Title:	**Co-ordination of SDO input to ITU-T Q.REF-1**
Source:	3GPP TSG CN
To:	PCG, TSG RAN, TSG SA, TSG T
Cc:	
Contact:	**Yun-Chao Hu (CN ITU-T Co-ordination Ad-Hoc Convenor)** yun-chao.hu@era.ericsson.se

Introduction

ITU-T Special Study Group on "IMT-2000 and Beyond" (SSG) has requested input from SDOs related to 3G core networks (see attached Chairman's letter from ITU-T SSG chair). In particular, the SDOs participating in 3GPP are invited to provide input on "IMT-2000 References to GSM evolved UMTS core NETWORK with UTRAN Access network ."

It is important that the SDOs participating in 3GPP provide as input a consistent set of 3GPP specifications. This document provides a proposal for how the SDOs may wish to respond to this request.

Proposed Baseline for input into ITU-T Q.REF-1

The scope of Q.REF-1 is the identification of the IMT-2000 technical specifications for the Core Network belonging to the IMT-2000 family member GSM evolved UMTS core network with UTRAN access network. The recommendation includes the internal and external interfaces for the Core Network as well as the general architecture specifications. Furthermore, the current scope of Q.REF-1 is aligned with 3GPP release 99.

It is the recommendation of the 3GPP CN ITU-T Co-ordination Ad-Hoc that this input should be based upon the Release 99 following TSG SA#11. The set of specifications should be those listed in TS 21.101 v330, with the following changes:

- Technical Reports (TRs) should not be included
- SOLSA is a GSM capability and should be not included
- The 25 series specifications (RAN specifications) should not be included
- The UE/USIM Test and Conformance Specifications should not be included

The table below provides the list of 3GPP specifications and versions which the CN ITU-T Co-ordination Ad-Hoc recommends be the base for the SDO responses to ITU-T.

3GPP Spec	Title	Version
TS 21.101	3rd Generation mobile system Release 1999 Specifications	3.3.0
TS 21.111	USIM and IC card requirements	3.3.0
TS 21.133	Security Threats and Requirements	3.1.0
TS 22.001	Principles of circuit telecommunication services supported by a Public Land Mobile Network (PLMN)	3.2.0
TS 22.002	Circuit Bearer Services Supported by a PLMN	3.6.0
TS 22.003	Circuit Teleservices supported by a Public Land Mobile Network (PLMN)	3.2.0
TS 22.004	General on Supplementary Services	3.2.1
TS 22.011	Service accessibility	3.4.0
TS 22.016	International Mobile Equipment Identities (IMEI)	3.2.0
TS 22.022	Personalisation of GSM ME Mobile functionality specification ; Stage 1	3.1.0
TS 22.024	Description of Charge Advice Information (CAI)	3.0.1
TS 22.030	Man-Machine Interface (MMI) of the Mobile Station (MS)	3.4.0
TS 22.034	High Speed Circuit Switched Data (HSCSD) ; Stage 1	3.2.1
TS 22.038	SIM application toolkit (SAT); Stage 1	3.2.0
TS 22.041	Operator Determined Call Barring	3.3.0
TS 22.042	Network Identity and Time Zone (NITZ), stage 1	3.0.1
TS 22.057	Mobile Station Application Execution Environment (MExE); Stage 1	3.0.1
TS 22.060	General Packet Radio Service (GPRS); Stage 1	3.5.0
TS 22.066	Support of Mobile Number Portability (MNP); Stage 1	3.2.0
TS 22.067	enhanced Multi-Level Precedence and Pre-emption service (eMLPP) ; Stage 1	3.0.1
TS 22.071	Location Services (LCS); Stage 1	3.3.0
TS 22.072	Call Deflection (CD); Stage 1	3.0.1

