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

Internet protocol aspects – Interworking

Voice services – MPLS network interworking

ITU-T Recommendation Y.1414

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ITU-T Recommendation Y.1414

Voice services – MPLS network interworking

Summary

This Recommendation focuses on the required functions and procedures necessary for support of narrow-band voice services by MPLS networks. Details of the encapsulation of encoded audio streams in MPLS packets are specified.

Source

ITU-T Recommendation Y.1414 was approved on 29 July 2004 by ITU-T Study Group 13 (2001-2004) under the ITU-T Recommendation A.8 procedure.

Keywords

AAL type 2, Interworking, MPLS, Network, VoIP, Voice services, User Plane.

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Introduction

This Recommendation focuses on the required functions and procedures necessary for support of narrow-band voice services by MPLS networks. Details of the encapsulation of encoded audio streams in MPLS packets are specified.

ITU-T Recommendation Y.1414

Voice services – MPLS network interworking

1 Scope

This Recommendation focuses on the required functions and procedures necessary for support of narrow-band voice services by MPLS networks. ITU-T Rec. Y.1261 [1] describes the service requirements and architecture for transport of voice services over MPLS networks.

Narrow-band voice services include encoded audio streams, telephony call progress tones, fax, and optionally circuit mode data.

This Recommendation specifies encapsulation of encoded audio in MPLS packets. Algorithms for encoding audio streams are beyond the scope of this Recommendation.

This Recommendation includes three modes:

- voice over IP over MPLS;
- voice over MPLS using AAL type 2 SSCS [2] and [3] for narrow-band services; and
- voice over MPLS using MPLS Forum IA 1.0 [4].

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.

- [1] ITU-T Recommendation Y.1261 (2002), *Service requirements and architecture for voice services over Multi-Protocol Label Switching*.
- [2] ITU-T Recommendation I.366.2 (2000), *AAL type 2 service specific convergence sublayer for narrow-band services*, plus Corrigendum 1 (2002).
- [3] ITU-T Recommendation I.363.2 (2000), *B-ISDN ATM Adaptation Layer specification: Type 2 AAL*.
- [4] MPLS Forum Implementation Agreement MPLS Forum 1.0 (2001), *Voice Over MPLS – Bearer Transport*.
- [5] ITU-T Recommendation Y.1411 (2003), *ATM-MPLS network interworking – Cell mode user plane interworking*.
- [6] ITU-T Recommendation G.805 (2000), *Generic functional architecture of transport networks*.
- [7] ITU-T Recommendation G.711 (1988), *Pulse code modulation (PCM) of voice frequencies*.
- [8] ITU-T Recommendation G.723.1 (1996), *Speech coders: Dual rate speech coder for multimedia communications transmitting at 5.3 and 6.3 kbit/s*.
- [9] ITU-T Recommendation G.726 (1990), *40, 32, 24, 16 kbit/s Adaptive Differential Pulse Code Modulation (ADPCM)*.
- [10] ITU-T Recommendation G.727 (1990), *5-, 4-, 3- and 2-bit/sample embedded adaptive differential pulse code modulation (ADPCM)*.