

MTAS Statement of Compliance Overview

MTAS

STATEMENT OF COMPLIANCE

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1 Introduction

The purpose of this document is to provide general information about compliancies with standards for the MTAS.

1.1 Prerequisites

This section states the prerequisites for this document, if applicable.





2 Statement of Compliance Definitions

One of the following statements is given to each standard specification:

- **Compliant:** The functionality that is provided has been implemented in accordance with relevant and mandatory requirements in the specification. Possible limitations in the functionality are summarized.
- **Partially Compliant:** Part of the functionality that is provided has either been implemented in a way that is deviating from relevant and mandatory requirements in the specification, or if there is functionality that has not been implemented.
- **Not Compliant:** The functionality that is provided has been implemented in a way that is deviating from relevant and mandatory requirements in the specification.
- **Not Applicable:** No explicit MTAS requirements.

Note: Compliant sometimes means that the functionality is transparent for the MTAS.





3 Standards

This section describes the standards with which the MTAS is compliant.

3.1 3GPP Specifications

The compliance for each specification is described in Table 1.

Note: In this document, the IMS core network and MMTel services comply to 3GPP specifications based on Release 8. The charging systems comply to 3GPP specifications Release 7 or Release 9. The MMTel services comply to 3GPP Release 8.

Table 1 3GPP Specifications

Specification/ Version	Title	Compliance	Comment
3GPP TS 04.08 V7.21.0	Mobile radio interface Layer 3 specification	Compliant	
3GPP TS 21.905 V8.8.0	Vocabulary for 3GPP Specifications	Not Applicable	
3GPP TS 22.101 V8.11.0	3rd Generation Partnership Project; Technical Specification Group Services and System Aspects Service aspects; Service principles	Not Applicable	
3GPP TS 22.127 V8.1.0	Service requirement for the Open Services Access (OSA); Stage 1	Not Applicable	Call Control Service is supported.
3GPP TS 22.340 V8.1.0	IMS Messaging; Stage 1	Not Applicable	Supports end-to-end Message Session Relay Protocol (MSRP) session-based messaging.
3GPP TS 23.002 V8.4.0	Network architecture	Not Applicable	
3GPP TS 23.003 V8.4.0	Technical Specification Group Core Network; Numbering, addressing, and identification	Not Applicable	

Table 1 3GPP Specifications

Specification/ Version	Title	Compliance	Comment
3GPP TS 23.125 V6.8.0	Overall high-level functionality and architecture impacts of flow based charging	Not Applicable	
3GPP TS 23.141 V8.1.0	Presence Service; Architecture and functional description	Not Applicable	The MTAS retrieves presence status.
3GPP TS 23.198 V8.0.0	Open Service Access (OSA); Stage 2	Not Applicable	Architecture principles followed in terms of implementing services.
3GPP TS 23.207 V8.0.0	End-to-end Quality of Service (QoS) concept and architecture	Not Applicable	
3GPP TS 23.218 V8.4.0	IP Multimedia (IM) session handling; IM call model; Stage 2	Not Applicable	
3GPP TS 23.221 V8.3.0	Architectural requirements	Not Applicable	
3GPP TS 23.228 V8.8.0	IP Multimedia Subsystem (IMS); Stage 2	Not Applicable	GRUU is not supported in the MTAS data model.
3GPP TS 23.237 V10.49.0	IP Multimedia Subsystem (IMS) Service Continuity; Stage 2	Not Applicable	Packet Switched-Circuit Switched (PS-CS) transfer is supported.
3GPP TS 23.240 V8.0.0	3GPP Generic User Profile - Architecture; Stage 2	Not Applicable	



Table 1 3GPP Specifications

Specification/ Version	Title	Compliance	Comment
3GPP TS 23.333 V8.3.0	Mp interface (Functions and Procedures)	Not Applicable	The following sections in the 3GPP TS 23.333 specification are supported: <ul style="list-style-type: none"> • 5.3, <i>Play Announcement</i> • 5.6, <i>DTMF Collection</i> • 5.8, <i>Play Multimedia</i> • 5.10, <i>Audio Conference</i> • 5.11, <i>Multimedia Conference</i> • 5.12, <i>Audio Transcoding</i> • 5.13, <i>Video Transcoding</i>
3GPP TS 23.380 V13.5.0	IMS Restoration Procedures	Partially Compliant	SCC AS is compliant to chapter 6
3GPP TS 24.147 V8.2.0	Conferencing using the IP Multimedia (IM) Core Network (CN) subsystem; Stage 3	Partially Compliant	INVITE with URI list is only supported for initial INVITE requests. Section 5.3.1.5.2 in the 3GPP TS 24.147 specification is not supported.
3GPP TS 24.173 V8.4.0	IMS Multimedia Telephony service and supplementary services; Stage 3	Partially Compliant	Message Waiting Indicator Not Applicable (MWI NA). Flexible Alerting (FA): proprietary service, see the comment for TS 24.239, is supported. Explicit Communication Transfer (ECT) blind transfer is not supported Closed User Group (CUG) is partially supported.

