OMTP

VERSION: 1.0

STATUS: APPROVED FOR PUBLICATION

DATE OF PUBLICATION: 16th May 2007

OWNER: OMTP LIMITED

CONTENTS

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1 INTRODUCTION

1.1 DOCUMENT PURPOSE

This document defines the minimum set of requirements for 3GPP IMS (IP Multimedia System) Release 6 functionalities on mobile Terminals and identifies which of these functionalities shall be available for developing new IMS capable applications in the Terminal.

Specifically the document contains:

– Requirements to ensure common and consistent functionality on IMS capable Terminals (e.g. requirements on SIP protocol), referencing 3GPP specifications as much as possible.

– Functional Requirements to enable easier development of IMS applications through consistency in Terminal IMS implementations (e.g. availability of SIP REGISTRY command for application developers)

– Functional Requirements to enable that applications can be properly deployed on the Terminals (e.g. application or new capability registry)

The requirements included in this document mainly target 3GPP IMS Terminals. However it is also acknowledged that many of them could also apply to any kind of IMS devices.

1.2 SCOPE & RELATIONSHIP WITH SDOS

1.2.1 DOCUMENT SCOPE

Diagram 1 below depicts a conceptual model of the different IMS components and functionalities.
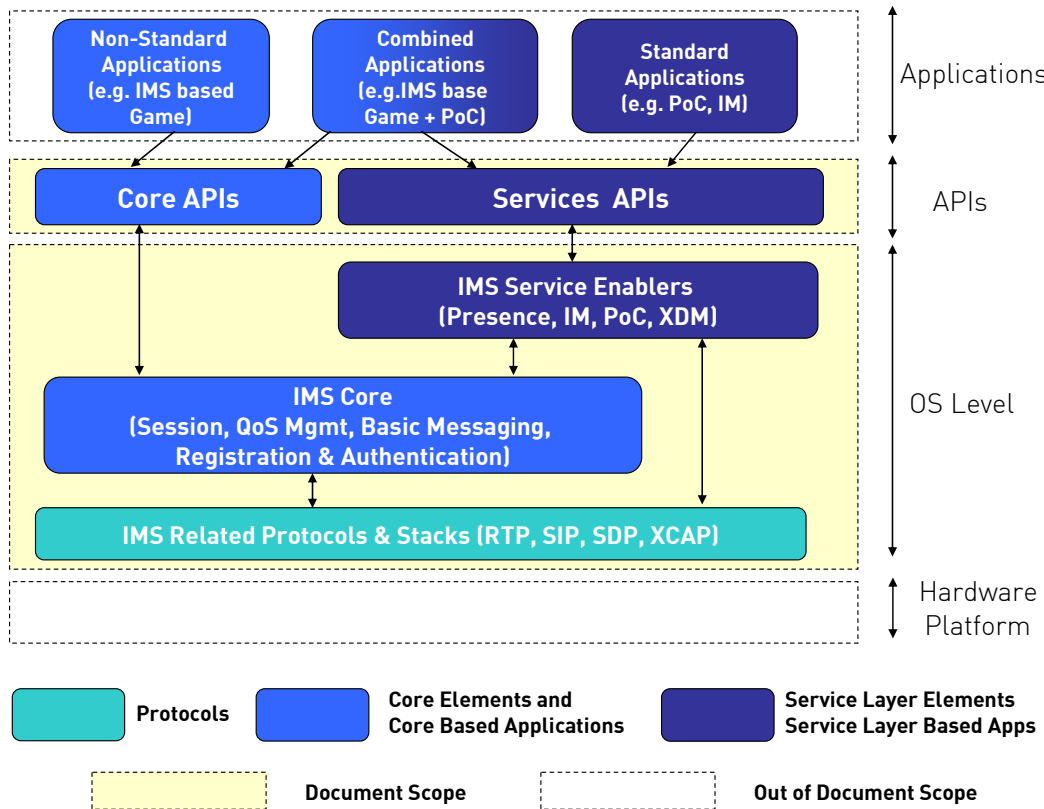
Diagram 1: IMS Conceptual Model

This model is structured in four main layers:

- Hardware Platform: This layer comprises all the hardware elements (e.g. Camera, Display, UICC…) available on the device.

- OS Level: This layer gathers all the software modules built on top of the hardware platform. Its main responsibility is implementing the functionality needed in order to offer mobile services.

- APIs: The API layer exposes the functionality implemented in the OS Level via a programmatic interface that makes possible application development. Although the API layer has been represented as a single module for the sake of the simplicity it is also possible to have different API sets (e.g. Java, C++…) using a single OS Level Framework.

- Applications: This layer comprises all the applications available on the device in order to offer a service to end-user (e.g. a game, an Instant Messaging Client…)

For each of the layers the IMS related modules have been included. These blocks are:

- OS Level

    - IMS Related Protocols & Stacks: This module gathers all the functionality related to the protocols deemed as essential in order to offer IMS Services (e.g. SIP, SDP, RTP, XCAP…).

    - IMS Core: This block provides the basic IMS functionality using the capabilities of the IMS related protocols and stacks. The main target of this module is abstracting the complexity of dealing directly with the protocols by providing a set of core high level functionalities (e.g. Session Management, Authentication…)

    - IMS Service Enablers: Although the functionality offered by the IMS Core abstracts protocol details, it is generic and hence not oriented to provide any concrete end-to-end service. The IMS Service Enablers offer functionality focused in a specific service (e.g. PoC, IM, Presence…). Therefore these enablers make easier the offering of end-to-end services to the users. The enablers are typically built using the high-level functionalities offered by the IMS Core.

- APIs:

    - Core APIs: This module comprises all the programmatic interfaces exposed by the IMS Core in order to develop IMS applications.

    - Service APIs: This module gathers all the APIs offered by the IMS Service Enablers for application development.

- Applications

    - Standard Applications: These applications are based exclusively on the Service Enablers Functionality and therefore are intended to offer a single end-to-end service (e.g. PoC Client, Instant Messaging Client…)

    - Non-Standard Applications: These applications are built using only the IMS Core functionalities and hence provide a service not related with any standard solution (e.g. an IMS based game)

    - Combined Applications: These applications combine the functionalities offered by the Core IMS and the Service Enablers (e.g. an IMS based game that allows users to chat using PoC)

All the IMS related modules listed above comprise the IMS Framework. This document does not define any particular implementation of this framework (e.g. whether it should be a single module, an application…) but defines requirements for the functionality that mobile Terminals should offer regarding IMS capabilities.

The definition of a common set of functionalities for IMS frameworks together with the services available for application developers will foster the creation of an open environment for service creation. To achieve this, the document focuses in the following parts of the framework:

– Functional Requirements: A set of requirements are defined to identify the needs and functionalities expected in IMS frameworks. The focus is put on the IMS Core capabilities and protocols as well as on the IMS service enablers. As the main target of the document is identifying a core set of requirements that facilitates interoperability, the definition of requirements for IMS applications is out of the scope.

– Application Programming Interface (API): The focus of the document is not on the detailed APIs and protocol specifications as these activities are covered by the OS providers, handset manufacturers and SDOs. However, the document provides high level definitions of the IMS Core and services functionality that should be exposed to application developers as this is essential to guarantee a consistent environment for service creation. The definition of requirements for the IMS Protocols and Stacks APIs has been considered as out of the scope of this document. It is anticipated that whenever possible direct access to protocol capabilities should be avoided using the Core and Service APIs instead.

As the main focus in the short-term is achieving a consistent functionality rather than a common User Experience, in this phase applications have been considered out of the document scope.

1.2.2 RELATED SDOs

The aim of the document is not defining a set of competing standard, but referring to available standards or providing inputs to them whenever needed.

There are some related SDOs considered especially relevant for the definition of the Terminal functionality. These are

– 3GPP: Developed the IP Multimedia Subsystem as part of Rel-5 and Rel-6. These specifications have been adopted by 3GPP2 and TISPAN. 3GPP also specifies conformance test specifications to validate the mobile implementations against test equipment. These specifications are used in the GCF and PTCRB process of certification of IMS clients in the mobiles. 3GPP is in the process of specifying 2 service enablers on top of the core IMS capability called Combinational Services (CSI) and Multi-Media Telephony (MMTel) as part of Rel-7. OMA DM Management

Objects are defined by 3GPP for configuration of service enablers, IMS and PS domain bearers.

- IETF: Some of the IMS key protocols (SIP, SDP…) have been defined by this body.

- OMA: This organisation has defined some service enablers (PoC, Instant Messaging…) on top of the core IMS capability. OMA also specifies IoT specifications and run test events to validate mobile implementations of these service enablers. These specifications are used in the GCF process of certification of IMS clients in the mobiles. OMA DM Management Objects are defined by OMA for configuration of service enablers and PS domain bearers.

- GSMA: The GSMA has been developing interoperability trials covering IMS video-sharing.

There are some platform specific activities in the Application Services Interface area defined in the JCP. The relevant JSRs are considered as an input for OMTP. The contents of this document could also be used to identify possible gaps in these JSRs:

- JSR-180 defined a general SIP API for J2ME.

- JSR-281 is defining a framework and APIs for IMS Core and IMS Services (e.g. PoC, XDM, Presence and GLM) on which operators and third parties could develop and offer new IMS services.

1.3 BUSINESS RATIONALE

IMS flexibility makes it possible to offer new end to end services dynamically and easily. Most of the IMS services will require specific applications running on the Terminal. Some of these applications will be provided at manufacture but in many cases, especially when operators wish to differentiate, the clients will be developed by third parties and deployed post-sale to the Terminals.

Having a common set of IMS requirements should provide benefits for all mobile industry players:

- Reducing operators' IMS requirements fragmentation will reduce cost for mobile manufacturers and OS providers.

- Having common IMS functionality across mobile Terminals will increase the number of Terminals which operators and third parties can develop against and allow them to offer consistent new IMS services.

- End users will also benefit from a richer IMS service offering.

1.4 INTENDED AUDIENCE

There are two main audiences for these recommendations:

Mobile Operators: As one of the main targets is reducing requirements fragmentation, OMTP Operators should adopt or reference these recommendations within their requirements specifications.

OMTP Terminal implementers, i.e. the equipment and technology vendors that will be asked to satisfy OMTP recommendations.

