3GPP TSG CN Plenary Meeting #14 **NP-010559**
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Source:	CN1 Chairman
Title:	CN1 IMS open items (work item 1273, Provisioning of IP based multimedia services)
Agenda item:	9.1
Document for:	Information

Introduction

IMS is by far the largest Rel-5 work item in CN1. This open item list identifies the tasks within that work item that still need to be completed before the CN1 IMS draft TSs (23.218, 24.228, 24.229) can be approved for Rel-5.

This study has been done to identify the still missing principal decisions and other major open issues in the IMS specifications under CN1 control. The intention is not to take this open items list to the granularity of a individual CRs.

Because of these reasons the list is not exhaustive so it should not be considered as comprehensive list of all CRs that are needed to complete the CN1 IMS task. It can be foreseen that not only the CRs to close the listed open items but also other CRs outside the list will be needed.

But the intention is to list all such open items which are likely to impact the scheduling and work amount estimates on the work item. This open item list may be used for priorisation of the Rel-5 work in TSG CN if the plenary meeting chooses to do so.

This document takes no position in how an open item is closed unless it is explicitly stated. So it may happen that an open item in a CN1 TS is covered by removing the whole clause from the TS.

It is the intention of the originator to maintain this document until it becomes redundant at the freezing of Rel-5 IMS related CN1 TSs.

Open items

1. Missing working assumptions				
#	**Description**	**TS**	**CRs**	**Comment**
1.1	SIP protocol related proposals to IETF in 24.229 Annex A	24.229		All SIP extensions in this annex which are not adopted to IETF RFCs need to be incorporated in 3GPP TSs.
1.2	SIP compression	24.229		3GPP should follow IETF decisions.
1.3	Network initiated re-authentication. Is this based on network initiated re-registrations which are then authenticated?	24.229		SA3 security requirements are needed first
1.4	Is I-CSCF stateful or is it not? Does the specification reflect this decision?	24.229		How to route CANCEL of an INVITE if it is not?
1.5	What shall be encoded in To and From headers by the UE?	24.228, 24.229	N1-011752	Third party registration is out of Rel-5. CR to update the To/From headers in 24.228 and the 24.229 CR is still needed
1.6	Is IMPI needed in P-CSCF for e.g. charging purposes?	24.228, 24.229		It is believed that that the private ID is required in the P-CSCF. The Requirements from SA2 or SA5 to use IMPI in P-CSCF need to be confirmed.
1.7	What information is needed from HSS to I-CSCF for S-CSCF selection?	23.218		CN4 to define the data contents must be standardised even though the procedure is not.
1.8	Emergency calls	24.228, 24.229		WI moved to Rel-6
1.9	Does a Re-INVITE need to be forwarded to AS by the S-CSCF?	24.228, 24.229		What to follow? Route headers or filtering rules?
1.10	Is there a need to carry the implicitly registered public IDs from S-CSCF to P-CSCF or is it enough if the P-CSCF stores only the registered contact information?			Replication of data in P-CSCF? Mandatory SUBSCRIBE from P-CSCF to S-CSCF? Delivery of dialled identity to callee?
1.11	Is INFO method used by 3GPP IMS?	24.228, 24.229		There are several editor's notes in 24.229 questioning whether the INFO method is supported.
1.12	Is MESSAGE method used by 3GPP IMS?	24.228, 24.229		
1.13	Is OPTIONS method used by 3GPP IMS?	24.228, 24.229		
1.14	Hiding at I-CSCF	24.229		11.3.3 and 11.3.4 to be created (or restructured)
1.15	Clause 5 missing in 24.228	24.228		Waiting for input from SA3. This chapter should contain subflows for setting up and tearing down of PDP contexts.
1.16	Sr interface protocol between AS – MRF	23.218		SA2 to develop the stage 2 information flows first and then CN1 specification text is needed.
1.17	Sh interface protocol between HSS – AS	23.218		SA2 to develop the stage 2 information flows first and then CN1 specification text is needed
1.18	Filtering of unknown methods	23.218		
1.19	Information from S-CSCF to AS about user registered	23.218		How does the AS become aware that the user has registered.
1.20	Correlation of B2BUA-AS calls	24.229, (24.228),		How does the S-CSCF become aware that an incoming call from an AS, that

		(23.218)		acted as a B2BUA for that call, is the same call as previously sent to the AS?
1.21	Call Release from S-CSCF / AS	23.218, (24.228, 24.229?)		23.228 states that the S-CSCF shall be able to release a call. How can the S-CSCF release a call? Shall this be done by an AS instead? If yes, how is this performed?
1.22	Call Release from P-CSCF	24.229, (24.228, 23.218?)		23.228 states that the P-CSCF shall be able to release a call. How can the P-CSCF release a call? Shall this be done by an AS instead? If yes, how can the P-CSCF request the AS to release the call?
1.23	Addition of Cell ID to SIP signalling	24.228, 24.229		Principal agreed to create a new header. An Internet Draft will be needed and the flows in 24.228 will need updating to include the new header. The coding of the header will be described in the Internet Draft and the conditions related to the sending, receiving and understanding of the header will probably need to be added to 24.229. Vodafone is willing to contribute
1.24	Determination of MOC / MTC in P-CSCF and S-CSCF	24.229, (24.228?)		How does the P-/S-CSCF find out if it shall act for the MO or the MT case. The problem especially occurs if the P-/S-CSCF serves both users (calling / callee)
1.25	Determination of Served User in S-CSCF	24.229, (24.228?)		Upon an incoming initial request how does the S-CSCF find out the user for whom to perform services? The problem especially occurs if the P-/S-CSCF serves both users.
1.26				