3GPP Spec		Title	Version
TS	22.078	CAMEL; Stage 1	3.7.0
TS	22.079	Support of Optimal Routing; Stage 1	3.0.1
TS	22.081	Line Identification Supplementary Services; Stage 1	3.2.0
TS	22.082	Call Forwarding (CF) Supplementary Services; Stage 1	3.0.1
TS	22.083	Call Waiting (CW) and Call Hold (HOLD) Supplementary Services; Stage 1	3.0.1
TS	22.084	MultiParty (MPTY) Supplementary Service; Stage 1	3.0.1
TS	22.085	Closed User Group (CUG) Supplementary Services; Stage 1	3.1.0
TS	22.086	Advice of Charge (AoC) Supplementary Services; Stage 1	3.1.0
TS	22.087	User-to-user signalling (UUS); Stage 1	3.1.0
TS	22.088	Call Barring (CB) Supplementary Services; Stage 1	3.0.2
TS	22.090	Unstructured Supplementary Service Data (USSD); Stage 1	3.1.0
TS	22.091	Explicit Call Transfer (ECT) Supplementary Service; Stage 1	3.1.0
TS	22.093	Call Completion to Busy Subscriber (CCBS); Stage 1	3.0.1
TS	22.096	Calling Name Presentation (CNAP); Stage 1 (T1P1)	3.0.1
TS	22.097	Multiple Subscriber Profile (MSP); Stage 1	3.2.0
TS	22.100	UMTS Phase 1	3.6.0
TS	22.101	UMTS Service principles	3.12.0
TS	22.105	Services & Service capabilities	3.10.0
TS	22.115	Service Aspects Charging and billing	3.3.0
TS	22.121	Provision of Services in UMTS - The Virtual Home Environment ; Stage 1	3.3.0
TS	22.129	Handover Requirements between UMTS and GSM or other Radio Systems	3.5.0
TS	22.135	Multicall Stage 1	3.4.0
TS	22.140	Multimedia Messaging Service; Stage 1	3.1.0
TS	23.002	Network Architecture	3.4.0
TS	23.003	Numbering, Addressing and Identification	3.8.0
TS	23.007	Restoration procedures	3.4.0
TS	23.008	Organisation of subscriber data	3.5.0
TS	23.009	Handover procedures	3.6.0
TS	23.011	Technical Realization of Supplementary Services - General Aspects	3.1.0
TS	23.012	Location management procedures	3.3.0
TS	23.014	Support of Dual Tone Multi Frequency (DTMF) signalling	3.1.0
TS	23.015	Technical realisation of Operator Determined Barring (ODB)	3.1.0
TS	23.016	Subscriber data management ; Stage 2	3.7.0
TS	23.018	Basic Call Handling - Technical realization	3.7.0
TS	23.032	Universal Geographical Area Description (GAD)	3.1.0
TS	23.034	High Speed Circuit Switched Data (HSCSD) ; Stage 2	3.3.0
TS	23.038	Alphabets & Language	3.3.0
TS	23.040	Technical realisation of Short Message Service	3.5.0
TS	23.041	Technical Realization of Cell Broadcast Service	3.3.0
TS	23.042	Compression algorithm for SMS	3.1.0
TS	23.054	Shared Interworking Functions ; Stage 2	3.0.0
TS	23.057	Mobile Station Application Execution Environment (MExE)	3.4.0
TS	23.060	General Packet Radio Service (GPRS) Service description; Stage 2	3.7.0
TS	23.066	Support of GSM Mobile Number Portability (MNP) stage 2	3.3.0
TS	23.067	Enhanced Multi-Level Precedence and Preemption Service (EMLPP) ; Stage 2	3.2.0
TS	23.072	Call Deflection Supplementary Service ; Stage 2	3.3.0
TS	23.078	Customised Applications for Mobile network Enhanced Logic (CAMEL) Phase 3 - Stage 2	3.8.0
TS	23.079	Support of Optimal Routeing - Phase 1 ; Stage 2	3.6.0
TS	23.081	Line Identification Supplementary Services ; Stage 2	3.1.0
TS	23.082	Call Forwarding (CF) Supplementary Services ; Stage 2	3.5.0
TS	23.083	Call Waiting (CW) and Call Hold (HOLD) Supplementary Service ; Stage 2	3.2.0
TS	23.084	MultiParty (MPTY) Supplementary Service ; Stage 2	3.2.0
TS	23.085	Closed User Group (CUG) Supplementary Service ; Stage 2	3.1.0
TS	23.086	Advice of Charge (AoC) Supplementary Service ; Stage 2	3.1.0
TS	23.087	User-to-User Signalling (UUS) ; Stage 2	3.1.0
TS	23.088	Call Barring (CB) Supplementary Service ; Stage 2	3.2.0
TS	23.090	Unstructured Supplementary Service Data (USSD) ; Stage 2	3.2.0
TS	23.091	Explicit Call Transfer (ECT) Supplementary Service ; Stage 2	3.2.0
TS	23.093	Call Completion to Busy Subscriber (CCBS) ; Stage 2	3.2.0
TS	23.094	Follow Me Stage 2	3.2.0
TS	23.096	Name Identification Supplementary Service ; Stage 2	3.0.1
TS	23.097	Multiple Subscriber Profile (MSP); Stage 2	3.1.1
TS	23.101	General UMTS Architecture	3.1.0
TS	23.107	Quality of Service, Concept and Architecture	3.5.0
TS	23.108	Mobile Radio Interface Layer 3 specification Core Network Protocols stage 2 (structured procedures)	3.2.0
TS	23.110	UMTS Access Stratum Services and Functions	3.4.0
TS	23.116	Super Charger ; Stage 2	3.0.0
TS	23.119	Gateway Location Register (GLR) ; Stage2	3.0.0
TS	23.121	Architecture Requirements for release 99	3.5.1
TS	23.122	Non-Access-Stratum functions related to Mobile Station (MS) in idle mode	3.6.0
TS	23.127	Virtual Home Environment; Stage 2	3.3.0
TS	23.135	Multicall ; Stage 2	3.2.0