1.5 CONVENTIONS

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in [1].

- MUST: This word, or the terms "REQUIRED" or "SHALL", mean that the definition is an absolute requirement of the specification.

- MUST NOT: This phrase, or the phrase "SHALL NOT", mean that the definition is an absolute prohibition of the specification.

- SHOULD: This word, or the adjective "RECOMMENDED", mean that there may exist valid reasons in particular circumstances to ignore a particular item, but the full implications must be understood and carefully weighed before choosing a different course.

- SHOULD NOT: This phrase, or the phrase "NOT RECOMMENDED" mean that there may exist valid reasons in particular circumstances when the particular behaviour is acceptable or even useful, but the full implications should be understood and the case carefully weighed before implementing any behaviour described with this label.

- MAY: This word, or the adjective "OPTIONAL", mean that an item is truly optional. One vendor may choose to include the item because a particular marketplace requires it or because the vendor feels that it enhances the product while another vendor may omit the same item. An implementation which does not include a particular option MUST be prepared to interoperate with another implementation which does include the option, though perhaps with reduced functionality. In the same vein an implementation which does include a particular option MUST be prepared to interoperate with another implementation which does not include the option (except, of course, for the feature the option provides.)

The requirements within this document are uniquely identified using the following format:

IMS-####, where:

is a number that uniquely identifies the requirement.

The following requirement categories have been identified:

Standard Requirement: The requirement is a reference to standard

Overruling Requirement: The requirement overrules a requirement defined in a standard (e.g. optional requirements in standard mandatory in OMTP)

New Requirement: The requirement is not related with any available standard (e.g. 3GPP, OMA, JCP…).

2 USE CASES

2.1 NON-STANDARD SERVICES BASED ON IMS APPLICATIONS

An operator or a 3rd Party wishes to deploy a new IMS service not based on existing standardized services. In these cases, the new service is typically offered via an application client developed using the IMS Core APIs offered by mobile Terminals.

An example of this type of application is a game which makes possible the connection between two users using IMS multimedia sessions.

2.2 COMBINED NON-STANDARD / STANDARD SERVICES

There are situations in which operators wish to create a new IMS service not supported by any standard in combination with some of the standardised capabilities offered by the handset.

An example of this type of services is a game that allows the use of PoC across the users who have joined the gaming session.

The new service is offered via an application that uses the services and functionalities exposed for accessing the core IMS capabilities and protocols in combination with those capabilities offered by the IMS Service Enablers interface (in this case PoC).

Combination of services can be achieved via adding or dropping media on an existing dialog. The services added must be distinguished in order to handle media correctly. Services can also be combined via the use of independent contexts.

2.3 STANDARD SERVICES AND IOT ACROSS OPERATORS

In many cases operators wish to guarantee that the users can use IMS services in an interoperable way with other operators' subscribers. The interoperability is typically reached by defining a framework in which all the aspects of the service are defined and standardised.

An example of this type of generic services is presence, in which users from operator A can see the presence status of one or more operator B subscribers. In combination with the presence service, it is also important to guarantee that PoC and Instant Messaging sessions can be set up across users subscribed to different operators.

These services are based mainly on the functionalities offered by standardised service enablers. To guarantee interoperability (IOT), these standards will be identified and referenced. In cases where options in these standards make IOT difficult, a de-optionalisation will be recommended.

De-optionalisation is the identification of optional features in the standards that are deemed as essential by the operator community. A potential example related to PoC user identification is the following optional requirement in OMA

PoC: "The PoC Client MAY override nicknames received from the PoC Server if a locally stored display name is available in the User Equipment." [2]. If this requirement is considered by OMTP as essential, this document will refer to it as mandatory.

Apart from the currently available standards, some use cases considered in section 2.1 are likely to evolve into standardised solutions if deemed as crucial for all the mobile community (e.g. content sharing).

3 IMS TERMINAL PROFILES

3.1 INTRODUCTION

IMS Terminals that may rely on these recommendations are likely to have different capabilities in terms of their processing power, memory, user interface, I/O, audio and visual support.

Due to these different capabilities and characteristics OMTP specifies two profiles against which Terminals may claim compliance. These profiles are explained in this section.

3.2 IMS OMTP LIGHTWEIGHT PROFILE (IMS P0)

The IMS OMTP Lightweight profile, or Profile 0, is a subset of the full profile and is the most basic implementation option for OMTP IMS compliance.

The IMS OMTP Lightweight profile mandates only support of the core features and requirements of the OMTP IMS Framework and is intended for early and/or low end IMS Terminals.

Lightweight implementations will typically reside on a Terminal in which capability limitations do not allow the full profile implementation.

3.3 IMS OMTP FULL PROFILE (IMS P1)

The IMS OMTP Full profile, or Profile 1, is for higher end Terminals that are capable of supporting all the requirements of this specification. Effectively, these Terminals have the capability to perform all of the requirements of the OMTP IMS framework.

It is **recommended** that wherever possible (depending on device capabilities) the IMS OMTP Full Profile **should** be implemented on Terminals.

3.4 PROFILES VS. IMS CONCEPTUAL MODEL

Diagram 2 links the defined profiles with the conceptual model described in section 1.2.1.
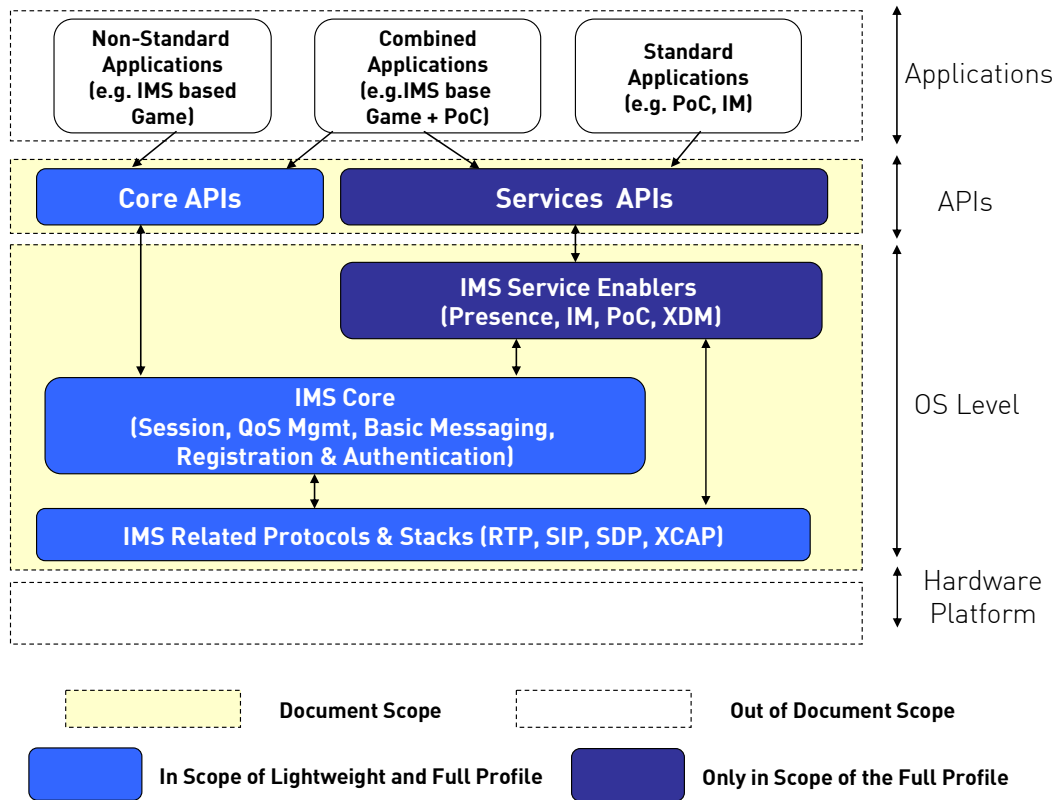
Diagram 2: IMS OMTP Profiles & IMS Conceptual Model

4 STRUCTURE OF THE REQUIREMENTS

The following sections include a set of tables summarizing the requirements that apply for each Terminal profile. All the tables include the following information for each requirement:

– Requirement ID: Unique identifier for the requirement following the numbering described in section 1.5.

– Requirement: Description of the requirement

– Type: Indicates whether the requirement is a reference to a standard (Std) or a new requirement (New)

– IMS P0 / IMS P1: Indicates the level of conformance required for IMS Profile 0 and IMS Profile 1:

   o Applicable to the related profile (✓)

   o Not applicable to the related profile (✖)

5 FUNCTIONAL REQUIREMENTS

5.1 USER EQUIPMENT (UE) GENERIC REQUIREMENTS

REQ. ID	REQUIREMENT	TYPE	TERMINAL PROFILE	
			IMS P0	IMS P1
IMS-0010	The UE MUST be able to support (depending on operator's preference) a minimum of 2 simultaneous UMTS/GPRS contexts with different APNs (i.e. primary PDP contexts).	STD	✔	✔
IMS-0020	The UE MUST support secondary PDP contexts.	STD	✔	✔
IMS-0030	The UE MUST be able to setup a dedicated primary PDP Context for SIP signalling. When this dedicated context is used, it SHALL handle the "signalling indication" and the "signalling flag".	STD	✔	✔
IMS-0040	The UE MUST allow simultaneous CS and PS communications. .	STD	✔	✔
IMS-0050	The UE SHOULD support multiple TBFs to properly handle several data flows (e.g. SIP signalling during video sharing) on GERAN with different QoS requirements (if different PDP contexts with specific QoS requirements are used)	STD	✔	✔
IMS-0060	The UE MUST support OMA DM v1.2 [3].	STD	✔	✔
IMS-0070	The UE MUST setup the PDP contexts and make them available for any media streams resulting from session setups	NEW	✔	✔

