

**Telecommunications and Internet converged Services and
Protocols for Advanced Networking (TISPAN);
Analysis of relevant 3GPP IMS specifications for use in
TISPAN_NGN Release 1 specifications**



Reference

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Foreword

This Technical Report (TR) has been produced by ETSI Technical Committee Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN).

1 Scope

The present document presents the analysis of the impacts on relevant 3GPP IMS specifications when used in the context of TISPAN NGN R1 and proposes arrangements for their endorsement by TISPAN as part of NGN Release 1.

An early decision of the NGN project was to use the 3GPP defined IP Multimedia Subsystem (IMS) as a starting point for providing Multimedia service capabilities and supporting Simulation of PSTN/ISDN communication services in the fixed network. The present document reviews the content of the relevant 3GPP Technical Specifications and identifies how their endorsement should be achieved to allow for the reuse of IMS in the TISPAN_NGN Release 1 specifications.

The document is structured as follows:

- Clause 4 identifies the process of endorsement.
- Clause 5 presents the analysis of endorsement requirements in the NGN.
- The annexes present outline CRs for specifically identified 3GPP documents.

2 References

For the purposes of this Technical Report (TR), the following references apply:

- [1] ETSI SR 001 262: "ETSI drafting rules".
- [2] ETSI TS 181 005: "Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN); Services and Capabilities Requirements".
- [3] ETSI ES 282 007: "Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN); IP Multimedia Subsystem (IMS); Functional architecture".
- [4] ETSI ES 283 003: "Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN); IP Multimedia Call Control Protocol based on Session Initiation Protocol (SIP) and Session Description Protocol (SDP) Stage 3 [3GPP TS 24.229 (Release 7), modified]".
- [5] ETSI TS 182 006: "Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN); IP Multimedia Subsystem (IMS); Stage 2 description (3GPP TS 23.228 v7.2.0, modified)".
- [6] ETSI TS 122 141: "Universal Mobile Telecommunications System (UMTS); Presence service; Stage 1 (3GPP TS 22.141)".
- [7] ETSI TS 122 228: "Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); Service requirements for the Internet Protocol (IP) multimedia core network subsystem (IMS); Stage 1 (3GPP TS 22.228)".
- [8] ETSI TS 122 340: "Universal Mobile Telecommunications System (UMTS); IP Multimedia Subsystem (IMS) messaging; Stage 1 (3GPP TS 22.340)".
- [9] ETSI TR 122 940: "Universal Mobile Telecommunications System (UMTS); IP Multimedia Subsystem (IMS) messaging; Stage 1 (3GPP TR 22.940)".
- [10] ETSI TS 132 240: "Universal Mobile Telecommunications System (UMTS); Telecommunication management; Charging management; Charging architecture and principles (3GPP TS 32.240)".
- [11] ETSI TS 132 299: "Universal Mobile Telecommunications System (UMTS); Telecommunication management; Charging management; Diameter charging applications (3GPP TS 32.299)".
- [12] ETSI TS 132 298: "Universal Mobile Telecommunications System (UMTS); Telecommunication management; Charging management; Charging Data Record (CDR) parameter description (3GPP TS 32.298)".

- [13] ETSI TS 132 297: "Universal Mobile Telecommunications System (UMTS); Telecommunication management; Charging management; Charging Data Record (CDR) file format and transfer (3GPP TS 32.297)".
- [14] ETSI TS 123 002: "Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); Network architecture (3GPP TS 23.002)".
- [15] ETSI TS 124 229: "Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); Internet Protocol (IP) multimedia call control protocol based on Session Initiation Protocol (SIP) and Session Description Protocol (SDP); Stage 3 (3GPP TS 24.229)".
- [16] ETSI TS 123 228: "Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); IP Multimedia Subsystem (IMS); Stage 2 (3GPP TS 23.228)".
- [17] ETSI TS 181 006: "Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN); TISPAN NGN Release 2; Direct Call; Stage 1 Service Description".
- [18] ETSI TS 132 260: "Universal Mobile Telecommunications System (UMTS); Telecommunication management; Charging management; IP Multimedia Subsystem (IMS) charging (3GPP TS 32.260)".
- [19] ETSI TS 129 229: "Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); Cx and Dx interfaces based on the Diameter protocol; Protocol details (3GPP TS 29.229)".
- [20] ETSI TS 183 033: "Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN); IP Multimedia; Diameter based protocol for the interfaces between the Call Session Control Function and the User Profile Server Function/Subscription Locator Function; Signalling flows and protocol details [3GPP TS 29.228 V6.8.0 and 3GPP TS 29.229 V6.6.0, modified]".
- [21] ETSI TS 124 141: "Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); Presence service using the IP Multimedia (IM) Core Network (CN) subsystem; Stage 3 (3GPP TS 24.141)".
- [22] ETSI ES 282 003: "Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN); Resource and Admission Control Sub-system (RACS); Functional Architecture".
- [23] ETSI TR 180 000: "Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN); NGN Terminology".
- [24] ETSI TS 183 021: "Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN); NGN Release 1; Endorsement of 3GPP TS 29.162 Interworking between IM CN Sub-system and IP networks".
- [25] ETSI TS 129 162: "Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); Interworking between the IM CN subsystem and IP networks (3GPP TS 29.162)".
- [26] ETSI TS 129 163: "Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); Interworking between the IP Multimedia (IM) Core Network (CN) subsystem and Circuit Switched (CS) networks (3GPP TS 29.163)".
- [27] ETSI ES 283 027: "Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN); Endorsement of the SIP-ISUP Interworking between the IP Multimedia (IM) Core Network (CN) subsystem and Circuit Switched (CS) networks [3GPP TS 29.163 (Release 7), modified]".
- [28] ETSI TS 129 228: "Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); IP Multimedia (IM) Subsystem Cx and Dx Interfaces; Signalling flows and message contents (3GPP TS 29.228)".

