



ATIS-0300104

ATIS Standard on -

**Next Generation Interconnection Interoperability Forum (NGIIF)
Next Generation Network (NGN) Reference Document
NGN Basic, Emergency Services, NGN Testing, and Network
Survivability**



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Alliance for Telecommunications Industry Solutions

Updated September 2013

Abstract

This document provides basic information regarding Next Generations Networks, as applicable to the Next Generation Interconnection Interoperability Forum (NGIIF).

Foreword

The Alliance for Telecommunications Industry Solutions (ATIS) serves the public through improved understanding between service providers (SPs), customers, and manufacturers. The Next Generation Interconnection Interoperability Forum (NGIIF) addresses next-generation network interconnection and interoperability issues associated with emerging technologies. Specifically, it develops operational procedures which involve the network aspects of architecture, disaster preparedness, installation, maintenance, management, reliability, routing, security, and testing between network operators. In addition, the NGIIF addresses issues which impact the interconnection of existing and Next Generation Networks (NGNs) and facilitate the transition to emerging technologies.

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 an 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, NGIIF, 1200 G Street NW, Suite 500, Washington, DC 20004.

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

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Table of Contents

1	SCOPE, PURPOSE, & APPLICATION.....	1
1.1	SCOPE	1
1.2	PURPOSE	2
1.3	APPLICATION	2
2	REFERENCES.....	2
3	DEFINITIONS, ACRONYMS, & ABBREVIATIONS.....	4
3.1	DEFINITIONS	4
3.2	ACRONYMS & ABBREVIATIONS.....	4
4	GENERAL OVERVIEW OF NGN.....	6
5	FUNDAMENTAL CHARACTERISTICS OF NGN	7
5.1	BASIC NGN FUNCTIONALITY	8
5.2	NGN CAPABILITIES	8
6	BASIC NGN ARCHITECTURE.....	8
6.1	OVERVIEW OF THE NGN ARCHITECTURE.....	8
6.2	DECOUPLING OF SERVICES & TRANSPORT	9
6.2.1	<i>Service Stratum Functions</i>	10
6.2.2	<i>Transport Stratum Functions</i>	10
6.3	PERFORMANCE MEASURES OF NGN SERVICES	11
6.3.1	<i>Basic Terms</i>	11
6.3.2	<i>Performance Measures</i>	12
6.4	NGN FUNCTIONAL ENTITIES.....	15
6.5	NGN FUNCTIONAL ARCHITECTURE.....	15
6.6	NGN EMERGENCY SERVICES	15
6.6.1	<i>GETS & WPS</i>	15
6.6.2	<i>NG9-1-1</i>	16
6.6.3	<i>TSP</i>	16
6.6.4	<i>Wireless Emergency Alerts (WEA)</i>	16
6.6.5	<i>Interim SMS Text-to-9-1-1</i>	17
7	ATIS COMMITTEES & FORUMS.....	18
7.1	EMERGENCY SERVICES INTERCONNECTIVITY FORUM (ESIF)	18
7.2	PACKET TECHNOLOGIES & SYSTEMS COMMITTEE (PTSC)	18
7.3	TELECOM MANAGEMENT & OPERATIONS COMMITTEE (TMOC)	19
7.4	WIRELESS TECHNOLOGIES & SYSTEMS COMMITTEE (WTSC).....	19
8	OTHER INDUSTRY ACTIVITIES RELATED TO NGN.....	19
8.1	ITU-T NGN GLOBAL STANDARDS INITIATIVE (NGN-GSI)	19
8.1.1	<i>NGN-GSI</i>	19
8.2	INTERNET ENGINEERING TASK FORCE (IETF).....	19
9	NGN GETS.....	20
9.1	GETS	20
9.2	WPS	20
9.2.1	<i>Precedence</i>	20
9.2.2	<i>UMTS Redirection to GSM (also known as Directed Retry Handover)</i>	21
9.2.3	<i>Enhanced Overload Performance (EOP)</i>	21
9.2.4	<i>Access Class Barring on LTE</i>	22
9.2.5	<i>Wireless Priority Service (WPS) on Long Term Evolution (LTE) Networks</i>	22
9.3	NGN PRIORITY SERVICES	24

