to 52.2.1.28 - Fixed Allocation / Uplink Transfer (Rel 4)	Nokia	Approved
GP-012204	CR 51.010-1-460 Correction to T3192 value in section 52.x (Rel 4)	Nokia	Approved
GP-012205	CR 51.010-1-461 Correction to section 44.2.1.2.7 - Combined GPRS attach / rejected / location area not allowed (Rel 4)	Nokia	Revised
GP-012653	CR 51.010-1-461 rev 1 Correction to section 44.2.1.2.7 - Combined GPRS attach / rejected / location area not allowed (Rel 4)	Nokia	Approved
GP-012206	CR 51.010-1-462 Correction to section 44.2.2.1.6; 44.2.2.1.7; 44.2.2.1.8 and 44.2.2.1.9 - MS initiated GPRS detach procedure (Rel 4)	Nokia	Revised

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GP-012656	CR 51.010-1-462 rev 1 Correction to section 44.2.2.1.6; 44.2.2.1.7; 44.2.2.1.8 and 44.2.2.1.9 - MS initiated GPRS detach procedure (Rel 4)	Nokia	Approved
GP-012207	CR 51.010-1-463 Correction to section 44.2.5.2.1 - Ciphering mode / start ciphering (Rel 4)	Nokia	Approved
GP-012208	CR 51.010-1-464 Clauses 42.5.5.1, 42.5.5.2 and 42.5.5.3 - Downlink Transfer / Reestablishment (Rel 4)	Alcatel	Revised
GP-012786	CR 51.010-1-464 rev 1 Clauses 42.5.5.1, 42.5.5.2 and 42.5.5.3 - Downlink Transfer / Reestablishment (Rel 4)	Alcatel	Approved
GP-012279	CR 51.010-1-465 Correction of Section 52.3 Testcases for Dynamic Allocation in Packet Transfer Mode (Rel 4)	Siemens	Approved
GP-012288	CR 51.010-1-466 Introduction of AMR layer 1 tests, reference sensitivity 51.010-1 (Rel 4)	Motorola	Postponed
GP-012290	CR 51.010-1-467 Introduction of AMR layer 1 tests, Co-channel rejection 51.010-1 (Rel 4)	Motorola	Postponed
GP-012292	CR 51.010-1-468 Introduction of AMR layer 1 tests, 51.010-1 section 14 general part (Rel 4)	Motorola	Postponed
GP-012293	CR 51.010-1-469 Bad frame indication - TCH/AFS - Random RF input 51.010-1 (Rel 4)	Motorola	Revised
GP-012721	CR 51.010-1-469 rev 1 Bad frame indication - TCH/AFS - Random RF input 51.010-1 (Rel 4)	Motorola	Approved
GP-012295	CR 51.010-1-470 Bad frame indication - TCH/AHS - Random RF input 51.010-1 (Rel 4)	Motorola	Revised
GP-012723	CR 51.010-1-470 rev 1 Bad frame indication - TCH/AHS - Random RF input 51.010-1 (Rel 4)	Motorola	Approved
GP-012297	CR 51.010-1-471 Correction to section 41.1.6 - RR / Paging / Before T3172 expiry (Rel-4)	Nokia	Approved
GP-012298	CR 51.010-1-472 Correction to section 51.1.6 - RR / Paging / Before T3172 expiry (Rel-4)	Nokia	Approved
GP-012322	CR 51.010-1-473 clause 44.2.5.1.2 Authentication rejected	Rohde & Schwarz	Withdrawn
GP-012323	CR 51.010-1-474 Fixed Allocation / Uplink Transfer / T3184 Expiry	Ericsson	Revised
GP-012782	CR 51.010-1-474 rev 1 Fixed Allocation / Uplink Transfer / T3184 Expiry	Ericsson	Withdrawn
GP-012324	CR 51.010-1-475 Multislot class in section 41.3.1.2	Ericsson	Approved
GP-012325	CR 51.010-1-476 testcase 41.2.3.10 Access burst content is not correct	Setcom	Approved
GP-012326	CR 51.010-1-477 RLC_OCTET_COUNT could be 0 in test case 42.1.2.1.9	Setcom	Revised
