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Information technology — Telecommunications and information exchange between systems — Private Integrated Services Network — Architecture and scenarios for Private Integrated Services Networking

Technologies de l'information — Télécommunications et échange d'information entre systèmes — Réseau privé à intégration de services — Architecture et scénarios pour réseau privé à intégration de services

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Foreword

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In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

The main task of technical committees is to prepare International Standards, but in exceptional circumstances a technical committee may propose the publication of a Technical Report of one of the following types:

— type 1, when the required support cannot be obtained for the publication of an International Standard, despite repeated efforts;

— type 2, when the subject is still under technical development or where for any other reason there is the future but not immediate possibility of an agreement on an International Standard;

— type 3, when a technical committee has collected data of a different kind from that which is normally published as an International Standard ("state of the art", for example).

Technical Reports of types 1 and 2 are subject to review within three years of publication, to decide whether they can be transformed into International Standards. Technical Reports of type 3 do not necessarily have to be reviewed until the data they provide are considered to be no longer valid or useful.

Technical Reports are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

Attention is drawn to the possibility that some of the elements of this Technical Report 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 14475, which is a Technical Report of type 3, was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology,* Subcommitee SC 6, *Telecommunications and information exchange between systems*.

This second edition cancels and replaces the first edition (ISO/IEC TR 14475:1996), which has been technically revised.

Information technology — Telecommunications and information exchange between systems — Private Integrated Services Network — Architecture and scenarios for Private Integrated Services Networking

1 Scope

A Private Integrated Service Network (PISN) is a network comprising either one PINX or more than one PINX interconnected by Inter-PINX connections. This Technical Report is concerned with inter-PINX connections (IPC) that are provided by Intervening Networks (IVN), and the way in which these are handled by PINXs to provide a platform for inter-PINX communication. Different types of IVNs can be used to provide IPCs, in accordance with the scenarios indicated in ISO/IEC 11579-1. These are Overlay Scenarios in that they enable the services of the PISN to operate transparently across an IVN.

Connected PINXs need to co-ordinate their use of IVNs, and appropriate standardisation is needed to allow networks to be created employing PINXs and IVNs from multiple vendors. The following points need to be considered:

— In general but depending on the type of IVN, procedures and signalling protocols between the PINXs are needed for the establishment, maintenance and release of IPCs. Appropriate standardisation of these procedures and signalling protocols is necessary.

— At the Q reference point (a conceptual point within a PINX) channels and PISN call control signalling (QSIG) are defined independently of the type of IVN. However, at the C reference point (where the PINX is connected to the IVN), the representation of the channels and of signalling is dependent on the type of IVN, and on how the PINXs use the IPCs. Appropriate standardisation of these aspects at the C reference point is necessary.

— In general the relationship between a channel at the Q reference point and its representation at the C reference point is not static, and procedures and signalling between the PINXs are needed for the co-ordination of these relationships. Appropriate standardisation of these procedures and signalling is necessary.

— Appropriate mechanisms need to be standardised for conveying inter-PINX signalling through the IVN. These will depend on the characteristics of the IPC used.

The aim of this Technical Report is to identify:

1. In addition to PISN call control signalling (QSIG), what needs to be standardised, in order to be able to inter-connect PINXs;
2. General techniques, procedures, protocols etc., that apply to of all (or at least very many) types of IVNs.

2 References

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