- [29] ETSI TS 133 102: "Universal Mobile Telecommunications System (UMTS); 3G security; Security architecture (3GPP TS 33.102)".
- [30] ETSI TS 187 003: "Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN); NGN Security; Security Architecture".
- [31] ETSI TS 187 001: "Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN); NGN SECurity (SEC); Requirements".
- [32] ETSI TR 187 002: "Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN); TISPAN NGN Security (NGN_SEC); Threat and Risk Analysis".
- [33] ETSI TS 133 141: "Universal Mobile Telecommunications System (UMTS); Presence service; Security (3GPP TS 33.141)".
- [34] ETSI TS 133 222: "Universal Mobile Telecommunications System (UMTS); Generic Authentication Architecture (GAA); Access to network application functions using Hypertext Transfer Protocol over Transport Layer Security (HTTPS) (3GPP TS 33.222)".
- [35] ETSI TS 133 203: "Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); 3G security; Access security for IP-based services (3GPP TS 33.203)".
- [36] ETSI TS 133 210: "Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); 3G security; Network Domain Security (NDS); IP network layer security (3GPP TS 33.210)".
- [37] ETSI TS 133 220: "Universal Mobile Telecommunications System (UMTS); Generic Authentication Architecture (GAA); Generic bootstrapping architecture (3GPP TS 33.220)".
- [38] ETSI TR 181 007: "Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN); Messaging Services; Messaging Overview".
- [39] ETSI ES 282 010: "Telecommunications and Internet Converged Services and Protocols for Advanced Networking (TISPAN); Charging [Endorsement of 3GPP TS 32.240 v6.3.0, 3GPP TS 32.260 v6.3.0, 3GPP TS 32.297 v6.1.0, 3GPP TS 32.298 v6.1.0 and 3GPP TS 32.299 v6.4.0 modified]".

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the following terms and definitions apply:

EXAMPLE 1: text used to clarify abstract rules by applying them literally

NOTE: This may contain additional information.

3.2 Abbreviations

For the purposes of the present document, the following abbreviations apply:

CR	Change Request
GAA	Generic Authentication Architecture
GERAN	GSM/EDGE Radio Access Network
GPRS	General Packet Radio Service
NDS	Network Domain Security
NGN	Next Generation Network
NNA	Network Network Access
PES	Packet Emulation Service
PLMN	Public Land Mobile Network

PSS	Provider Switch Service
QoS	Quality of Service
UMTS	Universal Mobile Telecommunications Service

4 Overview and method of analysis

4.1 Use of endorsement

Most specifications in 3GPP are written with a scope of application restricted to the PLMN and in many cases restricted to specific forms of access network (primarily radio (UMTS, GPRS, GERAN, IEE 802.11)). For all such specifications there is a requirement that when the specification is applied to the NGN (as specified in TISPAN) the scope is extended to lift any restrictions to PLMN or to specific access networks.

NOTE: The purpose of endorsement of IMS by TISPAN is to lift restrictions that may apply for fixed access.

In the NGN project the term *endorsement* is not used as in normal ETSI practice (see clause 4.2) but is a measure of the joint agreement between the TISPAN NGN project and the 3GPP IMS project to a shared development of the IMS specifications. Therefore as described in clause 4.3 where IMS needs modification to support the TISPAN NGN project the development and joint agreement of CRs by both TISPAN and 3GPP acts as *endorsement* of the change. Similarly if the capabilities of IMS fully meet the requirements of TISPAN and 3GPP it is still necessary to agree by means of *endorsement* to the use of the specification in both fixed and mobile environments. Finally where IMS needs to be extended in a way that is not required by 3GPP it is still necessary to have the agreement of both 3GPP and TISPAN to develop a TISPAN specific extension of the IMS specifications where once again this acts as the *endorsement* activity.

In visual terms the IMS is constructed from, and dependent on, requirements from both TISPAN and 3GPP and has the constraint that there should be no specializations of IMS allowed (i.e. there is only one IMS). This is shown in figure 1.

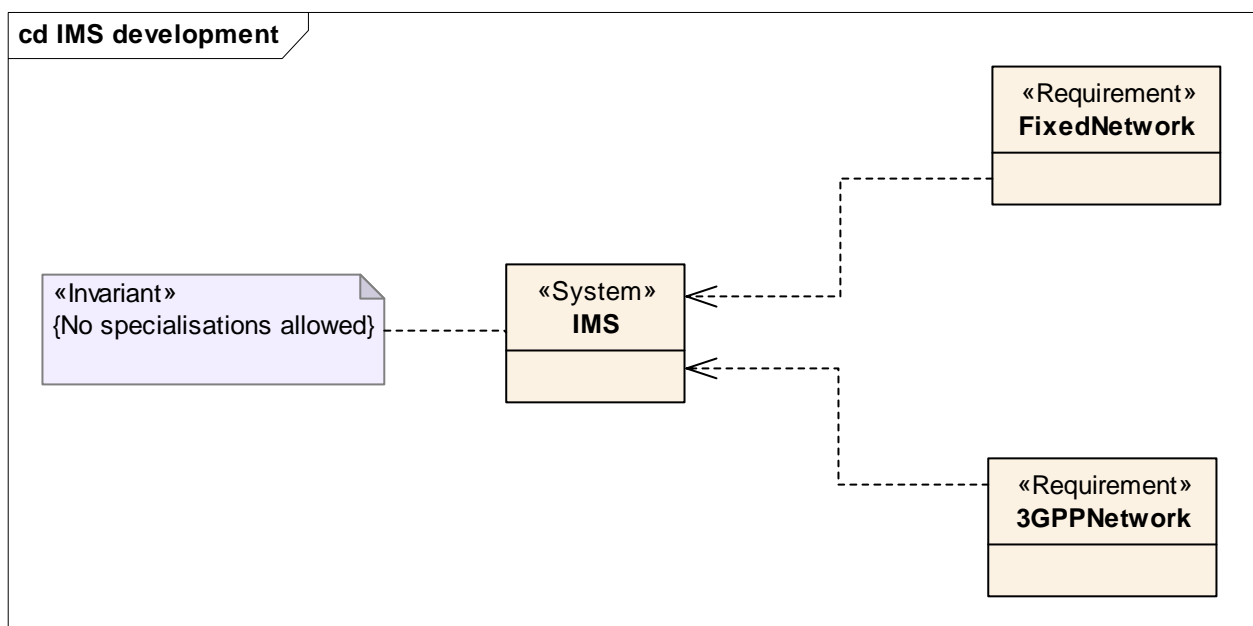


Figure 1: IMS dependencies and constraints

4.2 Endorsement forms in ETSI

4.2.1 Normative referencing

When a document from either ETSI or a 3rd party is normatively referenced in an ETSI specification the parts of the document referred to become normative to the subject document and are thus endorsed by reference. This method of endorsement may be most suitable when a 3rd party document, such as one from 3GPP, only applies in specific areas.

4.2.2 Document endorsement

Endorsements of documents from 3rd parties adopted by ETSI are given in the following forms as outlined in annex C of the ETSI Drafting Rules (SR 001 262 [1]):

- Endorsed in full:
 - If the endorsed document is referred to without modifications, the following text should be used:
"All elements of Apply."
- Endorsed with modification:
 - If the endorsed document is referred to with modifications, one of the following text blocks should be used:
 - 1) in the simple case where it is only required to directly modify elements of text from the endorsed document:
"The elements of Apply, with the following modifications:"
 - 2) in more complex cases, where (for example) additional requirements are added:
"The present document, in conjunction with... provides the specifications for....."

