ATIS-1000609.2014(R2019)

Interworking between the ISDN User-Network Interface Protocol and Signaling System Number 7 ISDN User Part

AMERICAN NATIONAL STANDARD FOR TELECOMMUNICATIONS

As a leading technology and solutions development organization, ATIS brings together the top global ICT companies to advance the industry's most-pressing business priorities. Through ATIS committees and forums, nearly 200 companies address cloud services, device solutions, emergency services, M2M communications, cyber security, ehealth, network evolution, quality of service, billing support, operations, and more. These priorities follow a fast-track development lifecycle — from design and innovation through solutions that include standards, specifications, requirements, business use cases, software toolkits, and interoperability testing.

ATIS is accredited by the American National Standards Institute (ANSI). ATIS is the North American Organizational Partner for the 3rd Generation Partnership Project (3GPP), a founding Partner of oneM2M, a member and major U.S. contributor to the International Telecommunication Union (ITU) Radio and Telecommunications sectors, and a member of the Inter-American Telecommunication Commission (CITEL). For more information, visit < www.atis.org >.

AMERICAN NATIONAL STANDARD

Approval of an American National Standard requires review by ANSI that the requirements for due process, consensus, and other criteria for approval have been met by the standards developer.

Consensus is established when, in the judgment of the ANSI Board of Standards Review, substantial agreement has been reached by directly and materially affected interests. Substantial agreement means much more than a simple majority, but not necessarily unanimity. Consensus requires that all views and objections be considered, and that a concerted effort be made towards their resolution.

The use of American National Standards is completely voluntary; their existence does not in any respect preclude anyone, whether he has approved the standards or not, from manufacturing, marketing, purchasing, or using products, processes, or procedures not conforming to the standard.

The American National Standards Institute does not develop standards and will in no circumstances give an interpretation of any American National Standard. Moreover, no person shall have the right or authority to issue an interpretation of an American National Standard in the name of the American National Standards Institute. Requests for interpretations should be addressed to the secretariat or sponsor whose name appears on the title page of this standard.

CAUTION NOTICE: This American National Standard may be revised or withdrawn at any time. The procedures of the American National Standards Institute require that action be taken periodically to reaffirm, revise, or withdraw this standard. Purchasers of American National Standards may receive current information on all standards by calling or writing the American National Standards Institute.

Notice of Disclaimer & Limitation of Liability

The information provided in this document is directed solely to professionals who have the appropriate degree of experience to understand and interpret its contents in accordance with generally accepted engineering or other professional standards and applicable regulations. No recommendation as to products or vendors is made or should be implied.

NO REPRESENTATION OR WARRANTY IS MADE THAT THE INFORMATION IS TECHNICALLY ACCURATE OR SUFFICIENT OR CONFORMS TO ANY STATUTE, GOVERNMENTAL RULE OR REGULATION, AND FURTHER, NO REPRESENTATION OR WARRANTY IS MADE OFMERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OR AGAINST INFRINGEMENT OF INTELLECTUAL PROPERTY RIGHTS. ATIS SHALL NOT BE LIABLE, BEYOND THE AMOUNT OF ANY SUM RECEIVED IN PAYMENT BY ATIS FOR THIS DOCUMENT, AND IN NO EVENT SHALL ATIS BE LIABLE FOR LOST PROFITS OR OTHER INCIDENTAL OR CONSEQUENTIAL DAMAGES. ATIS EXPRESSLY ADVISES THAT ANY AND ALL USE OF OR RELIANCE UPON THE INFORMATION PROVIDED IN THIS DOCUMENT IS AT THE RISK OF THE USER.

NOTE - The user's attention is called to the possibility that compliance with this standard may require use of an invention covered by patent rights. By publication of this standard, no position is taken with respect to whether use of an invention covered by patent rights will be required, and if any such use is required no position is taken regarding the validity of this claim or any patent rights in connection therewith. Please refer to [http://www.atis.org/legal/patentinfo.asp] to determine if any statement has been filed by a patent holder indicating a willingness to grant a license either without compensation or on reasonable and non-discriminatory terms and conditions to applicants desiring to obtain a license.