5.2 IMS RELATED PROTOCOLS

REQ. ID	REQUIREMENT	TYPE	TERMINAL PROFILE	
			IMS P0	IMS P1
IMS-0080	The UE MUST support Session Initiation Protocol (SIP) as specified in TS 24.229 [4]	STD	✔	✔
IMS-0090	The UE MUST support Session Description Protocol (SDP) as specified in TS 24.229 [4]	STD	✔	✔
IMS-0100	The UE MUST support IPv4 as specified in RFC 791 [5]	STD	✔	✔
IMS-0110	The UE MUST support IPv6 as specified in RFC 2460 [6]	STD	✔	✔
IMS-0120	The UE MUST support IPSec-3GPP as specified in RFC 3329 [7]	STD	✔	✔
IMS-0130	The UE SHOULD support DHCPv6 as specified in RFC 3315 [8]	STD	✔	✔
IMS-0140	The UE MUST support DNS as specified in RFC 1591 [9]	STD	✔	✔
IMS-0150	The UE MUST support RTP and RTCP as specified in RFC 3550 [10]	STD	✔	✔
IMS-0160	The UE MUST support RTSP as specified in RFC 2326 [11]	STD	✔	✔
IMS-0170	The UE MUST support XCAP as defined in [12]	STD	✔	✔
IMS-0180	The UE MUST support HTTPS as specified in RFC 2660 [13]	STD	✔	✔
IMS-0190	The UE MUST support SIP SigCOMP as specified in TS 24.229 [4]	STD	✔	✔

REQ. ID	REQUIREMENT	TYPE	TERMINAL PROFILE	
			IMS P0	IMS P1
IMS-0200	The UE MUST support MSRP as specified in 3GPP TS 24.247 [14]	STD	✔	✔
IMS-0210	The UE MUST support SIP MESSAGE METHOD as specified in 3GPP TS 24.247 [14]	STD	✔	✔

5.3 IMS CORE

REQ. ID	REQUIREMENT	TYPE	TERMINAL PROFILE	
			IMS P0	IMS P1
IMS-0220	The UE MUST manage, refresh and renew IMS registration and IMS sessions and any other Core IMS functionality when necessary in the Terminal	NEW	✓	✓
IMS-0230	The UE MUST manage the IMS signalling (e.g. SIP, XCAP, SDP) and provide an abstraction of this functionality to connected applications through the appropriate API	NEW	✓	✓
IMS-0240	The UE MUST keep track internally of SIP dialogs, transactions and states	NEW	✓	✓
IMS-0250	The UE MUST negotiate and determine codec and media characteristics for session setup based on the local capabilities (0) and the media preferences provided by an application at session setup time (0)	NEW	✓	✓
IMS-0260	The UE MUST support the IMS-AKA procedure to perform authenticated register to an IMS Core network as specified in TS 33.203 [15].	STD	✓	✓
IMS-0270	The UE MUST support early IMS Authentication as defined in TR 33.978 [16]	STD	✓	✓
IMS-0280	If a SIM is in use in the UE (i.e. there is no USIM or ISIM application) the UE MUST use early IMS for authentication purposes (see IMS-0270)	STD	✓	✓

REQ. ID	REQUIREMENT	TYPE	TERMINAL PROFILE	
			IMS P0	IMS P1
IMS-0290	If USIM or ISIM (or both) are in use in the UE, the UE MUST attempt to use IMS AKA (see IMS-0260 and IMS-0300)	STD	✔	✔
IMS-0300	The UE MUST be able to perform the mechanisms as defined in section 8.6 of 3GPP TS 34.229 [17] for initial registration for combined IMS support and early IMS security against a network with early IMS support only.	STD	✔	✔
IMS-0310	The UE MUST be able to fallback to use different procedures for setting up the IMS session (e.g. without use of preconditions or 100Rel, IETF Session setup) as defined in TS 24.229 [4] if it does not support one or more of the SIP extensions required by an IMS end point to set up the IMS Session	STD	✔	✔
IMS-0320	The UE MUST support the management object for IMS as defined in TS 24.167 [18]	STD	✔	✔
IMS-0330	The UE MUST be able to provide the basic mechanism "SIP specific event notification" as defined in RFC 3265 [19] in order to allow use of a generic event package not yet standardized or provided through IMS standards.	STD / NEW	✔	✔
IMS-0340	The UE MUST support IMS Procedures as defined in TS 23.228 [20].	STD	✔	✔
IMS-0350	The UE MUST support the media grouping capabilities (receiving media from a single flow encoded in different formats during a particular session, on different ports and interfaces) as defined in TS 24.229 [4]	STD	✔	✔

REQ. ID	REQUIREMENT	TYPE	TERMINAL PROFILE	
			IMS P0	IMS P1
IMS-0360	The UE MUST support the timers and SIP Timers values defined in TS 24.229 [4] for 2G and 3G.	STD	✔	✔
IMS-0370	The UE MUST support QoS pre-conditions as defined in TS 24.229 [4]	STD	✔	✔
IMS-0380	The UE SHOULD implement the mapping for SDP to 3GPP QoS parameters as defined in TS 29.208 [21].	STD	✔	✔
IMS-0390	The UE MUST release any resources reserved by an application when that application exits and/or when individual sessions are terminated	NEW	✔	✔
IMS-0400	The UE MUST be able to handle simultaneous SIP dialogs and transactions	STD	✔	✔
IMS-0410	The UE SHALL support all the P-headers as specified in TS 24.229 [4]	STD	✔	✔
IMS-0420	The UE SHALL support the fallback mechanisms for emergency call as specified in TS 24.229 [4]	STD	✔	✔

5.4 IMS APPLICATIONS

This section describes the functionality expected from IMS Terminals regarding the integration of IMS applications with the User Equipment (UE)

The UE will be responsible for controlling IMS capable applications in order to notify them about incoming messages, capabilities changes or new IMS applications installed. It shall be also responsible for controlling the IMS registration on the network taking into account the capabilities supported by the applications and the different user identities.

5.4.1 UE REGISTRY AND APPLICATION CONFIGURATION

REQ. ID	REQUIREMENT	TYPE	TERMINAL PROFILE	
			IMS P0	IMS P1
IMS-0430	The UE MUST offer a mechanism to select which public user identity it should use to register to the IMS network	NEW	✔	✔
IMS-0440	The user MUST be able to configure the timing of when the UE registers in the IMS network. At least the following options MUST be supported: – IMS network registration on Terminal switch-on: The general IMS registration is performed automatically after Terminal switch-on. – Manual IMS network registration: The IMS registration on the network is not started automatically and the end-user is the responsible for launching this process.	NEW	✔	✔
IMS-0450	The UE MUST provide a mechanism for allowing IMS applications to register/unregister on the device.	NEW	✔	✔

REQ. ID	REQUIREMENT	TYPE	TERMINAL PROFILE	
			IMS P0	IMS P1
IMS-0460	The UE MUST offer a mechanism in order to allow an application registered on the device to configure which public user identity it should use to register to the IMS network.	**NEW**	✓	✓

IMS-0470	The UE MUST offer a mechanism in order the allow the application to configure the timing of when its features will be registered in the IMS network:
	
	  − On Terminal IMS network registration: The features linked to the application will be registered in the IMS network whenever the Terminal registers in the IMS network (even if the application is not started) as defined in requirement IMS-0440.
	
	  − On application start: The features linked to the application will be registered in the IMS network when the application is started. They should be also un-registered when the application is stopped.
	
	This choice will be stored in the application's 'media feature tag registry' configuration defined in section 5.4.1.1.
		NEW	✓	✓

IMS-0480	The UE MUST offer a mechanism in order to allow an application registered on the device to select which feature media tags should it use when registering to the IMS network from the application's 'media feature tags registry' configuration defined in section 5.4.1.1	**NEW**	✓	✓

REQ. ID	REQUIREMENT	TYPE	TERMINAL PROFILE	
			IMS P0	IMS P1

IMS-0490	The UE MUST offer a mechanism in order to allow an application to set its start functions upon installation to the Terminal:
	
	  – Automatic start: The application is automatically started whenever the Terminal is started up.
	
	  – Manual start: The application is started manually by the user
	
	This choice will be stored in the application's 'start functions' configuration defined in section 5.4.1.1
		NEW	✓	✓

IMS-0500	The UE MUST offer a mechanism in order to allow the user to be able to select the start mechanism upon installation or configuration time of the application (see IMS-0490) for each application.	NEW	✓	✓

REQ. ID	REQUIREMENT	TYPE	TERMINAL PROFILE	
			IMS P0	IMS P1
IMS-0510	The UE MUST offer a mechanism in order to allow the user to configure an application's auto-execution behaviour (behaviour when an incoming message is directed to the application and it is not executing): – Automatic Execution: Application is started automatically and incoming messages are accepted without user confirmation. – User Confirmed Execution: The user is prompted whether he wishes to start the application and accept the incoming messages or not. – Reject Execution: The application is not started and incoming messages are rejected without user interaction. This choice will be stored in the application's 'auto-execution' configuration defined in section 5.4.1.10	NEW	✓	✓

5.4.1.1 Application Configuration Information

The following table describes the configuration information available for each IMS application installed on the UE:

PARAMETER	DESCRIPTION
PUBLIC USER IDENTITY	The public user identity that takes the form of either SIP URL (as defined in RFC 2543 [22] and RFC 2396 [23]) or E.164 numbers.
MEDIA FEATURE TAGS	A list with all the media feature tags that represent the media capabilities or properties supported by the application. .Their syntax will be specified for each service (e.g. OMA PoC +g.oma.poc, CSI +g.3gpp.cs-audio, +g.3gpp.cs-video) and compliant with registration procedure defined by RFC 2506 [24].
MEDIA FEATURE TAGS REGISTRY	Specifies when the **capabilities supported by the application should be registered on the IMS network**. Possible values are: – Application Capability Registration on general IMS network registration: The media feature tags linked to the application will be registered in the IMS network whenever the Terminal registers in the IMS network (even if the application is not executing). – Application Capability Registration on application start: The media feature tags linked to the application will be registered in the IMS network when the application is executed. They should be also un-registered when the application is terminated.
START FUNCTIONS (UPON INSTALLATION TO THE TERMINAL)	Identifies whether the **application should be started when the handset is started up** (see requirement IMS-0490). The possible values are: – Automatic start: The application is automatically started whenever the Terminal is started up. – ˜ - Manual start: The application is started manually by the use

PARAMETER	DESCRIPTION
AUTO-EXECUTION (UPON AN INCOMING SIP MESSAGE)	Specifies whether a **non-executing application should be started whenever an incoming message is directed to it**. (see requirement IMS-0510). The possible values are: − Automatic Execution: The application is started automatically without user confirmation. − User Confirmed Execution: The user is prompted whether he wishes to start the application or not. − Reject Execution: The application is not started.

