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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 23289 was prepared by ECMA (as ECMA-332) 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 International Standard is one of a series of Standards defining the interworking of services and signalling protocols deployed in corporate telecommunication networks (CNs). The series uses telecommunication concepts as developed by ITU-T and conforms to the framework of International Standards on Open Systems Interconnection as defined by ISO/IEC.

This International Standard defines the signalling protocol interworking for basic services between a Private Integrated Services Network (PISN) and a packet-based private telecommunications network based on the Internet Protocol (IP). It is further assumed that the protocol for the PISN part is that defined for the Q reference point (QSIG) and that the protocols for the IP-based network are based on ITU-T Recommendation H.323.

This International Standard 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 and other international and national standardization bodies. It represents a pragmatic and widely based consensus.

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Information technology - Telecommunications and information exchange between systems - Corporate telecommunication networks - Signalling interworking between QSIG and H.323 - Basic services

1 Scope

This International Standard specifies signalling interworking between "QSIG" and "H.323" in support of basic services within a corporate telecommunication network (CN).

"QSIG" is a signalling protocol that operates at the Q reference point between Private Integrated services Network eXchange (PINX) within a Private Integrated Services Network (PISN). The Q reference point is defined in ISO/IEC 11579-1. A PISN provides circuit-switched basic services and supplementary services to its users. QSIG is specified in other International Standards, in particular ISO/IEC 11572 (call control in support of basic services).

"H.323" is a set of signalling protocols for the support of voice or multimedia communication within a packet network, in particular a packet network that uses the Internet Protocol (IP) as its network layer protocol (IP network). H.323 signalling protocols operate between endpoints in an IP network, either indirectly via one or more gatekeepers, or directly. An endpoint can be a terminal or a gateway to another network. H.323 is an "umbrella" recommendation referring to various ITU-T recommendations, in particular recommendations H.225.0 and H.245 (basic communication capabilities).

This International Standard specifies signalling interworking for basic services that provide a bidirectional transfer capability for speech, DTMF, facsimile and modem media between a PISN employing QSIG and a private IP network employing H.323. This International Standard specifies requirements for establishing user information (audio) connections between the PISN and the IP network, but protocols for transmitting audio in the IP network and for signalling in order to establish and close down audio transmission in the IP network are outside the scope of this International Standard. Supplementary services are outside the scope of this International Standard.

Interworking between QSIG and H.323 permits a call originating at a user of a PISN to terminate at a user of a private IP network, or a call originating at a user of a private IP network to terminate at a user of a PISN.

Interworking between a PISN employing QSIG and a public IP network employing H.323 is outside the scope of this International Standard. However, the functionality specified in this International Standard is in principle applicable to such a scenario when deployed in conjunction with other relevant functionality (e.g., number translation, security functions, etc.).

Although two such gateways can operate as peers on either side of an IP network (whereby the IP network provides interconnection between two PISNs), special support for this situation (e.g., tunnelling of QSIG information through the IP network) is outside the scope of this International Standard.

Although two such gateways can operate as peers on either side of a PISN (whereby the PISN provides interconnection between two IP networks), special support for this situation (e.g., tunnelling of H.323 information through the PISN) is outside the scope of this International Standard.

This International Standard is applicable to any interworking unit that can act as a gateway between a PISN employing QSIG and a private IP network employing H.323.

2 Conformance

In order to conform to this International Standard, a gateway shall satisfy the requirements identified in the Implementation Conformance Statement (ICS) proforma in annex A.

3 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.

ISO/IEC 11571:1998, *Information technology - Telecommunications and information exchange between systems - Private Integrated Services Networks - Addressing*

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ISO/IEC 11572:2000, *Information technology - Telecommunications and information exchange between systems - Private Integrated Services Network - Circuit mode bearer services - Inter-exchange signalling procedures and protocol*

ISO/IEC 11579-1:1994, *Information technology - Telecommunications and information exchange between systems - Private integrated services network - Part 1: Reference configuration for PISN Exchanges (PINX)*

ISO/IEC 17310:2000, *Information technology - Telecommunications and information exchange between systems - Private Integrated Services Network - Mapping functions for the employment of 64 kbit/s circuit mode connections with 16 kbit/s sub-multiplexing*

ISO/IEC 17311:2000, *Information technology - Telecommunications and information exchange between systems - Private Integrated Services Network - Mapping functions for the employment of 64 kbit/s circuit mode connections with 8 kbit/s sub-multiplexing*

ISO/IEC 21409:2001; *Information technology - Telecommunications and information exchange between systems - Corporate telecommunication networks - Signalling interworking between QSIG and H.323 - Generic functional protocol for the support of supplementary services*

ITU-T Rec. H.225.0 version 4, *Call signalling protocols and media stream packetization for packet-based multimedia communication systems (11/2000)*

ITU-T Rec. H.235 version 2, *Security and encryption for H-Series (H.323 and other H.245-based) multimedia terminals (11/2000)*

ITU-T Rec. H.245 version 7, *Control protocol for multimedia communication (11/2000)*

ITU-T Rec. H.323 version 4, *Packet-based multimedia communications systems (11/2000)*

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