GP-012734	CR 51.010-1-477 rev 1 RLC_OCTET_COUNT could be 0 in test case 42.1.2.1.9	Setcom	Approved
GP-012327	CR 51.010-1-478 Test case 41.1.6 wrong establishment cause after paging	Setcom	Withdrawn
GP-012328	CR 51.010-1-479 BSN=31 is not always received in step 15 of test case 43.1.1.3	Setcom	Approved
GP-012329	CR 51.010-1-480 Allocation BITMAP is not sufficient in test case 42.2.2.1	Setcom	Approved

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GP-012330	CR 51.010-1-481 Test cases 41.2.3.4, 41.2.3.5, 41.2.3.6, 41.2.3.7, 41.2.3.8, 41.2.3.9, 41.2.3.10, 41.2.3.11 - One phase packet access	Alcatel	Revised
GP-012735	CR 51.010-1-481 rev 1 Test cases 41.2.3.4, 41.2.3.5, 41.2.3.6, 41.2.3.7, 41.2.3.8, 41.2.3.9, 41.2.3.10, 41.2.3.11 - One phase packet access	Alcatel	Revised
GP-012785	CR 51.010-1-481 rev 2 Test cases 41.2.3.4, 41.2.3.5, 41.2.3.6, 41.2.3.7, 41.2.3.8, 41.2.3.9, 41.2.3.10, 41.2.3.11 - One phase packet access	Alcatel	Approved
GP-012337	CR 51.010-1-482 Clause 60 - GERAN to UTRAN Handover (Rel-4)	Motorola	Approved
GP-012339	CR 51.010-1-483 Clause 20.22 - GPRS Cell Selection/Reselection (Rel-4)	Motorola	Revised
GP-012730	CR 51.010-1-483 rev 1 Clause 20.22 - GPRS Cell Selection/Reselection (Rel-4)	Motorola	Approved
GP-012340	CR 51.010-1-484 Clause 20.22.2 - Cell reselection in Packet Idle Mode (Rel-4)	Motorola	Withdrawn
GP-012341	CR 51.010-1-485 Clause 20.22.3 - Priority of Cells (Rel-4)	Motorola	Withdrawn
GP-012342	CR 51.010-1-486 Clause 20.22.5 - Network Controlled Cell re-selection in Transfer Mode (Rel-4)	Motorola	Approved
GP-012343	CR 51.010-1-487 Clause 20.22.11 - Cell Selection/No normal priority cell (Rel-4) CR 51.010-1 Clause 20.22.13 - Cell Reselection based on C32 quality (Rel-4)	Motorola	Revised
GP-012731	CR 51.010-1-487 rev 1 Clause 20.22.11 - Cell Selection/No normal priority cell (Rel-4) CR 51.010-1 Clause 20.22.13 - Cell Reselection based on C32 quality (Rel-4)	Motorola	Approved
GP-012344	CR 51.010-1-488 Clause 41.2.3.8 - One phase packet access / Contention resolution / 4 access repetition attempts (Rel-4)	Motorola	Approved
GP-012345	CR 51.010-1-489 Clause 42.1.2.1.8.1 Packet Uplink Assignment / One phase access / Contention Resolution (Rel-4)	Motorola	Withdrawn
GP-012346	CR 51.010-1-490 Clause 42.1 - Packet Access Repeat Attempts (Rel-4)	Motorola	Revised
GP-012740	CR 51.010-1-490 rev 1 Clause 42.1 - Packet Access Repeat Attempts (Rel-4)	Motorola	Approved
GP-012399	CR 51.010-1-491 Correction to section 44.2.3.2.5 - Combined routing area updating / rejected / roaming not allowed in this location area (Rel-4)	Nokia	Revised
GP-012660	CR 51.010-1-491 rev 1 Correction to section 44.2.3.2.5 - Combined routing area updating / rejected / roaming not allowed in this location area (Rel-4)	Nokia	Approved
GP-012400	CR 51.010-1-492 13.17.1 to 4, Clarification of applicability and test requirements	Nokia	Revised
GP-012726	CR 51.010-1-492 rev 1 13.17.1 to 4, Clarification of applicability and test requirements	Nokia	Approved