2. Missing text paragraphs				
#	Description	TS	CRs	Comment
	Missing clauses in 23.218	23.218		
2.1.1	6.1 Modes of operation between S-CSCF and Application Server	23.218		Empty clause
2.1.2	6.3 (S-CSCF) handling of IP Multimedia Registration	23.218		Empty clause
2.1.3	6.6 (S-CSCF) Handling of Multimedia session release	23.218		Empty clause
2.1.4	6.7 (S-CSCF) Handling of Subscription and notification	23.218		Empty clause
2.1.5	6.8.2 (S-CSCF) Definition of authentication data that is sent across the Cx interface	23.218		Empty clause. This clause may not be needed at all
2.1.6	7.3 (HSS) Procedures during IP Multimedia Registration	23.218		Empty clause
2.1.7	7.4 (HSS) Procedures during Mobile Originated IP Multimedia Sessions	23.218		Empty clause
2.1.8	7.5 (HSS) Procedures during Mobile Terminated IP Multimedia Sessions	23.218		Empty clause
2.1.9	8 Functional requirements for MRF	23.218		Empty clause
2.1.10	9 (AS) Handling of IP multimedia calls	23.218		Empty clause
2.1.11	11.3 GSM service control detection points	23.218		Empty clause. Agreed to be moved to CN2 document but a detailed CR is still needed
2.1.12	The first editor's note in clause 12	23.218		Is the editor's note redundant or is there still some restructuring of this clause and CN5 specifications needed?
	Missing clauses in 24.228	24.228		
2.2.1	Clause 6.4 Registration signalling: mobile initiated deregistration (not provided)	24.228		Empty clause. Hiding cases are already provided in clause 16.4 and therefore 6.4 should be replaced with a reference to 16.4
2.2.2	Clause 6.7 Notifying of the network initiated deregistration event			Incomplete. Contains only draft version of NOTIFY message and its response.
2.2.3	Clause 7.2.4.2 PSTN originated sessions routed towards CS domain (through G-MSC)	24.228		Empty clause
2.2.4	Clause 7.2.4.3 PSTN originated sessions routed either towards IM CN subsystem or towards CS domain	24.228		Empty clause
2.2.5	Clause 7.2.5 Error handling: origination procedures	24.228		Empty clause
2.2.6	Clauses 7.3.3 and 7.3.4 Not Applicable	24.228		Empty clauses, should be removed? 7.3.3 and 7.3.4 are needed to keep clauses 7 and 17 consistent.
2.2.7	Clause 7.3.5.3 Origination failure	24.228		Empty clause.
2.2.8	Clause 7.4.3.2 UE-detected failure/resource failure	24.228		Empty clause
2.2.9	Clause 7.4.3.3 Origination failure	24.228		Empty clause
2.2.10	Clause 7.4.4.2 MGCF-detected failure/resource failure	24.228		Empty clause.
2.2.11	Clause 7.4.4.3 Origination failure	24.228		Empty clause.
2.2.12	Clause 7.6 Error handling: session initiation	24.228		Empty clause.
2.2.13	Clause 8 Signalling flows for session release (non hiding)	24.228		Empty clause.
2.2.14	Clause 9 Network initiated procedures (non	24.228		

