



ATIS-0300211.2018

Structure and Coded Representation of
National Security and Emergency Preparedness (NS/EP)
Telecommunications Service Priority (TSP) Codes
for the North American Telecommunications System

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ATIS-0300211.2018, *Structure and Coded Representation of National Security and Emergency Preparedness (NS/EP) Telecommunications Service Priority (TSP) Codes for the North American Telecommunications System*

Is an American National Standard developed by the ATIS **Telecom Management and Operations Committee (TMOC)**.

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American National Standard for Telecommunications

**Structure and Coded Representation of
National Security and Emergency Preparedness (NS/EP)
Telecommunications Service Priority (TSP) Codes
for the North American Telecommunications System**

Alliance for Telecommunications Industry Solutions

Approved June 2018

American National Standards Institute, Inc.

Abstract

This standard provides the specifications, characteristics, and values of the National Security/Emergency Preparedness (NS/EP) – Telecommunications Service Priority (TSP) code. The TSP System is a Federal Communications Commission system which superseded the FCC National Communications System (NCS) Restoration Priority (RP) System. This standard contains clauses covering its purpose and scope, code representation, allowable code values, and relative importance of activities associated with services having NS/EP TSP designations.

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 Telecom Management and Operations Committee (TMOC) develops operations, administration, maintenance and provisioning standards, and other documentation related to Operations Support System (OSS) and Network Element (NE) functions and interfaces for communications networks -- with an emphasis on standards development related to U.S.A. communication networks in coordination with the development of international standards.

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, TMOC, 1200 G Street NW, Suite 500, Washington, DC 20005.

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

P. Galarza, TMOC Chair [iconectiv]

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American National Standard for Telecommunications –
**Structure and Coded Representation of
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1 Scope & Purpose

The Telecommunications Service Priority (TSP) codes for national security and emergency preparedness (NS/EP) enables NS/EP organizations to receive priority treatment for vital voice and data circuits or other telecommunications services. These codes, when provided, require and authorize service providers to provision and restore certain services, which have been designated most critical to NS/EP. Services being requested for provisioning or restoration shall have full attention and priority over non-TSP service requests.

The TSP System and procedures apply to give priority treatment to the following telecommunication services:

- Common carrier services which are interstate and foreign telecommunications services;
- Common carrier services which are intrastate telecommunications services inseparable from interstate or foreign telecommunications services, and intrastate telecommunications services to which TSP priority levels are assigned; and
- Services, which are provided by government and/or non-common carriers and are interconnected to common carrier services, assigned TSP priority levels.

This standard establishes the specifications, characteristics, and values of the NS/EP Telecommunications Service Priority code used by the NS/EP TSP and telecommunication service vendors providing NS/EP services.

2 References

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

2.1 Normative References

FCC 88-341, *Federal Communications Commission (FCC) Report and Order authorizing the Telecommunications Service Priority Program.*¹

Office of Emergency Communications Telecommunications Service Priority Operations Guide.¹

¹ This document is available from the Telecommunications Service Priority (TSP) Program homepage at < <https://www.dhs.gov/publication/tsp-documents> >.

2.2 Informative References

Executive Order 12656, "Assignment of Emergency Preparedness Responsibilities," November 18, 1988.

Title 47 CFR, Part 64, Appendix A, "Telecommunications Service Priority (TSP) System for National Security and Emergency Preparedness (NS/EP)."²

3 Definitions, Abbreviations, & Acronyms

3.1 Definitions

The following definitions establish understanding for the context of this standard.

