**ATIS-10000XX**

ATIS Standard on

**Robo-Metrics**

**Alliance for Telecommunications Industry Solutions**

Approved Month DD, YYYY

**Abstract**

This standard defines how extension to the IETF PASSporT and the associated STIR mechanisms are used to sign the Session Initiation Protocol Resource Priority Header (SIP RPH) header field and convey assertions of authorization for Resource-Priority. This standard provides a procedure for providing cryptographic authentication and verification of the information in the Session Initiation Protocol Resource Priority Header (SIP RPH) field in Internet Protocol (IP)-based service provider communication networks in support of National Security / Emergency Preparedness Next Generation Priority Services (NS/EP NGN-PS).Specifically, this standard provides a mechanism for a originating NS/EP NGN-PS Service Provider to cryptographically-sign the SIP RPH and allow a receiving NS/EP NGN-PS Service Provider to verify the validity of the authorization for Resource-Priority and act on the information with confidence (i.e., verifying that the RPH information have not been spoofed or compromised).

**Foreword**

The Alliance for Telecommunications Industry Solutions (ATIS) serves the public through improved understanding between carriers, customers, and manufacturers. The [**COMMITTEE NAME**] Committee [**INSERT MISSION**]. [**INSERT SCOPE**].

The mandatory requirements are designated by the word *shall* and recommendations by the word *should*. Where both a mandatory requirement and a recommendation are specified for the same criterion, the recommendation represents a goal currently identifiable as having distinct compatibility or performance advantages. The word *may* denotes a optional capability that could augment the standard. The standard is fully functional without the incorporation of this optional capability.

Suggestions for improvement of this document are welcome. They should be sent to the Alliance for Telecommunications Industry Solutions, [**COMMITTEE NAME**], 1200 G Street NW, Suite 500, Washington, DC 20005.

At the time of consensus on this document, [**COMMITTEE NAME**], which was responsible for its development, had the following leadership:

[**LEADERSHIP LIST**]

The **[SUBCOMMITTEE NAME]** Subcommittee was responsible for the development of this document.

**Revision History**

| **Date** | **Version** | **Description** | **Author** |
| --- | --- | --- | --- |
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# Scope & Purpose

## Scope

## Purpose

## General Assumptions

The following general assumptions are made in this standard:

1. The

# Normative References

The following standards contain provisions which, through reference in this text, constitute provisions of this ATIS Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below.

Editor’s Note: the draft RFCs below will be changed to the normative RFC numbers when available from IETF.

[ATIS-1000074], *ATIS Standard on Signature-based Handling of Asserted information using toKENs (SHAKEN).*

[draft-ietf-stir-passport], *Persona Assertion Token.*[[1]](#footnote-1)

[draft-ietf-stir-rfc4474bis], *Authenticated Identity Management in the Session Initiation Protocol.*1

[draft-ietf-stir-rph], PASSporT Extension for Resource-Priority Authorization. 1

[IETF RFC 3325], *Private Extensions to SIP for Asserted Identity within Trusted Networks.*1

[IETF RFC 3261], *SIP: Session Initiation Protocol.*1

[IETF RFC 5280], *Internet X.509 Public Key Infrastructure Certificate and Certificate Revocation List (CRL) Profile.*1

[IETF RFC 3326], *The Reason Header Field for the Session Initiation Protocol (SIP).*1

[IETF RFC 4412], *Communications Resource Priority for the Session Initiation Protocol (SIP).* 1

# Definitions, Acronyms, & Abbreviations

For a list of common communications terms and definitions, please visit the *ATIS Telecom Glossary*, which is located at < <http://www.atis.org/glossary> >.

## Definitions

**NS/EP NGN Priority Services (NS/EP NGN-PS)** [ATIS-1000057] are the evolution of legacy GETS and WPS to achieve service continuity in the packet-switched NGN, and to leverage the NGN to offer new features and priority multimedia services.

Note: NS/EP NGN-PS and NS/EP NGN-GETS are used interchangeable in ATIS standards.

## Acronyms & Abbreviations

|  |  |
| --- | --- |
| 3GPP | 3rd Generation Partnership Project |
| ATIS | Alliance for Telecommunications Industry Solutions |
| B2BUA | Back-to-Back User Agent |
| CRL | Certificate Revocation List |
| CSCF | Call Session Control Function |
| CVT | Call Validation Treatment |
| HTTPS | Hypertext Transfer Protocol Secure |
| IBCF | Interconnection Border Control Function |
| IETF | Internet Engineering Task Force |
| IMS | IP Multimedia Subsystem |
| IP | Internet Protocol |
| JSON | JavaScript Object Notation |
| JWS | JSON Web Signature |
| NNI | Network-to-Network Interface |
| OCSP | Online Certificate Status Protocol |
| PASSporT | Persona Assertion Token |
| PBX | Private Branch Exchange |
| PKI | Public Key Infrastructure |
| SHAKEN | Signature-based Handling of Asserted information using toKENs |
| SIP | Session Initiation Protocol |
| SKS | Secure Key Store |
| SPID | Service Provider Identifier |
| STI | Secure Telephone Identity |
| STI-AS | Secure Telephone Identity Authentication Service |
| STI-CA | Secure Telephone Identity Certification Authority |
| STI-CR | Secure Telephone Identity Certificate Repository |
| STI-VS | Secure Telephone Identity Verification Service |
| STIR | Secure Telephone Identity Revisited |
| TLS | Transport Layer Security |
| TN | Telephone Number |
| TrGW | Transition Gateway |
| UA | User Agent |
| URI | Uniform Resource Identifier |
| UUID | Universally Unique Identifier |
| VoIP | Voice over Internet Protocol |

# Metrics

## Editor’s Note: need to take into account analog access to an IP soft switch.

**Editor’s Note: add metrics on verification.**

**Editor’s Note: change terminology from “signing” to “authenticated”.**

## Deployment Metrics

When will you be signing calls?

* For VoLTE origination?
* For Fixed Broadband
* For IP Enterprise
* For IP Wholesale Gateways
* For IP International Gateways

Will you be exchanging CERTs manually with other carriers prior to establishment of the GA/PA/CA? If yes, please explain.

Do you plan on supporting the automated GA/PA/CA infrastructure when available?

Will you support both the manual and automated CERT infrastructures during transition? How long do you believe that transition will be?

Do you pass post Sheaken verification information to your CVT?

When will support signaling Verstat to end points? Does this differ by technology, if yes explain?

## Attestation Metrics

Will you give Full Attestation for VoLTE origination calls? If no, explain.

Will you give Full Attestation for Fixed Broadband origination calls? If no, explain.

Will you give another Attestation other than Gateway for incoming calls on International gateways?

For incoming calls on wholesale gateways, what is your criteria for giving Partial versus Gateway Attestation?

For incoming calls from enterprise’s, what is your criteria for giving Full versus Partial Attestation?

## Signing Useage Metrics

What percentage of VoLTE calls are signed?

What percentage of Fixed Broadband calls are signed?

What percentage of Enterprise calls are signed?

What percentage of Gateways calls are signed?

Independent of access, what percentage of your call origination are signed?

# Summary

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1. Available from the Internet Engineering Task Force (IETF) at: < <https://www.ietf.org/> >. [↑](#footnote-ref-1)