



ATIS STANDARD

ATIS-1000018

NGN ARCHITECTURE

TECHNICAL REPORT



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ATIS-1000018, *NGN Architecture*

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Technical Report on

NGN ARCHITECTURE

Secretariat

Alliance for Telecommunications Industry Solutions

Approved February 2007

Abstract

This Technical Report (TR) describes the overall ATIS Next generation Network (NGN) Architecture based on the IP Multimedia System (IMS) architecture, its subsystems, and the relationships between them. It defines Functional Entities (FEs), identifies reference points, and provides relationship with other industry NGN architectures.

FOREWORD

The Alliance for Telecommunication Industry Solutions (ATIS) serves the public through improved understanding between carriers, customers, and manufacturers. The Packet Technologies and Systems Committee (PTSC) -- formerly T1S1 -- 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.

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

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Technical Report on –

NGN Architecture

0 SUMMARY

This document describes the overall ATIS NGN Architecture based on the IMS architecture, its subsystems, and the relationships between them. It defines Functional Entities (FEs), identifies reference points, and provides relationship with other industry NGN architectures.

1 SCOPE

The IP Multimedia Subsystem (IMS) as specified by 3GPP has been adopted to use to support session and other Session Initiation Protocol (SIP) based services in the Next Generation Networks (NGN). This document describes the overall ATIS NGN functional architecture based on the IMS architecture, its subsystems, and the relationships between them. It defines *Functional Entities* (FEs), identifies reference points, and provides relationships with other industry NGN architectures.

The functional architecture provided in this TR allows a clear distinction between definition/specification aspects of services provided by the NGN and the actual specification of network technologies used to support those services. This TR describes the functional NGN architecture using generic definitions, symbols, and abbreviations.

Although this document is targeted primarily at an NGN architecture, it is clear that the accommodation of legacy Public Switched Telephone Network/Integrated Services Digital Network (PSTN/ISDN) terminals and/or interworking with the PSTN/ISDN is an important consideration with respect to the NGN deployment.

The specific protocols used within the NGN are defined in relevant signaling-related or management-related documents and are not specified in this document.

2 REFERENCES

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

[1] 3GPP TS 23.002 V6.10.0 (2005-12), *3rd Generation Partnership Project; Technical Specification Group Services and Systems Aspects, Network Architecture* (Release 6).¹

¹ This document is available from the Third Generation Partnership Project (3GPP) at