When a document is endorsed with modification in the above manner the document being endorsed and its endorsement are not equal and as such for the use of IMS in NGN there will be a divergence of fixed and mobile IMS.

Document endorsement should not be used as the default method of endorsement in the NGN project for use of 3GPP IMS specifications.

4.3 Approach to analysis

The approach to analysis taken for the present document is as follows:

- Identification of NGN R1 requirements from TS 181 005 [2].
- Identify the endorsement work already undertaken in the TISPAN WGs.
- Comparison of remaining requirements to capabilities offered in IMS.
- Identification of gaps ("Gap analysis").
- Stimulate discussion with 3GPP through the working groups while the updates are not yet cast in stone.
- Identify if the proposed updates have aspects that need to be brought to IETF.
- Discuss updates in WG3 and get a company delegate assigned to bring the CR to 3GPP.

4.3.1 Model of analysis method

The flowchart presented in figure 1 and in table 1 define the analysis approach to be used in deterring if endorsement of 3GPP IMS specifications is required.

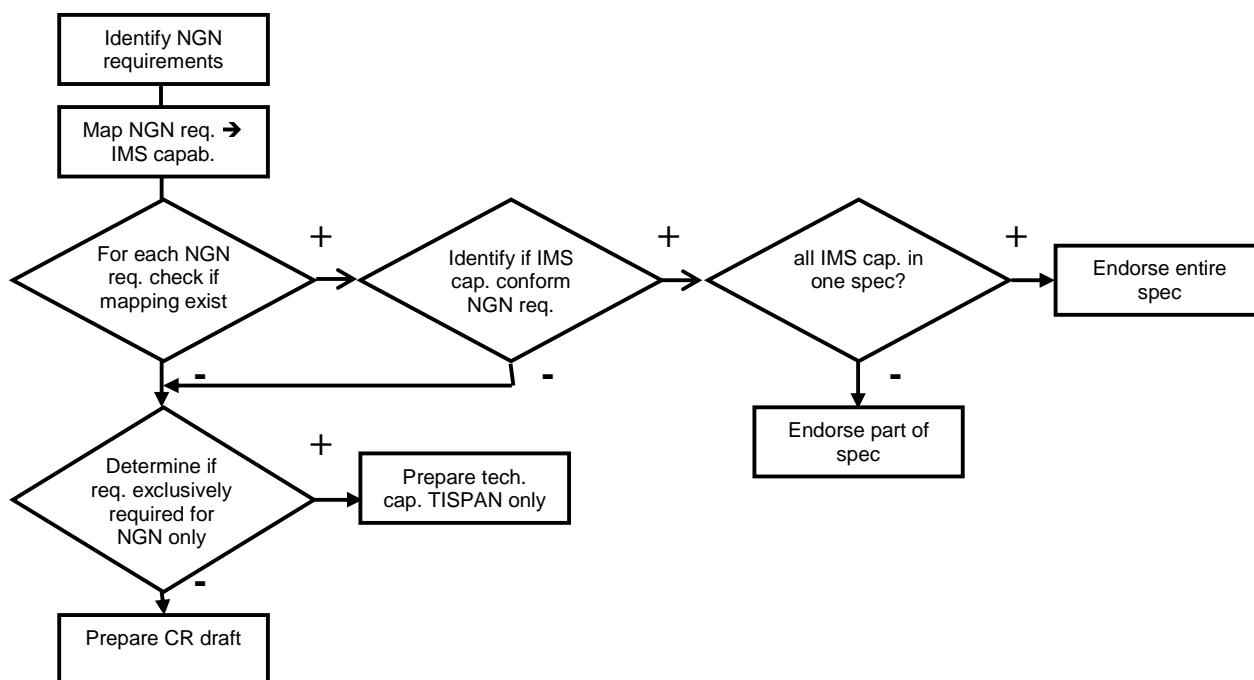


Figure 2: Endorsement flow chart

Table 1: Endorsement flow chart activities

Endorsement analysis phase	Activity	Methods
1	Identify NGN requirements	Use cases, Stage 1, Stage 2
2	Catalogue NGN requirements	Database, text document
3	Mapping to IMS capabilities	Manual inspection
4	Document IMS capability to NGN requirement mapping	Database, text document reference
5 (see note)	Identify if CR is necessary	
6	Identify if scope of CR is acceptable to both 3GPP and TISPAN	Joint agreement
7	If 6 is true prepare CR for 3GPP document	
8	If 6 is false prepare new TISPAN specification	

NOTE: All endorsements require at least one CR to extend the scope of IMS documents to apply to TISPAN NGN.

If a mapping exists determine how fully it meets the NGN requirement. Capabilities which can be extended to suit both NGN and 3GPP need to be developed as CRs and agreed to by both TISPAN and 3GPP (this acts as *endorsement* of the change). If the capabilities of IMS fully meet the requirements of TISPAN and 3GPP it is still necessary to agree (*endorsement*) to a change in the specification to clarify that the capability is not restricted in scope to the PLMN (3GPP). If a change is required that is only supported and necessary for TISPAN then it should be developed as a separate TISPAN specification with the agreement of both 3GPP and TISPAN (again this is the *endorsement* activity).

4.3.2 Failure and contingency

The over-riding principle of the TISPAN NGN project and its use of IMS is that there will be only one IMS that is suitable for both the fixed and mobile environments. In acceptance of this there is no significant consideration of failure by the industry as represented by TISPAN NGN and 3GPP to develop a single harmonized IMS suitable for both environments without damaging either. Failure of a CR to be accepted against an IMS specification will lead to failure of the first principle but may be mitigated by moving to phase 7 of the endorsement flow chart activities (table 1).

4.4 Scope of IMS and endorsement in TISPAN NGN-R1

The TISPAN NGN is a collection of systems. IMS endorsements apply only to the IMS part of TISPAN NGN although other specifications in the NGN may be endorsements.

4.4.1 Endorsement of IETF RFCs

The use of IETF RFCs and their endorsement, particularly of SIP and SDP, is achieved in 3GPP and 3GPP acts as the main conduit from ETSI to IETF. Where requirements to extend the capabilities of IETF RFCs the relevant internet drafts should be prepared jointly with 3GPP and addressed to the relevant working group of the IETF (i.e. SIPPING for extensions to SIP).