Table 1 3GPP Specifications

Specification/ Version	Title	Compliance	Comment
3GPP TS 24.229 V8.7.0	Internet Protocol (IP) multimedia call control protocol based on Session Initiation Protocol (SIP) and Session Description Protocol (SDP); Stage 3	Partially Compliant	GRUU is not supported. Regarding PANI header, the MTAS does not apply the constraint stated in bullet 4 in section 7.2A.4.3, however the bullet has been removed in V10.1.0 and later versions.
3GPP TS 24.237 V12.6.0	IP Multimedia (IM) Core Network (CN) subsystem IP Multimedia Subsystem (IMS) service continuity; Stage 3	Partially Compliant	The following are supported: <ul style="list-style-type: none">• PS-CS transfer• PS to CS access transfer, PS to CS SRVCC enhancement using ATCF• PS to CS access transfer when call is in alerting or pre-alerting phase
3GPP TS 24.247 V8.2.0	Messaging using the IP Multimedia (IM) Core Network (CN) subsystem; Stage 3	Compliant	MTAS supports MSRP session-based messaging.
3GPP TS 24.292 V10.9.0	IMS Centralized Services	Partially Compliant	MSC enhanced for IMS Centralized Services (ICS) is supported. Only one Voice over LTE (VoLTE) User Equipment (UE) in Implicit Registration Set (IRS) is supported. ICS enhanced UE is not supported. Using MSRN from HSS/HLR when call setup to VoLTE UE on CS is supported.



Table 1 3GPP Specifications

Specification/ Version	Title	Compliance	Comment
3GPP TS 24.525 V12.0.0	3rd Generation Partnership Project; Technical Specification Group Core Network and Terminals; Business Trunking; Architecture and functional description	Partially Compliant	ST AS supports Business Trunking architecture and applications. Supported connectivity: <ul style="list-style-type: none"> • Subscription-based Business Trunking • Peering based Business Trunking Not supported applications: <ul style="list-style-type: none"> • Advise of Charge • Break-in/ Break-out
3GPP TR 24.930 V8.2.0	Signalling flows for the session setup in the IM CN subsystem based on Session Initiation Protocol (SIP) and Session Description Protocol (SDP)	Not Applicable	
3GPP TS 26.236 V8.0.0	Packet switched conversational multimedia applications; Transport protocols	Compliant	
3GPP TS 29.002 V9.3.0	Mobile Application Part (MAP) specification (release 9)	Compliant	
3GPP TS 29.163 V8.7.0	Interworking between the IP Multimedia (IM) Core Network (CN) subsystem and Circuit Switched (CS) networks	Compliant	The MTAS supports Media Gateway Control Function (MGCF) acting as specified.
3GPP TS 29.199-1 V8.1.0	Open Service Access (OSA); Parlay X web services; Part 1: Common	Partially Compliant	Used parts compliant, refer to <i>Parlay X MMTel Extensions</i> .
3GPP TS 29.199-2 V8.1.0	Open Service Access (OSA); Parlay X web services; Part 2: Third-party call	Partially Compliant	Used parts compliant, refer to <i>Parlay X MMTel Extensions</i> .

Table 1 3GPP Specifications

Specification/ Version	Title	Compliance	Comment
3GPP TS 29.199-3 V8.2.0	Open Service Access (OSA); Parlay X web services; Part 3: Call notification	Partially Compliant	Used parts compliant, refer to <i>Parlay X MMTel Extensions</i> .
3GPP TS 29.208 V6.7.0	End-to-end Quality of Service (QoS) signalling flows	Compliant	
3GPP TS 29.229 V6.7.0	Cx and Dx interfaces based on the Diameter protocol	Partially Compliant	Procedure to find Home Subscriber Server (HSS) is supported. Dynamic discovery of Notif-Eff and Update-Eff features is supported (see 3GPP TS 29.329).
3GPP TS 29.328 V10.3.0	IP Multimedia (IM) Subsystem Sh interface; Signalling flows and message contents (release 10)	Partially Compliant	Notif-Eff and Update-Eff features are partially supported. Multiple HSS identities (more than one Redirect-Host AVPs) are not supported in the Sh response from an SLF and thus failover to an alternative HSS is not supported.
3GPP TS 29.329 V10.4.0	Sh interface based on the Diameter protocol	Partially Compliant	Notif-Eff and Update-Eff optional features are supported only if Data Reference is of type Repository Data and the SI refers to one or multiple Service Data instances. Combining Data References and Identity Sets is not supported.



Table 1 3GPP Specifications

Specification/ Version	Title	Compliance	Comment
3GPP TS 29.333 V8.4.1	Mp interface (Profile)	Partially Compliant	Functions and procedures described in comment to 3GPP TS 23.333 specification, are supported. Used Packages: Generic, Base Root, Generic Announcement, AAS Digit collection, ASR speech recognition, and Supplemental tones package.
3GPP TS 29.364 V9.0.0	IP Multimedia Subsystem (IMS) Application Server (AS) service data descriptions for AS interoperability	Not Compliant	
3GPP TS 29.658 V8.4.0	SIP Transfer of IP Multimedia Service Tariff Information	Compliant	
3GPP TS 29.962 V6.1.1	Signalling interworking between the 3GPP profile of the Session Initiation Protocol (SIP) and non-3GPP SIP use	Not Applicable	
3GPP TS 32.101 V6.1.0	Telecommunication management; Principles and high-level requirements	Compliant	
3GPP TS 32.102 V6.3.0	Telecommunication management; Architecture	Compliant	
3GPP TS 32.104 V3.4.0	Release 6, 3G Performance Management	Compliant	
3GPP TS 32.106–2 V3.3.0 & V3.2.0	Notification Integration Reference Point (IRP): Information Service (IS)	Compliant	