ATIS-1000609.2014(R2019), *Interworking between the ISDN User-Network Interface Protocol and Signalling System Number 7 ISDN User Part*

Is an American National Standard developed by the **Signaling, Architecture, and Control (SAC)** Subcommittee under the **ATIS Packet Technologies and Systems Committee (PTSC).**

Published by
Alliance for Telecommunications Industry Solutions
1200 G Street, NW, Suite 500
Washington, DC 20005

ATIS-1000609.2014(R2019)

American National Standard for Telecommunications

Interworking between the ISDN User-Network Interface Protocol and Signalling System Number 7 ISDN User Part

Alliance for Telecommunications Industry Solutions

Approved June 2014

American National Standards Institute, Inc.

Abstract

This standard is aimed at defining the interworking relationship between the call control protocol of the ISDN User Network Interface Protocol and the ISDN User Part of SS7. This standard defines in detail the relationship between signalling information conveyed via the User-Network Interface Protocol and similar signalling information conveyed via the ISDN User part of SS7. The above relationship is described within the context of supporting the establishment and clearing of call within an ISDN or mixed ISDN/non-ISDN environment.

Foreword

The information contained in this Foreword is not part of this American National Standard (ANS) and has not been processed in accordance with ANSI's requirements for an ANS. As such, this Foreword may contain material that has not been subjected to public review or a consensus process. In addition, it does not contain requirements necessary for conformance to the Standard.

The Alliance for Telecommunication Industry Solutions (ATIS) serves the public through improved understanding between providers, customers, and manufacturers. The Packet Technologies and Systems Committee (PTSC) develops and recommends standards and technical reports related to services, architectures, and signaling, in addition to related subjects under consideration in other North American and international standards bodies. PTSC coordinates and develops standards and technical reports relevant to telecommunications networks in the U.S., reviews and prepares contributions on such matters for submission to U.S. ITU-T and U.S. ITU-R Study Groups or other standards organizations, and reviews for acceptability or per contra the positions of other countries in related standards development and takes or recommends appropriate actions.

ANSI guidelines specify two categories of requirements: mandatory and recommendation. 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.

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:

M. Dolly, PTSC Chair (AT&T)
V. Shaikh, PTSC Vice-Chair (ACS)
M. Dolly, PTSC SAC Chair (AT&T)

The SAC Subcommittee was responsible for the development of this document.

Table of Contents

Table of Tables

ATIS Standard on –

Interworking between the ISDN User-Network Interface Protocol and the Signalling System Number 7 ISDN User Part

1 Scope, Purpose, & Application[1]

1.1 Introduction

This standard defines the interworking relationship between the D-channel layer-3 functions and protocol employed across an ISDN User-Network Interface and the ISDN User Part functions and protocol of Signalling System Number 7 (SS7).

The interworking between the above two signalling protocols typically may occur in an ISDN local ex- change and is specified in the context of a typical call in a pure ISDN or mixed ISDN/non-ISDN environment.

1.2 Purpose

The purpose of this standard is

1) To define how the ISDN User-Network Interface Protocol and SS7 ISDN User Part protocols should be used in combination with call control functions to support the circuit mode bearer service defined in ATIS-1000620;
2) To provide a logical bridge between the abstract signalling information flows, which are used in the description of ISDN services, and the corresponding messages and elements of procedure of the ISDN access and network signalling systems.

1.3 Scope

This standard is aimed at defining the interworking relationship between the call control protocol of the ISDN User-Network Interface Protocol and the ISDN User Part of SS7.

This standard defines in detail the relationship between signalling information conveyed via the User-Network Interface Protocol and similar signalling information conveyed via the ISDN User Part of SS7. The above relationship is described within the context of supporting the establishment and clearing of a call within an ISDN or mixed ISDN/non-ISDN environment.

NOTE - Although sufficient information is included in this standard to allow implementation of the interworking functionality, not all possible combinations of interworking scenarios are documented explicitly.

1.4 Relationship to Other American National Standards

This standard forms part of a set of interlocking ISDN service and signalling standards. Other members of this set include the following:

[1] Due to the extensive changes in this document from the previous issue, ATIS-1000609, no change markings are provided