TECHNICAL REPORT

ISO/IEC TR 29181-4

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Information technology — Future Network — Problem statement and requirements —

Part 4: Mobility

Technologies de l'information — Réseaux du futur — Énoncé du problème et exigences —

Partie 4: Mobilité

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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.

In exceptional circumstances, when the joint 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), it may decide to publish a Technical Report. A Technical Report is entirely informative in nature and shall be subject to review every five years in the same manner as an International Standard.

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

ISO/IEC TR 29181-4 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 6, *Telecommunications and information exchange between systems*.

ISO/IEC TR 29181 consists of the following parts, under the general title *Information technology — Future Network — Problem statement and requirements*:

— *Part 1: Overall aspects*

— *Part 2: Naming and addressing*

— *Part 3: Switching and routing*

— *Part 4: Mobility*

— *Part 5: Security*

— *Part 6: Media transport*

— *Part 7: Service composition*

Introduction

This part of ISO/IEC TR 29181 (Future Network: Problem Statement and Requirements) describes the problems of the current network and the requirements for Future Network in the mobility perspective. The general description on the problem statement and requirements for Future Network is given in ISO/IEC TR 29181-1. In addition, ISO/IEC TR 29181-4 establishes the problem statement and requirements for Future Network from the viewpoint of architecture and functionality for mobility support.

In general, the mobility issues can be classified into link-layer, network-layer, and transport/application layer mobility management. It is noted that the link-layer mobility issues have been addressed and well defined in the relevant SDOs, such as 3GPPs, IEEE 802, etc. The transport/application layer mobility issues are also associated with the particular transport/application protocols used by mobile nodes. On the other hand, the network layer mobility control issues are quite dependent on the network architecture. Accordingly, this part of ISO/IEC TR 29181 will focus on the mobility issues of Future Network in the network-layer perspective.

This part of ISO/IEC TR 29181 may be applicable to the overall design of Future Network architecture.

Information technology — Future Network — Problem statement and requirements —

Part 4: Mobility

1 Scope

This part of ISO/IEC TR 29181 describes the problem statements of current network and the requirements for Future Network in the mobility perspective. This part of ISO/IEC TR 29181 mainly specifies

— problems of the current network in mobile environment, and

— requirements for mobility support in Future Network.

In addition, this part of ISO/IEC TR 29181 gives information on

— existing mobility control schemes in the current network,

— examples of high-level mobility control architecture for Future Network,

— distributed mobility control in the Proxy Mobile IPv6 networks, and

— additional considerations for Future Network mobility.

2 Normative references

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

ISO/IEC TR 29181 (all parts), *Information technology — Future Network — Problem statement and requirements*