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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

Framework of location management for NGN

Recommendation ITU-T Q.1708/Y.2805



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Recommendation ITU-T Q.1708/Y.2805

Framework of location management for NGN

Summary

Recommendation ITU-T Q.1708/Y.2805 specifies the framework of IP-based location management for next generation networks. The location management is responsible for mapping among user identifier and location identifiers of the user equipment. This Recommendation describes the design considerations, functional architecture, and information flows for the location management function.

Source

Recommendation ITU-T Q.1708/Y.2805 was approved on 14 October 2008 by ITU-T Study Group 19 (2005-2008) under Recommendation ITU-T A.8 procedure.

Keywords

Location management, NGN.

FOREWORD

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Introduction

This Recommendation describes the framework of mobility management (MM) for next generation networks (NGN). This work has been motivated from the observation that NGN continues to evolve towards the convergence of fixed and wireless/mobile networks, and thus mobility management is an essential functionality needed to provide seamless mobility to NGN users and services.

This Recommendation is a part of the MM framework for NGN. The MM framework will be designed with a series of Recommendations, rather than a single Recommendation, as a suite of the framework of mobility management for NGN. The design of the MM framework includes a variety of technical issues to be addressed. Those design issues are associated with a wide variety of mobility scenarios and protocols. The MM framework Recommendations are:

- Recommendation Q.1707/Y.2804: Generic framework of mobility management for next generation networks;
- Recommendation Q.1708/Y.2805: Framework of location management for NGN;
- Recommendation Q.1709/Y.2806: Framework of handover control for NGN;

Recommendation ITU-T Q.1708/Y.2805

Framework of location management for NGN

1 Scope

This Recommendation describes the framework of IP-based location management (LM) for NGN, which includes design considerations, functional architecture, and information flows for location management. This Recommendation focuses on terminal mobility when mobile terminals move around and change their IP addresses in the NGN. This Recommendation also focuses on the mobility management (MM) schemes that operate in the network or IP layers, whereas the issues on the mobility support in the service stratum will be addressed in another 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.

- [ITU-T Q.1706] Recommendation ITU-T Q.1706/Y.2801 (2006), *Mobility management requirements for NGN*.
- [ITU-T Q.1707] Recommendation ITU-T Q.1707/Y.2804 (2008), *Generic framework of mobility management for next generation networks*.
- [ITU-T Q.1709] Recommendation ITU-T Q.1709/Y.2806 (2008), *Framework of handover control for NGN*.
- [ITU-T Y.2001] Recommendation ITU-T Y.2001 (2004), *General overview of NGN*.
- [ITU-T Y.2011] Recommendation ITU-T Y.2011 (2004), *General principles and general reference model for Next Generation Networks*.
- [ITU-T Y.2012] Recommendation ITU-T Y.2012 (2006), *Functional requirements and architecture of the NGN release 1*.
- [ITU-T Y.2014] Recommendation ITU-T Y.2014 (2008), *Network attachment control functions in next generation networks*.
- [ITU-T Y.2091] Recommendation ITU-T Y.2091 (2007), *Terms and definitions for next generation networks*.
- [ITU-T Y.2111] Recommendation ITU-T Y.2111 (2006), *Resource and admission control functions in next generation networks*.

3 Definitions

3.1 Terms defined in [ITU-T Q.1707]

This Recommendation uses the following terms defined in [ITU-T Q.1707]:

3.1.1 location identifier (LID): A topological location identifier of a UE. An IP address can be used as a location identifier. Refer also to [ITU-T Y.2091].