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GP-012401	CR 51.010-1-493 14.18.7 Incremental Redundancy Performance, (addition of a new test)	Nokia	Revised
GP-012727	CR 51.010-1-493 rev 1 14.18.7 Incremental Redundancy Performance, (addition of a new test)	Nokia	Approved
GP-012402	CR 51.010-1-494 21.8 EGPRS Signal Quality, (addition of a new test)	Nokia	Withdrawn
GP-012434	CR 51.010-1-495 Sec 45.2.4.2: Collision of MS initiated and network requested PDP context activation (case 1)	Siemens	Revised
GP-012664	CR 51.010-1-495 rev 1 Sec 45.2.4.2: Collision of MS initiated and network requested PDP context activation (case 1)	Siemens	Approved
GP-012435	CR 51.010-1-496 Sec 42.1.1.4.3: Packet channel request / access persistence control on PRACH / successive attempts	Siemens	Withdrawn
GP-012436	CR 51.010-1-497 Sec 44.2.2.1.7: GPRS detach / accepted / IMSI detach	Siemens	Approved
GP-012437	CR 51.010-1-498 Sec 41.1.6: RR / Paging / Before T3172 expiry	Siemens	Withdrawn
GP-012438	CR 51.010-1-499 Sec 41.1.2.1.1.1: Packet Uplink Assignment / Packet queuing notification / Stop sending Packet Channel Requests	Siemens	Revised
GP-012736	CR 51.010-1-499 rev 1 Sec 41.1.2.1.1.1: Packet Uplink Assignment / Packet queuing notification / Stop sending Packet Channel Requests	Siemens	Approved
GP-012470	CR 51.010-1-500 Sec 42 - CR404 erroneously Deleted Steps In 42.3.1.1.4	Anite Telecom	Revised
GP-012780	CR 51.010-1-500 rev 1 Sec 42 - CR404 erroneously Deleted Steps In 42.3.1.1.4	Anite Telecom	Approved
GP-012471	CR 51.010-1-501 Clause 42.4.1.3 - Correction To Expected Sequence	Anite Telecom	Approved
GP-012472	CR 51.010-1-502 Clause 44.2.3.2.3.3.2 - Correction of Detach Type	Anite Telecom	Approved
GP-012473	CR 51.010-1-503 Clause 44.2.3.2.7 - Insertion of a Location Update macro	Anite Telecom	Revised
GP-012658	CR 51.010-1-503 rev 1 Clause 44.2.3.2.7 - Insertion of a Location Update macro	Anite Telecom	Approved
GP-012474	CR 51.010-1-504 Clause 44.2.3.3.3 - Various corrections	Anite Telecom	Approved
GP-012475	CR 51.010-1-505 Clause 44.2.5.1.2 - Various corrections	Anite Telecom	Revised
GP-012659	CR 51.010-1-505 rev 1 Clause 44.2.5.1.2 - Various corrections	Anite Telecom	Approved
GP-012476	CR 51.010-1-506 Clause 44.2.5.2.2 - Various corrections	Anite Telecom	Revised
GP-012662	CR 51.010-1-506 rev 1 Clause 44.2.5.2.2 - Various corrections	Anite Telecom	Approved
GP-012477	CR 51.010-1-507 Clause 44.2.5.2.3 - Various corrections	Anite Telecom	Revised

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GP-012663	CR 51.010-1-507 rev 1 Clause 44.2.5.2.3 - Various corrections	Anite Telecom	Approved
GP-012480	CR 51.010-1-508 Sec TC 41.2.4.2: Single block packet access / Packet Measurement Report	Siemens	Withdrawn
GP-012481	CR 51.010-1-509 Sec. TC 20.22.2: Cell reselection in Packet Idle mode	Siemens	Revised
GP-012737	CR 51.010-1-509 rev 1 Sec. TC 20.22.2: Cell reselection in Packet Idle mode	Siemens	Approved