In the event that an essential capability has been described in an Internet-Draft (ID) which is of necessity a temporary document that expires within a given period and which may not be ratified as an RFC in time the text of the ID should be copied as normative text to the appropriate ETSI deliverable. In this way the capability is made normative in the NGN context irrespective of the course of events in the IETF.

5 Analysis of IMS in the NGN

5.1 NGN requirements (WG1)

The requirements expressed in TS 181 005 [2] follow the structure of requirements given in figure 3.

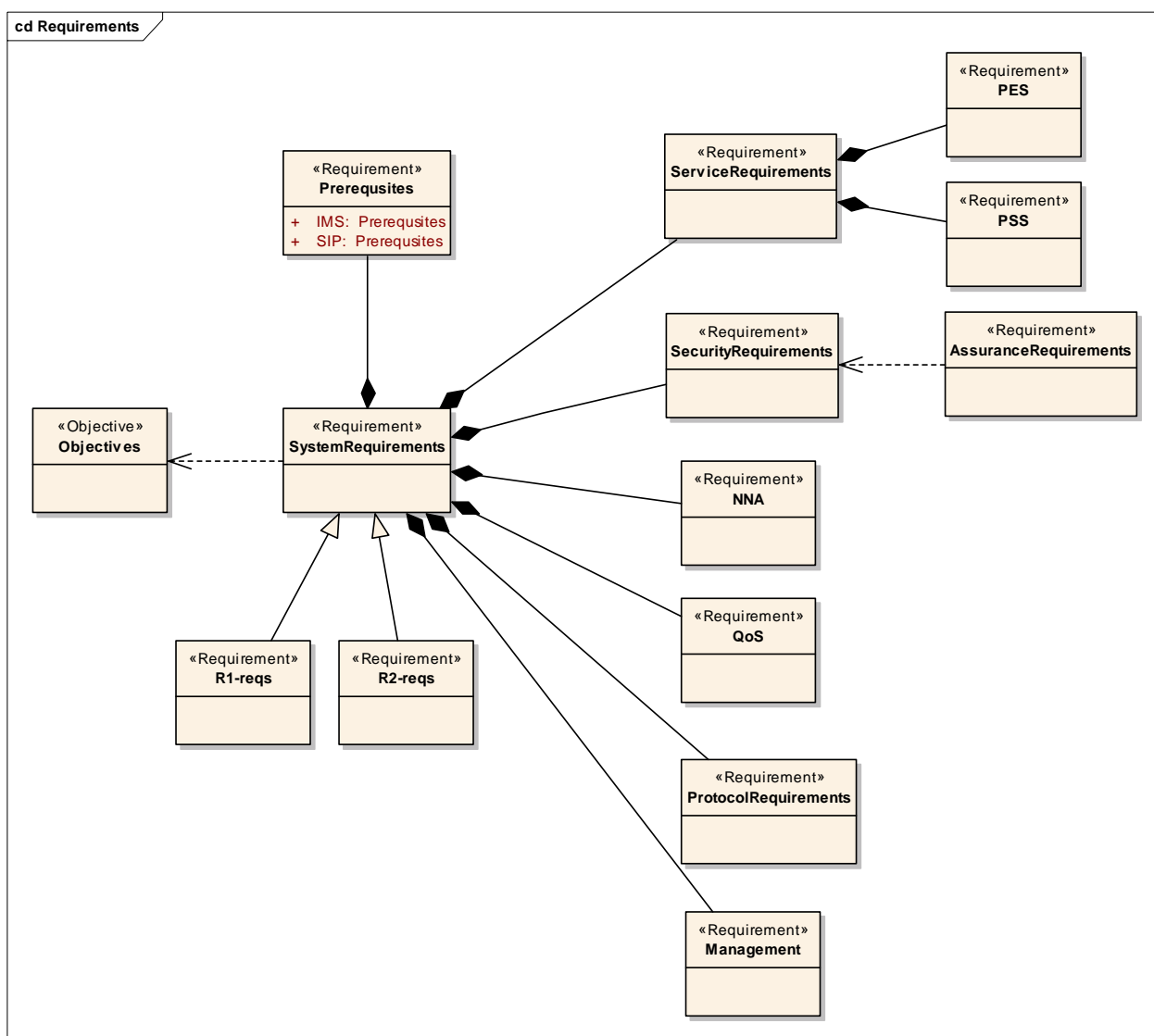


Figure 3: Structure of NGN R1 requirements

5.1.1 Endorsement strategy for 3GPP TS 22.141

The presence service is required for NGN-R1 and the endorsement of TS 22.141 [6] has been approved by reference from TS 181 005 [2].

No further work required.

5.1.2 Endorsement strategy for 3GPP TS 22.228

There is no plan to endorse TS 22.228 [7] as the equivalent document for NGN-R1 is TS 181 005 [2].

No further work required.

5.1.3 Endorsement strategy for 3GPP TS 22.340

TISPAN endorses TS 22.340 [8] by reference and reports on the mechanisms defined in TS 22.340 in the context of TR 181 007.

No further work required.

5.1.4 Endorsement strategy for 3GPP TR 22.940

TISPAN endorses TR 22.940 [9] by reference and reports on the mechanisms defined in TR 22.940 [9] in the context of TR 181 007 [38].

No further work required.

5.2 Architecture (WG2)

5.2.1 Endorsement strategy for TS 23.002

Endorsed by reference in ES 282 007 [3].

5.2.2 Endorsement strategy for TS 32.240, TS 32.260, TS 32.297, TS 32.298 and TS 32.299

This suite of documents from 3GPP cover the topic of charging and the following explicit endorsement statements are made in ES 282 010 [39].

References to "The present document" in the tables that follow refer to ES 282 010 [39].

5.2.2.1 Endorsement of 3GPP TS 32.240 (V6.3.0)

The references listed in the table below are replaced by references applicable to NGN.

Reference no.	Reference in 3GPP TS 32.240	Applicable reference in the present document
[50]	3GPP TS 32.299 [11]	The present document
[51]	3GPP TS 32.298 [12]	The present document
[52]	3GPP TS 32.297 [13]	The present document

All occurrences in the text of Online Charging (in particular clauses 4.1.2, 4.3.2, 4.4.2, 4.5.2, 5.2.2 and 5.5.2) are not included.

All occurrences to Bearer level charging and flow-based charging (clause 5.3.1) are not included.

Advice of Charge (clause 5.5.4) is not included.

Concerning clause 5.3.4.3, only type 2 IOI is provided.

5.2.2.2 Endorsement of 3GPP TS 32.260 (V6.3.0)

The references listed in the table below are replaced by references applicable to NGN.

