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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 prioritisation 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.

The colour coding of the table is as follows:

After CN1 Meeting	20bis	21 = CN#14	21bis	22	22bis = CN#15	23	24 = CN#15		
Red = not done	102	90	70	44	27				
Yellow = partly done	1	11	22	31	9				
Green = completed	4	9	22	42	92				
Total	107	110	114	117	128				

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. Currently Path Header, EAP security extensions, Cell ID, Roaming Network Name... (Lucent) This is out of date since the current annex A is not a temporary storage of preliminary solutions as it contains the PICS proforma tables. All dependencies to IETF drafts are reflected in 1.32 – 1.34.
1.2	SIP compression	24.229		3GPP should follow IETF decisions. Need to fill in the Gaps regarding negotiation/setup of compression. ROHC group is moving in slightly different direction than SA2 requirements regarding UE-P-CSCF negotiation (Dynamicsoft, Ericsson, Motorola)
1.3	Network initiated re-authentication. Is this based on network initiated re-registrations which are then authenticated?	24.229	N1-012025	According to 24.229 Annex A 5.1.1.5.4 and N1-012025 the answer to this principal question is yes. A CR to move the text in 11.1.1.3 to the main body of 24.229 is still needed
1.4	Is I-CSCF stateful or is it not? Does the specification reflect this decision?	24.229	N1-011935	How to route CANCEL of an INVITE if it is not? -> Answer: I-CSCF is stateful in registration procedure and if hiding is required, then also in session initiation procedures.
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. Encryption of To and From headers still needs to be solved. (Nokia)
1.6	Is IMPI needed in P-CSCF for e.g. charging purposes? SA2, SA5	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. P-CSCF gets the IMPI during registration and so it will be available if needed for e.g. charging.
1.7	What information is needed from HSS to I-CSCF for S-CSCF selection? CN4	23.218	N1-020417 N1-020664	CN4 to define the data contents must be standardised even though the procedure is not. N1-020417 puts a pointer for Cx data to 29.228 ?
1.8	Emergency calls	24.228, 24.229	N1-020294 N1-020436	WI moved to Rel-6 The existing draft call flow needs to be removed from 24.228.

				(Ericsson)
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? (Ericsson, Siemens, Nortel)
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?	24.229		Replication of data in P-CSCF? Mandatory SUBSCRIBE from P-CSCF to S-CSCF? Delivery of dialled identity to callee? Done by means of NOTIFY
1.11	Is INFO method referenced in 3GPP IMS in Rel-5	24.228, 24.229		There are several editor's notes in 24.229 questioning whether the INFO method is supported. Not in Rel-5
1.12	Is MESSAGE method referenced in 3GPP IMS in Rel-5	24.228, 24.229		Needed for messaging. Up to SA2 to define whether it is needed for presence which is a Rel-5 WI. Not in Rel-5
1.13	Is OPTIONS method referenced in 3GPP IMS in Rel-5	24.228, 24.229		If the answer is yes, then the usage, if different from IETF, must be specified in 24.228 and 24.229. Included in Rel-5
1.14	Hiding at I-CSCF	24.229	N1-012056	11.3.3 and 11.3.4 to be created (or restructured) The text is in the annex but it still needs to be moved to the main body of the TS.
1.15	Clause 5 missing in 24.228	24.228		Waiting for input from SA2. This chapter should contain subflows for setting up and tearing down of PDP contexts. Explicitly indicated signalling PDP context? Clause 5 is there now. Some editor's notes still exist but these are covered by a separate open item.
1.16	Sr interface protocol between AS – MRF SA2	23.218	N1-020113 N1-020392	SA2 to develop the stage 2 information flows first and then CN1 specification text is needed. Not in Rel-5
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 Not a CN1 issue.
1.18	Filtering of unknown methods	23.218		Decision that unknown methods can be filtered.
1.19	Information from S-CSCF to AS about user registered	23.218		How does the AS become aware that the user has registered. Agreed to use REGISTER method
1.20	Correlation of B2BUA-AS calls	24.229, (24.228), (23.218)		How does the S-CSCF become aware that an incoming call from an AS, that acted as a B2BUA for that call, is the same call as previously sent to the AS? Dialogue ID inside the message body is used to identify this.
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? Transparent B2BUA solves this.