3GPP Spec		Title	Version
TS	23.140	Multimedia Messaging Service (MMS)	3.0.1
TS	23.171	Functional stage 2 description of location services in UMTS	3.3.0
TS	24.002	GSM-UMTS Public Land Mobile Network (PLMN) Access Reference Configuration	3.1.0
TS	24.007	Mobile Radio Interface Signalling Layer 3 - General Aspects	3.7.0
TS	24.008	Mobile Radio Interface Layer 3 specification; Core Network Protocols ; Stage 3	3.7.0
TS	24.010	Mobile Radio Interface Layer 3 - Supplementary Services Specification - General Aspects	3.1.0
TS	24.011	Point-to-Point (PP) Short Message Service (SMS) Support on Mobile Radio Interface	3.6.0
TS	24.012	Short Message Service Cell Broadcast (SMSCB) Support on the Mobile Radio Interface	3.0.0
TS	24.022	Radio Link Protocol (RLP) for Data and Telematic Services on the (MS-BSS) Interface and the Base Station System - Mobile-services Switching Centre (BSS-MSC) Interface	3.4.0
TS	24.030	Location Services LCS Stage 3 SS (MO-LR)	3.1.0
TS	24.067	Enhanced Multi-Level Precedence and Pre-emption service (eMLPP) ; Stage 3	3.1.0
TS	24.072	Call Deflection Supplementary Service ; Stage 3	3.0.0
TS	24.080	Mobile radio Layer 3 Supplementary Service specification - Formats and coding	3.4.1
TS	24.081	Line Identification Supplementary Service ; Stage 3	3.1.0
TS	24.082	Call Forwarding Supplementary Service ; Stage 3	3.0.0
TS	24.083	Call Waiting (CW) and Call Hold (HOLD) Supplementary Service ; Stage 3	3.0.0
TS	24.084	MultiParty (MPTY) Supplementary Service ; Stage 3	3.0.0
TS	24.085	Closed User Group (CUG) Supplementary Service ; Stage 3	3.0.0
TS	24.086	Advice of Charge (AoC) Supplementary Service ; Stage 3	3.0.0
TS	24.087	User-to-User Signalling (UUS) ; Stage 3	3.0.0
TS	24.088	Call Barring (CB) Supplementary Service ; Stage 3	3.0.0
TS	24.090	Unstructured Supplementary Service Data (USSD) ; Stage 3	3.0.0
TS	24.091	Explicit Call Transfer (ECT) Supplementary Service ; Stage 3	3.0.0
TS	24.093	Call Completion to Busy Subscriber (CCBS) ; Stage 3	3.0.0
TS	24.096	Name Identification Supplementary Service ; Stage 3	3.0.0
TS	24.135	Multicall Stage 3	3.1.0
TS	26.071	AMR speech Codec; General description	3.0.1
TS	26.073	AMR speech Codec; C-source code	3.2.0
TS	26.074	AMR speech Codec; Test sequences	3.1.0
TS	26.090	AMR speech Codec; Transcoding Functions	3.1.0
TS	26.091	AMR speech Codec; Error concealment of lost frames	3.1.0
TS	26.092	AMR speech Codec; comfort noise for AMR Speech Traffic Channels	3.0.1
TS	26.093	AMR speech Codec; Source Controlled Rate operation	3.3.0
TS	26.094	AMR Speech Codec; Voice Activity Detector for AMR Speech Traffic Channels	3.0.0
TS	26.101	AMR speech Codec; Frame Structure	3.1.0
TS	26.102	AMR speech Codec; Interface to Iu and Uu	3.3.0
TS	26.103	Codec lists	3.0.0
TS	26.104	AMR speech Codec; Floating point C-Code	3.1.0
TS	26.110	Codec for Circuit switched Multimedia Telephony Service; General Description	3.1.0
TS	26.111	Codec for Circuit switched Multimedia Telephony Service; Modifications to H.324	3.4.0
TS	26.131	Narrow Band (3,1kHz) Speech & Video Telephony Terminal Acoustic Characteristics	3.2.0
TS	26.132	Narrow Band (3,1kHz) Speech & Video Telephony Terminal Acoustic Test Specification.	3.2.0
TS	27.001	General on Terminal Adaptation Functions (TAF) for Mobile Stations (MS)	3.8.0
TS	27.002	Terminal Adaptation Functions (TAF) for services using Asynchronous bearer capabilities	3.5.0
TS	27.003	Terminal Adaptation Functions (TAF) for services using Synchronous bearer capabilities	3.5.0
TS	27.005	Use of Data Terminal Equipment - Data Circuit terminating Equipment (DTE - DCE) interface for Short Message Service (SMS) and Cell Broadcast Service (CBS)	3.1.0
TS	27.007	AT command set for 3G User Equipment (UE)	3.8.0
TS	27.010	Terminal Equipment to User Equipment (TE-UE) multiplexer protocol User Equipment (UE)	3.3.0
TS	27.060	GPRS Mobile Stations supporting GPRS	3.5.0
TS	27.103	Wide Area Network Synchronisation	3.1.0
TS	29.002	Mobile Application Part (MAP)	3.8.0
TS	29.007	General requirements on Interworking between the PLMN and the ISDN or PSTN	3.8.0
TS	29.010	Information Element Mapping between Mobile Station - Base Station System (MS - BSS) and Base Station System - Mobile-services Switching Centre (BSS - MCS) Signalling Procedures and the Mobile Application Part (MAP)	3.5.0
TS	29.011	Signalling Interworking for Supplementary Services	3.0.0
TS	29.013	Signalling interworking between ISDN supplementary services Application Service Element (ASE) and Mobile Application Part (MAP) protocols	3.0.0
TS	29.016	Serving GPRS Support Node SGSN - Visitors Location Register (VLR); Gs Interface Network Service Specification	3.1.0
TS	29.018	Serving GPRS Support Node SGSN - Visitors Location Register (VLR); Gs Interface Layer 3 Specification	3.6.0
TS	29.060	GPRS Tunnelling protocol (GTP) across the Gn and Gp interface	3.8.0
TS	29.061	General Packet Radio Service (GPRS); Interworking between the Public Land Mobile Network (PLMN) supporting GPRS and Packet	3.5.0
TS	29.078	CAMEL; Stage 3	3.7.0
TS	29.108	Application of the Radio Access Network Application Part (RANAP) on the E-interface	3.1.0
TS	29.119	GPRS Tunnelling Protocol (GTP) specification for Gateway Location Register (GLR)	3.0.0
TS	29.120	Mobile Application Part (MAP) specification for Gateway Location Register (GLR); Stage 3	3.1.0
TS	29.198	Open Services Architecture API part 1	3.3.0

