INTERNATIONAL STANDARD

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Health informatics — Health cards — Numbering system and registration procedure for issuer identifiers

Informatique de santé — Cartes de santé — Système de numérotation et mode opératoire d'enregistrement pour les identificateurs d'émetteur

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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 20302 was prepared by Technical Committee ISO/TC 215, *Health informatics*.

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Introduction

This International Standard describes a numbering system and registration procedure for issue identifiers of machine-readable cards used in the field of healthcare.

The purpose of using machine-readable cards in the field of healthcare is to improve the quality of the health service and increase the efficient use of healthcare resources in the field. The primary consideration in creating this International Standard has been to improve patient service and patient safety, as well as improve the practical use of healthcare data cards in clinical fields.

The main policy of this International Standard is as follows.

1) ISO/TC215 has agreed to exempt the following items from standardization efforts:

 — standardizing the clinical practice of medicine and

 — defining a standardized healthcare delivery service structure.

In past years healthcare data cards have been used to exchange healthcare data by placing necessary and appropriate information on the surface of the cards in order to implement the health service of each country. However, as people now move more frequently across borders, healthcare data cards issued in one country or area are increasingly being used in another, and with this consideration in mind this International Standard has been designed to apply to healthcare data cards that will be used internationally.

2) This International Standard is applicable to healthcare data cards used for healthcare services provided by the card issuer. Not only ISO/TC 215, but also ISO/IEC JTC1/SC17 should discuss the standardization of the characteristics and operation of other cards, which are not covered by this International Standard.

3) This International Standard is designed to accept relevant technologies and recording techniques for healthcare data cards.

The data elements and data structures in healthcare data cards are under consideration within ISO/TC 215/WG 5.

Health informatics — Health cards — Numbering system and registration procedure for issuer identifiers

1 Scope

This International Standard is designed to confirm, via a numbering system and registration procedure, the identities of both the healthcare application provider and the health card holder in order that information may be exchanged by using cards issued for healthcare service.

This International Standard focuses on the machine-readable cards of ID-1 type defined in ISO/IEC 7810 that are issued for healthcare services provided in a service area that crosses the national borders of two or more countries/areas.

This International Standard applies to healthcare data cards where the issuer and the application provider are the same party.

This International Standard applies directly, or refers, to existing ISO standards for physical characteristics and recording techniques. Security issues follow the requirements of each healthcare data card system.

In addition, this International Standard regulates the visual information written on the healthcare data card.

2 Normative references

The following referenced documents are 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.

ISO 3166-1:1997, *Codes for the representation of names of countries and their subdivisions — Part 1: Country codes*

ISO/IEC 7810:2003, *Identification cards — Physical characteristics*

ISO/IEC 7812-1:2000 + Cor 1:2001, *Identification cards — Identification of issuers — Part 1: Numbering system*

ISO/IEC 7812-2:2000, *Identification cards — Identification of issuers — Part 2: Application and registration procedures*

ISO/IEC 7816-4:2005, *Identification cards — Integrated circuit cards — Part 4: Organization, security and commands for interchange*

ISO/IEC 7816-5:2004, *Identification cards — Integrated circuit cards — Part 5: Registration of application providers*

3 Terms and definitions

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

3.1
card issuer
entity that records the information to activate the card and registers and distributes it to the healthcard holder

EXAMPLE   A hospital could be a card issuer of cards for handling appointments for medical treatment or for accessing medical records. A health funding agency could be a card issuer of cards for health funding.

3.2
healthcare application provider
entity that provides healthcare services to the healthcard holder and in doing so, makes use of the card and records the healthcare application information on to the card

EXAMPLE   A hospital could be a healthcare application provider by handling appointments for medical treatment or by providing access control to medical records. A health funding agency could be a healthcare application provider by issuing cards for health funding. A health funding agency could also be a healthcare application provider by certifying the health funding status of the healthcard holder.

NOTE   If the card contains an application for medical appointments, while a hospital could be an application provider as it provides appointment services to the patients, it could also be a user of the card if the card contains an application for health funding services, as the hospital may get reimbursed from the health funding agency.

3.3
healthcare data card
machine-readable card conformant to ISO 7810 intended for use within the healthcare domain

[ISO 21549-1:2004, definition 3.2]

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4 Abbreviations

AID   Application identifier

BCD   Binary Coded Decimal

IIN   Issuer Identification Number

MII   Major industry identifier for health care

OID   Object identifier

RID   Registered application provider identifier

# 5 Identifiers of the healthcare application providers

5.1 General

The identifier of the healthcare application provider may be determined from one of the following numbering systems:

a) IIN numbering system as defined in ISO/IEC 7812-1, if the card issuer is the healthcare application provider;

b) RID numbering system as defined in ISO/IEC 7816-4 as part of an application identifier, AID, if the healthcare data card is an IC card;

c) identification information such as number, sign, character strings, etc. according to the standard defined by card issuers, healthcare application providers, etc. and understood in the service area across national borders.

5.2 Structure of IIN

IIN is the number that identifies the major industry and the card issuer. The first two digits in IIN begin with "80" in the healthcare sector, followed by the three-digit country code in accordance with ISO/IEC 3166-1. The following variable length digits up to 12 identify the card issuer. Figure 1 shows the composition of the INN on healthcare data cards (see ISO/IEC 7812-1).