- 3.1.1 **Data:** A representation of facts, concepts, or instructions that are collected, organized, recorded, processed, and stored in a retrievable form suitable for communication, interpretation, or processing by human or automated means. [This definition refers to a group of facts taken as a unit; thus it is used with a singular verb.]
- 3.1.2 **Data element:** A single unit of data that in a certain context is considered indivisible. It cannot be decomposed into more fundamental segments of data that have useful meanings within the business.
- 3.1.3 **Federal Communications Commission (FCC):** Provides regulatory oversight of NS/EP TSP Program implementation. It also enforces TSP rules and regulations; acts as a final authority for approval, revision, or disapproval of priority actions by the DHS.
- 3.1.4 **Format structure:** A combination of data elements grouped in a prescribed sequence.
- 3.1.5 **Office of Emergency Communications (OEC):** Responsible for implementing the TSP Program and has established the TSP Program Office to administer the system on a daily basis. OEC was formerly known as National Communications System (NCS).
- 3.1.6 **Provisioning:** The act of supplying telecommunication service to a user, including all associated transmission, wiring, and equipment.
- 3.1.7 **Restoration:** The repair or returning to service of telecommunications services that have experienced a service outage or are unusable for any reason.
- 3.1.8 **Service provider:** Any individual, association, partnership, corporation, organization, or other entity (including common carriers and government organizations) offering telecommunications equipment, facilities, services, or combination thereof.
- 3.1.9 **Service user:** Any individual or organization supported by a telecommunications service for which a TSP assignment has been requested or assigned. NS/EP telecommunications services within the Federal, State, local, or foreign governments, as well as private industry, are eligible for TSP.
- 3.1.10 **Telecommunication services:** The transmission, emission, or reception of intelligence of any nature, by wire, cable, satellite, fiber optics, laser, radio, visual or other electronic, electric, electromagnetic, or acoustically coupled means, or any combination thereof.

3.2 Abbreviations & Acronyms

ANSI	American National Standards Institute
ATIS	Alliance for Telecommunications Industry Solutions

² This document is available from the U.S Government Publishing Office at < <http://www.ecfr.gov/cgi-bin/ECFR?page=browse> >.

DHS	Department of Homeland Security
ETS	Emergency Telecommunications Service
FCC	Federal Communications Commission
GETS	Government Emergency Telecommunications Service
IMS	Internet Protocol Multimedia Subsystem
IP	Internet Protocol
NCS	National Communications System
NGN	Next Generation Network
NS/EP	National Security and Emergency Preparedness
OEC	Office of Emergency Communications
RP	Restoration Priority
SONET	Synchronous Optical Network
TSP	Telecommunications Service Priority Codes

4 General

Each data element shall consist of one character, each character being either an alphabetic (A-Z) or numeric (0-9). In the format structures in Clause 6, character positions that require numeric or either alphabetic or numeric characters are represented by "N" and "A/N" respectively. The alphabetic character shall be considered as case insensitive; that is, there shall be no distinction made between upper and lower case letters. However, it is recommended that the code be represented with upper case letters.

5 Data Elements

Clause 6 of this standard describes TSP code formats that contain data elements that are defined and described in the following clauses.

5.1 Provisioning Priority Code

A standard code to identify the type of priority level needed for the designated service. This data element shall consist of one alpha or one numeric character.

5.2 Restoration Priority (RP) Code

A standard code to identify the type of priority level needed for restoration of the service users' designated service. This data element shall consist of one numeric character.

6 Code Set Values

This clause describes the TSP Code Set Values for each of the data elements defined in Clause 5.

6.1 Provisioning Priority Code

A standard code to designate the provisioning priority level for the designated request. This data element shall have the fixed values of E, 1, 2, 3, 4, 5, or 0 (zero). A zero indicates that no provisioning priority is assigned. Table 6.1 depicts the relationship of each code value among the choices available.

Table 6.1 – Provisioning Character Representation Relationships

E Highest
1
2
3
4
5 Lowest
0 (ZERO)

6.2 Restoration Priority Code

A standard code to designate the restoration priority level for the designated service. This data element shall consist of one character with the fixed values of 1, 2, 3, 4, 5, or 0 (zero). A zero indicates that no restoration priority is assigned. Table 6.2 depicts the relationship of each code value among the choices available.