Table 1 3GPP Specifications

Specification/ Version	Title	Compliance	Comment
3GPP TS 32.106–3 V3.3.0 & V3.2.0	Notification Integration Reference Point (IRP); Common Object Request Broker Architecture (CORBA) Solution Set (SS)	Compliant	
3GPP TS 32.106–8 V3.2.0	Name Convention for Managed Objects	Compliant	
3GPP TS 32.111-1 V3.3.0	Telecommunication management; Fault Management; Part 1: 3G fault management requirements	Compliant	
3GPP TS 32.111-2 V3.3.0	Telecommunication management; Fault Management; Part 2: Alarm Integration Reference Point (IRP): Information Service (IS)	Compliant	
3GPP TS 32.111–3 V3.3.0	Alarm Integration Reference Point (IRP): Common Object Request Broker Architecture (CORBA) Solution Set (SS)	Compliant	
3GPP TS 32.150 V6.2.0	Integration Reference Point (IRP) Concept and definitions	Compliant	
3GPP TS 32.240 V9.2.0	Charging architecture and principles.	Compliant	
3GPP TS 32.260 V9.11.0	IP Multimedia Subsystem (IMS) charging	Compliant	
3GPP TS 32.275 V9.14.0	Telecommunication management; Charging management; Multimedia Telephony (MMTel) charging	Partially Compliant	For details, refer to <i>Managed Object Model (MOM)</i> .



Table 1 3GPP Specifications

Specification/ Version	Title	Compliance	Comment
3GPP TS 32.280 V8.1.0	Telecommunication management; Charging management; Advice of Charge (AoC) service	Compliant	
3GPP TS 32.299 V6.11.0	Diameter charging applications	Compliant	
3GPP TS 32.299 V7.7.0	Diameter charging applications	Compliant	
3GPP TS 32.299 V9.14.0	Diameter charging applications	Compliant	
3GPP TS 32.302 V6.3.0	Notification Integration Reference Point (IRP): Information Service (IS)	Compliant	
3GPP TS 32.312 V6.3.0	Generic Integration Reference Point (IRP) management; Information Service (IS)	Compliant	
3GPP TS 32.401 V5.5.0 & V6.2.0	3G Performance Management (PM)	Compliant	
3GPP TS 32.412 V6.9.0	Performance Management (PM) Integration Reference Point (IRP): Information Service (IS)	Compliant	
TS32.421 V9.1.0	Subscriber and equipment trace: Trace concepts and requirements	Compliant	
TS 32.422 V9.5.0	Subscriber and equipment trace: Trace control and configuration management	Compliant	
3GPP TS 32.423 V9.7.0	Telecommunication management; Subscriber and equipment trace; Trace data definition and management	Compliant	

Table 1 3GPP Specifications

Specification/ Version	Title	Compliance	Comment
3GPP TS 32.600 V6.0.0	Configuration Management (CM); Concept and high-level requirements	Compliant	
3GPP TS 33.222 V8.0.0	Generic Authentication Architecture (GAA); Access to network Application Functions using Hypertext Transfer Protocol over Transport Layer Security (HTTPS)	Compliant	

3.2 IETF RFCs

The compliance for each specification is described in Table 2.

Table 2 IETF RFCs Specifications

Specificat ion	Title	Compliant	Comment
RFC 768	User Datagram Protocol	Compliant	
RFC 791	Internet Protocol	Compliant	
RFC 793	Transmission Control Protocol	Compliant	
RFC 959	File Transfer Protocol	Compliant	
RFC 1321	The MD5 Message-Digest Algorithm	Compliant	
RFC 1579	Firewall-Friendly FTP	Compliant	
RFC 1901	Introduction to Community-based SNMPv2	Compliant	
RFC 1907	Management Information Base for Version 2 of the Simple Network Management Protocol (SNMPv2).	Compliant	
RFC 2045	Multipurpose Internet Mail Extensions (MIME) Part One: Format of Internet Message Bodies	Compliant	



Table 2 IETF RFCs Specifications

Specification	Title	Compliant	Comment
RFC 2046	Multipurpose Internet Mail Extensions (MIME) Part Two: Media Types	Compliant	
RFC 2141	Uniform Resource Name (URN) Syntax	Compliant	
RFC 2183	Communicating Presentation Information in Internet Messages: The Content-Disposition Header Field	Compliant	
RFC 2234	Augmented BNF for Syntax Specifications: ABNF	Compliant	Made obsolete by RFC 4234 and RFC 5234 .
RFC 2251	Lightweight Directory Access Protocol (v3)	Compliant	
RFC 2252	Lightweight Directory Access Protocol (V3): Attribute Syntax Definitions	Compliant	
RFC 2275	View-based Access Control Model (VACM) for the Simple Network Management Protocol (SNMP)	Compliant	O&M is used for alarm handling.
RFC 2327	SDP: Session Description Protocol	Compliant	Made obsolete by RFC 4566 .
RFC 2396	Uniform Resource Identifiers (URI): Generic Syntax	Compliant	Made obsolete by RFC 3986 .
RFC 2460	Internet Protocol, Version 6 (IPv6) Specification	Partially compliant	Traffic plane supported. O&M interfaces, Muta Interface supported.
RFC 2474	Definition of the Differentiated Services Field (DS Field)	Partially compliant	MTAS supports setting of DS code points.
RFC 2486	The Network Access Identifier	Compliant	
RFC 2574	User-based Security Model (USM) for version 3 of the Simple Network Management Protocol (SNMPv3)	Partially compliant	O&M: Supported by the Platform.

