

For Comments Only

Draft Indian Standard
Information and Documentation —
Digital Object Identifier System

ICS 01.140.20

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NATIONAL FOREWORD

(Formal clauses to be added later on)

The text of the International Standard has been approved as suitable for publication as an Indian Standard without deviations. Certain conventions are, however, not identical to those used in Indian Standards. Attention is particularly drawn to the following:

- a) Wherever the words 'International Standard' appear referring to this standard, they should be read as 'Indian Standard'.

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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*. Mountain View, California: Unicode Consortium. Latest edition available at: [https:// www .unicode .org/ versions/ latest/](https://www.unicode.org/versions/latest/)

Annexes A, B and C are for normative and D is informative only.

Note: The technical content of the document is not available on website. For details, please refer the corresponding ISO 26324: 2022 or kindly contact:

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Scope

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

This document 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 document 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 or the DOI syntax or both.

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

Introduction

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

DOI is an initialism for “digital object identifier”, meaning a “digital identifier of an object” rather than an “identifier of a digital object”. In this document, the term “digital object identifier” refers to the system defined in this document, 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 offers a useful set of functionalities, including:

- persistence, if material is moved, rearranged, or bookmarked,
- interoperability with other data from other sources,
- extensibility by adding new features and services through management of groups of DOI names,
- single management of data for multiple output formats (platform independence),
- class management of applications and services, and
- dynamic updating of metadata, applications and services.

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.