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Health Informatics — Health Cards — Numbering system and registration procedure for issuer identifiers

Informatique de santé — Soins des santé — Système de numérotation et procédure 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.

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ISO 20302 was prepared by Technical Committee ISO/TC 215, *Health informatics*, Working Group WG5, *Health Cards*.

Introduction

ISO TC215 is proceeding to regulate and standardize data exchange in the medical-health field. This standard describes general characteristics of machine-readable cards in this sector.

The usage of machine-readable cards in the healthcare field aims to improve the quality of medical treatment and/or material effectiveness. However, in recent years medical information is being exchanged across the local area to the international level in order to provide and expand the services. Therefore, the main purpose of this draft international standard is to set common minimal regulations supported by the technical facts in the use of this card. And the main consideration of this draft international standard is to improve patient service and patient safety, as well as practical use of healthcare cards in clinical fields.

The main policy of this draft international standard is below.

(1) In ISO TC215, items below are agreed for exception in order to standardize.

- Standardizing the clinical practice of medicine
- Define a standardized healthcare delivery service structure

Each healthcare card should show and describe precise information, data, and services based on each country's medical policy. If the description of visual information would be restricted on the healthcare card, there would be discrepancies due to difference of each country's medical circumstances.

Therefore, this draft International standard was structured for cards designed in a situation where they could be used internationally.

(2) This draft international standard is based on the case that the card is issued for only the healthcare service provided by the card issuer itself. If it doesn't follow the above case, not only TC215, but also ISO/IEC JTC1/SC17 discusses standards. The items that should be discussed are not only the standards themselves, but how to farther the scope of standards and how they should be operated.

(3) This draft international standard is designed to accept several technologies when the card was being used.

(4) This draft international standard has adopted, for describing the card issuer, the identifiers defined by ISO/IEC 7812-1 and/or 7816-5, and the identifiers defined by card issuers and/or healthcare application providers.

Moreover, the usage method of documented data and data structures are considered and discussed for other standards separately in ISO/TC215.

Users can select from the technologies described in this standard to organize and store healthcare data in the card and to meet the security needs and functions of the card system.

Health Informatics — Health Cards — Numbering system and registration procedure for issuer identifiers

1 Scope

This Draft International Standard specifies identification assigned to Healthcare application provider using the card, which is issued for healthcare, and healthcare coverage.

This Draft International Standard focuses on the machine-readable card of ID-1 type defined in ISO/IEC 7810 that are issued for the healthcare service provided in the service area across national borders of two or more countries. This Draft International Standard specifies the healthcare service provider where issuer and application provider are the same party.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this **Draft International Standard**. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this **Draft International Standard** are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 3166:	Codes for the representation of names of countries
ISO/IEC 7810	Identification cards - Physical characteristics
ISO/IEC 7811 (all parts)	Identification cards - Recording technique
ISO/IEC 7812 (all parts)	Identification cards - Identifier of Card Issuer
ISO/IEC 7816 (parts 1-6)	Identification cards - Integrated circuit(s) with contacts
ISO 3166:	Codes for the representation of names of countries
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ISO/IEC 7812 (all parts)	Identification cards – Identifier of Card Issuer
ISO/IEC 7816 (parts 1-6)	Identification cards - Integrated circuit(s) with contacts
ISO/CD 20301	Health Informatics — Health Cards — General Characteristics

3 Terms and definitions

For the purposes of this Draft International Standard, the following terms and definitions apply.

3.1 Healthcare card

The card that is carried by an individual. This card would contain administrative data and/or service information for healthcare services, and all or partial information would be read mechanically.

3.2 Card Issuer

A provider who designs the specification, arranges cards, and supplies cards to healthcare application providers or cardholders. A hospital is to handle appointments for medical treatment and access control for medical records, (and a medical insurance company is to issue health insurance certification).

3.3 Healthcare application provider

The provider who regulates the information for the healthcare service. The provider or the card issuer enters the information into the cards. Then the provider provides its healthcare service to the cardholder using the cards. A hospital is to handle appointments for medical treatment and access control for medical records, (and a medical insurance company is to issue health insurance certification).