	hiding)			
2.2.15	Clause 17.3.2.2 Termination failure	24.228		Empty clause
2.2.16	Clause 17.3.2.3 Origination failure	24.228		Empty clause
2.2.17	Clause 17.3.3.2 Termination failure	24.228		Empty clause
2.2.18	Clause 17.3.3.2 Origination failure	24.228		Empty clause
2.2.19	Clause 17.3.4.2 Termination failure	24.228		Empty clause
2.2.20	Clause 17.3.4.2 Origination failure	24.228		Empty clause
2.2.21	Clause 17.3.5 Not applicable	24.228		Should be removed? The clause is needed to keep clauses 7 and 17 consistent
2.2.22	Clause 17.3.7.1 (S-S#4) PSTN Termination performed by different operator than origination (not provided)	24.228		Empty clause
2.2.23	Clause 17.4.2.2 UE-detected failure/resource failure	24.228		Empty clause
2.2.24	Clause 17.4.2.3 Origination failure	24.228		Empty clause
2.2.25	Clause 17.4.3 Not applicable	24.228		Should be removed? The clause is needed to keep clauses 7 and 17 consistent
2.2.26	Clause 17.4.4 Not required	24.228		Should be removed?
2.2.27	Clause 17.6 Error handling: Session Initiation	24.228		Empty clause
2.2.28	Clause 18 Signalling flows for session release (hiding)	24.228		Empty clause
2.2.29	Clause 19 Network initiated procedures (hiding)	24.228		Empty clause
2.2.30	Clause 20 Procedures to enable enhanced multimedia services (hiding)	24.228		Empty clause
	Missing clauses in 24.229	24.229		
2.3.1	4.2 URL and address assignments	24.229		
2.3.2	5 SIP compression	24.229		
2.3.3	7.2.3.1 Status codes table is not complete	24.229		What should it actually indicate?
2.3.4	8.1 SDP types	24.229		Which ones of the IETF defined SDP types are to be supported by 3GPP
2.3.5	10.1 SIP methods defined in 3GPP	24.229		SIP extensions which are defined only in 3GPP
2.3.6	10.2 SIP headers defined in 3GPP	24.229		SIP extensions which are defined only in 3GPP
2.3.7	10.3 SIP option tags defined in 3GPP	24.229		SIP extensions which are defined only in 3GPP
2.3.8	10.4 SIP status codes defined in 3GPP	24.229		SIP extensions which are defined only in 3GPP
2.3.9	10.5 SDP types defined in 3GPP	24.229		SIP extensions which are defined only in 3GPP
2.3.10	11.1 (SIP) Procedures at UE	24.229		UE procedural description. Some of this material is already in place in Annex A
2.3.11	11.2 (SIP) Procedures at P-CSCF	24.229		P-CSCF procedural description. Some of this material is already in place in Annex A
2.3.12	11.3 (SIP) Procedures at I-CSCF	24.229		I-CSCF procedural description. Some of this material is already in place in Annex A
2.3.13	11.4 (SIP) Procedures at S-CSCF	24.229		S-CSCF procedural description. Some of this material is already in place in Annex A
2.3.14	11.5 (SIP) Procedures at MGCF	24.229		MGCF procedural description.
2.3.15	11.6 (SIP) Procedures at BGCF	24.229		BGCF procedural description

2.3.16	11.7 (SIP) Procedures at AS	24.229		AS procedural description
2.3.17	12.1 (SDP) Procedures at UE	24.229		
2.3.18	12.2 (SDP) Procedures at I-CSCF	24.229		
2.3.19	12.3 (SDP) Procedures at S-CSCF	24.229		
2.4.2	New protocol elements: PATH header	24.229		
2.4.2	New protocol elements: path option tag	24.229		
2.4.3	New SDP types and handling of SDP in the UE	24.229		
2.5	S-CSCF not available error cases at I-CSCF	(24.228), 24.229		Actually not errors but real life failure cases that must be defined.
2.6	Notation of tokenisation, both definition and implementation throughout the TS	24.228		
2.7	Removal of the conflict between 23.228 and 24.228 in case GGSN and P-CSCF are not in the same network as UE?	24.228		The assumption in 24.228 that the UE and P-CSCF are in the same network should be changed (P-CSCF and GGSN are in the same network) but the actual call flows are not affected.
2.8	Network initiated deregistration	24.229		The UE behaviour?
2.9	Definition of Registration State Event Package	24.229		This is an extension to the already existing presence event package. The extension is needed due to the re-authentication addition to presence that is made by CN1. Where should this extension be described? In an Annex of 24.229?

3. Specification consistency				
#	**Description**	**TS**	**CRs**	**Comment**
3.1	Unstable clauses in 23.218 Annex C	23.218		Material to be moved to the appropriate places in the main body of the document
3.2	Unstable clauses in 24.228 Annex A	24.228		Material to be moved to the appropriate places in the main body of the document
3.3	Informative material in 24.229 Annex B	24.229		The annex should be deleted before freezing when it is not needed any more.
3.4	Working assumptions in 24.229 Annex C	24.229		List of working assumptions which have not yet been implemented in CN1 specifications. To be deleted before freezing.
3.5	Editor's notes in 23.218 must be replaced by normative text	23.218		
3.6	Editor's notes in 24.228 must be replaced by normative text	24.228		
3.7	Editor's notes in 24.229 must be replaced by normative text.	24.229		
3.8	Systematical checking of reserved words {can, must, may, will, shall}	23.218		
3.9	Systematical checking of reserved words {can, must, may, will, shall}	24.228		
3.10	Systematical checking of reserved words {can, must, may, will, shall}	24.229		
3.11	Deletion of Annex C	23.218		Minor task now that this temporary information storage is empty
3.12	Hanging text paragraph in section 6	23.218		
3.13	9.4 Specific IP Multimedia session handling for SIP Application Servers	23.218		If no specific session handling procedures are defined the the whole clause needs to be deleted
3.14	Systematic checking of correct use of defined terminology	23.218, 24.228, 24.229		Correct spelling of defined terms such as private user identity and public user identity