INTERNATIONAL STANDARD

ISO 23527

First edition
2022-12

Information and documentation — Research activity identifier (RAiD)

Information et documentation — Identificateur d'activité de recherche (RAiD)

Reference number
ISO 23527:2022(E)

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

Contents

Page

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.

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 ISO documents 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).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

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.

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

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.

Introduction

The research activity identifier (RAiD) is a persistent identifier for research projects and supports data management across all phases of research by placing the research activity (or project) at the centre of research workflows, creating a chain of provenance, improving discovery and access, and ensuring that output is attributable and reportable.

It also supports the F.A.I.R Principles[8] of making research data findable, accessible, interoperable, and re-usable.

A RAiD name is associated with a RAiD metadata record.

The RAiD metadata record holds metadata including standard identifiers that relate to research entities or objects encountered by or related to the activity. This includes participant institutions (by use of ISNI, GRID or ROR) and researchers (ORCID ID, ISNI or other identifier).

Information and documentation — Research activity identifier (RAiD)

1 Scope

This document defines the use and structure of the Research Activity Identifier (RAiD) system. The RAiD system includes a registry which supports the identification of research projects, i.e. projects managed in a scholarly or industrial environment which are expected to lead to specified outputs.

It also specifies the RAiD metadata record which holds key metadata relating to the identified project and indicates relationships to other entities and their persistent identifiers and metadata.

RAiD is an identifier for research projects and sub projects or tasks within such projects. It is not itself an identifier for any individual, group or institution, it is not a repository for project documentation or deliverables, nor is it a repository, platform or storage method. It does not apply to research outputs.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

3.1
Open Research and Contributor Identifier
ORCID
non-proprietary alphanumeric numbering system designed not to collide with the *ISNI* (3.2) number system and hosted by the ORCID organization, aiming to provide a unique number to scientific and other academic authors so as to uniquely identify such authors' contributions to research

Note 1 to entry: ORCID is managed by ORCID, INC which maintains a webpage at https://orcid.org/.

3.2
ISNI
international standard code data identifying the public identity of parties (a person or an organization) across multiple fields of creative activity

Note 1 to entry: ISNI is specified in ISO 27729.

Note 2 to entry: The name and contact information of the ISO 27729 Registration Authority can be found at https://www.iso.org/mara.

[SOURCE: ISO 5127:2017, modified – Note 2 to entry has been added and emphasis and terminology cross references were removed.]

3.3
grant
money or in kind assistance provided by a *research funding organization* (3.13) to allow *research* (3.10) to take place

3.4
Global Research Identifier Database
GRID
open, persistent *identifier* (3.15) for research organizations

Note 1 to entry: GRID was managed by Digital Science and Research Solutions Ltd which maintains a webpage at https://www.grid.ac/.

Note 2 to entry: GRID has been absorbed into ROR. Identifiers are included in the ROR system even if GRID is deprecated.

3.5
DOI name
string that specifies a unique object within the *DOI system* (3.7)

Note 1 to entry: Names consist of characters in a sequence specified by the *DOI syntax* (3.6).

Note 2 to entry: The terms "identifier" and "number" are sometimes but not always used in the same sense and are to be avoided where ambiguity can arise. The unqualified use of "DOI" alone can also be ambiguous. Therefore "DOI" is always used in conjunction with a specified noun [e.g. DOI name, DOI System] unless the meaning is sufficiently clear from an earlier mention or the specific context.

Note 3 to entry: A DOI name is specified in ISO 26324. The name and contact information of the ISO 26324 Registration Authority can be found at https://www.iso.org/mara.

[SOURCE: ISO 26324:2012, 3.4, modified — Note 3 to entry has been added.]

3.6
DOI syntax

rules for the form and sequence of characters comprising any *DOI name* (3.5) specifically the form and character of a prefix element, separator or suffix element

[SOURCE: ISO 26324:2012, 3.5]

3.7
DOI system
social and technical infrastructure for the assignment and administration of *DOI names* (3.5) as *identifiers* (3.15) in computer-readable form through assignment, resolution, referent description, administration, etc.

