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

Global information infrastructure – General

**Guideline for attributes and requirements for
interconnection between public
telecommunication network operators and
service providers involved in provision of
telecommunication services**

ITU-T Recommendation Y.140.1

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ITU-T Recommendation Y.140.1

Guideline for attributes and requirements for interconnection between public telecommunication network operators and service providers involved in provision of telecommunication service

Summary

Based on the framework set forth in ITU-T Rec. Y.140, this Recommendation concentrates on one of the interconnection scenarios relevant to GII, the interconnection between operators of public telecommunication networks (PTNOs) and service providers (SPs). After looking at the situation before and during transition to a full implementation of the so-called enterprise model, attributes of reference points for interconnection between PTNOs and SPs are dealt with in some detail. Separate clauses treat the various aspects of these attributes, in particular, security, service interaction, charging/billing, service availability, access to a network address and management. The content of this Recommendation should be seen as a guideline for consideration by involved parties when implementing the GII concept within a Next Generation Network.

Source

ITU-T Recommendation Y.140.1 was approved on 29 March 2004 by ITU-T Study Group 13 (2001-2004) under the ITU-T Recommendation A.8 procedure.

Keywords

Essential requirements for service provision, Global Information Infrastructure, interconnection, interconnection interfaces, public policy, reference points for interconnection.

FOREWORD

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Introduction

The objective of this Recommendation is to elaborate on one aspect of ITU-T Rec. Y.140 and is intended to supplement it. The reader should be aware of the content and considerations of ITU-T Rec. Y.140.

ITU-T Rec. Y.140 describes the reference points for technical interconnection between various entities involved in the provision of telecommunication services. One of the areas identified by ITU-T Rec. Y.140 as to where technical interconnection is required, is "for the access and/or interconnection of a service provider to products of a public network operator" (item b of clause 8/Y.140).

This Recommendation (ITU-T Rec. Y.140.1) looks in more detail at this relationship between the service provider and the network operator, and at the elements of the interconnection interface that results as a consequence of this relationship.

It needs to be recognized at the outset that the elements of the technical interconnection between these two entities, the network operator and the service provider, arise not only from the needs of these two entities. External forces also play a role in determining the elements of interconnection that will exist between these two entities. For example, service subscribers' needs will also influence the nature of the interconnection between the network operator and the service provider. Also, government regulators may impose certain requirements on the nature of the interconnection between the two parties. (It is to be noted in passing that there may be an inverse relationship between the extent to which the network operator and the service provider take the needs of the service subscriber into account voluntarily, and the need for government regulation, as a matter of public policy, to require the two entities to do so. If the network operator and service provider act voluntarily in a way that satisfies public policy, the need for government regulation may be reduced. This relationship is also known as co-regulation.)

Also, the nature of the technical interconnection that is agreed upon between the two parties will need to be captured in a contractual agreement between them.

Figure 1 portrays these relationships in diagram form. The focus of this Recommendation is on the technical aspects of the interconnection between the network operator and the service area (the shaded area). However, it is recognized that the interests of other parties (identified in the diagram outside the shaded area) may impact this relationship. Therefore, although the Recommendation only addresses the shaded area, references in the Recommendation are made, where appropriate, to identify places where these external forces may impact these reference points. Contractual agreements are also outside the scope of this Recommendation. Also, in some places, the Recommendation identifies reference points that may be impacted by external contractual agreements.

More background information about how the influence of the changing regulatory environment may impact the technical aspects of these reference points may be found in the attached bibliography.

ITU-T Recommendation Y.140.1

Guideline for attributes and requirements for interconnection between public telecommunication network operators and service providers involved in provision of telecommunication services

1 Scope and purpose

This Recommendation deals with the interconnection of service providers and (public) networks (in short, this type of interconnection will be called service provider access). The Recommendation should not be seen as an obligation for the parties involved, but should be considered as a Guideline assisting in recognizing and implementing the adequate essential attributes and/or requirements in a voluntary manner facilitating the public policy objectives.

Therefore, two aspects/perspectives have to be considered:

- a) service providers' requirements on network operators in delivering telecommunication services; and
- b) network operators' requirements for the provision of service provider access.

As illustrated in Figure 1/Y.140, a set of possible reference points for interconnection (RPIs) is introduced. In clause 8/Y.140, it is pointed out that there might be a couple of essential attributes and/or requirements relating to different classes of interconnection interfaces. Class b of these relates to the interconnection of service providers to (products of) public network operators. This Recommendation proposes a description of attributes/requirements for the class b interconnection interfaces.

Indirect SPA, i.e., accesses where intermediate networks are involved, will not be considered in this Recommendation.

An example of a possible scenario is given in Figure 1. It shows an environment of involved parties where many different roles and relationships exist. In this Recommendation, only the grey shadowed area is dealt with.

Figure 1