Reference no.	Reference in 3GPP TS 32.260	Applicable reference in the present document
[1]	3GPP TS 32.240 [10]	The present document
[50]	3GPP TS 32.299 [11]	The present document
[51]	3GPP TS 32.298 [12]	The present document
[52]	3GPP TS 32.297 [13]	The present document
[103]	3GPP TS 23.002 [14]	ES 282 007: "IP Multimedia Subsystem (IMS) Release 1" [3]
[204]	3GPP TS 24.229 [15]	ES 283 003: "Endorsement of "IP Multimedia Call Control Protocol based on Session Initiation Protocol (SIP) and Session Description Protocol (SDP) Stage 3 (Release 6); Release 1" [4]
[200]	3GPP TS 22.228 [7]	TS 181 006: "Service Requirements and Capabilities for TISpan NGN Release 1" [17]
[201]	3GPP TS 23.228 [16]	TS 182 006: "IP Multimedia Subsystem (IMS); Stage 2; TISpan NGN Release 1" [5]

All occurrences in the text of Online Charging (in particular clauses 4.3, 5.3, 6.2,) are not included.

The ACID (clause 5.1.2.5 and annex A) is not provided.

5.2.2.3 Endorsement of 3GPP TS 32.297 (V6.1.0)

The references listed in the table below are replaced by references applicable to NGN.

Reference no.	Reference in 3GPP TS 32.260	Applicable reference in the present document
[1]	3GPP TS 32.240 [10]	The present document
[50]	3GPP TS 32.299 [11]	The present document
[51]	3GPP TS 32.298 [12]	The present document

The specifications described here are completely applicable.

5.2.2.4 Endorsement of 3GPP TS 32.298 (V6.1.0)

The references listed in the table below are replaced by references applicable to NGN.

Reference no.	Reference in 3GPP TS 32.260	Applicable reference in the present document
[1]	3GPP TS 32.240 [10]	The present document
[20]	3GPP TS 132 260 [18]	The present document
[40]	3GPP TS 32.299 [11]	The present document
[42]	3GPP TS 32.297 [13]	The present document
[79]	3GPP TS 24.229 [15]	ES 283 003: Endorsement of "IP Multimedia Call Control Protocol based on Session Initiation Protocol (SIP) and Session Description Protocol (SDP) Stage 3 (Release 6); Release 1" [4]

Bearer Level CDRs are not supported (clause 5.1.2 and 5.2.2).

Service Level CDR parameters (clauses 5.1.4 and 5.2.4) are not supported.

5.2.2.5 Endorsement of 3GPP TS 32.299 (V6.4.0)

The references listed in the table below are replaced by references applicable to NGN.

Reference no.	Reference in 3GPP TS 32.260	Applicable reference in the present document
[1]	3GPP TS 32.240 [10]	The present document
[201]	3GPP TS 23.228 [16]	TS 182 006: " IP Multimedia Subsystem (IMS); Stage 2; TISPAN NGN Release 1" [5]
[202]	3GPP TS 24.229 [15]	ES 283 003: Endorsement of "IP Multimedia Call Control Protocol based on Session Initiation Protocol (SIP) and Session Description Protocol (SDP) Stage 3 (Release 6); Release 1" [4]
[204]	3GPP TS 129 229 [19]	TS 183 033: Endorsement of 3GPP TS 29 228 (Release 6) and 3GPP TS 29.229 (Release 6); Release 1 [20]

Online Charging scenarios (clauses 5.2, 5.3, 6.3, and 6.4) are not supported.

AVPs belonging to the excluded CDR-parameters from TS 32.298 are not used.

5.3 Protocol (WG3)

5.3.1 Endorsement strategy for 3GPP TS 24.141

Endorsed in clause 6 of ES 282 003 [22] with additional endorsement in clause 5 of OMA-TS-Presence_SIMPLE-V1_0-20051122-C. The elements of 3GPP TS 24.141 [21] with the following modifications:

- The references are in some instances replaced by references applicable to NGN.
- Clause 1 does not apply.
- Clause 3.1 the definition of UE is replaced by the definition agreed in TR 180 000 [23].
- Clause 6 does not apply this will be covered in the TS 283 038 and the presence specific part of the OMA above.
- Clause A.8 does not apply.

5.3.2 Endorsement strategy for 3GPP TS 24.229

The endorsement of TS 24.229 [15] is essential to allow completion of the NGN and is addressed in ES 282 003 [22] (WI-03019) which endorses, with the addition of modifications described in ES 282 003, 3GPP TS 24.229 [15] (V7.2.0): "Internet Protocol (IP) multimedia call control protocol based on Session Initiation Protocol (SIP) and Session Description Protocol (SDP)"; Stage 3.

The endorsement document replaces the text of clauses 4.1 and 4.2.

The endorsement document addresses clause 5 of TS 24.229 [15] with the statement that clause 5 applies to TISPAN NGN-R1 with exceptions detailed as follows: the following clauses do not apply 5.1.1.2, 5.1.1.3, 5.1.1.4, 5.1.1.5, 5.1.1.6, 5.1.1.7, 5.1.2A, 5.2.1, 5.2.2, 5.2.5, 5.2.6, 5.2.7, 5.2.8, 5.4.1, 5.4.3.3 5.6, 5.10.1, 5.10.2.2, 5.10.2.3 and 5.10.3.1, which are replaced by text in ES 282 003 [22]. In addition also clauses 5.1.1.1B, 5.1.1.2A, 5.1.1.4A, 5.1.1.5.1A, 5.1.1.6A, 5.2.2A and 5.10.6 are added.

The profiling of IETF RFCs in TS 24.229 [15] is not fully endorsed with replacement text for clauses A.1.2, A.2.1.2, A.2.1.4.1, A.2.2.2 and A.2.2.4.1 provided in ES 282 003 [22].

In the context of annex C UICC and USIM Aspects for access to the IM CN subsystem an additional clause C.4 applies and is found in ES 282 003 [22].

Annex E is extended in ES 282 003 [22] with the addition of clause E.3 covering "Application usage of SIP".

NOTE: The changes to TS 24.299 [15] identified in ES 282 003 [22] imply that NGN-IMS and 3GPP-IMS behave differently.

5.3.3 Endorsement strategy for 3GPP TS 29.162

TS 183 021 [24].

5.3.4 Endorsement strategy for 3GPP TS 29.163

ES 283 027 [27] offers endorsement with modifications. Not approved in WG3.

5.3.5 Endorsement strategy for 3GPP TS 29.228 and 3GPP TS 29.229

Documents TS 129 228 [28] and TS 29.229 [19] are endorsed with modifications in ES 283 003 [4].