5.4.2 IMS APPLICATION INTEGRATION

REQ. ID	REQUIREMENT	TYPE	TERMINAL PROFILE	
			IMS P0	**IMS P1**
IMS-0520	The UE MUST be aware of the following local capabilities of the Terminal in order to negotiate sessions (see also IMS-0830): – Codecs supported – Cameras characteristics – Screen Resolution – Supported IMS Service Enablers (i.e. PoC, Presence SIMPLE, IM, XML Document Management)	**NEW**	✓	✓
IMS-0530	The UE MUST be aware of the updates on the local capabilities described in requirement IMS-0520 (e.g. installation of a new codec).	**NEW**	✓	✓

5.4.3 REPORTING FEATURES SUPPORTED BY APPLICATIONS

REQ. ID	REQUIREMENT	TYPE	TERMINAL PROFILE	
			IMS P0	IMS P1
IMS-0540	The UE MUST be able to report supported application features on the IMS network using the public user identity selected for the application (from IMS-0460).and according to the registration procedures in TS 24.229 [4].	NEW	✓	✓
IMS-0550	The UE MUST report to the IMS network the features supported by applications registered on the device according to its configuration as defined in 0. The UE MUST provide different methods for an application to register with the IMS network (IMS-0480),	NEW	✓	✓
IMS-0560	The UE MUST offer a mechanism (and mechanism configuration) to applications in order to allow them to include information to be delivered in the "Feature Media Tag" in all the REGISTER / OPTIONS / INVITE / PUBLISH / SUBSCRIBE messages sent by Terminal.	NEW	✓	✓

5.4.4 REDIRECTING IMS MESSAGES TO APPLICATIONS

REQ. ID	REQUIREMENT	TYPE	TERMINAL PROFILE	
			IMS P0	IMS P1
IMS-0570	The UE MUST provide a mechanism (and mechanism configuration) that permits identification of the IMS application to which the incoming SIP messages are directed.	NEW	✔	✔
IMS-0580	The UE MUST support all of the following matching criteria for identifying the target application of an IMS incoming message: • Media-Type • Feature Tag • SDP Fields.[1]	NEW	✔	✔
IMS-0590	The UE MUST provide a mechanism (and mechanism configuration) to choose the default application for incoming requests. If more than one application is interested in an undirected incoming request (i.e. request not linked to a particular application) the UE will apply the defined application priorities for message routing.	NEW	✔	✔
IMS-0600	The UE MUST route an incoming message to just one application.	NEW	✔	✔

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[1] OMTP is aware that 3GPP is working on a matching criteria for Release 7 (TR 23.816) [25] that should be referred in future versions of this document

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REQ. ID	REQUIREMENT	TYPE	TERMINAL PROFILE	
			IMS P0	IMS P1
IMS-0610	The UE MUST provide a mechanism (according with the configuration defined in IMS-0510) to allow the auto-execution of an application (as defined for the application in 0) when an incoming message is to be routed to that application and that application is not currently running.	NEW	✔	✔
IMS-0620	Whenever an incoming IMS message can be delivered to more than one application the UE SHALL: − Deliver it to the application preferred by the end-user (if any) − If there is no user choice, decide which is the most suitable application	NEW	✔	✔

5.4.5 QUERYING REMOTE TERMINAL CAPABILITIES

REQ. ID	REQUIREMENT	TYPE	TERMINAL PROFILE	
			IMS P0	IMS P1
IMS-0630	The UE MUST support the functionality to query remote Terminal capabilities according to RFC 3840 [26] and the SIP OPTIONS message.	STD	✔	✔
IMS-0640	The UE MUST support the functionality to convey its capabilities according to RFC 3840 [26]	STD	✔	✔

REQ. ID	REQUIREMENT	TYPE	TERMINAL PROFILE	
			IMS P0	IMS P1
IMS-0650	The UE MUST support the mechanisms defined in RFC 3841 "Caller Preferences for SIP" [27] for providing a feature set that expresses its preferences on the characteristics of the UA that is to be reached and specific request handling directives for a server"	STD	✓	✓

5.5 IMS SERVICE ENABLERS

This chapter describes the requirements that apply to each of the relevant service enablers in an IMS capable Terminal.

This section describes requirements for the service enablers available at the time of publication. It is anticipated that the list of service enablers required will evolve with the time as they become standardised (e.g. MultiMedia Telephony)

5.5.1 PoC

REQ. ID	REQUIREMENT	TYPE	TERMINAL PROFILE	
			IMS P0	IMS P1
IMS-0660	The UE MUST support Push-to-talk Over Cellular v1.0 as specified by OMA [2]	STD	✘	✔
IMS-0670	If the UE supports PoC, then it MUST support OMA-XDM as defined in OMA PoC [2]	STD	✘	✔
IMS-0680	If the UE supports PoC, then it MUST support the PoC Management Object as specified by OMA [2] (Control Plane Document – Annex B)	STD	✘	✔
IMS-0690	If the UE supports PoC, then it MUST provide to the user the option to activate or de-activate the Instant Personal Alert Barring setting [2] (Requirements Document Section 6.2.5)	STD	✘	✔
IMS-0700	If the UE supports PoC, then it MUST support the sending of the nickname in SIP requests and SIP responses as described in OMA PoC [2] (Control Plane Document Section 5.4)	STD	✘	✔

REQ. ID	REQUIREMENT	TYPE	TERMINAL PROFILE	
			IMS P0	IMS P1
IMS-0710	If the UE supports PoC, then it MUST support both modes of the feature "Multiple Group Operation" (with one primary groups AND with no primary group) as described in OMA PoC [2] (Requirements Document Section 6.2.11).[2]	STD	✘	✔
IMS-0720	If the UE supports PoC, then it MUST support the feature "Separate 1-to-1 PoC session while having a PoC session" as described in OMA PoC [2] (Requirements Document Section 6.2.12) [3]	STD	✘	✔

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[2] Please note that this requirement is not part of the PoC v1.0 Technical Specification [2] although they are included in the PoC v1.0 Requirements Document. Due to the lack of the technical specification for these requirements OMTP is aware that interoperability across different devices satisfying these requirements is not guaranteed

[3] Although it is understood that OMA PoC v1.0 and OMA Presence SIMPLE v1.0 just require XDM v1.0 [33], OMA SIMPLE IM requires XDM v2.0 [29] that is backwards compatible with previous versions.

5.5.2 OMA PRESENCE SIMPLE

REQ. ID	REQUIREMENT	TYPE	TERMINAL PROFILE	
			IMS P0	IMS P1
IMS-0730	The UE MUST support OMA Presence SIMPLE (SIP for Instant Messaging and Leveraging Extensions) as specified by OMA [28]	STD	✘	✔
IMS-0740	If the UE supports OMA Presence SIMPLE, then it MUST support OMA-XDM as defined in OMA Presence SIMPLE [28]	STD	✘	✔
IMS-0750	If the UE supports OMA Presence SIMPLE, then it MUST support the Presence Simple Management Object as defined specified by OMA [28] (Technical Specification – Annex C)	STD	✘	✔

5.5.3 XML DOCUMENT MANAGEMENT

REQ. ID	REQUIREMENT	TYPE	TERMINAL PROFILE	
			IMS P0	IMS P1
IMS-0760	The UE MUST support OMA-XDM v2.0[3] (XML Document Management) as specified in [29].	STD	✘	✔

5.5.4 OMA SIMPLE IM

REQ. ID	REQUIREMENT	TYPE	TERMINAL PROFILE	
			IMS P0	IMS P1
IMS-0770	The UE MUST support Instant Messaging as specified by OMA [30]	STD	✘	✔
IMS-0780	If the UE supports OMA SIMPLE IM, then it MUST support OMA-XDM as specified in OMA SIMPLE IM [30]	STD	✘	✔
IMS-0790	If the UE supports OMA SIMPLE IM, then it MUST support the IM Management Object as defined specified by OMA [30] (Annex I)]	STD	✘	✔

5.5.5 VIDEO-SHARE

REQ. ID	REQUIREMENT	TYPE	TERMINAL PROFILE	
			IMS P0	IMS P1
IMS-0800	During IMS registration a UE supporting Video-Share MUST include the feature tag g.3gpp.cs-voice in the contact header of a SIP REGISTER request, in accordance with RFC 3840 [26]	STD	✘	✔
IMS-0810	When a UE supporting video-share is registered on the IMS network, it MUST request information from the called party about whether video-share service is supported each time a CS voice call is established.	STD	✘	✔

6 APPLICATION PROGRAMMING INTERFACE REQUIREMENTS

This chapter identifies which IMS functionality defined in the previous sections should be exposed to applications.

6.1 GENERIC API REQUIREMENTS

REQ. ID	REQUIREMENT	TYPE	TERMINAL PROFILE	
			IMS P0	IMS P1
IMS-0820	Concurrent use of the APIs MUST be possible. (e.g. a number of applications should be able to use the API for getting the presence status of a contact simultaneously)	NEW	✓	✓
IMS-0830	The UE MUST offer an API that allows an application to get a list of the local capabilities supported by the device as defined in IMS-0520.	NEW	✓	✓
IMS-0840	The UE MUST offer an API that allows an application to get a list of all the media feature tags registered on the device.	NEW	✓	✓
IMS-0850	The UE SHOULD offer an API that allows an application to subscribe to the device to receive events about changes on local capabilities as defined in IMS-0540.	NEW	✓	✓
IMS-0860	If requirement IMS-0660 is fulfilled, the PoC functionality as defined in IMS-0660 MUST be available to applications.	NEW	✘	✓
IMS-0870	If requirement IMS-0730 is fulfilled, the Presence functionality as defined in IMS-0730 MUST be available to applications.	NEW	✘	✓

REQ. ID	REQUIREMENT	TYPE	TERMINAL PROFILE	
			IMS P0	IMS P1
IMS-0880	If requirement IMS-0760 is fulfilled, the XDM functionality as defined in IMS-0760 MUST be available to applications.	**NEW**	✘	✔
IMS-0890	If requirement IMS-0770 is fulfilled, the IM functionality as defined in IMS-0770. MUST be available to applications.	**NEW**	✘	✔