GP-012483	CR 51.010-1-510 clause 31.9.1.2 - Correction of step references in Expected Message Sequence and Specific Message Contents	Anite Telecom	Approved
GP-012545	CR 51.010-1-511 Sec. TC 14.16.2.1: Co-channel rejection for packet channels	Siemens	Approved
GP-012546	CR 51.010-1-512 Sec. TC 14.16.2.1: Co-channel rejection for packet channels	Siemens	Revised
GP-012725	CR 51.010-1-512 rev 1 Sec. TC 14.16.2.1: Co-channel rejection for packet channels	Siemens	Approved
GP-012562	CR 51.010-1-513 clause 44.2.1.2.6 Combined GPRS attach / rejected / GPRS services not allowed	Rohde & Schwarz	Approved
GP-012583	CR 51.010-1-514 Expected sequence in section 41.2.3.6	Ericsson	Approved
GP-012589	CR 51.010-1-515 Test case 41.2.3.6 - One phase packet access / Contention resolution / Counter N3104	Alcatel	Withdrawn
GP-012590	CR 51.010-1-516 Test case 45.3.1 - PDP context modification	Alcatel	Approved
GP-012591	CR 51.010-1-517 Test case 20.22.11 - Cell Selection / No normal priority cell	Alcatel	Withdrawn
GP-012592	CR 51.010-1-518 Test case 12.1.1 - MS allocated a channel	Alcatel	Revised
GP-012724	CR 51.010-1-518 rev 1 Test case 12.1.1 - MS allocated a channel	Alcatel	Approved
GP-012593	CR 51.010-1-519 Test case 41.2.4.2 - Single block packet access / Packet Measurement Report Test case 41.2.7.2 - Single block packet downlink assignment / MS returns to packet idle mode	Alcatel	Approved
GP-012594	CR 51.010-1-520 Test case 26.5.7.1.3 - Spare bits / RR / AGCH	Alcatel	Approved
GP-012616	CR 51.010-1-521 Correction to section 51.3.5 - PDCH Release (Rel 4)	Nokia	Approved
GP-012617	CR 51.010-1-522 Correction to section 20.22 GPRS Cell Selection and Reselection (Rel 4)	Nokia	Approved
GP-012632	CR 51.010-1-523 Correction to section 44.2.1.2.1 - Combined GPRS attach / GPRS and non-GPRS attach accepted (Rel 4)	Nokia	Withdrawn
GP-012642	CR 51.010-1-524 Test case 42.1.2.1.5 - Packet Uplink Assignment / One or two phase access	Alcatel	Approved
GP-012652	CR 51.010-1-525 Clause 40 Missing correction of binary value	Rohde & Schwarz	Approved

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GP-012665	CR 51.010-1-526 Network Induced LCS Emergency Call on SDCCH, Idle, no IMSI (Rel 4)	Ericsson	Approved
GP-012666	CR 51.010-1-527 Positioning/RR/Classmark Interrogation (Rel 4)	Ericsson	Approved
GP-012667	CR 51.010-1-528 Network Induced LCS Emergency Call on SDCCH, (Rel 4)	Ericsson	Approved
GP-012116	CR 51.010-2-019 Deletion of test case 27.11.2.1 (Rel-4) (G5-010043)	GERAN WG5	Approved
GP-012117	CR 51.010-2-020 Correction of applicability condition C220 in Annex B.1 (Rel-4) (G5-010027)	GERAN WG5	Approved
GP-012118	CR 51.010-2-021 Correction of applicability condition C52 in Annex B.1 (Rel-4) (G5-010028)	GERAN WG5	Approved
GP-012119	CR 51.010-2-022 Changes to applicability of test case 44.2.1.2.3 (Rel-4) (G5-010149)	GERAN WG5	Approved
