

Source: MCC
Title: Summary of Content of Rel-4 and foreseen content of Rel-5

Introduction

This document describes the foreseen content of Rel-5, with the actual content of Rel-4 annexed, as frozen at TSG SA#12.

It includes the results of TSG RAN, T, CN and SA#14 (partly).

Only the names of the features are provided here. More information on the features can be found in the Work Plan, which last available version is Dec., 12th (tdoc SP-010627), i.e. not including the results of TSGs #14. As soon as available, the newer version of the Work Plan including the results of TSG #14, in line with this document, will be available on the server: a notification will be sent on the 3GPP SA, CN, RAN and T e-mail lists.

Foreseen content of Release 5 (exhaustive list)

Evolutions of the Transport in the UTRAN

- IP Transport in the UTRAN
- Evolution of transport in UTRAN and GERAN (to be confirmed at RAN#15)

High Speed Downlink Packet Access (HSDPA)

Improvements of Radio Interface

- BS Classification for 1.28 Mcps TDD option
- FDD BS classification
- TDD BS classification
- Multiple Input Multiple Output antennas (MIMO) for RAN#16
- Enhancement on the DSCH hard split mode
- UMTS1800/1900
- Improved usage of downlink resource in FDD for CCTrCHs (to be confirmed at RAN#15)
- Terminal power saving feature (to be confirmed at RAN#15)

Feasibility Studies on:

- FS on UE antenna efficiency test method performance requirements: no Work Item needed for 3GPP.
- FS on the re-introduction of the downlink SIR measurement: no Work Item needed for 3GPP.
- Fast Cell Selection (FCS) for HS-DSCH
- Radio link performance enhancements
- UTRA Wide Band Distribution Systems (to be confirmed at RAN#15). Completion date moved to June 2002.
- Mitigating the effect of CPICH interference at the UE.
- Deployment of UTRA in additional spectrum arrangements (to be confirmed at RAN#15).

RAN improvements:

- RL Timing Adjustment
- Separation of resource reservation and radio link activation
- Improvement of Radio Resource Management across RNS and RNS/BSS
- Node B synchronisation for 1.28 Mcps TDD
- Re-arrangement of Iub Transport Bearers
- SRNS Relocation Procedure Enhancement
- RRM optimization for Iur and Iub
- RAB support enhancement

Evolution of the transport for CN:

- SUA Feasibility Study

IP-based Multimedia Services (IMS)

Confirmed for Rel5:

- Basic functionality

To be checked at TSG#14 if belonging to Rel5:

- CAMEL in IMS
- interworking with external IP and CS networks
- Header removal/compression in UTRAN and/or GERAN
- IMS local services
- Specification of MRF
- Lawful interception
- Number portability in IMS
- Online charging
- Sh interface (SIP AS to HSS)
- Si interface (IMS SSF to HSS)

Extended Transparent End-to-End Packet Switched Mobile Streaming Applications (Extended Streaming)

Global Text Telephony

OSA Improvements for Rel5

Including:

- Multi media call / session control
- Policy management
- Presence
- Support for technologies additional to CORBA (XML based API with WSDL/SOAP/XML : Web-service support for OSA).

Potentially moved to Rel6:

- User Profile
- Authorization
- Network capabilities (unclear requirement)
- Journaling
- Terminal capabilities
- Information Transfer (mapping to IMS needed)
- Information Service

CAMEL phase 4

Including:

- Interactions with Optimal Routing
- CAMEL control over MT SMS
- Provision of location information of called subscriber

- Call Party Handling
- Mid call procedure for MO and MT calls
- Inclusion of flexible tone injection
- Notification of GPRS mobility management to CSE
- Inclusion of ODB data in the CSE-HLR interface
- GPRS Any Time Interrogation

Delayed:

- CAMEL support by the IMS
- Location information during an ongoing call

MExE Enhancements Rel-5

Wideband-AMR

Terminal interfaces improvements for Rel-5:

Wide Area Data Synchronization

- vObjects and Other Constructs for Use in Data Synchronization (to be confirmed at T#15)
- Terminal Local Model enhancements
 - aspects of UE Functionality Split to be accommodated

LCS activities for Rel-5 are:

- LCS in GERAN PS domain
- Event driven deferred LCS request
- Periodic location reports
- Standardization of the Le interface
- Enhanced support for user privacy and subscriber data handling.
- Password and Requestor handling in location services
- UE positioning

UICC/(U)SIM enhancements and interworking

- “C SIM API” – Draft specification presented for information to TSG-T #14

(U)SIM toolkit enhancements

- USAT Interpreter

Security Enhancements Rel-5

- Network domain security: MAP application layer security (Automatic Key Management) (to be confirmed at RAN#15)
- FIGS (might be deleted at TSG#15)

Charging and OAM&P

Subscription Management

FS on User Equipment Management

Iu-Flex

GERAN improvements

Includes:

- GERAN improvements 2: MS conformance test for Intra BSC NACC
- GERAN improvements 3 (new transport layer on interface A)
- GERAN support for IMS
- Alignment of 3G functional split and Iu
- GERAN enhancements for streaming services 1
- GERAN enhancements for streaming services 2
- GERAN/UTRAN interface evolution 1 (evolution of Iu PS)
- GERAN/UTRAN interface evolution 2 (evolution of Iu CS)
- GERAN Inter BSC NACC improvements over the Gb Interface
 - Modification of Gb protocols for GERAN Inter BSC NACC over the Gb interface
 - Modification of core network protocols for GERAN Inter BSC NACC for Gb interface
- Alignment of 3G functional split and Iu
 - GERAN user / control plane
 - Iu rg interface
- Enhanced Power Control
 - Realization of Enhanced power control and signalling support
 - GERAN MS Conformance test for Enhanced Power Control
 - GERAN BTS Conformance test for Enhanced Power Control
- 8PSK AMR HR
- Definition of channel coding, performance requirements and signaling support
- GERAN MS Conformance test for 8PSK HR
- GERAN BTS Conformance test for 8PSK HR
- Uplink TDOA feasibility study

End-to-End QoS

Messaging Enhancements Rel-5

Service Change and UDI Fallback (SCUDIF)

Features with unclear status (to be clarified at TSG #15 if belonging to Rel-5 or Rel-6)

Presence

UE functionality split

Graphical Display of Service Provider name on UE

Push Services

Multimedia Broadcast/Multicast Service (MBMS)

Release 6 features

Generic User Profile

Digital Rights Management

FS on WLAN-UMTS Interworking

Speech Recognition and Speech Enabled Services (Aurora's part belong to Rel5)

FS on Priority Service

Content of Release 4

Evolutions of the Transport in the UTRAN – Rel-4 part

- QoS optimisation for AAL2 connections over Iub and Iur interfaces.
- Transport bearer modification procedure on Iub, Iur, and Iu (note: this was previously known as “Migration to modification procedures”).

Evolutions of the transport in CN – Rel-4 part

- IP transport of CN protocol.
- FS on transport and control separation in PS domain (this FS will not lead to any feature).

Improvements of Radio Interface - Rel-4 part

- UTRA repeater specification
- DSCH power control improvement in SHO.

Low chip rate TDD option

RAB Quality of Service Negotiation over Iu during relocation

RAN improvements - Rel-4 part

- RRM optimization for Iur and Iub
- Node B synchronisation for TDD
- RAB support enhancement

Transparent End-to-End PS Mobile Streaming Applications

Emergency call enhancements – Rel-4 part: for CS based calls

Enable bearer independent CS architecture (Lawful interception still in progress at S3)

Real time Facsimile (Rel-4)

MExE Enhancements - Rel-4 part (the main enhancements are Third MExE classmark for a new small-footprint Java platform, support of SDR concepts by software download and Security enhancements)

Tandem Free Operation

Transcoder Free Operation

ODB (Operator Determined Barring) for Packet Oriented Services

Multimedia Messaging Service

UICC/(U)SIM enhancements and interworking

- Common PCN Handset Specification (CPHS)

(U)SIM toolkit enhancements

- USAT local link
- UICC API testing (main task is the test specification for the Java API, as defined in release 99).
- Protocol Standardisation of a SIM Toolkit Interpreter (Stage 2 expected at TSG-T #12 for approval but remains in Rel-4)

Advanced Speech Call Items enhancements (created for Rel-4 to maintain the specs only, i.e. not a new feature).

Terminal Interfaces - Rel-4 part

- AT Commands enhancements: specification of AT commands for new services (closed even if the goal was not completely reached)
- Continues evolution of Synchronization protocol
- Terminal Local Model

Charging and OAM&P

Note: the testing and OAM activities are not subject to the TSG #11 deadline to be part of Release 4.

- OAM Architecture, and Management of Configuration, Fault, Performance and Charging should be completed by June
- UTRAN Operations & Maintenance procedures

Reliable QoS for PS domain - for Rel-4: QoS in UMTS only

GERAN WI status - Rel-4 part (to be confirmed by next GERAN plenary)

- GERAN/UTRAN interface evolution of Iups
- GERAN/UTRAN interface evolution of Iucs
- Low chip rate TDD interworking with GERAN
- Gb over IP & Gb enhancements (Stage 2 & Stage 3)
- 700 MHz spectrum support
- Wideband telephony services (UMTS) GMSK support
- LCS for GERAN Stage 2 (CS mode & Timing Advance positioning)

LCS enhancements - Rel 4:

- LCS in the 3G PS-domain (LCS in 2G PS domain for Rel5)
- Location report at the Event "UE becomes reachable"
- Support of the following positioning methods: cell coverage based, OTDOA, A-GPS
- LCS support in TDD mode
- OSA includes support for LCS API

Small Technical Enhancements and Improvements for Release 4

Network Domain Security: MAP aspects

OSA enhancements - Rel-4 part

- Support for LCS API
- Interactions OSA - e-commerce

Miscellaneous UE Conformance Testing Activities and any other UE Testing activity - Rel-4 part:

- Testing of several Rel-4 features approved at TSG #12 (note: the testing activities are not subject to the TSG#11 deadline for being included in Rel-4).

Other

Release-independent:

UMTS 1800

UMTS 1900