3GPP Spec	Title	Version
TS 31.102	Characteristics of the USIM Application	3.5.0
TS 31.110	Numbering system for telecommunication IC card applications	3.2.0
TS 31.111	USIM Application Toolkit (USAT)	3.4.0
TS 32.005	Telecommunications Management; Charging and billing; 3G call and event data for the Circuit Switched (CS) domain	3.4.0
TS 32.015	Telecommunications Management; Charging and billing; 3G call and event data for the Packet Switched (PS) domain	3.5.0
TS 32.101	3G Telecom Management principles and high level requirements	3.4.0
TS 32.102	3G Telecom Management Architecture	3.2.0
TS 32.104	3G Performance Management	3.4.0
TS 32.106-1	Telecommunication Management; Configuration Management; Part 1: 3G configuration management; Concept and requirements	3.1.0
TS 32.106-2	Telecommunication Management; Configuration Management; Part 2: Notification Integration Reference Point; Information Service version 1	3.3.0
TS 32.106-3	Telecommunication Management; Configuration Management; Part 3: Notification Integration Reference Point; CORBA solution set version 1:1	3.3.0
TS 32.106-4	Telecommunication Management; Configuration Management; Part 4: Notification Integration Reference Point: CMIP Solution Set Version 1:1	3.1.0
TS 32.106-5	Telecommunication Management; Configuration Management; Part 5: Basic Configuration Management IRP information model (including NRM) version 1	3.1.0
TS 32.106-6	Telecommunication Management; Configuration Management; Part 6: Basic Configuration Management IRP CORBA solution set version 1:1	3.1.0
TS 32.106-7	Telecommunication Management; Configuration Management; Part 7: Basic Configuration Management IRP CMIP solution set version 1:1	3.1.0
TS 32.106-8	Telecommunication Management; Configuration Management; Part 8: Name convention for Managed Objects	3.1.0
TS 32.111-1	Telecommunication Management; Fault Management; Part 1: 3G fault management requirements	3.2.0
TS 32.111-2	Telecommunication Management; Fault Management; Part 2: Alarm Integration Reference Point: Information Service	3.3.0
TS 32.111-3	Telecommunication Management; Fault Management; Part 3: Alarm Integration Reference Point: CORBA solution set version 1:1	3.4.0
TS 32.111-4	Telecommunication Management; Fault Management; Part 4: Alarm Integration Reference Point: CMIP solution set	3.1.1
TS 33.102	Security Architecture	3.8.0
TS 33.103	Security Integration Guidelines	3.5.0
TS 33.105	Cryptographic Algorithm requirements	3.7.0
TS 33.106	Lawful interception requirements	3.1.0
TS 33.107	Lawful interception architecture and functions	3.2.0
TS 33.120	Security Objectives and Principles	3.0.0
TS 35.201	Specification of the 3GPP confidentiality and integrity algorithms; Document 1: f8 and f9 specifications	3.1.0
TS 35.202	Specification of the 3GPP confidentiality and integrity algorithms; Document 2: Kasumi algorithm specification	3.1.0
TS 35.203	Specification of the 3GPP confidentiality and integrity algorithms; Document 3: Implementors' test data	3.1.0
TS 35.204	Specification of the 3GPP confidentiality and integrity algorithms; Document 4: Design conformance test data	3.1.0