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? Transparent B2BUA solves this.
1.23	Addition of Cell ID to SIP signalling	24.228, 24.229	N1-020399	3GPP specific container in the message body will need to be defined. (Vodafone, Ericsson)
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) (Siemens)
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. (Siemens)
1.26	Charging identifier SA2 ?	24.229	N1-020296	<u>Which CSCFs are impacted?</u>
1.27	Transport of Security Parameters CK and IK from S-CSCF to P-CSCF and matching of INVITES to previous authentications at P-CSCF.	24.228 24.229	N1-020094 N1-020154 N1-020418	The keys are sent by S-CSCF to P-CSCF in EAP header of the 401 UNAUTHORISED. P-CSCF matches the IK used for integrity protection of the message to the IMPU.
1.28	How to handle the DTMF?	24.229	N1-020499 N1-020666	Is DTMF transported in SIP (CN1) or RTP (CN3) signalling? (H3G, Vodafone, Lucent) Decision has been made to use RTP.
1.29	Indication from P-CSCF to S-CSCF whether a REGISTER message was received (at P-CSCF) integrity protected or not.	24.229		This principle has been agreed but a CR to add the details is also needed. (Vodafone, H3G)
1.30	Is filtering done just once or multiple times?	23.218	N1-020637	N1-020164 highlights the problem but there is no solution yet. (Lucent, Nokia)
1.31	IM CN and GPRS interaction during session initiation	24.008	N1-020442 N1-020456	?? P-CSCF address to UE ?? indication of signalling PDP context ?? authorisation token to SGSN
1.32	Dependencies to IETF drafts	23.218	N1-020516	Satisfying references to drafts by either: ?? references to RFCs ?? annexed drafts ?? deletion of reference
1.33	Dependencies to IETF drafts	24.228	N1-020516	Satisfying references to drafts by either: ?? references to RFCs ?? annexed drafts ?? deletion of reference
1.34	Dependencies to IETF drafts	24.229	N1-020516	Satisfying references to drafts by either: ?? references to RFCs ?? annexed drafts ?? deletion of reference

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	N1-020137	
2.1.2	6.3 (S-CSCF) handling of IP Multimedia Registration	23.218	N1-020385 N1-020552	
2.1.3	6.6 (S-CSCF) Handling of Multimedia session release	23.218	N1-020110	
2.1.4	6.7 (S-CSCF) Handling of Subscription and notification	23.218	N1-020634	Empty clause
2.1.5	6.8.2 (S-CSCF) Definition of authentication data that is sent across the Cx interface	23.218	N1-020072	References to 23.008 and 33.203
2.1.6	7 Functional requirement for HSS	23.218	N1-020109 N1-020552	CN4 input needed. Covered with references to CN4 documents.
2.1.7	8 Functional requirements for MRFC	23.218	N1-020392 N1-020451 N1-020452 N1-020453 N1-020552 N1-020662	N1-020392 redefines this playground after removal of Sr interface. Two remaining editor's notes are not significant open items and should be removed. There is a separate open item on this in 3.5
2.1.8	9 (AS) Handling of IP multimedia calls	23.218	N1-020071 N1-020115 N1-020119 N1-020231 N1-020387 N1-020393 N1-020450 N1-020552 N1-020607	The two remaining editor's notes do not contain any major open item.
2.1.9	11.3 GSM service control detection points	23.218	N1-012051	Empty clause. Agreed to move to CN2 document. The whole section is replaced with a reference to 23.278
2.1.10	The first editor's note in clause 12	23.218	N1-011874 N1-020069	Is the editor's note redundant or is there still some restructuring of this clause and CN5 specifications needed? The whole section was replaced with a reference to OSA specifications.
	Missing clauses in 24.228	24.228		
2.2.1	Clause 6.4 Registration signalling: mobile initiated deregistration (not provided)	24.228	N1-020427	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		N1-020020 N1-020143 N1-020270 N1-020427 N1-020631	
2.2.3	Clause 7.2.4.2 PSTN originated sessions routed towards CS domain (through G-MSC)	24.228		Clause to be deleted? Call flow not needed, marked as not provided.
2.2.4	Clause 7.2.4.3 PSTN originated sessions routed either towards IM CN subsystem or towards CS domain	24.228		Clause to be deleted? Call flow not needed, marked as not provided.
2.2.5	Clause 7.2.5 Error handling: origination procedures	24.228		This empty title is error handling of INVITE when not registered. Do we