Table 2 IETF RFCs Specifications

Specification	Title	Compliant	Comment
RFC 2616	Hypertext Transfer Protocol HTTP/1.1	Compliant	
RFC 2617	HTTP Authentication: Basic and Digest Access Authentication	Compliant	
RFC 2741	Agent Extensibility (AgentX) Protocol.	Compliant	
RFC 2818	HTTP Over TLS	Compliant	
RFC 2822	Internet Message Format	Compliant	
RFC 2849	The LDAP Data Interchange Format (LDIF)	Compliant	
RFC 2960	Stream Control Transmission Protocol	Compliant	
RFC 2976	The SIP INFO Method	Compliant	Made obsolete by RFC 6086 .
RFC 3023	XML Media Types	Compliant	
RFC 3261	SIP: Session Initiation Protocol	Compliant	
RFC 3262	Reliability of Provisional Responses In the Session Initiation Protocol (SIP)	Compliant	
RFC 3263	Session Initiation Protocol (SIP): Locating SIP Servers	Compliant	
RFC 3264	An Offer/Answer Model with the Session Description Protocol (SDP)	Compliant	
RFC 3265	Session Initiation Protocol (SIP)-specific Event Notification	Compliant	
RFC 3311	The Session Initiation Protocol (SIP) UPDATE Method.	Compliant	
RFC 3312	Integration of Resource Management and Session Initiation Protocol (SIP)	Partially compliant	SDP in CANCEL requests and 580 responses are not included and supported.
RFC 3323	A Privacy Mechanism for the Session Initiation Protocol (SIP)	Compliant	



Table 2 IETF RFCs Specifications

Specification	Title	Compliant	Comment
RFC 3325	Private Extensions to the Session Initiation Protocol (SIP) for Asserted Identity within Trusted Networks	Compliant	
RFC 3326	The Reason Header Field for the Session Initiation Protocol (SIP)	Compliant	
RFC 3327	Session Initiation Protocol (SIP) Extension Header Field for Registering Non-Adjacent Contacts	Partially compliant	The MTAS only reads the Path header for Single Radio Voice Call Continuity (SRVCC) service.
RFC 3388	Grouping of Media Lines in the Session Description Protocol	Partially compliant	MTAS is transparent to this information. SCTP as transport not supported.
RFC 3413	Simple Network Management Protocol (SNMP) Applications (Definition for SNMP-TARGET-MIB)	Compliant	
RFC 3420	Internet Media Type message/sipfrag	Compliant	
RFC 3428	Session Initiation Protocol (SIP) Extension for Instant Messaging	Compliant	
RFC 3455	Private Header (P-Header) Extensions to the Session Initiation Protocol (SIP) for the 3rd Generation Partnership Project (3GPP)	Compliant	
RFC 3482	Number Portability in the Global Switched Telephone Network (GSTN): An Overview	Compliant	
RFC 3515	The Session Initiation Protocols (SIP) Refer Method	Compliant	Out of dialog REFER not supported.
RFC 3524	Mapping of Media Streams to Resource Reservation Flows	Compliant	

Table 2 IETF RFCs Specifications

Specification	Title	Compliant	Comment
RFC 3588	Diameter Base Protocol	Partially Compliant	SCTP as Transport not supported.
RFC 3665	Session Initiation Protocol (SIP) Basic Call Flow Example	Partially compliant	Miscellaneous examples are supported.
RFC 3680	A Session Initiation Protocol (SIP) Event Package for Registrations	Compliant	
RFC 3688	The IETF XML Registry	Compliant	
RFC 3840	Indicating User Agent Capabilities in the Session Initiation Protocol (SIP)	Compliant	The MTAS is not using it, but the MTAS is transparent if UEs would like to use it.
RFC 3841	Caller Preferences for the Session Initiation Protocol (SIP)	Partially compliant	Only partially used by the MTAS.
RFC 3856	A Presence Event Package for the Session Initiation Protocol (SIP)	Partially compliant	Acting as a watcher for Communication Diversion (CDIV) service.
RFC 3863	Presence Information Data Format (PIDF)	Compliant	
RFC 3891	Session Initiation Protocol (SIP) "Replaces" Header	Compliant	
RFC 3892	The Session Initiation Protocol (SIP) Referred-By Mechanism	Compliant	
RFC 3903	Session Initiation Protocol (SIP) Extension for Event State Publication	Compliant	
RFC 3960	Early Media and Ringing Tone Generation in the Session Initiation Protocol (SIP)	Compliant	
RFC 3966	The tel URI for Telephone Numbers	Compliant	
RFC 3986	Uniform Resource Identifier (URI): Generic Syntax	Compliant	Obsoletes RFC 2396 .
RFC 4006	Diameter Credit Control Application	Compliant	