GP-012120	CR 51.010-2-023 Clause 45.2.1.2.1 – This Test Case Should Only Be Applicable To Mobiles That Support Configuration of Their QoS (Rel-4) (G5-010159)	GERAN WG5	Approved
GP-012273	CR 51.010-2-024 on Annex B - removal of test case 51.2.4.2 (related to G4-010594) Rel-4	TSG GERAN WG4	Approved
GP-012274	CR 51.010-2-025 on GSM 700 and GSM850 inclusion into foreward Rel-4	TSG GERAN WG4	Approved
GP-012275	CR 51.010-2-026 on New test cases for clause 42.1 Rel-4	TSG GERAN WG4	Approved
GP-012276	CR 51.010-2-027 on change of test case name for clause 51.2.2.2. Rel-4	TSG GERAN WG4	Approved
GP-012277	CR 51.010-2-028 on Table B1 – Addition of section 52.1 testcases to the applicability table Rel-4	TSG GERAN WG4	Approved
GP-012134	CR 51.010-2-029 Adding LCS test cases to Applicability Tables in 51.010-2	Ericsson	Withdrawn
GP-012191	CR 51.010-2-030 Correction to the Applicability of test cases 13.17.1; 13.17.3 and 13.17.4 (Rel 4)	Nokia	Approved
GP-012201	CR 51.010-2-031 Annex B - renameing of test case 51.2.4.1 (Rel 4)	Nokia	Approved
GP-012334	CR 51.010-2-032 Introduction and Default Conditions for LCS Clause 70	Ericsson	Revised
GP-012729	CR 51.010-2-032 rev 1 Introduction and Default Conditions for LCS Clause 70	Ericsson	Approved
GP-012291	CR 51.010-2-033 Introduction of AMR layer 1 tests, Co-channel rejection 51.010-2 (Rel 4)	Motorola	Postponed
GP-012294	CR 51.010-2-034 Bad frame indication - TCH/AFS - Random RF input 51.010-2	Motorola	Revised
GP-012722	CR 51.010-2-034 rev 1 Bad frame indication - TCH/AFS - Random RF input 51.010-2	Motorola	Approved
GP-012732	CR 51.010-2-035 14.18.7 Incremental Redundancy Performance, (addition of a new test) (Rel-4)	Nokia	Approved
GP-012784	CR 51.010-2-036 Applicability of test 42.2.2.4; Fixed Allocation / Uplink Transfer / T3184 Expiry	Ericsson	Approved
GP-012296	CR 51.010-2-037 Bad frame indication - TCH/AHS - Random RF input 51.010-2	Motorola	Approved

Tdoc	Title	Source	Status
GP-012289	CR 51.010-2-038 Introduction of AMR layer 1 tests, reference sensitivity 51.010-2 (Rel 4)	Motorola	Postponed
GP-012609	CR 51.010-2-039 Applicability Table for E-OTD Test Cases for LCS Clause 70	Ericsson	Approved
GP-012338	CR 51.010-2-040 PICS update for GERAN to UTRAN Handover test cases (Rel-4)	Motorola	Rejected
GP-012121	CR 51.010-3-006 Classmark 2 modification to support R96 and later mobiles (Rel-4) (G5-010050)	GERAN WG5	Approved
GP-012122	CR 51.010-3-007 Mobile originated Setup PDU additions to support R96 and later mobiles (Rel-4) (G5-010051)	GERAN WG5	Approved
GP-012123	CR 51.010-3-008 Classmark 2 modification (Rel-4) (G5-010119)	GERAN WG5	Approved
GP-012278	CR 51.010-3-010 on Corrections to BA-IND values Rel-4	TSG GERAN WG4	Approved
GP-012651	CR 51.010-3-011 rev 1 Updating EFR to accept Version 3 Speech (Rel 4)	Anite Telecoms	Approved
GP-012161	CR 51.010-3-011 Updating EFR to accept Version 3 Speech (Rel 4)	Anite Telecoms	Revised
GP-012162	CR 51.010-3-012 Bearer Capability additions (Rel 4)	Anite Telecoms	Approved