NOTE: A full security review of the changes made by ES 283 003 [4] is required.

5.4 Numbering, naming and addressing (WG4)

The NGN shall support coexistence of URIs and ITU-T Recommendation E.164. WG4 has endorsed the relevant parts of 3GPP TS 29.229 [19] by cooperation with the endorsements of TS 29.229 in each of WGs 2 and 3.

No further endorsement activity required.

5.5 Quality of Service (WG5)

No endorsement activity required.

5.6 Testing and validation (WG6)

No endorsement activity required.

5.7 Security (WG7)

5.7.1 Introduction

The overall document structure for NGN-R1 security is shown in figure 4, and for the LI domain in figure 5.

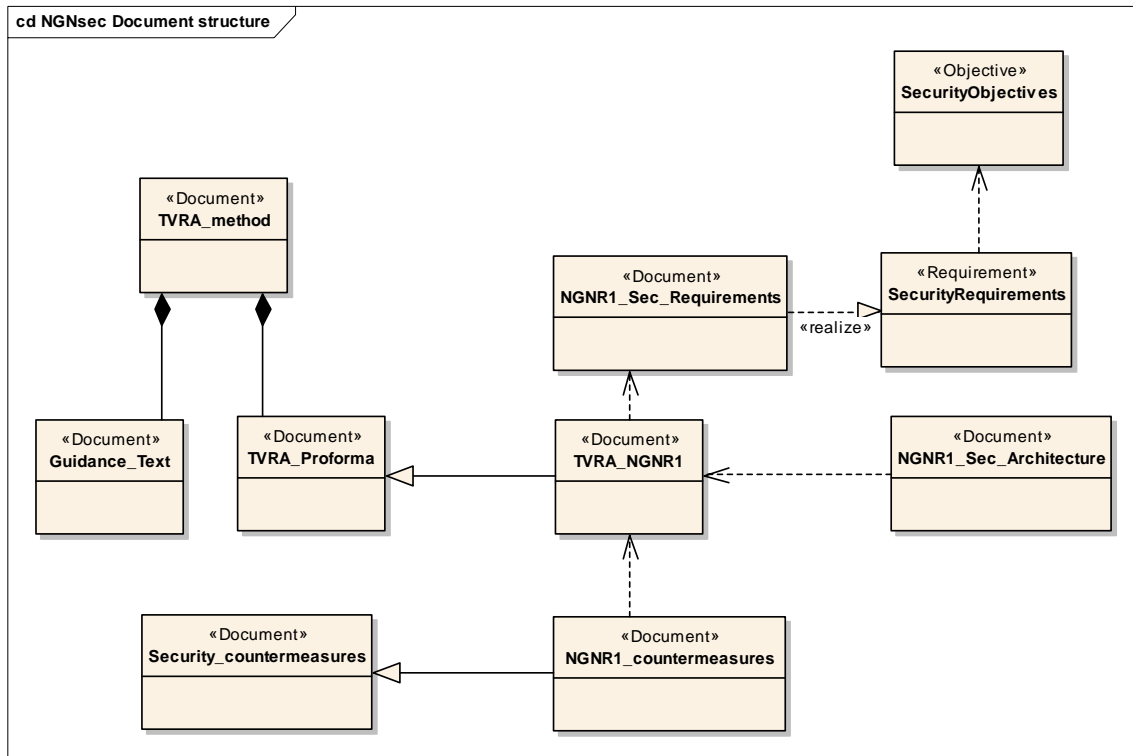


Figure 4: Document architecture for NGN security

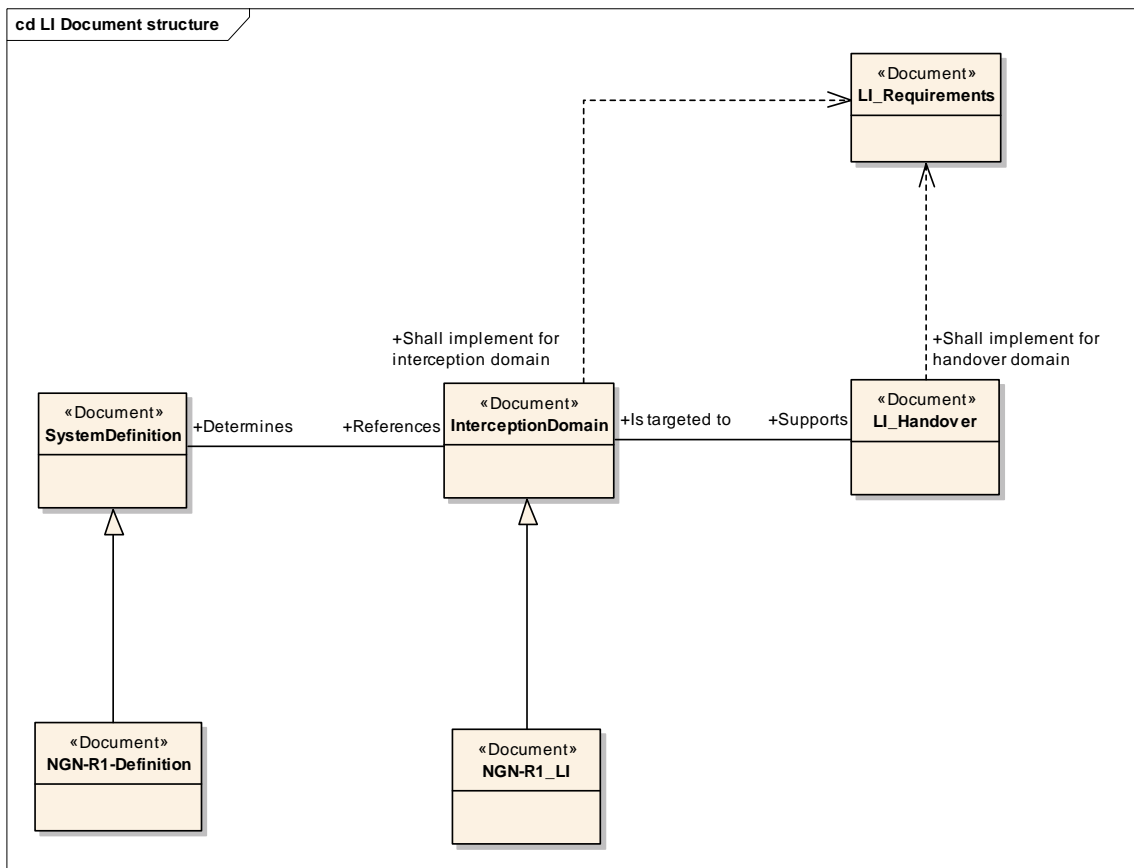


Figure 5: Document architecture for NGN LI domain

The realization of the document relationships and the implied endorsements are shown in figure 6 for NGN-R1 security, and in figure 7 for the LI domain.