				add the call flow or delete the heading? Call flow not needed, marked as not provided.
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		Just a title "Origination failure" with no explanation of what kind of failure case was intended. Do we add the call flow or delete the heading? Call flow not needed, marked as not provided.
2.2.8	Clause 7.4.3.2 UE-detected failure/resource failure	24.228		Another empty title. Do we add the call flow or delete the heading? Call flow not needed, marked as not provided.
2.2.9	Clause 7.4.3.3 Origination failure	24.228		Another empty title. Do we add the call flow or delete the heading? Call flow not needed, marked as not provided.
2.2.10	Clause 7.4.4.2 MGCF-detected failure/resource failure	24.228		Another empty title. Do we add the call flow or delete the heading? Call flow not needed, marked as not provided.
2.2.11	Clause 7.4.4.3 Origination failure	24.228		Another empty title. Do we add the call flow or delete the heading? Call flow not needed, marked as not provided.
2.2.12	Clause 7.6 Error handling: session initiation	24.228		Another empty title. Do we add the call flow or delete the heading? Call flow not needed, marked as not provided.
2.2.13	Clause 8 Signalling flows for session release (non hiding)	24.228	N1-020427	What about PSTN interworking and error cases? 8.3 and 8.4 must be either added or marked as not provided. -> done to v.2.0.1
2.2.14	Clause 9 Network initiated procedures (non hiding)	24.228	N1-020427	Empty clause, just like 19.
2.2.15	Clause 17.3.2.2 Termination failure	24.228		Another empty title. Do we add the call flow or delete the heading? Call flow not needed, marked as not provided.
2.2.16	Clause 17.3.2.3 Origination failure	24.228		Another empty title. Do we add the call flow or delete the heading? Call flow not needed, marked as not provided.
2.2.17	Clause 17.3.3.2 Termination failure	24.228		Another empty title. Do we add the call flow or delete the heading?

				Call flow not needed, marked as not provided.
2.2.18	Clause 17.3.3.3 Origination failure	24.228		Another empty title. Do we add the call flow or delete the heading? Call flow not needed, marked as not provided.
2.2.19	Clause 17.3.4.2 Termination failure	24.228		Another empty title. Do we add the call flow or delete the heading? Call flow not needed, marked as not provided.
2.2.20	Clause 17.3.4.3 Origination failure	24.228		Another empty title. Do we add the call flow or delete the heading? Call flow not needed, marked as not provided.
2.2.21	Clause 17.3.5 Not applicable	24.228		The clause is needed to keep clauses 7 and 17 consistent so it is defined as not applicable (for hiding case)
2.2.22	Clause 17.3.7.1 (S-S#4) PSTN Termination performed by different operator than origination (not provided)	24.228	N1-020427	Clause to be deleted? Call flow not needed, marked as not provided.
2.2.23	Clause 17.4.2.2 UE-detected failure/resource failure	24.228		Another empty title. Do we add the call flow or delete the heading? Call flow not needed, marked as not provided.
2.2.24	Clause 17.4.2.3 Origination failure	24.228		Another empty title. Do we add the call flow or delete the heading? Call flow not needed, marked as not provided.
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 so it is defined as not applicable (for hiding case)
2.2.26	Clause 17.4.4 Not required	24.228	N1-020427	7.4.4 does exist, so this is needed for keeping the subclause numbers consistent.
2.2.27	Clause 17.6 Error handling: Session Initiation	24.228		Another empty title. Do we add the call flow or delete the heading?
2.2.28	Clause 18 Signalling flows for session release (hiding)	24.228	N1-020427	What about PSTN interworking and error cases? An example of 18.3 and 18.4 is not shown in this specification.
2.2.29	Clause 19 Network initiated procedures (hiding)	24.228	N1-020427	Empty clause, just like 9. An example of this flow is not shown in this specification.
2.2.30	Clause 20 Procedures to enable enhanced multimedia services (hiding)	24.228		Another empty title. Do we add the call flow or delete the heading? An example of this flow is not shown in this specification.
2.2.31	Loose routing changes in IETF	24.228		implement the necessary call flow changes to align 24.228 with the latest IETF draft version.
2.2.32	Max-forwards changes in IETF	24.228		implement the necessary call flow

