INTERNATIONAL STANDARD

ISO/IEC 9579-1

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Information technology — Open Systems Interconnection — Remote Database Access —

Part 1: Generic Model, Service and Protocol

Technologies de l'information — Interconnexion de systèmes ouverts (OSI) — Accès aux bases de données à distance —

Partie 1: Modèle, service et protocole

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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. 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.

International Standard ISO/IEC 9579-1 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 21, *Open systems interconnection, data management and open distributed processing*.

ISO/IEC 9579 consists of the following parts, under the general title *Information technology — Open Systems Interconnection — Remote Database Access*:

— *Part 1: Generic Model, Service and Protocol*

— *Part 2: SQL specialization*

Annex A of this part of ISO/IEC 9579 is for information only.

. Introduction

The Remote Database Access (RDA) standard is one of a set of International Standards produced to facilitate the interworking of computer systems. It is positioned in the Application Layer of the Reference Model of Open Systems Interconnection (OSI) and is related to other OSI standards, as defined in ISO 7498.

The goal of Remote Database Access is to allow, with a minimum of technical agreement outside the interconnection standards, the interconnection of applications and database systems:

- from different manufacturers;
- under different managements;
- of different levels of complexity;
- exploiting different technologies.

An application may itself be a database system and therefore RDA can be used to support multi-database system interworking.

ISO/IEC 9579 defines a service provided to application programs which represents a boundary between the local processing of an application and that part concerned with communications. There is a mapping between the RDA Service elements defined in ISO/IEC 9579 and the services provided by lower layers of the Reference Model of Open Systems Interconnection. This RDA Service, and the lower layer services, may be used to carry database language statements and data between a client application and a database server to enable an application to read and update data in a remote database.

This part of ISO/IEC 9579 is to be used together with an RDA Specialization Standard (specified in some other part of ISO/IEC 9579) to define an RDA application providing interworking with a database management system supporting a specific database language.

Information technology — Open Systems Interconnection — Remote Database Access —

Part 1:
Generic Model, Service and Protocol

Section 1: Introduction

1.1 Scope

ISO/IEC 9579 specifies the OSI Remote Database Access (RDA) Service in terms of

a) the behaviour, as perceived from the OSI environment, of an application-process, called a database server, that provides database storage facilities and database processing services (that is, provides a database management system) to other application-processes; and

b) the behaviour, as perceived from the OSI environment, of an application-process, called an RDA client, that accesses remote database facilities.

This part of ISO/IEC 9579, called the "RDA Generic Standard", specifies the general capabilities of an RDA Service. These generic capabilities are intended to be used for interaction with many different database management systems.

Other parts of ISO/IEC 9579, called "RDA Specialization Standards", pertain to particular database languages, and augment the RDA Generic Standard by specifying how the generic capabilities of RDA are specialized for each of those database languages.

Thus a complete RDA Service is specified, for a given database language, by the combination of two parts of ISO/IEC 9579, one (this part) for the generic capabilities of RDA and a second (another part) for that particular database language.

The resulting specification is an OSI Application Layer standard.