



INTERNATIONAL TELECOMMUNICATION UNION

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

Series Y

Supplement 15

(10/2011)

SERIES Y: GLOBAL INFORMATION
INFRASTRUCTURE, INTERNET PROTOCOL ASPECTS
AND NEXT-GENERATION NETWORKS

Profile-based application adaptation service using NGN

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Profile-based application adaptation service using NGN

Summary

The dynamic adaptation between various service environments using the application profiles for the continuous service is a key issue of the profile-based application adaptation service (PAAS) using NGN. PAAS offers an optimized service framework for providing continuous services for users, which are multimedia, educational broadcasting, game, etc., using the various devices that are not restricted by the service environment of the user. This Supplement specifies the functional model and service scenario of PAAS.

Keywords

NGN, Profile, Profile-based application adaptation service

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1 Scope

The purpose of this Supplement is to provide continuous service for users who have service profiles with different attributes (user device, application software, frame format etc.) for the applications using NGN. Therefore, the profile-based application adaptation service (PAAS) offers an optimized service framework for providing continuous services for users. This Supplement specifies the functional model of PAAS and service scenario.

It includes the following information:

- general description of PAAS;.
- functional model for PAAS;.
- functional capabilities and functional procedures of PAAS;.
- service scenario for PAAS.

2 References

The following ITU-T Recommendations and other references contain provisions, which, through reference in this text, constitute provisions of this Supplement. At the time of publication, the editions indicated were valid. All Recommendations and other references are subject to revision; users of this Supplement 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 Supplement does not give it, as a stand-alone document, the status of a Recommendation.

[ITU-T Y.2011] ITU-T Recommendation Y.2011(2004), General principles and general reference model for Generation Networks.

[ITU-T Y.2012] ITU-T Recommendation Y.2012(2010), Functional requirements and architecture of the NGN

[ITU-T Y.2111] ITU-T Recommendation Y.2111(2008), Resource and admission control functions in next generation networks

[ITU-T Y.2014] ITU-T Recommendation Y.2014 (2010), Network attachment control functions in next generation networks

[ITU-T Y.2018] ITU-T Recommendation Y.2018 (2009), Mobility management and control framework and architecture within the NGN transport stratum.

3 Definitions

3.1 Terms defined elsewhere:

This Supplement uses the following terms defined elsewhere:

3.1.1 application [ITU-T Y.2261]: A structured set of capabilities providing value-added functionality supported by one or more services that may be supported by an API interface.

3.1.2 content provider [ITU-T Y.1910]: Entity that owns or has license to sell content or content assets.

3.1.3 network network interface (NNI) [ITU-T G.8012/Y.1308]: An interface that is used for the interconnection of networks elements within a transport network.

3.1.4 next generation network (NGN) [ITU-T Y.2001]: A packet-based network able to provide telecommunication services and able to make use of multiple broadband, QoS-enabled transport technologies and in which service-related functions are independent from underlying

transport-related technologies. It supports generalized mobility which will allow consistent and ubiquitous provision of services to users.

3.1.5 profile [CCITT Rec. T.86]: A specific set of capabilities, parameter values or ranges, and optionally file format.

3.1.6 user network interface (UNI) [ITU-T Y.1308]: - Interface used for the interconnection of customer equipment with a network element of the transport network.

3.2 Terms defined in this Supplement

None

4 Abbreviations and acronyms

This Supplement uses the following abbreviations and acronyms:

ANI	Application Network Interface
GUI	Graphic User Interface
NACF	Network Attachment Control Functions
NGN	Next Generation Network
NNI	Network Network Interface
MMCF	Mobility Management and Control Functions
PAAS	Profile-based Application Adaptation Service
RACF	Resource and Admission Control Functions
SCF	Service Control Functions
SNI	Service Network Interface
UNI	User Network Interface

5 Conventions

The term “continuous service” is not used in this document to indicate service continuity when a user moves across different service environments, but rather to indicate the capability using PAAS functions to provide comparable service in different service environments.

6 General Description of PAAS

Application profiles are registered in the service provider according to each application. They have different attributes. A user wishing to change his service environment should be provided with continuous service to adapt the service profiles having different attributes. It is required that advanced applications using NGN overcome some of the service restriction of the different service environment. Therefore, PAAS provides continuous service using the application profiles, which is adapted to the changed service environment such as user devices.

Figure 6.1 presents the conceptual model of PAAS. PAAS provides continuous service when a user moves from PC to PDA and/or Mobile Phone. The pre-encoded data formats of contents according to the different devices for the user service are provided by the Contents/Broadcast/Internet service provider.