6.2 CORE API

6.2.1 SESSION API

6.2.1.1 Session Media Requirements

REQ. ID	REQUIREMENT	TYPE	TERMINAL PROFILE	
			IMS P0	IMS P1
IMS-0900	The UE MUST offer an API to allow an application to create a media stream to be used during an IMS session	**NEW**	✔	✔
IMS-0910	The UE MUST offer an API that allows applications to send media through a packet media connection	**NEW**	✔	✔
IMS-0920	The UE MUST offer an API that informs an application whenever data is received through a packet media connection	**NEW**	✔	✔

6.2.1.2 Originating Endpoint Session Management Requirements

REQ. ID	REQUIREMENT	TYPE	TERMINAL PROFILE	
			IMS P0	IMS P1
IMS-0930	The UE MUST offer an API to allow an application to setup an IMS Session to a remote Terminal endpoint (TS 24.229 [4], Section 5.1.2A & 6.1), (TS 24.247 [14], Section 8.2.1)	NEW	✓	✓
IMS-0940	The UE SHOULD offer an API to allow an application to monitor the status of the ongoing session setup from the IMS Framework (TS 24.229 [4], Section A.2.1.4.1)	NEW	✓	✓
IMS-0950	The API to setup an IMS session (0) SHOULD offer the option to request that their identification as the caller is withheld from the called party (TS 24.229 [4], Section 5.1.2A)	NEW	✓	✓
IMS-0960	The UE MUST offer an API to allow an application to cancel a session setup (TS 24.229 [4], Section A.2.1.4.4)	NEW	✓	✓

6.2.1.3 Terminating Endpoint Session Management Requirements

REQ. ID	REQUIREMENT	TYPE	TERMINAL PROFILE	
			IMS P0	IMS P1
IMS-0970	The UE MUST offer an API to allow the destination application to accept an incoming call (from the network) (TS 24,229 [4], Section A.2.1.4.1)	NEW	✓	✓

REQ. ID	REQUIREMENT	TYPE	TERMINAL PROFILE	
			IMS P0	IMS P1
IMS-0980	The UE MUST offer an API to allow the destination application to reject an incoming call (from the network) (TS 24,229 [4], Section A.2.1.4.1)	NEW	✔	✔
IMS-0990	The UE MUST offer an API to allow the destination application to redirect an incoming call (from the network) (TS 24,229 [4], Section A.2.1.4.1)	NEW	✔	✔

6.2.1.4 General Session Management Requirements

REQ. ID	REQUIREMENT	TYPE	TERMINAL PROFILE	
			IMS P0	IMS P1
IMS-1000	The UE MUST offer an API to allow the application to request that a session is transferred to another device (TS 23.228 [20], Section 5.11.6)	NEW	✔	✔
IMS-1010	The UE MUST offer an API to allow the application to terminate a session (TS 24.229 [4], Section A.2.2.4.3)	NEW	✔	✔
IMS-1020	The UE MUST offer an API that allows applications to receive events that inform that a session has been terminated (TS 24.229 [4], Section A.2.2.4.3, A.2.1.4.1)	NEW	✔	✔
IMS-1030	The UE MUST offer an API to allow an application to place a session on hold (TS 23.228 [20], Section 5.11.1)	NEW	✔	✔

REQ. ID	REQUIREMENT	TYPE	TERMINAL PROFILE	
			IMS P0	IMS P1
IMS-1040	The UE MUST offer an API that allows applications to receive events that inform it that a terminating endpoint has confirmed the session is on hold (TS 23.228 [20], Section 5.11.1)	NEW	✔	✔
IMS-1050	The UE MUST offer an API to allow an application to resume a session that it has previously placed on hold (TS 23.228 [20], Section 5.11.1)	NEW	✔	✔
IMS-1060	The UE MUST offer an API to allows applications to receive events that inform that a terminating endpoint does a session resume (TS 23.228 [20], Section 5.11.1)	NEW	✔	✔
IMS-1070	The UE MUST offer an API to allows applications to receive events that inform an application that previously requested a session hold when a terminating endpoint has confirmed the session resume (TS 23.228 [20], Section 5.11.1)	NEW	✔	✔
IMS-1080	The UE MUST offer an API to allow an application to negotiate the resources at session setup for a new session (TS 23.228 [20], Section 5.11.3)	NEW	✔	✔
IMS-1090	The UE MUST offer an API to allow an application to re-negotiate the resources in an established session (TS 23.228 [20], Section 5.11.3)	NEW	✔	✔
IMS-1100	The UE MUST offer an API to allow an application to add, modify or remove media in an existing session (TS 23.228 [20], Section 5.11.3)	NEW	✔	✔

REQ. ID	REQUIREMENT	TYPE	TERMINAL PROFILE	
			IMS P0	IMS P1
IMS-1110	The UE MUST offer an API to allow an application to transfer a media to another Terminal	**NEW**	✓	✓
IMS-1120	The UE MUST offer an API to allow an application to receive events that inform that a session has been modified by a terminating endpoint	**NEW**	✓	✓
IMS-1130	The UE MUST offer an API to allow an application to send generic session related control information (RFC-2976 [31])	**NEW**	✓	✓

6.2.2 EVENT FRAMEWORK API

REQ. ID	REQUIREMENT	TYPE	TERMINAL PROFILE	
			IMS P0	IMS P1
IMS-1140	The UE MUST offer an API that supports service specific event subscription and notification according to RFC-3265 [19]	**NEW**	✓	✓
IMS-1150	The UE MUST offer an API that supports publication of any service event state according to RFC-3903 [32]	**NEW**	✓	✓

6.2.3 NETWORK API

REQ. ID	REQUIREMENT	TYPE	TERMINAL PROFILE	
			IMS P0	IMS P1
IMS-1160	The UE MUST provide an API to allow an application to request the list of all available radio access technologies supported by the UE (e.g. WiFi, EDGE, UMTS, GPRS, etc)	NEW	✓	✓
IMS-1170	The UE MUST offer an API to allow an application to choose the bearer (from the list provided in IMS-1160) for the SIP signalling subject to Bearer Policy.	NEW	✓	✓
IMS-1180	The UE MUST offer an API to allow an application to choose the bearer (from the list provided in IMS-1160) for a media connection subject to Bearer Policy.	NEW	✓	✓
IMS-1190	The UE MUST provide an API to allow an application to receive notifications when the set of available bearers changes	NEW	✓	✓
IMS-1200	The UE MUST offer an API to allow an application to ensure that a session is created satisfying QoS settings (as in IMS-0370)	NEW	✓	✓
IMS-1210	The UE MUST offer an API to allow an application to receive notifications to inform about networks events (e.g. registration changes)	NEW	✓	✓

6.2.4 REGISTRATION API

REQ. ID	REQUIREMENT	TYPE	TERMINAL PROFILE	
			IMS P0	IMS P1
IMS-1220	The UE MUST provide an API to allow an application to indicate to the device that it is available (i.e. "registered on the device").	**NEW**	✓	✓
IMS-1230	The UE MUST provide an API to allow an application to indicate to the device that it is no longer available (i.e. "not registered on the device").	**NEW**	✓	✓
IMS-1240	The UE MUST provide an API to allow an application to register its capabilities to the IMS Network (i.e. "registered on the network").	**NEW**	✓	✓
IMS-1250	The UE MUST provide an API to allow an application to de-register its capabilities from the IMS Network (i.e. "not registered on the network")	**NEW**	✓	✓

6.2.5 INTERROGATING API

REQ. ID	REQUIREMENT	TYPE	TERMINAL PROFILE	
			IMS P0	IMS P1
IMS-1260	UE MUST offer an API in order to allow an application to interrogate a terminating endpoint capabilities (i.e. via a SIP OPTIONS message - as defined in requirement IMS-0630)	**NEW**	✓	✓

6.3 SERVICE API

This section describes requirements for the API offered by service enablers available at the time of publication. It is anticipated that the list of service enablers required will evolve with the time as they become standardised (e.g. MultiMedia Telephony)

6.3.1 OMA PRESENCE API

6.3.1.1 Presentity Requirements

REQ. ID	REQUIREMENT	TYPE	TERMINAL PROFILE	
			IMS P0	IMS P1
IMS-1270	The UE MUST offer an API to allow an application to create a representation for presence information (including presence information element: device, person and service information, and authorization rules) of the local presentity for each public identity used during registration	NEW	✘	✔
IMS-1280	The UE MUST offer an API to allow an application to manipulate (modifying, adding or removing data) the representation of the presence information related to a local presentity	NEW	✘	✔
IMS-1290	The UE MUST offer an API to allow an application to manipulate (adding, modifying or removing) each presence information element (both standard and application specific elements) defined in the Presence document. OMA-Presence [28], Section 10	NEW	✘	✔
IMS-1300	The UE MUST offer an API to allow an application to manipulate (adding, modifying or removing) subscription authorisation rules related to a local presentity. OMA-XML [12], Section 5.1.1	NEW	✘	✔

REQ. ID	REQUIREMENT	TYPE	TERMINAL PROFILE	
			IMS P0	IMS P1
IMS-1310	The UE MUST offer an API to allow an application to manipulate (adding, modifying or removing) presence content rules related to a local presentity. OMA-XML [33], Section 5.1.2	**NEW**	✘	✔
IMS-1320	The UE MUST offer an API to allow an application to retrieve the presence information of a peer presentity received through a presence subscription (IMS-1380)as a representation of the presence information defined in IMS-1270)	**NEW**	✘	✔
IMS-1330	The UE MUST offer an API to allow an application to manage (create, update, remove, subscribe to changes, etc.) XDM–based presentity lists. OMA-Presence [28], Section 5.6 and [34]	**NEW**	✘	✔

6.3.1.2 Presence Publication

REQ. ID	REQUIREMENT	TYPE	TERMINAL PROFILE	
			IMS P0	IMS P1
IMS-1340	The UE MUST offer an API to allow an application to publish the presence information for a local presentity. OMA-Presence [28], Section 5.1.1	**NEW**	✘	✔
IMS-1350	The UE MUST offer an API to allow an application to refresh publications	**NEW**	✘	✔
IMS-1360	The UE MUST offer an API to allow an application to receive notification if its publications are near expiration.	**NEW**	✘	✔

