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**Information and documentation — Digital
object identifier system**

Information et documentation — Système d'identifiant numérique d'objet



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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member 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 shall not be held responsible for identifying any or all such patent rights.

ISO 26324 was prepared by Technical Committee ISO/TC 46, *Information and documentation*, Subcommittee SC 9, *Identification and description*.

Introduction

The digital object identifier [DOI®¹⁾] system provides an infrastructure for persistent unique identification of objects of any type.

DOI is an acronym for “digital object identifier”, meaning a “digital identifier of an object” rather than an “identifier of a digital object”. In this International Standard, the term “digital object identifier” refers to the system defined in this International Standard unless otherwise stated. The DOI system was initiated by the International DOI Foundation in 1998, and initially developed with the collaboration of some participants in ISO/TC 46/SC 9. Due to its application in the fields of information and documentation and previous collaboration with some ISO/TC 46/SC 9 participants, it was introduced as a possible work item in 2004 and further developed from 2006 to 2010.

The DOI system is designed to work over the Internet. A DOI name is permanently assigned to an object to provide a resolvable persistent network link to current information about that object, including where the object, or information about it, can be found on the Internet. While information about an object can change over time, its DOI name will not change. A DOI name can be resolved within the DOI system to values of one or more types of data relating to the object identified by that DOI name, such as a URL, an e-mail address, other identifiers and descriptive metadata.

The DOI system enables the construction of automated services and transactions. Applications of the DOI system include but are not limited to managing information and documentation location and access; managing metadata; facilitating electronic transactions; persistent unique identification of any form of any data; and commercial and non-commercial transactions.

The content of an object associated with a DOI name is described unambiguously by DOI metadata, based on a structured extensible data model that enables the object to be associated with metadata of any desired degree of precision and granularity to support description and services. The data model supports interoperability between DOI applications.

The scope of the DOI system is not defined by reference to the type of content (format, etc.) of the referent, but by reference to the functionalities it provides and the context of use. The DOI system provides, within networks of DOI applications, for unique identification, persistence, resolution, metadata and semantic interoperability.

1) DOI® is a registered trademark. Information concerning trademark issues can be found on ISO online webpage for the ISO 26324 Registration Authority at http://www.iso.org/iso/maintenance_agencies.html.

Information and documentation — Digital object identifier system

1 Scope

This International Standard specifies the syntax, description and resolution functional components of the digital object identifier system, and the general principles for the creation, registration and administration of DOI names (where DOI is an acronym for “digital object identifier”).

This International Standard defines the syntax for a DOI name, which is used for the identification of an object of any material form (digital or physical) or an abstraction (such as a textual work) where there is a functional need to distinguish it from other objects.

The DOI name does not replace, nor is it an alternative for, an identifier used in another scheme, such as the schemes defined by ISO/TC 46/SC 9. This International Standard describes how the DOI system can be used in conjunction with another identifier scheme (for example, to provide additional functionality, such as resolution, where this is not already available), and how the character string of that other scheme can be integrated into the DOI system through the DOI metadata record and/or the DOI syntax.

This International Standard does not specify specific technologies to implement the syntax, description and resolution functional components of the digital object identifier system.

2 Normative references

The following referenced document is 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.

Unicode Consortium. *The Unicode™ Standard*²⁾

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1

allowed value

item which may be used as a value of an element

3.2

application profile

set of DOI names that share some common characteristics

NOTE A DOI application profile is a grouping mechanism for DOI names; the functional specification of the application profile includes a set of metadata, comprising the kernel metadata and additional information applicable to that particular genre of object and functional requirements. Each DOI name is associated with one or more application profiles.

2) Available at: <http://www.unicode.org>. Unicode is a trademark of Unicode, Inc. The Unicode Standard imposes additional constraints on implementations of ISO/IEC 10646:2011.