				changes to align 24.228 with the latest IETF draft version.
2.2.33	Manyfolks -> unify -> manyfolks ->...	24.228		implement the necessary call flow changes to align 24.228 with the latest IETF draft version. offer-answer / offer-counter-offer-answer
2.2.34	Digest AKA authentication	24.228		implement the necessary call flow changes to align 24.228 with the latest IETF draft version. (encoding auth. parameters in digest rather than EAP)
2.2.35	XML body vs. P-headers	24.228		implement the necessary call flow changes to align 24.228 with the latest IETF draft version. (XML body or P-headers for transfer of 3GPP specific information)
2.2.36	To and From headers	24.228		What does the UE encode in To and From headers?
2.2.37	Branch removal in Route headers	24.228		implement the necessary call flow changes to align 24.228 with the latest IETF draft version.
2.2.38	Integrity check indication from P-CSCF to S-CSCF	24.228		Indication from P-CSCF to S-CSCF that a REGISTER was received unprotected.
	Missing clauses in 24.229	24.229		
2.3.1	4.2 URL and address assignments	24.229	N1-020198	
2.3.2	8 SIP compression	24.229	N1-020198	
2.3.3	A.2.2.3 Status codes table is not complete	24.229		What should it actually indicate?
2.3.4	Annex A.3 SDP types	24.229	N1-011836	Which ones of the IETF defined SDP types are to be supported by 3GPP
2.3.5	7.1 SIP methods defined in 3GPP	24.229		SIP extensions which are defined only in 3GPP Editor's note to be replaced with statement that there are no new methods defined in this version of the specification.
2.3.6	7.2 SIP headers defined in 3GPP	24.229	N1-020198 N1-020623	SIP extensions which are defined only in 3GPP Editor's note in 7.2 to be deleted. If Path header is standardised in IETF in time, then the contents of this clause can also be replaced with statement that there are no new headers defined in this version of the specification.
2.3.7	7.3 SIP option tags defined in 3GPP	24.229		SIP extensions which are defined only in 3GPP Editor's note in 7.3 to be deleted.
2.3.8	7.4 SIP status codes defined in 3GPP	24.229		SIP extensions which are defined only in 3GPP Editor's note to be replaced with statement that there are no new status codes defined in this version of the specification.
2.3.9	7.5 SDP types defined in 3GPP	24.229		SIP extensions which are defined only in 3GPP Editor's note to be replaced with statement that there are no new SDP

				types defined in this version of the specification.
2.3.10	7.6 3GPP IM CN Subsystem XML body, version 1	24.229	N1-020399 N1-020656 N1-020659 N1-020671	3GPP specific container in XML body, initially visited network identity, cell global identity, original dialog ID, IMPU and RAT
2.3.11	5.1 (SIP) Procedures at UE	24.229	N1-011986 N1-011989 N1-012025 N1-020123 N1-020142 N1-020157 N1-020198 N1-020500 N1-020604 N1-020627 N1-020642 N1-020671	UE procedural description. Some of this material is already in place in Annex A
2.3.12	5.2 (SIP) Procedures at P-CSCF	24.229	N1-011984 N1-011988 N1-012021 N1-012057 N1-012031 N1-020142 N1-020064 N1-020151 N1-020396 N1-020416 N1-020418 N1-020421 N1-020198 N1-020624 N1-020659 N1-020669	P-CSCF procedural description. Some of this material is already in place in Annex A
2.3.13	5.3 (SIP) Procedures at I-CSCF	24.229	N1-012056 N1-020417 N1-020198 N1-020521 N1-020624 N1-020649 N1-020659	I-CSCF procedural description. Some of this material is already in place in Annex A
2.3.14	5.4 (SIP) Procedures at S-CSCF	24.229	N1-011985 N1-012045 N1-020124 N1-020142 N1-020146 N1-020165 N1-020398 N1-020415 N1-020418 N1-020419 N1-020198 N1-020617 N1-020623 N1-020624 N1-020627 N1-020642 N1-020659 N1-020656	S-CSCF procedural description. Some of this material is already in place in Annex A