REQ. ID	REQUIREMENT	TYPE	TERMINAL PROFILE	
			IMS P0	IMS P1
IMS-1370	The UE MUST offer an API to allow an application to remove its publications	**NEW**	✘	✔

6.3.1.3 Presence subscription

REQ. ID	REQUIREMENT	TYPE	TERMINAL PROFILE	
			IMS P0	IMS P1
IMS-1380	The UE MUST offer an API to allow an application to subscribe/unsubscribe for presence information of a remote presentity or presence list. OMA-Presence [28], Section 5.2.2	**NEW**	✘	✔
IMS-1390	The UE MUST offer an API to allow an application to receive notification of the subscribed presentity or presence list. OMA-Presence [28], Section 5.2.3	**NEW**	✘	✔
IMS-1400	The UE MAY offer an API to allow an application to subscribe for the watcher information as defined in OMA-Presence [28], Section 5.3	**NEW**	✘	✔
IMS-1410	The UE MUST offer an API to allow an application to refresh subscriptions	**NEW**	✘	✔
IMS-1420	The UE MUST offer an API to allow an application to receive notification if its subscriptions are judged to be near expiration by the UE as specified by the timers maintained from IMS-0360.	**NEW**	✘	✔
IMS-1430	The UE MUST offer an API to allow an application to receive notification if a subscription was cancelled or terminated.	**NEW**	✘	✔

REQ. ID	REQUIREMENT	TYPE	TERMINAL PROFILE	
			IMS P0	IMS P1
IMS-1440	The UE MUST offer an API to allow an application to perform one-time subscription for presence information of a remote presentity or presence list. OMA-Presence [28]	**NEW**	✘	✔

6.3.2 OMA POC API

6.3.2.1 General Requirements

REQ. ID	REQUIREMENT	TYPE	TERMINAL PROFILE	
			IMS P0	IMS P1
IMS-1450	The UE MUST offer an API to allow applications to change the status of the barring configuration (i.e. bar / unbar) for personal alerts and incoming PoC sessions.	NEW	✘	✔
IMS-1460	The UE MUST offer an API to allow applications to retrieve the active PoC sessions.	NEW	✘	✔
IMS-1470	The UE MUST offer an API to allow applications to send instant personal alerts.	NEW	✘	✔
IMS-1480	The UE MUST offer an API to allow applications to send group advertisements.	NEW	✘	✔
IMS-1490	The UE MUST offer an API to allow applications to create a PoC group.	NEW	✘	✔
IMS-1500	The UE MUST offer an API to allow applications to retrieve the PoC groups available on the UE.	NEW	✘	✔
IMS-1510	The UE MUST offer an API to allow applications to define the action to be taken when receiving an invitation to a PoC session from a given user (i.e. accept or reject)	NEW	✘	✔

6.3.2.2 PoC Sessions

REQ. ID	REQUIREMENT	TYPE	TERMINAL PROFILE	
			IMS P0	IMS P1
IMS-1520	The UE MUST offer an API to allow applications to get the initiator of a PoC session.	NEW	✘	✔
IMS-1530	The UE MUST offer an API to allow applications to retrieve the PoC session type (i.e. Chat, Prearranged or Adhoc).	NEW	✘	✔
IMS-1540	The UE MUST offer an API to allow applications to mute a PoC session (i.e. deactivate transmission of incoming talk bursts by the PoC server).	NEW	✘	✔
IMS-1550	The UE MUST offer an API to allow applications to get the list of participants of a PoC session.	NEW	✘	✔
IMS-1560	The UE MUST offer an API to allow applications to close a PoC session.	NEW	✘	✔

6.3.2.2.1 Adhoc Sessions

REQ. ID	REQUIREMENT	TYPE	TERMINAL PROFILE	
			IMS P0	IMS P1
IMS-1570	The UE MUST offer an API to allow applications to create and ad-hoc PoC Session with a Group identifier or a list of user identifiers.	NEW	✘	✔
IMS-1580	The UE MUST offer an API to allow applications to accept an invitation to participate in an ad-hoc PoC session.	NEW	✘	✔

REQ. ID	REQUIREMENT	TYPE	TERMINAL PROFILE	
			IMS P0	IMS P1
IMS-1590	The UE MUST offer an API to allow applications to reject an invitation to participate in an ad-hoc PoC session.	NEW	✖	✔
IMS-1600	The UE MUST offer an API to allow applications to get the users invited to participate in an ad-hoc PoC session. NOTE: This feature is only available to the caller.	NEW	✖	✔
IMS-1610	The UE MUST offer an API to allow applications to get the user role in an ad-hoc PoC session (i.e. caller or callee).	NEW	✖	✔
IMS-1620	The UE MUST offer an API to allow applications to invite additional users to an established ad-hoc PoC session. NOTE: This feature is only available to the caller.	NEW	✖	✔

6.3.2.2.2   Chat Sessions

REQ. ID	REQUIREMENT	TYPE	TERMINAL PROFILE	
			IMS P0	IMS P1
IMS-1630	The UE MUST offer an API to allow applications to create a chat PoC Session.	NEW	✖	✔
IMS-1640	The UE MUST offer an API to allow applications to get the type (i.e. open or restricted) of a chat PoC Session.	NEW	✖	✔
IMS-1650	The UE MUST offer an API to allow applications to disconnect from a chat PoC Session.	NEW	✖	✔

6.3.2.2.3 Prearranged Sessions

REQ. ID	REQUIREMENT	TYPE	TERMINAL PROFILE	
			IMS P0	IMS P1
IMS-1660	The UE MUST offer an API to allow applications to create a prearranged PoC Session.	**NEW**	✘	✔
IMS-1670	The UE MUST offer an API to allow applications to accept an invitation to participate in a prearranged PoC session.	**NEW**	✘	✔
IMS-1680	The UE MUST offer an API to allow applications to reject an invitation to participate in a prearranged PoC session.	**NEW**	✘	✔
IMS-1690	The UE MUST offer an API to allow applications to get the user role in a prearranged PoC session (i.e. distinguished or ordinary participant).	**NEW**	✘	✔
IMS-1700	The UE MUST offer an API to allow applications to get the model of a prearranged PoC session (i.e. one to many or one to many to one).	**NEW**	✘	✔
IMS-1710	The UE MUST offer an API to allow applications to invite additional users to an ongoing prearranged PoC session. NOTE: In 1-to-many-to-1 mode only the distinguished participant may invite another user.	**NEW**	✘	✔

6.3.2.3 PoC Events

REQ. ID	REQUIREMENT	TYPE	TERMINAL PROFILE	
			IMS P0	IMS P1
IMS-1720	The UE MUST offer an API to subscribe to notifications of incoming PoC session requests.	NEW	✘	✔
IMS-1730	The UE MUST offer an API to subscribe to notifications of incoming instant personal alerts.	NEW	✘	✔
IMS-1740	The UE MUST offer an API to subscribe to notifications of incoming group advertisements.	NEW	✘	✔
IMS-1750	The UE MUST offer an API to subscribe to receive session progress events (i.e. invite accepted/rejected, join accepted or session terminated) from a PoC Server.	NEW	✘	✔
IMS-1760	The UE MUST offer an API to subscribe to notifications of incoming instant personal alerts.	NEW	✘	✔
IMS-1770	The UE MUST offer an API to subscribe to notifications of PoC session participant updates (i.e. whether a user joins or leaves the PoC session)	NEW	✘	✔

6.3.3 OMA SIMPLE IM API

REQ. ID	REQUIREMENT	TYPE	TERMINAL PROFILE	
			IMS P0	**IMS P1**
IMS-1780	An API MUST be offered to send IM pager mode message (to individual participants, ad-hoc group and pre-defined groups).	**NEW**	✘	✔
IMS-1790	An API MUST be offered to send IM large mode message (to individual participants, ad-hoc group and pre-defined groups).	**NEW**	✘	✔
IMS-1800	An API MUST be offered to initiate, control and terminate IM conference (to individual participants, ad-hoc group and pre-defined groups).	**NEW**	✘	✔

6.3.4 OMA XML DOCUMENT MANAGEMENT API

6.3.4.1 Document Manipulation

REQ. ID	REQUIREMENT	TYPE	TERMINAL PROFILE	
			IMS P0	IMS P1
IMS-1810	The UE MUST offer an API to allow an application to be able to create a new XML document on the XDMS stating the PUID to use for document creation.	NEW	✘	✔
IMS-1820	The UE MUST offer an API to allow an application to delete an XML document on the XDMS	NEW	✘	✔
IMS-1830	The UE MUST offer an API to allow an application to retrieve an existing XML document from the XDMS	NEW	✘	✔
IMS-1840	The UE MUST offer an API to allow an application to replace an existing XML document on the XDMS	NEW	✘	✔
IMS-1850	The UE MUST offer an API to allow an application to copy an existing XML document on the XDMS	NEW	✘	✔
IMS-1860	The UE MUST offer an API to allow an application to modify an existing XML document on the XDMS	NEW	✘	✔
IMS-1870	The UE MUST offer an API to allow an application to suspend an existing XML document on the XDMS	NEW	✘	✔
IMS-1880	The UE MUST offer an API to allow an application to resume a suspended existing XML document on the XDMS	NEW	✘	✔
IMS-1890	The UE MUST offer an API to allow an application to search an existing XML document on the XDMS	NEW	✘	✔

REQ. ID	REQUIREMENT	TYPE	TERMINAL PROFILE	
			IMS P0	IMS P1
IMS-1900	The UE MUST offer an API to allow an application to search the contents of an existing XML document on the XDMS	**NEW**	✘	✓
IMS-1910	The UE MUST offer an API to allow an application to retrieve the directory.xml content on the XDMS	**NEW**	✘	✓
IMS-1920	The UE MUST offer an API to allow an application to retrieve a list of documents that it owns on the XDMS	**NEW**	✘	✓

6.3.4.2 Element and Attribute Manipulation

REQ. ID	REQUIREMENT	TYPE	TERMINAL PROFILE	
			IMS P0	IMS P1
IMS-1930	The UE MUST offer an API to allow an application to create an element for an existing XML document on the XDMS	**NEW**	✘	✓
IMS-1940	The UE MUST offer an API to allow an application to delete an element from an existing XML document on the XDMS	**NEW**	✘	✓
IMS-1950	The UE MUST offer an API to allow an application to retrieve an element from an existing XML document on the XDMS	**NEW**	✘	✓
IMS-1960	The UE MUST offer an API to allow an application to replace an element for an existing XML document on the XDMS	**NEW**	✘	✓
IMS-1970	The UE MUST offer an API to allow an application to create an attribute for an existing XML document on the XDMS	**NEW**	✘	✓