Table 1 – 3GPP core network and system specifications and versions for Release 99

Information to be provided by each SDO

ITU-T has requested that for each specification, the SDOs provide the following information:

Document No.   This is the designation assigned by the SDO for the deliverable corresponding to the 3GPP specification number,

Version   The version designation assigned by the SDO corresponding to the 3GPP specification version,

Status   The status of the SDO deliverable (i.e., ETSI published, ANSI standard),

Issued Date   The date when the SDO deliverable was issued,

Location   The location where the SDO deliverable may be obtained (i.e., a URL, publications office).

This information may be provided in tabular form as indicated in the circular letter (see attached NP-010213).

It is also recommended that each SDO also provide warning text indicating that:
- The references provided by a SDO represent a consistent set of documents. These documents are continuously evolving and later versions of the documents may be available at the SDO's web site.
- Some references may be provided to both ITU-T and ITU-R. Alignment of the version numbers in the sets provided to both ITU-T and ITU-R is not assured.
Two issues has been raised during the ITU-T Ad Hoc meeting:

- The deliverables provided by a SDO represent a consistent set of specifications. However, later versions of specifications may be available at the SDO web site
- Alignment between the specification versions provided to ITU-R and ITU-T is not assured.

It is proposed to recommend ITU-T to include the following text into the ITU-T draft Q.REF-1, reflecting a warning text on the following issue:

"The working procedures within the 3GPP allows a continuous improvement of their specifications by means of a change request procedure. The Change Requests are reviewed by each 3GPP Working Group and provided for approval to the 3GPP TSG Plenary Meetings. Therefore, the SDO standards/specifications can be updated after each 3GPP TSG Plenary meetings. In this context, it is recommended to the reader to retrieve the latest version of the SDO Standards/Specifications from the location indicated within the template."

The following text is recommended to be included into the communication towards ITU-T SSG.

"3GPP has identified that a number of SDO Standards/Specifications (based on 3GPP Specifications) are duplicated within ITU-R Recommendation M.1457 and ITU-T draft Recommendation Q.REF-1. An example of this duplication is the SDO Standard/Specification of 3GPP TS 23.060. In this context, the used versions of the referenced documents are not ensured to be the same. It is believed that the handling of this overlapping is an issue that needs to be decided by ITU, however if ITU is considering to align the ITU-R and ITU-T IMT-2000 references then support for this activity will be provided."