			N1-020668 N1-020670	
2.3.15	5.5 (SIP) Procedures at MGCF	24.229	N1-020159 N1-020198 N1-020500 N1-020507 N1-020614 N1-020659	MGCF procedural description.
2.3.16	5.6 (SIP) Procedures at BGCF	24.229	N1-012022 N1-020198 N1-020659	BGCF procedural description
2.3.17	5.7 (SIP) Procedures at AS	24.229	N1-020165 N1-020198 N1-020398 N1-020617 N1-020624 N1-020659 N1-020668	AS procedural description
2.3.18	5.8 (SIP) Procedures at MRFC	24.229	N1-011828 N1-020198 N1-020504 N1-020611 N1-020612 N1-020613 N1-020659	MRFC procedural description
2.3.19	6.1 (SDP) Procedures at UE	24.229	N1-020198 N1-020422 N1-020500 N1-020646	
2.3.20	6.2 (SDP) Procedures at I-CSCF	24.229	N1-020198 N1-020449 N1-020500	
2.3.21	6.3 (SDP) Procedures at S-CSCF	24.229	N1-020198 N1-020449	
2.3.22	6.4 (SDP) Procedures at MGCF	24.229	N1-020159 N1-020198	
2.3.23	6.5 (SDP) Procedures at MRFC	24.229	N1-020198 N1-020424	
2.4.2	New protocol elements: PATH header	24.229	N1-020198	Defined in 7.2
2.4.2	New protocol elements: path option tag	24.229	N1-020198	Defined in 7.3
2.4.3	(7.5) New SDP types and handling of SDP in the UE	24.229		Editor's note in 7.5 to be replaced with statement that there are no new SDP types defined in this specification.
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	5.1.1.7 Network initiated deregistration	24.229	N1-020198	The UE behaviour?
2.9	Definition of Registration State Event Package	24.229	N1-020198	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. Clause 5.1.1.3 will

				cover this. Editorial correction to version 1.2.1 will still be needed.
2.10	9 GPRS aspects when connected to IMS	24.229	N1-020198 N1-020408 N1-020626	IM CN – GPRS interaction

3. Specification consistency				
#	Description	TS	CRs	Comment
3.1	Unstable clauses in 23.218 Annex C	23.218	N1-020036	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	N1-020427 N1-020512	Material to be moved to the appropriate places in the main body of the document. Only one call flow, re-registration failure case remains. Repair or delete it?
3.3	Informative material in 24.229 Annex B	24.229	N1-020198 N1-020511	The annex should be deleted before freezing when it is not needed any more. The contents did not match the title but after N1-020198 moves all material to the main body for version 1.2.0 this does not matter any more. The Annex with editor's notes still needs to be deleted.
3.4	Working assumptions in 24.229 Annex C	24.229	N1-020512	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 deleted or replaced with normative text	23.218	N1-020036 N1-020114 N1-020662	All done for version 2.0.0
3.6	Editor's notes in 24.228 must be deleted or replaced with normative text	24.228	N1-011834 N1-012016 N1-012017	
3.7	Editor's notes in 24.229 must be deleted or replaced with normative text.	24.229	N1-012015 N1-020603	
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	N1-020437	
3.11	Deletion of Annex C	23.218		Minor task now that this temporary information storage is empty Not any more as the current annex C contains overview of filtering
3.12	Hanging text paragraph in section 6	23.218		This has been corrected to version 2.0.0
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 The contents has been added to version 2.0.0
3.14	Systematic checking of correct use of defined terminology	23.218, 24.228, 24.229	N1-011864 N1-011905 N1-012012 N1-012013 N1-012014 N1-012015 N1-020019 N1-020053 N1-020054 N1-020473	Collecting the used terms to vocabulary and checking the correct spelling of defined terms such as private user identity and public user identity

			N1-020530 N1-020653	