Information on the registration procedure of IIN shall refer to ISO/IEC 7812-2.

Key
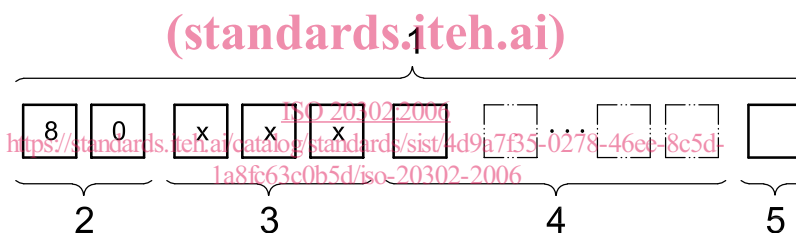
1 IIN
2 MII – two digits
3 country code – three digits
4 issuer identifier – variable length (maximum 12 digits)
5 check digit

Figure 1 — Structure of the IIN

5.3 Structures of RID

RID as part of an AID is used to uniquely identify the application provider of a specific application in an IC card (see ISO/IEC 7816-4).

Information on the registration procedure of RID shall refer to ISO/IEC 7816-5.

Annex A
(normative)

Structure of RID

RID consists of the following five byte fields.

— The first four bits, bits 8 to 5 of the first byte, indicate the registration category. "0" to "9" are reserved for backward compatibility with ISO/IEC 7812-1. "A", "D" and "E" indicate the international registration, the national registration and identification of a standard, respectively, by an object identifier in accordance with ISO/IEC 8825-1.

— If the registration category is "A", the subsequent fields are as follows:

— registered application provider number, 36bits as 9 BCD digits.

— If the registration category is "D", the subsequent fields are as follows:

— country code of the national registration authority, 12 bits as 3 BCD digits coded in accordance with ISO 3166-1, numeric part only;

— field(s) specified by the national authority, 24 bits, BCD coding recommended.

— If the registration category is "E", the successive fields are as follows:

— range indicator "8" followed by an object identifier.

NOTE   The category "E" is used for applications defined by a standards committee. Structures of RID are shown in Figure A.1.
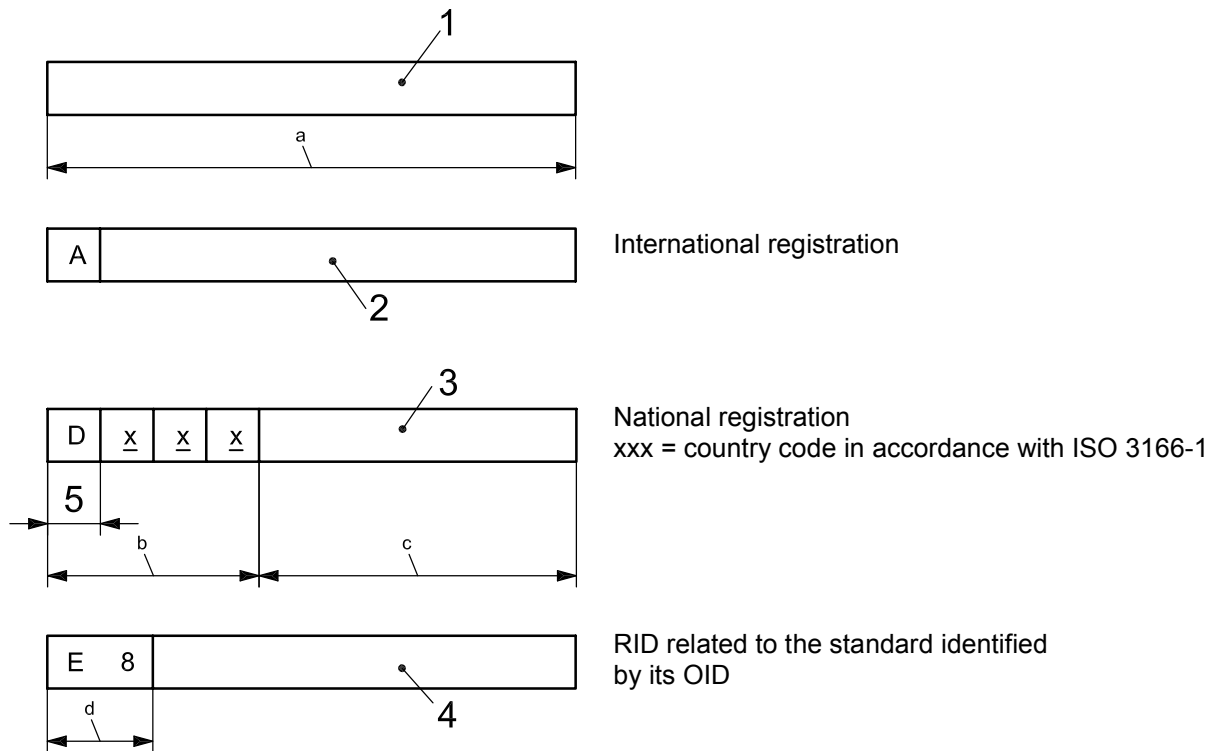
Key
1   registered application provider identifier (RID)
2   registered application provider number (9 BCD digits)
3   specified by the national authority (24 bits)
4   object identifier
5   registration category

^a   5 bytes.
^b   2 bytes.
^c   3 bytes.
^d   1 byte.

Figure A.1 — Structures of RID