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Q.1706/Y.2801

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SERIES Q: SWITCHING AND SIGNALLING

Signalling requirements and protocols for IMT-2000

SERIES Y: GLOBAL INFORMATION

INFRASTRUCTURE, INTERNET PROTOCOL ASPECTS
AND NEXT-GENERATION NETWORKS

Next Generation Networks – Generalized mobility

Mobility management requirements for NGN

ITU-T Recommendation Q.1706/Y.2801



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ITU-T Recommendation Q.1706/Y.2801

Mobility management requirements for NGN

Summary

This Recommendation describes the requirements for mobility management (MM) for Next Generation Networks (NGN). For this purpose, this Recommendation describes the considerations for mobility management in the NGN, classifies the types of mobility management for NGN environment, and identifies a set of the MM requirements for NGN.

Source

ITU-T Recommendation Q.1706/Y.2801 was approved on 6 November 2006 by ITU-T Study Group 19 (2005-2008) under the ITU-T Recommendation A.8 procedure.

Keywords

Mobility management requirements, NGN, Systems beyond IMT-2000.

FOREWORD

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Mobility management requirements for NGN

1 Scope

The scope of this Recommendation is to identify the requirements for Mobility Management (MM) for NGN. Note that the scope of this Recommendation is not limited to a specific level of mobility and covers full mobility. To that end, this Recommendation describes the following:

- Considerations of MM for NGN;
- Classification of MM types for NGN;
- Requirements for MM for NGN.

Administrations may require operators and service providers to take into account national regulatory and national policy requirements in implementing this Recommendation.

2 References

The following ITU-T Recommendations and other references contain provisions which, through reference in this text, constitute provisions of this Recommendation. At the time of publication, the editions indicated were valid. All Recommendations and other references are subject to revision; users of this Recommendation are therefore encouraged to investigate the possibility of applying the most recent edition of the Recommendations and other references listed below. A list of the currently valid ITU-T Recommendations is regularly published. The reference to a document within this Recommendation does not give it, as a stand-alone document, the status of a Recommendation.

- [G.992.3] ITU-T Recommendation G.992.3 (2005), *Asymmetric digital subscriber line transceivers 2 (ADSL2)*.
- [Q.1741.1] ITU-T Recommendation Q.1741.1 (2002), *IMT-2000 references to release 1999 of GSM evolved UMTS core network with UTRAN access network*.
- [ITU-R M.1645] ITU-R Recommendation M.1645 (2003), *Framework and overall objectives of the future development of IMT-2000 and systems beyond IMT-2000*.

3 Definitions

This Recommendation uses the definitions and terms that have been defined in the relevant ITU-T Recommendations such as [Q.Sup52].

In addition, this Recommendation defines the following terms:

- 3.1 home network:** The network to which a mobile user is normally connected, or the service provider with which the mobile user is associated, and where the user's subscription information is managed.
- 3.2 mobility:** The ability for the user or other mobile entities to communicate and access services irrespective of changes of the location or technical environment.
- 3.3 mobility management:** The set of functions used to provide mobility. These functions include authentication, authorization, location updating, paging, download of user information and more.
- 3.4 open interface:** An interface that uses open standards.

3.5 open standard: Open Standards are standards made available to the general public and are developed (or approved) and maintained via a collaborative and consensus-driven process.

3.6 roaming: [Q.1741.1] The ability for a user to function in a serving network different from the home network.

NOTE – This is the ability of the users to access services according to their user profile while moving outside of their subscribed home network, i.e., by using an access point of a visited network. This requires the ability of the user to get access to the visited network, the existence of an interface between home network and visited network, as well as a roaming agreement between the respective network operators.

3.7 seamless service: A service that is implemented such that it will ensure that users will not experience any service disruptions while changing the point of attachment.

3.8 visited network: The network outside a home network that provides service to a mobile user. This term is more business significant than geographically significant.

3.9 xDSL: [G.992.3] Any of the various types of digital subscriber lines technologies.

4 Abbreviations

This Recommendation uses the following abbreviations:

2G	Second Generation
3G	Third Generation
AAA	Authentication, Authorization and Accounting
AN	Access Network
CN	Core Network
IP	Internet Protocol
IPv4	Internet Protocol Version 4
IPv6	Internet Protocol Version 6
MM	Mobility Management
MMR	Mobility Management Requirements
MT	Mobile Terminal
NAP	Network Access Point
NGN	Next Generation Network
NNI	Network-to-Network Interface
NT	Network Termination
QoS	Quality of Service
SAP	Service Access Point
SDO	Standards Development Organization
SIP	Session Initiation Protocol
SLA	Service Level Agreement
SP	Service Platform
SPI	Service Platform Interface
TCP/IP	Transmission Control Protocol/Internet Protocol