[SOURCE: ISO 26324:2012, 3.6]

3.8
Research Organization Registry
ROR
open, persistent *identifier* (3.15) for *research organizations* (3.12)

Note 1 to entry: The Research Organization Registry is managed by a group of cooperating organisations which maintain a webpage at https://ror.org.

3.9
research activity
identifiable package of work involving organized, systematic investigation

Note 1 to entry: A research activity is often described as a project but may be a program of smaller, subsidiary projects or a single task within a larger project.

3.10
research
organized, systematic investigation

3.11
researcher
person involved in *research* (3.10)

3.12
research organization
organization where *research* (3.10) occurs

3.13
research funding organization
body that supplied monetary or in-kind support for *research activities* (3.9) to occur

3.14
research output
digital, physical or performative outcomes of the *research activity* (3.9)

Note 1 to entry: *Research output* (3.14) includes publications (digital and paper), data sets, works of art and non-traditional research outputs such as performances.

3.15
identifier
data string or pointer that establishes the identity of an item, organization or person alone or in combination with other elements

[SOURCE: ISO 5127:2017, modified – removed cross references.]

3.16
RAiD register
database, or similar, of the RAiD names and metadata record contents

3.17
international Geo Sample Number
IGSN
open, persistent *identifier* (3.15) for physical objects

Note 1 to entry: IGSN maintain a webpage at https://www.igsn.org/.

3.18
handle
distributed information system designed to provide an efficient, extensible, and secured global name service for use on networks such as the Internet

[SOURCE: IETF RFC 3650]

4 RAiD components

RAiD names are case-insensitive.

A RAiD name shall be a unique string of alphanumeric characters according to a syntax specified by the Registration Authority following the general format:

<prefix_part>/<suffix_part>

The prefix part is taken from a list maintained and authorized by the Registration Authority. The combination of the prefix part and suffix part shall be managed to be unique to each identified research activity. RAiD names are registered (and assigned if appropriate) by the Registration Authority on request.

A RAiD metadata record is a manifest containing the name by which the activity is known along with structured metadata describing entities associated with a research activity, as specified by the Registration Authority and relating it to the identifiers for the entities. It is stored in the RAiD register.

The metadata may optionally include the relevant names and standard identifiers for entities associated with the research activity.

Each of the elements has a zero to many cardinalities. It is not intended that there be artificial limits on the data stored in a RAiD metadata record if it is useful to users.

At least the elements in Table 1 shall be accommodated.

Table 1 — Elements for the RAiD metadata record

Related entity	Identifiers
Activity name	(string)
Research organization	ISNI, GRID, ROR, other
Research contributor	ORCID, email address, ISNI
Instrument	DOI, other
Stored data	DOI, handle, other
Physical specimen	IGSN, other
Journal articles, pre-prints, conference papers	DOI, other
Research grant	Grant identifier
Funding organization	Organisational identifier
Projects	RAiD
Other	Local identifiers

The Registration Authority shall specify the minimum initial metadata and recommend the richer metadata for a maturing research activity that should appear in the RAiD metadata record.

5 Assignment of a RAiD

The Registration Authority shall, on application, assign or register a RAiD number in accordance with the principles in Annex A to a research activity when appropriate metadata are submitted.

The RAiD name shall be unique to a particular activity, and it shall be managed to be persistent over the expected relevance of that activity.

The Registration Authority shall from time to time publish technical information to enable RAiD system users to request the assignment of a RAiD by the Registration Authority.

6 RAiD register

A register of RAiD names and their associated RAiD metadata records shall be maintained by the Registration Authority. This will be an official registration database managed by the Registration Authority containing all RAiD identifiers and associated metadata records for those RAiDs that have been assigned to date.

The Registration Authority shall publish technical information to allow RAiD system users to query this register and retrieve RAiD names and RAiD metadata records.