Table 2 IETF RFCs Specifications

Specification	Title	Compliant	Comment
RFC 4028	Session Timers in the Session Initiation Protocol (SIP).	Compliant	
RFC 4032	Update to the Session Initiation Protocol (SIP) Preconditions Framework	Compliant	
RFC 4122	A Universally Unique Identifier (UUID) URN Namespace	Compliant	
RFC 4234	Augmented BNF for Syntax Specifications: ABNF	Compliant	Obsoletes RFC 2234 . Made obsolete by RFC 5234 .
RFC 4240	Basic Network Media Services with SIP	Compliant	
RFC 4244	An Extension to the Session Initiation Protocol (SIP) for Request History Information	Compliant	
RFC 4265	An INVITE-Initiated Dialog Event Package for the Session Initiation Protocol (SIP)	Compliant	
RFC 4320	Actions Addressing Identified Issues with the Session Initiation Protocol's (SIP) Non-INVITE Transaction	Partially compliant	Suppression of 180 provisional response and 408 final response for non-INVITE requests is supported.
RFC 4353	A Framework for Conferencing with the Session Initiation Protocol (SIP)	Compliant	
RFC 4412	Communications Resource Priority for the Session Initiation Protocol (SIP)	Compliant	
RFC 4458	Session Initiation Protocol (SIP) URIs for Applications such as Voicemail and Interactive Voice Response (IVR)	Partially compliant	IVR is not supported.
RFC 4480	RPID: Rich Presence Extensions to the Presence Information Data Format (PIDF)	Compliant	

Table 2 IETF RFCs Specifications

Specification	Title	Compliant	Comment
RFC 4511	Lightweight Directory Access Protocol (LDAP): The Protocol	Compliant	
RFC 4514	Lightweight Directory Access Protocol (LDAP): String Representation of Distinguished Names	Partially compliant	Distinguished names format is supported.
RFC 4538	Request Authorization through Dialog Identification in the Session Initiation Protocol (SIP)	Partially compliant	The SCC AS only reads the Target-Dialog header for the SRVCC service.
RFC 4566	SDP: Session Description Protocol	Compliant	Obsoletes RFC 2327 .
RFC 4575	A Session Initiation Protocol (SIP) Event Package for Conference State	Compliant	
RFC 4579	Session Initiation Protocol (SIP). Call Control – Conferencing for User Agents	Compliant	
RFC 4585	Real-time Transmission Control Protocol (RTCP)-Based Feedback (RTP/AVPF)	Compliant	
RFC 4660	Functional Description of Event Notification Filtering	Compliant	
RFC 4661	An Extensible Markup Language (XML)-Based Format for Event Notification Filtering	Compliant	
RFC 4694	Number Portability Parameters for the "tel" URI	Compliant	
RFC 4741	NETCONF Configuration Protocol	Compliant	
RFC 4742	Using the NETCONF Configuration Protocol over Secure Shell (SSH)	Compliant	



Table 2 IETF RFCs Specifications

Specification	Title	Compliant	Comment
RFC 4745	Common Policy: A Document Format for Expressing Privacy Preferences	Compliant	
RFC 4769	IANA Registration for an Enumservice Containing Public Switched Telephone Network (PSTN) Signaling Information	Compliant	
RFC 4825	The Extensible Markup Language (XML) Configuration Access Protocol (XCAP)	Compliant	
RFC 4826	Extensible Markup Language (XML) Formats for Representing Resource Lists	Compliant	
RFC 4967	Dial String Parameter for the Session Initiation Protocol Uniform Resource Identifier	Compliant	
RFC 5009	Private Header (P-Header) Extension to the Session Initiation Protocol (SIP) for Authorization of Early Media	Compliant	
RFC 5057	Multiple Dialog uses in the Session Initiation Protocol	Compliant	
RFC 5079	Rejecting Anonymous Requests in the Session Initiation Protocol (SIP)	Compliant	
RFC 5234	Augmented BNF for Syntax Specifications: ABNF	Compliant	Obsoletes RFC 4234 .
RFC 5364	Extensible Markup Language (XML) Format Extension for Representing Copy Control Attributes in Resource Lists	Compliant	
RFC 5366	Conference Establishment Using Request-Contained Lists in the Session Initiation Protocol (SIP)	Compliant	

Table 2 IETF RFCs Specifications

Specification	Title	Compliant	Comment
RFC 5502	The SIP P-Served-User private header (P-Header) for the 3GPP IP Multimedia (IM) Core Network (CN) Subsystem	Compliant	
RFC 5552	SIP Interface to VoiceXML Media Services	Partially compliant	Dual-Tone Multifrequency (DTMF) or voice invocation result is supported and handled as described in chapter 4.2 <i>SIP Mechanism</i> in the RFC 5552 .
RFC 5806	Diversion Indication in SIP	Compliant	
RFC 6080	A Framework for Session Initiation Protocol User Agent Profile Delivery	Compliant	
RFC 6086	Session Initiation Protocol (SIP) INFO Method and Package Framework	Partially compliant	MTAS uses legacy mode.
RFC 6140	Registration for Multiple Phone Numbers in the Session Initiation Protocol (SIP)	Compliant	ST AS supports PBX registrations with bulk number contacts.
RFC 6228	Session Initiation Protocol (SIP) Response Code for Indication of Terminated Dialog	Compliant	
RFC 6665	SIP-Specific Event Notification	Compliant	
RFC 6809	Mechanism to Indicate Support of Features and Capabilities in the Session Initiation Protocol (SIP)	Compliant	Supported in reg event info XML.
RFC 6910	Completion of Calls for the Session Initiation Protocol (SIP)	Compliant	In addition, MTAS understands format of parameters in NOTIFY body as specified in draft-ietf-bliss-call-completion-03.



