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Information and documentation — International standard link identifier (ISLI)

Information et documentation — Identification de connexion standard international (ISLI)

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ISO copyright office
Ch. de Blandonnet 8 • CP 401
CH-1214 Vernier, Geneva, Switzerland
Tel. +41 22 749 01 11
Fax +41 22 749 09 47
copyright@iso.org
www.iso.org

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Foreword

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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).

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 46, *Information and documentation*, Subcommittee SC 9, *Identification and description*.

Introduction

Developments in technology have already provided a reliable foundation to set up links between resources, whether these are stored in digital or traditional form. The developments have, in particular, reinforced the ability to link resources of different types. This allows users to experience rich media content, such as audio files or video files, more easily. Further, they not only provide traditional users with enriched information, but also improve accessibility of textual material to individuals who are visually impaired and extend the capabilities of educational materials.

Technologies providing such capabilities have typically been hardware dependent or enclosed within a particular ecosystem. To provide improved interoperability and better access to these technologies and services, the International Standard Link Identifier (ISLI) defines connections between these resources. The approach taken in this International Standard comes from experience in several different projects, but it allows a general way of identifying links which enables new applications in more fields, such as multimedia. The link built by ISLI makes resources more readily available, and thus creates more value through their use.

Information and documentation — International standard link identifier (ISLI)

1 Scope

This International Standard specifies an identifier of links between entities (or their names) in the field of information and documentation. These entities can be documents, media resources, people, or more abstract items such as times or places.

The ISLI system identifies links between entities that are related to each other so that, for instance, they can be rendered jointly. It does this by registering each link identifier with information (metadata) that specifies the link. The ISLI does not change the content, ownership, right of access, or existing identification of these entities.

This International Standard does not specify the technology used to represent the identifier or realize the link. It enables applications to be built which use the interoperable ISLI system for the identification of links.

2 Terms and definitions

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

2.1
entity
something capable of being uniquely identified

Note 1 to entry: Entities include material objects, electronic representations of content, abstract items (such as times, places), parties (human and corporate), as well as anything else that can be identified uniquely.

Note 2 to entry: A defined fragment of an entity is itself an entity.

2.2
ISLI code
International Standard Link Identifier assigned in accordance with the specifications of this International Standard

2.3
link
directed relationship between two *entities* (2.1) in the field of information and documentation

2.4
name
string of characters that identifies an *entity* (2.1), possibly (but not necessarily) in the form of an identifier specified in an International Standard

2.5
registrant
party requesting the assignment of an *ISLI code* (2.2) to a *link* (2.3)

2.6
service
class of *links* (2.3) with a common application between typed *sources* (2.7) and typed *targets* (2.8)

2.7
source
entity (2.1) which is the origin of a *link* (2.3)

2.8
target
entity (2.1) which is the destination of a *link* (2.3)

3 Link model of ISLI

An ISLI code specifies the link between a source and a target as shown in Figure 1.

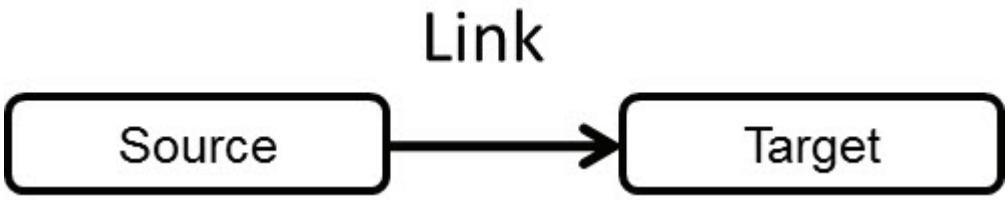

Figure 1 — Link model of ISLI

4 Structure and syntax of ISLI

An ISLI code, as shown in Table 1, comprises decimal digits in three fields, which includes

— service field,

— link field, and

— check digit field.

Table 1 — ISLI structure

Service field	Link field	Check digit field
six digits (see 4.1)	variable length (see 4.2)	one digit (see 4.3)

4.1 Service field

The service field contains the service code, which is allocated by the registration authority.

The service code comprises six decimal digits.

