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Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work. In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of the joint technical committee is to prepare International Standards. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights.

ISO/IEC TR 12860 was prepared by Ecma International (as ECMA TR/95) and was adopted, under a special “fast-track procedure”, by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, in parallel with its approval by national bodies of ISO and IEC.

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Introduction

This Technical Report is the first of a series of publications that explore IP-based enterprise communication involving Corporate telecommunication Networks (CNs) (also known as enterprise networks) and in particular Next Generation Corporate Networks (NGCN). The series particularly focuses on inter-domain communication, including communication between parts of the same enterprise, between enterprises and between enterprises and carriers. This particular Technical Report provides general information on the subject, defines some architectural concepts, identifies various communication scenarios, and provides a framework in support of other publications that provide greater detail on particular topics.

This Technical Report is based upon the practical experience of Ecma member companies and the results of their active and continuous participation in the work of ISO/IEC JTC 1, ITU-T, ETSI, IETF and other international and national standardization bodies. It represents a pragmatic and widely based consensus. In particular, Ecma acknowledges valuable input from experts in ETSI TISPAN.

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Information technology — Telecommunications and information exchange between systems — Next Generation Corporate Networks (NGCN) — General

1 Scope

This Technical Report is part of a series of publications that provides an overview of IP-based enterprise communication involving Corporate telecommunication Networks (CNs) (also known as enterprise networks) and in particular Next Generation Corporate Networks (NGCN). The series particularly focuses on session level communication based on the Session Initiation Protocol (SIP) [6], with an emphasis on inter-domain communication. This includes communication between parts of the same enterprise (on dedicated infrastructures and/or hosted), between enterprises and between enterprises and public networks. Key technical issues are investigated, current standardisation work and gaps in this area are identified and a number of requirements are stated.

This particular Technical Report provides general information on the subject, defines some architectural concepts, identifies various communication scenarios, and provides a framework in support of other publications that provide greater detail on particular topics. At the time of publication of this Technical Report, one further document in the series has been published, on the subject of identification and routing [3].

The scope of this Technical Report is limited to communications with a real-time element, including voice, video, real-time text and instant messaging.

Further details on mobility in an NGCN environment are to be found in ISO/IEC TR 26927 [2].

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

[1] ISO/IEC 18051:2007, *Information technology — Telecommunications and information exchange between systems — Services for Computer Supported Telecommunications Applications (CSTA) Phase III*

[2] ISO/IEC TR 26927:2006, *Information technology — Telecommunications and information exchange between systems — Corporate Telecommunication Networks — Mobility for Enterprise Communications*

[3] ISO/IEC TR 12861:2009, *Information technology — Telecommunications and information exchange between systems — Next Generation Corporate Networks (NGCN) — Identification and routing*

[4] ITU-T Recommendation H.248, *Gateway control protocol*

[5] ITU-T Recommendation H.323, *Packet-based multimedia communications systems*

[6] IETF RFC 3261, *SIP: Session Initiation Protocol*

[7] IETF RFC 3550, *RTP: A Transport Protocol for Real-Time Applications*

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[8] IETF RFC 4566, *SDP: Session Description Protocol*

[9] SIP Forum sf-adopted-twg-IP_PBX_SP_Interop-sibley-sipconnect *"IP-PBX / Service Provider Interoperability - SIPConnect 1.0 Technical Recommendation"*

[10] ETSI EG 201 017, *Corporate Telecommunication Networks (CN); Standardization plan*

[11] ETSI TR 180 000, *Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN); NGN Terminology*

[12] IEEE 802.1x, *Port Based Network Access Control*

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