REQ. ID	REQUIREMENT	TYPE	TERMINAL PROFILE	
			IMS P0	IMS P1
IMS-1980	The UE MUST offer an API to allow an application to delete an attribute from an existing XML document on the XDMS	NEW	✘	✔
IMS-1990	The UE MUST offer an API to allow an application to retrieve an attribute from an existing XML document on the XDMS	NEW	✘	✔
IMS-2000	The UE MUST offer an API to allow an application to replace an attribute for an existing XML document on the XDMS	NEW	✘	✔

6.3.4.3 Subscriptions (XDMS)

REQ. ID	REQUIREMENT	TYPE	TERMINAL PROFILE	
			IMS P0	IMS P1
IMS-2010	The UE MUST offer an API to allow an application to subscribe to the XDMS for change notifications if an XML document is changed	NEW	✘	✔
IMS-2020	The UE MUST offer an API to allow an application to unsubscribe from the XDMS for change notifications established in IMS-2010.	NEW	✘	✔

7 UICC REQUIREMENTS

IMS applications may not be located or be acting only at the Terminal level. An IMS application can also be linked with a counterpart in the UICC, or may have to interact with some other application (e.g. authentication, phonebook, etc). In some other cases an IMS application can be entirely residing on the UICC and running from the UICC.

Considering these possibilities, some additional requirements are needed for any interface with the UICC.

7.1 IMS FRAMEWORK FUNCTIONALITIES

REQ. ID	REQUIREMENT	TYPE	TERMINAL PROFILE	
			IMS P0	IMS P1
IMS-2030	All the applications on the UICC that make use of IMS capabilities MUST be registered on the UE independently of their origin (e.g. embedded, downloaded…)	**NEW**	✓	✓
IMS-2040	The UE MUST be aware whether the UICC inserted has the capabilities to perform the IMS registration procedure (i.e. UICC with an ISIM application [35] or with an USIM application [36]	**NEW**	✓	✓

7.2 IMS RELATED PROTOCOLS

REQ. ID	REQUIREMENT	TYPE	TERMINAL PROFILE	
			IMS P0	IMS P1
IMS-2050	The UICC MUST support Session Initiation Protocol (SIP) as specified in TS 24.229 [4]	**STD**	✓	✓
IMS-2060	The UICC MUST support IPv4 as defined in RFC 791 [5]	**STD**	✓	✓

REQ. ID	REQUIREMENT	TYPE	TERMINAL PROFILE	
			IMS P0	IMS P1
IMS-2070	The UICC MUST support IPv6 as defined in RFC 2460 [6]	STD	✔	✔
IMS-2080	The UICC MUST support IPSec-3GPP as specified in RFC 3329 [7]	STD	✔	✔
IMS-2090	The UICC MUST support HTTPS as defined in RFC 2660 [13]	STD	✔	✔

8 FURTHER WORK

This section lists those areas where there are further requirements which may be addressed in future versions of this document (with no priority order). Some additional items might be also considered:

– **3GPP Release 7**: OMTP recommendations have focused on 3GPP Release 6 specifications. Apart from the evolution of the documents referred in these recommendations (e.g. addition of support for NAT traversal technologies in TS 23.228). There are several new areas that will be included in Release 7 that should be considered in the future:

- – **Multimedia Telephony and Supplementary Services:** TS 22.173 defines the IMS Multimedia Telephony service and associated supplementary services for IMS. It aims to take account and build on the IMS capabilities already provided in 3GPP Release 5 and Release 6. The objective is to define the minimum set of capabilities required in the IP Multimedia Subsystem to secure multi-vendor and multi-operator inter-operability for the IMS Multimedia Telephony service and related Supplementary Services.

- – **Combining Circuit Switched (CS) and IP Multimedia Subsystem (IMS) services:** TS 24.279 provides the technical realisation for the combination of Circuit Switched calls and IM sessions when using them simultaneously between the same two users. This document describes the use of CS and IM services in combination, using the existing procedures that have been defined for CS and IMS. It includes the necessary function as adding an IM session to an ongoing CS call, adding a CS call to an ongoing IM session, supplementary services as they relate to CSICS and supporting capability exchange.

- – **Voice Call Continuity between the Circuit-Switched (CS) domain and the IP Multimedia Core Network (CN) (IMS) subsystem**: TS 24.206 provides the protocol details for voice call continuity between the IP Multimedia (IM) Core Network (CN) subsystem based on the Session Initiation Protocol (SIP) and the Session Description Protocol (SDP) and the protocols of the 3GPP Circuit-Switched (CS) domain (CAP, MAP, ISUP, BICC and the NAS call control protocol for the CS access). Voice call continuity allows users to move between the CS domain and the IP Connectivity Access Network (e.g., WLAN interworking) with home IM CN subsystem functionality.

- – **IMS Emergency Sessions**: TS 23.167 defines the stage-2 service description for emergency services in the IP Multimedia

Core Network Subsystem (IMS), including the elements necessary to support IP Multimedia (IM) emergency services.

– **Identification of Communication Services in IMS:** TR 23.816 captures the results of a feasibility study into the identification of IMS communication services with a focus on the application of an IMS communication service identifier and the necessary administrative procedures. The exact means to administer the IMS communication service identifiers will be stage 3 issues, but a few possibilities are described in the Technical Report.

– **New OMA Enablers (non-exhaustive):**

– **OMA PoC v2.0:** This work item provides the means to deliver enhancements to push to talk services beyond those defined in PoC v1.0. It continues the work created in v1.0 enhancing this specification and covering additional areas (e.g. support of additional media formats to provide enhanced user experience, e.g. video)

– **OMA SIP Based Push:** The scope of this work item is to introduce SIP as a transport bearer for WAP push; maintaining compatibility with the existing WAP push architecture, push message definitions and service specifications is high priority. The resulting SIP Push OTA specifications preferably utilize already existing SIP extensions, namely SIP for Instant Messaging or the SIP events framework

– **OMA Converged IP Messaging (OMA CPM):** The goal of this work item is to specify the future messaging functionalities as common reusable capabilities that support building of a range of IP-based Services needing messaging functionality. The evolutionary interoperability between future IP-based messaging services and legacy Mobile Messaging Services – e.g., SMS, MMS, IMPS - is included in the overall architecture in order to achieve maximum connectivity between end-users (independent of whether they are using the future IP-based messaging services or legacy Mobile Messaging Services).

– **OMA Dynamic Content Delivery (DCD):** The scope of this work item is to provide an enabler for automated delivery of personalized content direct to users' devices. Support for DCD over SIP/IMS will enhance the dynamic characteristics of the enabler, in that it can more effectively support server initiated (pushed) content delivery, enabler integration (e.g. Presence, Location), and availability over a variety of network technologies.

In the SIP/IMS environment, DCD will leverage SIP/IMS features directly, and other SIP-related OMA enablers as available.

− **SIP Profiles:** The increasing amount of SIP capabilities and related RFCs together with the optional features defined in this standard makes really difficult to understand what are the SIP features, methods and extensions that should be supported in mobile Terminals. A list with the minimum SIP functionalities that should be supported will be beneficial for the whole mobile industry.

− **IMS Media and Codecs:** IMS services will require wide support of multimedia capabilities and codecs. A set of requirements defining what the required multimedia functionalities are will ease IMS service offering across the entire Terminal portfolio. A first attempt of defining these features is being done in 3GPP Release 7 as part of the 26 Series Specifications (CODECS).

− **Security:** Future versions of this document should also address additional security aspects like Bootstrapping Architectures, security algorithms, etc.

− **Policy and Charging Control Architecture:** Future version of this document will also address policy and charging control aspects as defined in 3GPP. TS 23.203 specifies the overall stage 2 level functionality for Policy and Charging Control that encompasses flow based charging and policy control for IP-CANs (e.g. GPRS, I-WLAN, Fixed Broadband, etc.).

− **Local capabilities subscription on the device:** Requirement IMS-0520 states that the UE must be aware of a set of local capabilities. Future versions of this document may refine this requirement by the definition of more detailed mechanisms and capabilities to be supported (e.g. by referring to OMA device capabilities specifications).

− **Phonebook integration with IMS services:** There is a tendency in the Industry to increase the relevance of the phonebook in the future as the main point of access to the IMS services; the user will use the phonebook to check the presence status of his contacts and to directly initiate any communication service with his contacts.

Future OMTP activities should address all the aspects related to this integration, e.g., the user experience, the impact of having different services depending on the PUIDs registered, etc … It is also important to address the functionalities that should be exposed to the phonebook in order to be able to develop the full potential of this application without compromising differentiation among operators.