Table 2 IETF RFCs Specifications

Specification	Title	Compliant	Comment
RFC 7254	A Uniform Resource Name Namespace for the Global System for Mobile Communications Association (GSMA) and the International Mobile Station Equipment Identity (IMEI)	Compliant	
RFC 7255	Using the International Mobile Station Equipment Identity (IMEI) Uniform Resource Name (URN) as an Instance ID	Compliant	
RFC 7316	The Session Initiation Protocol (SIP) P-Private-Network-Indication Private-Header (P-Header)	Compliant	
RFC 7329	A Session Identifier for the Session Initiation Protocol (SIP)	Compliant	Used for more than just fault tracing.
RFC 7339	Session Initiation Protocol (SIP) Overload Control	Partially compliant	MTAS only act as reporting role
RFC 7462	URNs for the Alert-Info Header Field of the Session Initiation Protocol (SIP)"	Compliant	
RFC 7463	Shared Appearances of a Session Initiation Protocol (SIP) Address of Record (AOR)	Compliant	

3.2.1 IETF Drafts

The compliance for each IETF draft, that is not yet a standard, is described in Table 3.

Table 3 IETF Drafts

Title	Compliant	Comment
draft-jones-sip-options-ping-02	Compliant	

3.3 ITU-T

The compliance for each specification is described in Table 4.

Table 4 ITU-T Specifications

Specification	Title	Compliant	Comment
ITU-T E.131	Subscriber Control Procedures for Supplementary Telephone Services	Compliant	
ITU-T E.164	The international public telecommunication numbering plan	Compliant	
ITU-T E.164 Complement, June 2000	List of ITU-T Recommendation E.164 assigned Country Codes	Compliant	
ITU-T E.164/I.331	The International Public Telecommunication Numbering Plan. 1997, E.164/I.331 (05/97)	Compliant	
ITU-T H.248.1	Gateway Control Protocol: Version 2 with corrigendum 1IPv4 only, text encoding only	Compliant	
ITU-T H.248.4	Gateway Control Protocol: Transport over Stream Control Transmission Protocol (SCTP)	Compliant	
ITU-T H.248.7	Gateway Control Protocol: Generic Announcement package	Compliant	
ITU-T H.248.8	Gateway Control Protocol: Error code and ServiceChange reason description	Partially compliant	Supported Media: The error codes and ServiceChange reasons MTAS use are defined here.
ITU-T H.248.9	Gateway Control Protocol: Advanced media server packages	Compliant	



Table 4 ITU-T Specifications

Specification	Title	Compliant	Comment
ITU-T H.248.9 Amendment 1	Gateway Control Protocol: Advanced media server packages; Amendment 1: ASR, TTS, and multimedia enhancement	Compliant	
ITU-T H.248.10	Gateway Control Protocol: Media gateway resource congestion handling package	Compliant	
ITU-T H.248.27	Gateway Control Protocol: Supplemental tones packages	Compliant	
ITU-T H.248.36	Gateway Control Protocol: Hanging Termination Detection package	Compliant	
ITU-T M.3100	Generic network information model	Compliant	
ITU-T Q.713	Signalling connection control part formats and codes	Compliant	
ITU-T Q.763	Signalling System No.7 – ISDN User Part formats and codes	Partially compliant	Formats used by CAMEL Application Part (CAP) are supported.
ITU-T Q.850	Use of cause and location in the Digital Subscriber Signalling System No. 1 and the Signalling System No.7 ISDN User Part	Compliant	
ITU-T Q.931	ISDN User Network Interface Layer 3 specification for basic call control	Partially compliant	Formats used by CAP are supported.
ITU-T T.38	Procedures for real-time Group 3 facsimile communication over IP Networks	Compliant	

Table 4 ITU-T Specifications

Specification	Title	Compliant	Comment
ITU-T X.731	Information Technology – Open Systems Interconnection – Systems Management: State Management Function	Compliant	
ITU-T X.733	Alarm Reporting Function; Systems Management: Alarm reporting function	Compliant	
ITU-T X.736	Information technology - Open Systems Interconnection - Systems Management: Security alarm reporting function	Compliant	
Annex to ITU OB 953-E, 2010		Compliant	

3.4 ETSI/3GPP Services

The compliance for each specification is described in Table 5.