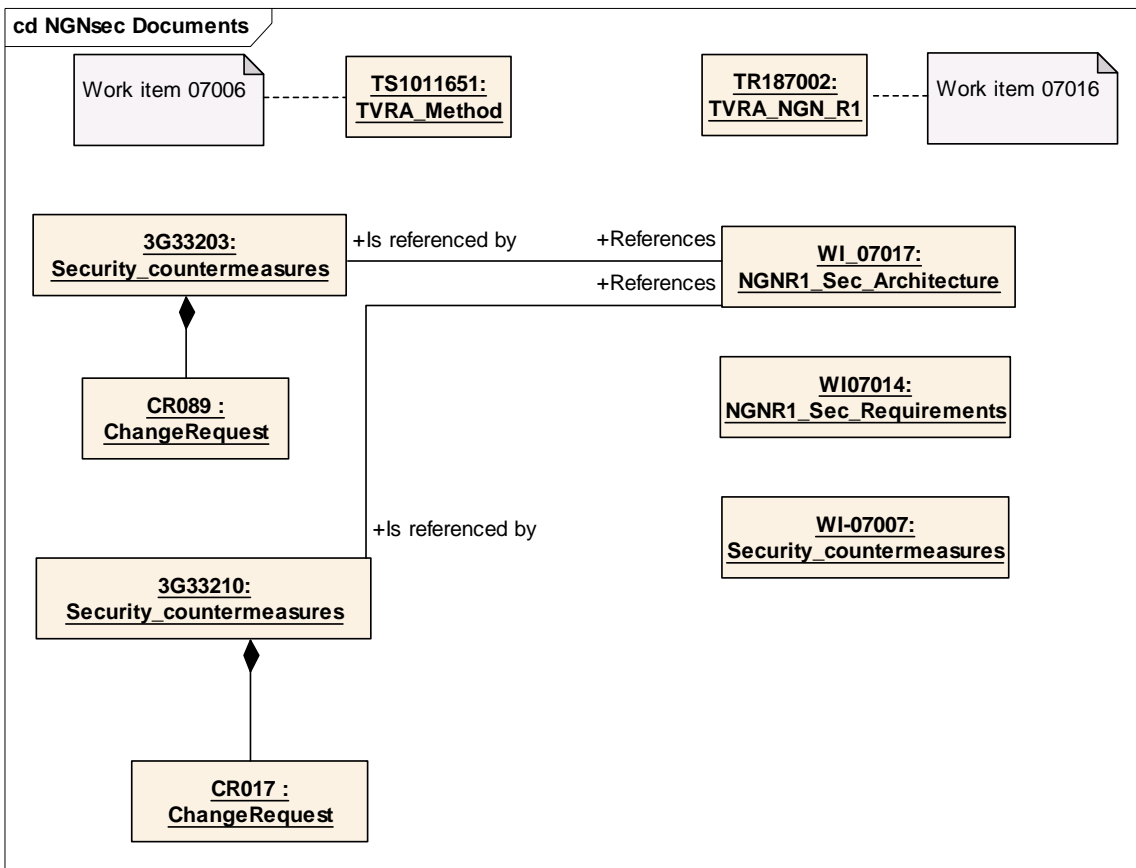


Figure 6: NGN Security document relationships

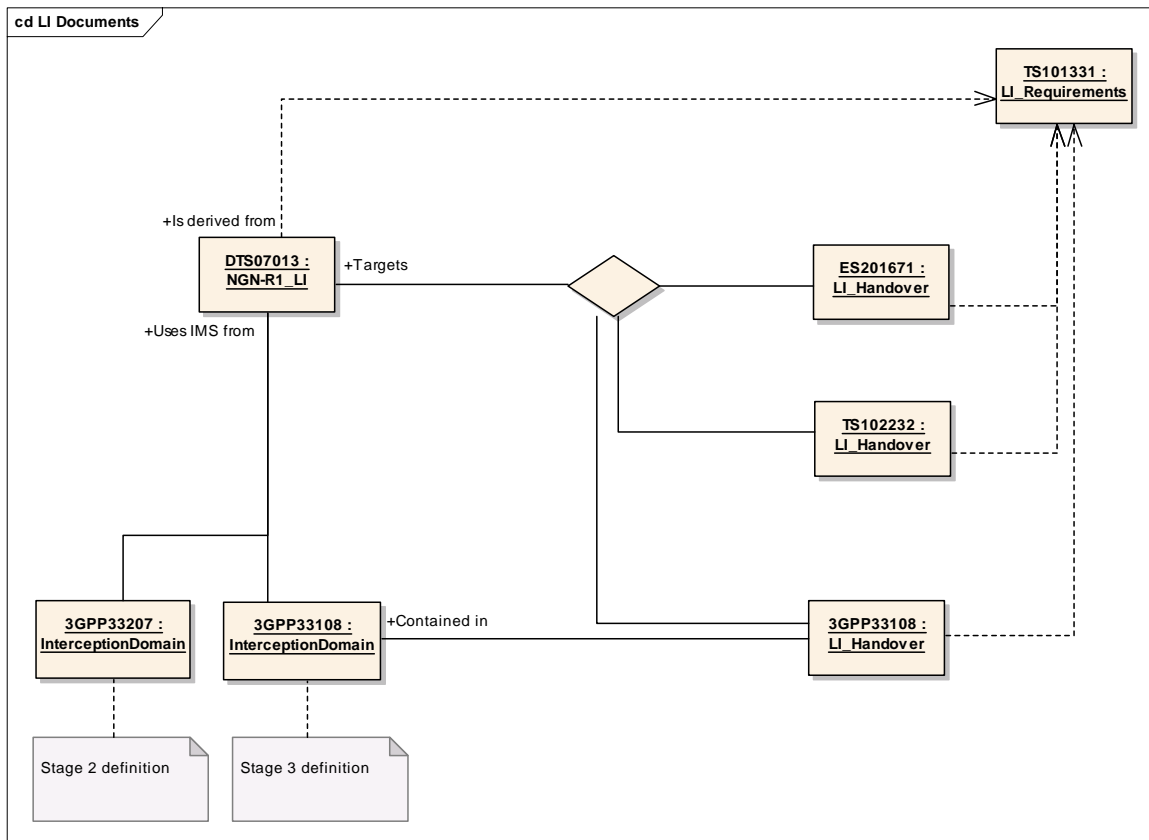


Figure 7: NGN LI document relationships

The security requirements for the NGN have not been fully stated. The following notes identify the principal areas of concern for the NGN adoption of IMS security as described in 3GPP TS 33.203 and in 3GPP TS 33.210.

