ATIS-1000061.2015(R2020)

LTE Access Class 14 for National Security and Emergency Preparedness (NS/EP) Communications

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ATIS-1000061.2015(R2020), *LTE Access Class 14 for National Security and Emergency Preparedness (NS/EP) Communications*

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LTE Access Class 14 for National Security and Emergency Preparedness (NS/EP) Communications

Alliance for Telecommunications Industry Solutions

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American National Standards Institute, Inc.

Abstract

The purpose of this TR is to provide operational guidance regarding the assignment and use of the 3GPP LTE specifications for Access Class Barring to support National Security and Emergency Preparedness (NS/EP) Next Generation Network Priority-Services (NGN-PS).

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.

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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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V. Shaikh, PTSC Vice-Chair (Applied Communication Sciences)

M. Dolly, PTSC SAC Chair (AT&T)

A. Nguyen, Technical Editor (Office of Emergency Communications)

The Signaling, Architecture, and Control [SAC] Subcommittee was responsible for the development of this document.

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1 Scope & Purpose

1.1 Introduction

Executive Order 13618[1] outlines the Assignment of National Security and Emergency Preparedness Communications Functions and defines the following policy:

"The Federal Government must have the ability to communicate at all times and under all circumstances to carry out its most critical and time sensitive missions. Survivable, resilient, enduring, and effective communications, both domestic and international, are essential to enable the executive branch to communicate within itself and with: the legislative and judicial branches; State, local, territorial, and tribal governments; private sector entities; and the public, allies, and other nations. Such communications must be possible under all circumstances to ensure national security, effectively manage emergencies, and improve national resilience."

This Technical Report (TR) proposes the allocation of LTE Access Class 14 for National Security and Emergency Preparedness (NS/EP) communications in order to address the need for priority treatment of NS/EP communications.

1.2 Purpose

The purpose of this TR is to provide operational guidance regarding the assignment and use of the 3GPP LTE specifications for Access Class Barring to support National Security and Emergency Preparedness (NS/EP) Next Generation Network Priority-Services (NGN-PS). 3GPP TS 22.011 Section 4 contains the following general description of Access Classes:

"All UEs are members of one out of ten randomly allocated mobile populations, defined as Access Classes 0 to 9. The population number is stored in the SIM/USIM. In addition, UEs may be members of one or more out of 5 special categories (Access Classes 11 to 15), also held in the SIM/USIM. These are allocated to specific high priority users as follows. (The enumeration is not meant as a priority sequence):

Class	15	-	PLMN Staff;
-"-	14	-	Emergency Services;
-"-	13	-	Public Utilities (e.g. water/gas suppliers);
-"-	12	-	Security Services;
-"-	11	-	For PLMN Use."

2 Normative References

The following standards contain provisions which, through reference in this text, constitute provisions of this Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and

[1] This document is available from the Federal Register Vol. 77, No. 133, Wednesday, July 11, 2012, < http://www.gpo.gov/fdsys/pkg/FR-2012-07-11/pdf/2012-17022.pdf >.

parties to agreements based on this Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below.

3GPP TS 22.011 V12.1.0 (2014-03), 3rd Generation Partnership Project; *Technical Specification Group Services and System Aspects; Service accessibility (Release 12)*[2]

ATIS-1000065.2015, *ETS EPC Network Element Requirements*[3]

ATIS-1000057, *Service Requirements for Emergency Telecommunications Service (ETS) in Next Generation Network (NGN)*[4]

3 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 >.

3.1 Definitions

NS/EP NGN-PS [ATIS-1000057] is the evolution of Legacy Government Emergency Telecommunication Service (GETS) and Wireless Priority Service (WPS) to achieve service continuity in the packet-switched Next Generation Network (NGN) and leverages the NGN to offer priority voice, video, data, and multimedia services.

NS/EP NGN-PS subscribed UE [ATIS-1000057] is a User Equipment (UE) associated with Subscription Credentials. Subscription Credentials are credentials assigned by a Service Provider to a Service User who has a subscription to NS/EP NGN-PS with the Service Provider and allow the Service User to successfully invoke NS/EP NGN-PS using the subscription-based authentication without having to submit NGN-PS Credentials.

3.2 Acronyms & Abbreviations

ATIS	Alliance for Telecommunications Industry Solutions
EPC	Evolved Packet Core
ETS	Emergency Telecommunications Service
GETS	Government Emergency Telecommunication Service
LTE	Long Term Evolution
PLMN	Public Land Mobile Network
NGN	Next Generation Network
NS/EP NGN-PS	National Security and Emergency Preparedness (NS/EP) Next Generation Network Priority Services (NGN-PS)

[2] This document is available from the Third Generation Partnership Project (3GPP) at < http://www.3gpp.org/specs/specs.htm>.

[3] This document is available from the Alliance for Telecommunications Industry Solutions (ATIS), 1200 G Street N.W., Suite 500, Washington, DC 20005 < https://www.atis.org/docstore/product.aspx?id=28192 >

[4] This document is available from the Alliance for Telecommunications Industry Solutions (ATIS), 1200 G Street N.W., Suite 500, Washington, DC 20005 < https://www.atis.org/docstore/product.aspx?id=28156>

RRC	Radio Resource Control
SIM/USIM	Subscriber Identity Module / Universal Subscriber Identity Module
UE	User Equipment
WPS	Wireless Priority Service

4 Use of Access Class 14

Access Class Barring provides NS/EP NGN-PS subscribed UEs priority to initiate the RRC Connection Establishment procedure. This preferential treatment is a property of subscription and does not apply to a UE that is not a member of Access Classes 11 through 15 inclusive.

As specified in ATIS-1000065.2015, Access Class value 14 shall be reserved by the Service Provider for use exclusively by NS/EP NGN-PS subscribed UEs.

NS/EP NGN-PS subscribed UEs are provisioned with Access Class 14 to gain prioritized access to the radio resources during congestion. Priority treatment provided by Access Class Barring is limited to the control of mobile initiated transmissions and does not directly affect the behavior of a UE in response to a Page transmitted over the Uu interface.

The following defines the use of Access Class 14:

Class 15 - PLMN Staff;

-"- **14** - **NS/EP NGN-PS subscribed UEs**;

-"- 13 - Public Utilities (e.g. water/gas suppliers);

-"- 12 - Security Services;

-"- 11 - For PLMN Use."

It is expected that Access Class Barring will improve access for all UEs, and will greatly improve access for NS/EP NGN-PS subscribed UEs.

NOTE: When during times of severe congestion for which access class barring need also be applied to the special Access Classes 10-15, AC 14 shall not be subject to barring until after AC 10, 11, 12, and 13 are subject to barring. This is done to provide priority to AC 14 over AC 10, 11, 12, and 13.