



ATIS-100025.2013 (R2018)

USER TO NETWORK INTERFACE (UNI) STANDARD FOR
SIGNALING AND CONTROL SECURITY REQUIREMENTS FOR
EVOLVING VOP/MULTIMEDIA NETWORKS

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ATIS-1000025.2013(R2018), User to Network Interface (UNI) Standard for Signaling and Control Security Requirements for Evolving VoP/Multimedia Networks

Is an American National Standard developed by the **Security (SEC) Subcommittee** under the **ATIS Packet Technologies and Systems Committee (PTSC)**.

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American National Standard for Telecommunications

**User to Network Interface (UNI) Standard for
Signaling and Control Security Requirements for
Evolving VoP/Multimedia Networks**

Alliance for Telecommunications Industry Solutions

Approved May 6, 2013

American National Standards Institute, Inc.

Abstract

This standard specifies Voice over Packet and Multimedia signaling and control plane security requirements for evolving networks. This standard is part of a suite of signaling and control security standards as shown in Figure 1. This standard provides security requirements for VoP and Multimedia signaling and control services that cross the User to Network Interfaces (UNI).

Foreword

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

At the time of consensus on this document, PTSC, which was responsible for its development, had the following leadership:

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American National Standard on –

User to Network Interface (UNI) Standard for Signaling and Control Security Requirements for Evolving VoP/Multimedia Networks

1 Introduction/Executive Summary

Many security threats exist to the signaling and control plane of telecommunications networks. In addition, new security threats to the signaling and control plane are being introduced as the network evolves. The purpose of this standard is to provide user to network interface (UNI) signaling and control plane security requirements for Voice and Multimedia over packet in evolving telecommunications networks.

In some telecommunications networks, signaling and control traffic is transmitted on an overlay network that provides point to point facilities segregated from those carrying the service provider's end-user traffic. In these networks, security threats to the signaling and control plane are isolated from any malicious activity on the end-user plane. With the evolving telecommunications networks, however, signaling and control traffic is often combined with end-user traffic on the same IP transport facility. Combining traffic in this manner minimizes costs by requiring only a single integrated network infrastructure; however, new security challenges are introduced. Threats in the end-user plane now become threats to the signaling and control plane since the signaling and control plane becomes more accessible to the multitude of end-users and can be affected by user plane traffic.

This standard specifies Voice over Packet and Multimedia signaling and control plane security requirements for evolving networks. This standard is part of a suite of signaling and control security standards as shown in Figure 1. This standard provides security requirements for VoP and Multimedia signaling and control services that cross the User to Network Interfaces (UNI).

This standard is in alignment with ITU-T Recommendation X.805. [ITU X.805].

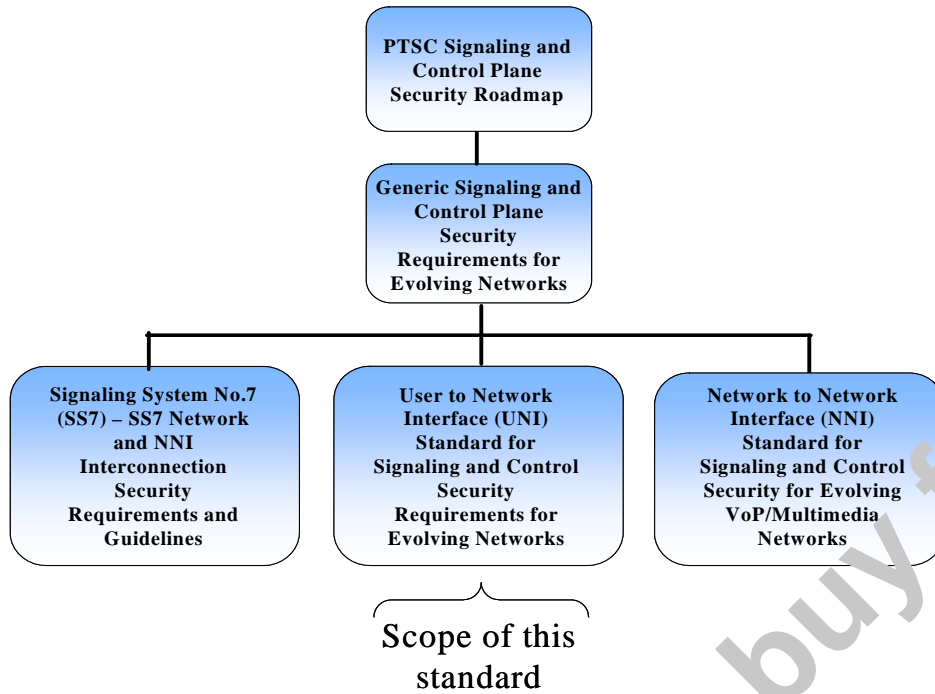


Figure 1: Signaling and Control Plane Security Standards

2 Scope, Purpose, & Application

2.1 Scope

The scope of this standard is to define the User to Network Interface Signaling Security requirements. The standard addresses security requirements for voice over packet and multimedia security, including:

- SIP Signaling. [RFC 3261]
- H.323: Packet-based multimedia communications systems. [ITU-T H.323]
 - H.225: Call signaling protocols and media stream packetization for packet-based multimedia communication systems. H.225 includes the RAS: Registration, Admission, Status protocol. [ITU-T H.225.0]
 - H.245: Control protocol for multimedia communication. [ITU-T H.245]

This standard addresses VoP/Multimedia signaling and control plane security requirements of evolving telecommunications networks. Evolving telecommunications networks often combine legacy telecommunication facilities with new technologies such as Wireless (air interface), Asynchronous Transfer Mode (ATM), and Internet Protocol (IP) transport mechanisms. The security requirements given in this standard apply to service provider networks and may also be applicable to individual company single location and corporate enterprise multi-location networks.

This standard takes the following into consideration:

- Network operators may not always have complete control with respect to which terminal the user uses to connect to the network, and thereby its capabilities with respect to security may not be known.
- The user may use a separate access provider network.
- There may be differences in security depending on the access technology used to connect the user to the network.