10	9-1-1.....	26
10.1	LEGACY 9-1-1 SERVICE	26
10.2	NEXT GENERATION 9-1-1 SERVICE.....	27
10.2.1	<i>Operational Issues</i>	27
10.2.2	<i>Service Access</i>	27
10.2.3	<i>FCC Recommendations</i>	28
10.2.4	<i>Other Organizations</i>	28
11	TELECOMMUNICATIONS SERVICE PRIORITY (TSP).....	28
11.1	DOMESTIC NS/EP SERVICES	28
11.2	CONTROL SERVICES & ORDERWIRES	28
11.3	OTHER SERVICES	29
11.4	TSP CODE IDENTIFICATION.....	29
11.5	TSP INSTALLATION	30
11.6	TSP MAINTENANCE.....	30
11.7	COMPETITION FOR RESOURCES BETWEEN PROVISIONING & RESTORATION PRIORITIES	30
11.8	TSP INSTALLATION PREEMPTION	31
11.9	TSP MAINTENANCE PREEMPTION.....	31
12	TESTING DOCUMENTATION.....	31
12.1	ATIS DOCUMENTATION RELEVANT FOR IP NETWORK-TO-NETWORK INTERCONNECTION TESTING	31
13	TESTING PROCEDURES & RESPONSIBILITIES	33
14	DISASTER CONSIDERATIONS	33
14.1	PLANNING	34
15	NETWORK MANAGEMENT CONTROL DURING HIGH LEVEL CONGESTION EVENTS.....	34
15.1	CONGESTION & OVERLOAD	34
15.1.1	<i>NGN Session Control & Congestion/Overload</i>	34
15.1.2	<i>Retransmission</i>	34
15.1.3	<i>Capacity</i>	34
15.1.4	<i>Emergency-Induced Call Volume Flash/Transient Crowds</i>	35
15.1.5	<i>Denial of Service (DoS) Attacks</i>	35
15.2	NGN ACCESS PRIORITIZATION.....	35
16	DISASTER RECOVERY	36
16.1	FORCE MAJEURE	36
16.2	GOVERNMENTAL DISASTER PLANS.....	36
16.3	STANDARDS GROUPS DISASTER PLANS	37
17	DISASTER REPORTING	37
17.1	NETWORK OUTAGE REPORTING SYSTEM (NORS).....	37
17.2	DISASTER INCIDENT REPORTING SYSTEM (DIRS)	37

Table of Figures

FIGURE 4.	NGN BASICS	7
FIGURE 5.1-	NGN FUNCTIONALITY	8
FIGURE 6.	NGN ARCHITECTURE OVERVIEW	9
FIGURE 9.1	9-1-1 CALL FLOW 1.....	26

Table of Tables

TABLE 11.1 - TSP CODES REFERENCE TABLE29

Currently in preview, click buy full version

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Next Generation Interconnection Interoperability Forum (NGIIF) NGN Reference Document

NGN Basics, Emergency Services, NGN Testing, and Network Survivability

1 Scope, Purpose, & Application

1.1 Scope

The suite of NGN Reference Documents provides basic information regarding Next Generation Networks (NGNs), as applicable to the Alliance for Telecommunications Industry Solutions (ATIS) Next Generation Interconnection Interoperability Forum (NGIIF). The NGN is a multi-service, multi-vendor, multi-provider managed packet-based network, which is able to provide telecommunication services and is able to make use of multiple broadband, quality of service (QoS)-enabled transport technologies and in which service related functions are independent from underlying transport related technologies.

This document identifies items that could potentially impact government-managed emergency services, such as Government Emergency Telecommunications Service (GETS), Wireless Priority Service (WPS), and Telecommunications Service Priority (TSP) when telecommunication facilities in the NGN are consolidated and newer technologies (e.g., IP, fiber, Ethernet) are implemented.

It also describes the effects of adoption of NGN National Security and Emergency Preparedness (NS/EP) priority services. Included in the document are descriptions regarding Enhanced Overload Performance (EOP) precedence in Code Division Multiple Access (CDMA) networks, Universal Mobile Telecommunications Standard (UMTS) handover to Global System for Mobile Communications (GSM), and the transition to Next Generation 9-1-1 emergency services.

Additionally, this document has been developed to assist network managers by providing guidelines to serve as a general framework in planning for traffic management during high level congestion events or disaster conditions, such as the following (not all-inclusive).

- Network congestion due to facility failures or abnormal calling periods
- Switch or network failures or extended outages
- SS7 network failures
- Voice over IP (VoIP) network failures
- Natural disasters
- Pandemic events
- Major accidents
- Civil disturbances

It also addresses survivability of communications networks and the services those networks provide under failure conditions. Communications networks should be designed and should operate to meet users' expectations regarding network survivability. There should be a common understanding of network survivability assessment techniques. This document references the architectures and services of communications industry segments (i.e., wireline, Internet, wireless, cable, and satellite) and provides references for further information.