4.2 Link field

The link field contains the link code, which defines the link between the source and the target. It is assigned by the registration authority. The link code comprises decimal digits and its length is defined for each service by the registration authority.

4.3 Check digit field

The check digit provides protection against errors.

The check digit field contains a single decimal digit calculated from the contents of the service field and link field in accordance with Annex D.

4.4 ISLI representation for human reading

ISLI is a code intended for machine reading. When an ISLI code needs to be shown on a screen or printed, the hyphen symbol "-" should be added to separate the fields and "ISLI" should be inserted before the numeric code. The symbol "-" and "ISLI" do not form part of the identifier.

EXAMPLE ISLI 116063-4520086293791473426443001-9

5 Principles for allocation of ISLI

5.1 Allocation of ISLI service codes

5.1.1 An ISLI service code shall be allocated to a service by the registration authority if an application meets the criteria that the registration authority shall publish.

5.1.2 An ISLI service code shall be allocated to one service and each service shall be allocated only one ISLI service code.

5.1.3 An ISLI service code shall be permanently allocated to a given service and shall never be altered, replaced, or reused, although it may be withdrawn from use for new assignments of ISLI codes.

5.1.4 Details on the allocation of ISLI service codes are contained in A.1.

5.2 Assignment of ISLI codes

5.2.1 An ISLI code shall be assigned by the registration authority on receipt of an application for a code to be associated with a particular service.

5.2.2 An ISLI code shall not be assigned unless the registrant wishes to designate that the relevant source and target are to be linked within the requested service.

5.2.3 Within a service, each ISLI code shall be assigned to only one link from a given source to a given target, and each such link shall be assigned only one ISLI code.

NOTE Provided two ISLI codes are assigned in different services, they can refer to the same sources and targets.

5.2.4 The ISLI shall identify a link rather than a single entity.

5.2.5 An ISLI code may be assigned to a link where the source and/or the target is an entity whose content changes over time, such as a webpage.

5.2.6 A link from entity A to entity B shall have a different ISLI code than a link from entity B to entity A.

5.2.7 An ISLI code shall be permanently assigned to a given link and shall never be altered, replaced, or reused, although it may be cancelled and marked as cancelled in the register of the registration authority.

NOTE Cancellation can be required if the ISLI code was assigned in error or has become out of date.

5.2.8 In identifying sources and targets, the use of identifiers specified in ISO standards shall be preferred.

5.2.9 Details on the assignment of ISLI codes are contained in A.2.

6 Metadata

6.1 ISLI metadata

Each ISLI code shall be associated with ISLI metadata as defined in Annex B. The ISLI code and ISLI metadata shall be included in a register operated by the registration authority.

6.2 Service metadata

Each service code shall be associated with metadata as defined in Annex B. The service code and its metadata shall be included in a register operated by the ISLI registration authority.

7 Administration of the ISLI system

The ISLI system shall be administered by the registration authority of this International Standard, hereafter referred to as the ISLI registration authority.

The responsibilities of the ISLI registration authority are contained in Annex C.

Annex A
(normative)

Allocation of service codes and assignment of ISLI codes

A.1 Allocation of service codes

A.1.1 The registration authority shall allocate a service code to a service if an application for such an allocation meets the criteria for the allocation of such a code which it has published.

A.1.2 When a service code is allocated, the registration authority shall provide the kernel metadata in Table B.3.

A.1.3 When the registration authority allocates a service code, it shall specify which of the metadata elements are to be made public through the resolution and query services operated in accordance with C.1.

A.1.4 The registration authority may withdraw a service code from use with future ISLI assignments.

A.1.5 The registration authority shall not allocate service codes which start with the digit "9" to allow for extension of the length of the service field in a future edition of this International Standard.

A.2 Assignment of ISLI codes

A.2.1 The registration authority shall assign an ISLI code by combining the service code, an assigned link code, and a check digit calculated according to Annex D.

A.2.2 The assigned link code shall be unique within the service.

A.2.3 The registration authority shall enter the assigned ISLI code, together with the metadata specified in Clause 6, into the register it shall operate for the purpose.