5.7.2 Endorsement strategy for 3GPP TS 33.102 Security architecture

The present document is not referred to in TS 187 003 [30] (although it appears in the list of references it is not in fact referenced).

The scope of TS 133 102 [29] is the UMTS subsystem and specifically those parts providing security based on USIM. USIM is not in the scope of TISPAN NGN and therefore there should be no endorsement of TS 133 102 [29].

For ISIM the IMS-AKA text of TS 133 102 [29] applies and therefore WG7 endorses by reference the sequence number generation in TS 187 003 [30].

NOTE 1: The normative endorsement of IMS-AKA includes the sequence number generation which is marked as informative in annex C of TS 133 102 [29].

NOTE 2: The latest version of TS 133 102 [29] has some parts of the IMS-AKA procedures in an informative annex which is made normative in TISPAN by this endorsement.

NOTE 3: The reference in TS 187 003 is to the latest version of TS 133 102 [29] and therefore requires that if any change in future versions which are not backwards compatible, or which modify the referring text in TS 187 003 [30], need to be addressed jointly with TISPAN and 3GPP.

Table 2: Endorsement of 3GPP TS 33.102 [29]

TS 33.102	Endorsement criteria
Clause 1	The scope of TS 133 102 [29] is primarily for UMTS but the endorsement in the present document extends the scope of application of the security functions to the fixed network components of the NGN.
Clause 2	Remains valid
Clause 3	Remains valid
Clause 4	The content of clause 4 introduces the security architecture for 3G systems. The provisions made for the transport strata and for the home/serving stratum do not apply for TISPAN.
Clause 5	The contents of clause 5 outline general objectives and requirements of the security mechanisms in 3GPP systems. This clause is not endorsed but the objectives and detail requirements of TISPAN are identified in TS 187 001 [31] and in TR 187 002 [32].
Clause 6	Endorsed with exceptions indicated below per clause
Clause 6.1	Does not apply in TISPAN (TMSI based mechanisms not used in TISPAN)
Clause 6.2	Does not apply in TISPAN (IMSI based mechanisms not used in TISPAN)
Clause 6.3.4	Does not apply in TISPAN
Clause 6.4	Does not apply in TISPAN
Clause 6.5	Does not apply in TISPAN
Clause 6.6	Does not apply in TISPAN
Clause 6.7	Does not apply in TISPAN
Clause 6.8	Does not apply in TISPAN
Annex A	Does not apply
Annex B	Does not apply
Annex C	Endorsed in full and made normative for TISPAN
Annex D	Does not apply
Annex E	Does not apply
Annex F	Endorsed in full and made normative for TISPAN
Annex G	Applies (list of CRs that are included in the document)

5.7.3 Endorsement strategy for 3GPP TS 33.141 Presence service; Security

The presence service is required in NGN-R1. The endorsement of TS 33.141 [33] is recommended on the assumption that the underlying mechanisms used in TS 33.141 [33] are also endorsed.

The underlying mechanisms of TS 33.141 [33] are described in TS 33.222 [34].

5.7.4 Endorsement strategy for 3GPP TS 33.203 3G security; Access security for IP-based services

Endorsement of TS 33.203 [35] is required to offer protection of SIP signalling. It is noted however that the mechanisms of TS 33.203 [35] extend those of TS 33.102 [29] whose endorsement is not recommended.

A single CR against TS 33.203 [35] has been approved by 3GPP TSG SA with identity TS 33.203CR089.

The text of TS 33.203 is endorsed with the inclusion of TS 33.203CR089.

5.7.5 Endorsement strategy for 3GPP TS 33.210 3G security; Network Domain Security (NDS)

Endorsement of TS 133 210 [36] is required to allow the use of SEGs in the TISPAN NGN architecture. It is noted that the mechanisms for NDS offer bulk protection by means of secure tunnels and may not be applicable where the security requirement requires mechanisms per user.

A single CR against TS 33.210 [36] has been approved by 3GPP TSG SA with identity TS 33.210CR017.

The text of TS 33.210 is endorsed for provision of Network Domain Security with the following explanatory text and with the inclusion of TS 33.210CR017.

Table 3: Endorsement of 3GPP TS 33.210 [36]

TS 33.210	Endorsement criteria
Clause 1	The scope of TS 133 210 [36] is restricted to UMTS but the endorsement in the present document extends the scope of application of the security functions to the fixed network components of the NGN.
Clause 2	Remain valid
Clause 3	Remain valid
Clause 4	The content of clause 4 introduces the security gateway and describes its deployment. The text remains valid even when the scope is extended to the NGN.
Clause 5	Comments are given by clause
Clause 5.1	Endorsed in full
Clause 5.2	Endorsed in full. In addition the attention of readers of the present document are drawn to the requirement for IKE
Clause 5.3	Endorsed in full. It is noted that by supporting NDS the algorithms AES-128 and SHA-1 are explicitly supported too
Clause 5.4	Endorsed in full
Clause 5.5	Endorsed in full. It is noted that the SA defines the relationship between domains and that the domains described by the SA may be defined by ownership or by interface (i.e. there may be a different SA for each interface that the SEG transports)
Clause 5.6	Endorsed in full
Annex A	The text applies and remains informative
Annex B	Not necessary for those NGN implementations that do not deploy GTP
Annex C	Endorsed in full
Annex D	Does not apply for fixed access

5.7.6 Endorsement strategy for 3GPP TS 33.220 Generic Authentication Architecture (GAA); Generic bootstrapping architecture

Endorsement of TS 33.220 [37] is required to support endorsement of TS 33.222 [34] and is endorsed in full.

5.7.7 Endorsement strategy for 3GPP TS 33.222 Generic Authentication Architecture (GAA); Access to network application functions using Hypertext Transfer Protocol over Transport Layer Security (HTTPS)

Endorsement of TS 33.222 [34] is required to support endorsement of TS 33.141 [33] and is endorsed in full.

Annex A: Identified CRs against 3GPP documents

Document	CR	WG	TISPAN document that refers
TS 33.203 [35]	CR089	7	7017
TS 33.210 [36]	CR017	7	7017

History

Document history		
V1.1.1	May 2006	Publication