Table 6.2 – Restoration Character Representation Relationships

1 Highest
2
3
4
5 Lowest
0 (ZERO)

6.3 Provisioning & Restoration Value Combinations

Table 6.3 depicts the allowable codes of the TSP system.

Table 6.3 – Allowable Codes of the TSP System

E1	11	21	31	41	51	01
E2	12	22	32	42	52	02

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E3	13	23	33	43	53	03
E4	14	24	34	44	54	04
E5	15	25	35	45	55	05
E0	10	20	30	40	50	00

The absence of a TSP code (blank) indicates no priority. The representation of “00” indicates removal of a previously assigned TSP code. Revocation of a priority TSP level assignment is indicated if the values of both the provisioning and restoration priority fields contain zeros.

7 Format Structures

7.1 Telecommunications Service Priority (TSP)

The TSP Code is an encoded representation used to identify both provisioning and restoration priorities services. This code set serves two distinct and separate purposes for the service provider but shall always appear as a singular representation with two occupied character positions. When presented between operational support systems, the TSP code shall not be subdivided or presented as a single character. This code set shall consist of the sequence of Provisioning Priority Code and Restoration Priority Code data elements, resulting in a code that consists of two characters as illustrated in Table 7.1.

Table 7.1 – TSP Code Format

	Provisioning Priority Code	Restoration Priority Code
Character Positions	1	2
Character Set	Alphanumeric	Numeric
Data Unit Use	Required	Required

8 Code Set Maintenance

The TSP code set specified in Clause 6 represents a closed set of priorities. No code growth is expected and therefore no maintenance is required, unless authorized by the Federal Communications Commission.

Annex A
(informative)

A Role of TSP in an NGN/IP Environment

A.1 Physical Circuits

As in the PSTN, NS/EP services can request the use of physical circuits in Next Generation Network (NGN)/ Internet Protocol (IP) networks; for example, DS3 or OC-3 circuits can be requested for designated NS/EP use. Since TSP applies to physical circuits, direct TSP rules and codes apply for provisioning such circuits as well as in the case for manual repair if automated restoration means are not available.

A request for a physical circuit dedicated for NS/EP (e.g., private line) requires the use of TSP codes for provisioning and manual repair per current practice. Once provisioned, if this circuit can be restored via automated capabilities under failure conditions (e.g., circuit provisioned over a SONET ring), then TSP codes do not apply for the automated restoration process. If manual repair is necessary, then priority for repair is dictated by TSP codes per current practice.

A.2 Emergency Telecommunications Service (ETS)

The evolution of the Government Emergency Telecommunications Service (GETS) in the PSTN to a broader class of services in NGN/IP environments – known as Emergency Telecommunications Service (ETS) – requires enhancements for automated preferential treatment as described in ATIS-1000010, *Support of Emergency Telecommunications Service (ETS) in IP Networks*³. ETS comprises real-time Voice over IP calls as well as other forms of telecommunications traffic – data, video, and multimedia.

As in the case with GETS in the PSTN, whereby the Signaling System 7 (SS7) recognizes the initiation of a GETS call and provides preferential treatment over a non-GETS call for admission in the PSTN, TSP codes do not apply directly. Rather, as in the case for GETS service in the PSTN, priority rules and mechanisms are needed in NGN/IP environments in order to facilitate preferential admission and restoration policies. Specifically, priority agreements are used to classify ETS as a preferred service over other services, signaling extensions are used to communicate the high priority of ETS, and finally priority-enabling mechanisms are defined that recognize the signaled priority and provide desired actions. Additional detail is provided in ATIS-1000023, ETS Network Element Requirements for a NGN IMS Based Deployments.³

A request for an NS/EP service such as ETS that requires signaling procedures for call/session setup does not require the use of TSP codes. In such cases, the service request is established by signaling the “High” priority for call/session setup and service restoration in case of failure conditions. NS/EP services are classified with the highest available priority for admission control and service restoration.

³ This document is available from the Alliance for Telecommunications Industry Solutions (ATIS), at < <https://www.atis.org/docstore/default.aspx> >