9 DEFINITION OF TERMS

TERM	DESCRIPTION
APPLICATION REGISTERED ON THE DEVICE	Application which has indicated to the UE that it is available. The application does not necessarily need to be registered on the IMS network (see Application Registered on the IMS Network definition).
APPLICATION REGISTERED ON THE IMS NETWORK	Application which has registered its capabilities on the IMS network.
BEARER POLICY	Access network control defined by handset manufacturer, operator or 3rd party.
CORE API	Programmatic interfaces exposed by the IMS Core in order to provide access to IMS Core Functionalities.
IMS AUTHENTICATION	Establishment of a secure association between a UE and an IMS network.
IMS CORE	The block providing the basic IMS functionality using the capabilities of the IMS related protocols and stacks
IMS FRAMEWORK	Set of all the modules (e.g. libraries, applications, APIs…) that implement IMS Functionalities on UE.
IMS SERVICE ENABLERS	IMS Service Enablers offer functionality focused in a specific service (e.g. PoC, IM, Presence)
MANAGEMENT OBJECT	Management objects are the entities that can be manipulated by management actions carried over the OMA DM protocol.
SERVICES API	Programmatic interfaces offered by the IMS Service Enablers (e.g. PoC) in order to provide access to IMS Service Enablers Functionalities.
TERMINAL	Used as an alternative term for a cellular telephone or handset.
USER EQUIPMENT	Combination of mobile Terminal and UICC

10 ABBREVIATIONS

ABBREVIATION	DESCRIPTION
3GPP	3rd Generation Partnership Project
3GPP2	3rd Generation Partnership Project 2
AKA	Authentication and Key Agreement Protocol
API	Application Programming Interface
APN	Access Point Name
BICC	Bearer Independent Call Control
CAMEL	Customised Applications for Mobile network Enhanced Logic
CAP	CAMEL Application Part
CN	Core Network
CPM	Converged IP Messaging
CS	Circuit Switched
CSI	Combinational Services
CSICS	Circuit Switched IMS Combinational Services
DCD	Dynamic Content Delivery
DHCP	Dynamic Host Configuration Protocol
DL	Download Link
DM	Device Management
DNS	Domain Name System
EDGE	Enhanced Data rates for Global Evolution
GCF	Global Certification Forum
GERAN	GSM EDGE Radio Access Network
GLM	Group List Management

ABBREVIATION	DESCRIPTION
GPRS	General Packet Radio System
GSM	Global System for Mobile Communications
GSMA	GSM Association
HTTP	Hyper Text Transfer Protocol
HTTPS	Secure HTTP
I-WLAN	Interworking - WLAN
IETF	Internet Engineering Task Force
IM	Instant Messaging
IMPS	Instant Messaging and Presence Service
IMS	IP Multimedia System
I/O	Input / Output
IoT	Inter Operability
IP	Internet Protocol
IP-CAN	IP-Connectivity Access Network
IPSEC	IP Security
IPv4	Internet Protocol Version 4
IPv6	Internet Protocol Version 6
ISDN	Integrated Services Digital Network
ISIM	IP Multimedia Services Identity Module
ISUP	ISDN User Part
J2ME	Java 2 Micro Edition
JCP	Java Community Process
JSR	Java Specification Request

ABBREVIATION	DESCRIPTION
MAP	Mobile Application Part
MMS	Multimedia Message Service
MMTEL	Multimedia Telephony
MSRP	Message Session Relay Protocol
NAS	Non-Access Stratum
OMA	Open Mobile Alliance
OMTP	Open Mobile Terminal Platform
OS	Operating System
PDP	Packet Data Protocol
PoC	Push Over Cellular
PCS	Personal Communications Service
PS	Packet Switched
PTCRB	PCS Type Certification Review Board
PUID	Public User Identity
QoS	Quality of Service
RAB	Radio Access Bearer
RFC	Request For Comments
RTP	Real Time Protocol
RTCP	Real Time Control Protocol
RTSP	Real Time Streaming Protocol
SDO	Standard Definition Organization
SDP	Session Description Protocol
SIGCOMP	Signalling Compression

ABBREVIATION	DESCRIPTION
SIM	Subscriber Identity Module
SIMPLE	SIP for Instant Messaging and Leveraging Extensions
SIP	Session Initiation Protocol
SMS	Short Message Service
TBF	Temporary Block Flow
TISPAN	Telecoms & Internet converged Services & Protocols for Advanced Networks
UA	User Agent
UE	User Equipment
UICC	Universal Integrated Circuit Card
UMTS	Universal Mobile Telecommunications System
USIM	Universal Subscriber Identity Module
WAP	Wireless Application Protocol
WIFI	Wireless Fidelity
WLAN	Wireless Local Area Network
XCAP	XML Configuration Access Protocol
XDM	XML Document Management
XDMS	XML Document Management Server
XML	Extensible Markup Language

11 REFERENCED DOCUMENTS

The following table summarizes the documents referred within this set of recommendations.

References are either specific (identified by date of publication and/or edition number or version number) or non specific.

– For a specific reference, subsequent revisions do not apply.

– For a non specific reference, the latest version applies. In the case of a reference to a Rel 6 document, a non specific reference implicitly refers to the latest version of that document in the same Release as the present document

No.	DOCUMENT	AUTHOR
[1]	RFC 2119, "Key words for use in RFCs to Indicate Requirement Levels"	IETF
[2]	"OMA Push to talk Over Cellular V1.0"	OMA
[3]	"OMA Device Management v1.2"	OMA
[4]	3GPP TS 24.229 "IP Multimedia Call Control Protocol based on Session Initiation Protocol (SIP) and Session Description Protocol (SDP), Stage 3 (R6)"	3GPP
[5]	RFC 791 - "Internet Protocol"	IETF
[6]	RFC 2460 - "Internet Protocol, Version 6 (IPv6) Specification"	IETF
[7]	RFC 3329 - "Security Mechanism Agreement for the Session Initiation Protocol (SIP)"	IETF
[8]	RFC 3315 - "Dynamic Host Configuration Protocol for IPv6 (DHCPv6)"	IETF
[9]	RFC 1591 - "Domain Name System Structure and Delegation"	IETF
[10]	RFC 3550 - "RTP: A Transport Protocol for Real-Time Applications"	IETF
[11]	RFC 2326 – "Real Time Streaming Protocol"	IETF

No.	Document	Author
[12]	draft-ietf-simple-xcap-12	IETF
[13]	RFC 2660 – "The Secure Hypertext Transfer Protocol"	IETF
[14]	3GPP TS 24.247 – "Messaging service using the IP Multimedia (IM) Core Network (CN) subsystem" (R6)	IETF
[15]	3GPP TS 33.203 "Access security for IP-based services, (R6)"	3GPP
[16]	3GPP TS 33.978 "Security Aspects of early IP Multimedia Subsystem (IMS)" (R6)	3GPP
[17]	3GPP TS 34.229-1 "Internet Protocol (IP) multimedia call control protocol based on Session Initiation Protocol (SIP) and Session Description Protocol (SDP) -User Equipment (UE) conformance specification; Part 1: Protocol conformance specification - (Release 6)"	3GPP
[18]	3GPP TS 24.167 "3GPP IMS Management Object; Stage 3, Release 6"	3GPP
[19]	RFC 3265 - "SIP Specific Event Notification"	IETF
[20]	3GPP TS 23.228: "IP Multimedia Subsystem (IMS); Stage 2, Release 6"	3GPP
[21]	3GPP TS 29.208 – "End-to-end Quality of Service (QoS) signalling flows" (R6)	3GPP
[22]	RFC 2543 – "SIP: Session Initiation Protocol"	IETF
[23]	RFC 2396 – "Uniform Resource Identifiers (URI): Generic Syntax"	IETF
[24]	RFC 2506 – "Media Feature Tag Registration Procedure"	IETF
[26]	RFC 3840 - "Indicating User Agent Capabilities in the Session Initiation Protocol (SIP)"	IETF
[27]	RFC 3841 "Caller Preferences for SIP"	IETF
[28]	"OMA Presence Simple V1.0"	OMA
[29]	"OMA XML Document Management V2.0	OMA

No.	Document	Author
[30]	"OMA SIMPLE IM V1.0"	OMA
[31]	RFC 2976 – "The SIP Info Method"	IETF
[32]	RFC 3903 – "Session Initiation Protocol (SIP) Extension for Event State Publication"	IETF
[33]	"OMA XML Document Management V1.0"	OMA
[34]	draft-ietf-simple-message-sessions-18	IETF
[35]	3GPP TS 31.103 "Characteristics of the IP Multimedia Services Identity Module (ISIM) application (R6)"	3GPP
[36]	3GPP TS 31.102 "Characteristics of the Universal Subscriber Identity Module application (R6)"	3GPP

A. SUMMARY OF STANDARD CAPABILITIES REQUIRED

Next table provides a summary of the standard capabilities requested in these recommendations. The following categories have been defined:

– Mandatory: ✓

– Recommended: **R**

– Not Required: ✖

CATEGORY	REFERENCE	IMS P0	IMS P1
TERMINAL GENERIC REQUIREMENTS (SECTION 5.1)	Simultaneous Primary PDP Contexts (at least 2)	✓	✓
	Secondary PDP Contexts	✓	✓
	Simultaneous PS and CS	✓	✓
IMS RELATED PROTOCOLS (SECTION 5.2)	SIP (as defined in 3GPP TS 24.229 [4])	✓	✓
	SDP (as defined in 3GPP TS 24.229 [4])	✓	✓
	IPv4 (RFC 791 [5])	✓	✓
	IPv6 (RFC 2460 [6])	✓	✓
	IPSec 3GPP (RFC 3329 [7])	✓	✓
	DHCPv6 (RFC 3315 [8])	**R**	**R**
	DNS (RFC 1591 [9])	✓	✓
	RTP / RTCP (RFC 3550 [10])	✓	✓
	RTSP (RFC 2326 [11])]	✓	✓
	HTTP/XCAP	✓	✓
	HTTPS (RFC 2660 [13])	✓	✓
	SIP SigCOMP (as defined in 3GPP TS 24.229 [4])	✓	✓

CATEGORY	REFERENCE	IMS P0	IMS P1
	XCAP as defined in draft-ietf-simple-xcap-12 [12]	✓	✓
	MSRP (as defined in TS 24.247 [14])	✓	✓
IMS CORE (SECTION 5.3)	IMS AKA (3GPP TS 33.203 [15])	✓	✓
	IMS Early Authentication (3GPP TS 33.978 [16])	✓	✓
	IMS Management Object (3GPP TS 24.167 [18])	✓	✓
	IMS Procedures (3GPP TS 23.228 [20])	✓	✓
	QoS Preconditions (3GPP TS 23.228 [20])	✓	✓
	Fallback to different session set-up procedures (3GPP TS 23.228 [20])	✓	✓
	SIP Timer Values (3GPP TS 24.229 [4])	✓	✓
	Generic Event Package (RFC 3265 [19])	✓	✓
	Media Grouping (as defined in 3GPP TS 24.229 [4])	✓	✓
	SDP mapping to 3GPP QoS Parameters (TS 29.208 [21])	✓	✓
	Indicating User Agent Capabilities in the Session Initiation Protocol (SIP) RFC 3840 [26]	✓	✓
	Caller Preferences for SIP RFC 3841 [27]	✓	✓

CATEGORY	REFERENCE	IMS P0	IMS P1
SERVICE ENABLERS (SECTION 5.5)	OMA PoC [2]	✘	✔
	OMA Presence SIMPLE [28]	✘	✔
	OMA XDM [29]	✘	✔
	OMA SIMPLE IM [30]	✘	✔