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**Information technology — Metadata  
registries (MDR) —**

**Part 2:  
Classification**

*Technologies de l'information — Registres de métadonnées (RM) —*

*Partie 2: Classification*

*iTech Standards*  
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ISO/IEC TR 11179-2:2019

<https://standards.iteh.ai/catalog/standards/iso/1ddd4305-75f0-44e2-8848-b0a5812503f6/iso-iec-tr-11179-2-2019>



Reference number  
ISO/IEC TR 11179-2:2019(E)

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Published in Switzerland

# Contents

Page

<b>Foreword</b> .....	<b>iv</b>
<b>Introduction</b> .....	<b>v</b>
<b>1 Scope</b> .....	<b>1</b>
<b>2 Normative references</b> .....	<b>1</b>
<b>3 Terms and definitions</b> .....	<b>1</b>
<b>4 Meaning of classification</b> .....	<b>2</b>
<b>5 Benefits of classification scheme</b> .....	<b>3</b>
<b>6 Type of classification scheme</b> .....	<b>3</b>
<b>7 Requirements for good classification scheme</b> .....	<b>6</b>
<b>Annex A (informative) Usages of classification in an ISO/IEC 11179 metadata registry</b> .....	<b>7</b>
<b>Bibliography</b> .....	<b>9</b>

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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 32, *Data management and interchange*.

A list of all parts in the ISO/IEC 11179 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html).

## Introduction

This document focuses on the part of the metadata registry (MDR) model called the *classification region* (see ISO/IEC 11179-3:2013, 9.2). The classification region permits the registration and administration of all or part of a *classification scheme*. A classification scheme can be used to classify a *Classifiable Item* (see ISO/IEC 11179-3:2013, 9.2.2.1), which is a type that can be applied to any metadata item in a metadata registry.

There are many efforts underway to devise classification schemes and to use the schemes to build and populate classification structures for organizing information resources. Classification schemes can be used to discover information pertaining to topics of interest. For the purpose of this document, the following are all considered types of classification schemes of varying discriminatory power: tags, keywords, lists of categories, hierarchies, thesauri, taxonomies and ontologies. These classification schemes have potentially great utility for organizing objects in an MDR.

When applied to classifiable items in an MDR, the classification schemes covered in this document have utility for:

- deriving and formulating other administered items;
- ensuring appropriate attribute and attribute-value inheritance;
- deriving names from a controlled vocabulary;
- disambiguating;
- recognizing superordinate, coordinate and subordinate concepts;
- recognizing relationships among items;
- deriving or clarifying the meaning of items associated with the classified items;
- assisting in the development of modularly designed names and definitions.

Each type of classification scheme mentioned above has particular strengths and weaknesses, and provides the foundation upon which particular capabilities can be built. Tags and keywords, for example, are a quick way to provide users some assistance in locating potentially useful classifiable items. A thesaurus provides a more structured approach, arranging descriptive terms in a structure of broader, narrower and related classification categories. A taxonomy provides a classification structure that adds the power of inheritance of meaning from generalized taxa to specialized taxa. Ontologies, with associated epistemologies, can provide rich, rigorously defined structures (e.g. directed acyclic graphs with multiple inheritance) that can convey information needed by software, such as intelligent agents and mediators that are useful in the provision of intelligent information services. When classification systems are used to classify data elements, or value domains, it makes it easier for end users to interpret the data that is associated with the data elements or value domains.

An example of a classification scheme that uses external standards or controlled vocabulary in registering to a metadata registry is provided in [Annex A](#).