Table 5 ETSI/3GPP Services Specifications

Specification	Title	Compliant	Comment
ES 282 001 V1.1.1	Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN); NGN Functional Architecture Release 1	Compliant	Interactions with SIP Application Servers take place through the Ut interface.
TS 102 333 V1.1.2	Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN); Gate control protocol	Compliant	



Table 5 ETSI/3GPP Services Specifications

Specification	Title	Compliant	Comment
TS 24.182 V9.2.0	3rd Generation Partnership Project; Technical Specification Group Core Network and Terminals; IP Multimedia Subsystem (IMS) Customized Alerting Tones (CAT); Protocol specification (Release 9)	Partially compliant	Invocation of external CAT server and Gateway Model related signaling are supported.
TS 24.238 V11.2.0	Session Initiation Protocol (SIP) based user configuration; Stage 3	Compliant	Early announcement is used.
TS 24.239 V8.2.0	Flexible Alerting (FA) using IP Multimedia (IM) Core Network (CN) subsystem; Protocol specification	Partially compliant	Ericsson Flexible Communication Distribution (FCD) service is similar in functionality, but has a different implementation.
TS 24.315 V11.1.0	IP Multimedia Subsystem (IMS) Operator Determined Barring (ODB); Stage 3: protocol specification	Partially compliant	Barring of supplementary services configuration not supported.
TS 24.604 V8.17.0	Communication Diversion (CDIV) using IP Multimedia (IM) Core Network (CN) subsystem; Protocol specification	Partially compliant	GRUU not supported. Adding a No-Reply timer only, is possible even if an XCAP rule already exists. FCD service is similar where only one or more of divert-primary, No-Reply timer or target-list can be added even if an XCAP rule already exists.
TS 24.605 V8.3.0	Conference (CONF) using IP Multimedia (IM) Core Network (CN) subsystem; Protocol specification	Compliant	3PTY service uses release 9.
TS 24.607 V8.2.0	Originating Identification Presentation (OIP) and Originating Identification Restriction (OIR) using IP Multimedia (IM) Core Network (CN) subsystem; Protocol specification	Compliant	

Table 5 ETSI/3GPP Services Specifications

Specification	Title	Compliant	Comment
TS 24.608 V8.2.0	Terminating Identification Presentation (TIP) and Terminating Identification Restriction (TIR) using IP Multimedia (IM)Core Network (CN) subsystem; Protocol specification	Compliant	
TS 24.610 V8.3.0	Communication HOLD (HOLD) using IP Multimedia (IM) Core Network (CN) subsystem; Protocol specification	Compliant	
TS 24.611 V8.2.0	Anonymous Communication Rejection (ACR) and Communication Barring (CB); using IP Multimedia (IM) Core Network (CN) subsystem; Protocol specification	Compliant	
TS 24.615 V8.2.0	Communication Waiting (CW) using IP Multimedia (IM) Core Network (CN) subsystem; Protocol specification	Compliant	
TS 24.616 V8.5.0	Malicious Communication Identification (MCID) using IP Multimedia (IM) Core Network (CN) subsystem; Protocol specification	Partially compliant	Communication ended scenario for temporary mode is supported except for sip INFO methods for missing CLI and re-INVITE during communication.
TS 24.623 V8.4.0	Extensible Markup Language (XML) Configuration Access Protocol (XCAP) over the Ut interface for Manipulating Supplementary Services	Partially compliant	xcap-diff event package not supported.
TS 24.628 V8.2.0	Common Basic Communication procedures using IP Multimedia (IM) Core Network (CN) subsystem; Protocol specification	Compliant	
TS 24.629 V8.3.0	Explicit Communication Transfer (ECT) using IP Multimedia (IM) Core Network (CN) subsystem; Protocol specification	Compliant	Consultative ECT is supported - where leg to transfer target is active. 3pcc is used.



Table 5 ETSI/3GPP Services Specifications

Specification	Title	Compliant	Comment
TS 24.642 V8.9.0	Completion of Communications to Busy Subscriber (CCBS) Completion of Communications by No Reply (CCNR) using IP Multimedia (IM) Core Network (CN) subsystem; Protocol specification	Compliant	See comment for RFC 6910 on Section 3.2 IETF RFCs on page 14.
TS 24.647 V8.1.0	Advise of Charge (AoC) using IP Multimedia (IM) Core Network (CN) subsystem Protocol specification	Compliant	
TS 24.654 V8.6.0	Closed User Group (CUG) using IP Multimedia (IM) Core Network (CN) subsystem, Protocol Specification	Partially compliant	MTAS supports terminating CUG. No support for default group.
TS 183 043 V.2.5.1	Telecommunications and Internet Converged Services and Protocols for Advanced Networks (TISPAN); IMS-based PSTN/ISDN Emulation, Stage 3 specification, ETSI TS 183 043 v.2.5.1 (2011-02)	Partially compliant	The following are supported: <ul style="list-style-type: none"> • Advise of Charge • Feature access codes • Communication Waiting • Dial Tone Management • Service Code Command
TS 187 001 V1.1.1	Telecommunications and Internet Converged Services and Protocols for Advanced Networking (TISPAN); NGN SECurity (SEC); Requirements	Not Applicable	
TS 187 003 V1.1.1	Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN); NGN Security; Security Architecture	Not Applicable	

3.5 OMA

The compliance for each specification is described in Table 6.

Table 6 OMA Specifications

Specification	Title	Compliant	Comment
OMA-SUP-XSD_xdm_commonPolicy-V1_0_2-20070830-A	Common policy schema definition	Compliant	
OMA-TS-XDM_Core-V1_0-20051006-C	XML Document Management (XDM) Specification	Compliant	

3.6 W3C

The compliance for each specification is described in Table 7.

Table 7 W3C Specifications

Specification	Title	Compliant	Comment
http://www.w3.org/TR/2008/REC-xml-20081126	Extensible Markup Language (XML) 1.0 (Fifth Edition)	Compliant	
http://www.w3.org/TR/2001/REC-xml-c14n-20010315	Canonical XML Version 1.0	Compliant	
http://www.w3.org/TR/2000/NOTE-SOAP-20000508/	Simple Object Access Protocol (SOAP) 1.1	Compliant	
http://www.w3.org/TR/2001/NOTE-wsdl-20010315	Web Services Description Language (WSDL) 1.1	Compliant	
http://www.w3.org/TR/2004/REC-xml-infoset-20040204	XML Information Set	Compliant	
http://www.w3.org/TR/1999/REC-xpath-19991116	XML Path Language (XPath) Version 1.0	Compliant	
http://www.w3.org/TR/2004/REC-xmlschema-0-20041028/	XML schema Part 0: Primer Second Edition	Compliant	
http://www.w3.org/TR/2004/REC-xmlschema-1-20041028/	XML schema Part 1: Structures Second Edition	Compliant	
http://www.w3.org/TR/2004/REC-xmlschema-2-20041028/	XML schema Part 2: Datatypes Second Edition	Compliant	
http://www.w3.org/TR/2007/REC-voicexml20-20040316/	Voice Extensible Markup Language (VoiceXML) 2.0 W3C Recommendation 16 March 2004	Compliant	
http://www.w3.org/TR/xslt	XSL Transformations (XSLT) Version 1.0, 16 November 1999	Compliant	



3.7 GSM

The compliance for each specification is described in Table 8.

Table 8 GSM Specifications

Specification	Title	Compliant	Comment
GSM 12.11	Fault management of the Base Station System (BSS)	Partially compliant	Used for alarmProbableCause in Ericsson Alarm IRP MIB and Ericsson Alarm PC MIB.

3.8 Miscellaneous

The compliance for each specification is described in Table 9.

Table 9 Miscellaneous Specifications

Specification	Title	Compliant	Comment
ANSI X3.4-1986	Coded Character Set –7-Bit American Standard Code for Information Interchange	Compliant	
ETSI ES 201 296	Integrated Services Digital Network (ISDN); Signalling System No.7 (SS7); ISDN User Part (ISUP); Signalling aspects of charging	Partially compliant	Procedures after start of charge is supported.
ETSI ETS 300 738	Human Factors (HF); Minimum Man–Machine Interface (MMI) to public network-based supplementary services	Partially compliant	Service code commands are supported.
GIR (Government Industry Requirements) Document	IMS Core Network GIR for National Security/Emergency Preparedness (NS/EP) Next Generation Network (NGN) Priority Services (Issue 2.0, January 2013)	Partially compliant	Resource-Priority Header in SIP responses not supported. PIN-Code not supported.
GSMA IR.92 V10..0	IMS Profile for Voice and SMS	Partially compliant	UE must be configured.

*Table 9 Miscellaneous Specifications*

Specification	Title	Compliant	Comment
GSMA IR.94 V11.0	IMS Profile for Conversational Video Service	Partially compliant	Audio-Visual Profile with Feedback (AVPF) for Call Out Of the Blue is not supported.
IANA SDP-parameters	Session Description Protocol (SDP) Parameters	Compliant	
SIP Forum - SIPconnect 1.1	SIP-PBX / Service Provider Interoperability	Partially Compliant	ST AS supports PBX interoperability and Business Trunking applications. Not supported applications: <ul style="list-style-type: none">• Call transfer



4 Interfaces

This section describes the interfaces with which the MTAS is compliant.

4.1 MTAS Interfaces

The interfaces supported by the MTAS are described in the following documents:

- *ACR Storage in MTAS*
- *Diameter Communication Details in MTAS*
- *Diameter Offline Charging in MTAS*
- *Diameter Online Charging in MTAS*
- *ETSI MAP Support in MTAS*
- *MTAS CAI3G Interface*
- *MTAS CAI3G Interface for ST AS*
- *MTAS CAP Support*
- *MTAS, Communication Details, 3GPP R7 XML*
- *MTAS H.248 Support*
- *MTAS Interface to CAT-S (CAT)*
- *MTAS Interface to CSCF (ISC, Ma, Pw)*
- *MTAS Interface to MRF (Mr)*
- *MTAS, Offline Charging, 3GPP R7 MM XML*
- *MTAS, Offline Charging, 3GPP R9 MM XML*
- *MTAS, Online Charging, 3GPP R7 MM XML*
- *MTAS, Online Charging, 3GPP R9 MM XML*
- *MTAS, Offline Charging, 3GPP R12 MM XML*
- *MTAS, Online Charging, 3GPP R12 MM XML*
- *MTAS Ut Interface*
- *NameDb*



- *Parlay X in MMTEL*
- *Parlay X MMTel Extensions*
- *Sh/Dh Interface*

4.2 Common Component Interfaces

The interfaces supported by the MTAS are described in *IMS Common Components Initial Configuration and Managed Object Model (MOM)*.