NOTE There can be a USER besides the parties above. For example, hospitals are users in the case of the health insurance service.

The health insurance supplies the healthcare service itself, the hospital (user) confirms the certification, provides the patient (cardholder) with medical treatment, sends the information read from the patient's card to the insurance company (healthcare application provider) and claims the benefits.

The health insurance supplies the medical cost; the hospital (user) confirms the certification and provides the patient (cardholder) with medical treatment. The patient pays the fee to the hospital and claims the benefits from the insurance company (healthcare application provider).

4 Abbreviations

IC	Integrated circuit
PAN	Primary account number
IIN	Industrial identification number
RID	Registered application provider identifier
BCD	Binary coded decimal

5 Numbering system for Healthcare Providers

5.1 General

The healthcare application provider in the healthcare card should be identified relevantly to a unique healthcare service provider.

One of following three rules applies to the numbering system for the healthcare providers.

- i) Use the IIN that is registered according to ISO/IEC 7812-2 as the identifier of card issuer when the application provider matches the card issuer.
- ii) Use the RID that is registered according to ISO/IEC 7816-5 as the identifier of the application provider when the healthcare card is an IC card.
- iii) Use the 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 Numbering and registration of IIN

If IIN is used as the numbering system for the healthcare application provider, this should be numbered according to ISO/IEC 7812-1 and ISO/IEC 7812-2.

IIN is the number that identifies the major industry and the card issuer and that forms the first part of the Primary Account Number (PAN). When IIN is used in the healthcare sector, IIN begins with '80'. The following 3 digits is the three digits country code in accordance with ISO/IEC3166. The following digits identify the card issuer. The maximum digit numbers of the card issuer are 13 including the following customer account number (figure 5.1). The individual national registration authorities manage the IINs for the healthcare sector. Enquiries for details of national healthcare registration authorities may be made to the ISO/IEC 7812 Registration Authority.

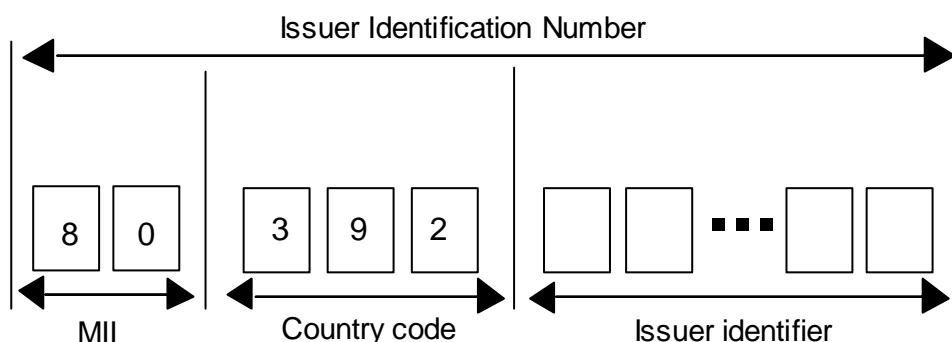


Figure 1 — Composition of the IIN on health care sector

Some information of registration procedure of IIN and the related information are shown in Annex A.

5.3 Numbering and registration of RID

If RID is used as the numbering system for the application provider it should be according to ISO/IEC 7816-5. RID is mainly used to identify the application provider for IC card. RID consists of following 5 bytes fields.

- Registration category : the first 4 bits '0' to '9' follows as defined in ISO/IEC7812-1, 'A' means the international registration, and 'D' means the national registration.
- If the registration category is 'A', the successive fields are as follows;
 - Registered application provider number, 36bits as 9 BCD digits
- If the registration category is 'D', the successive fields are as follows;
 - Country code of the national registration authority : 12 bits as 3 BCD digits coded according to ISO/3166, numeric part only
 - Field(s) specified by the national authority : 24 bits, BCD coding recommended

Definition of RID are shown in figure 5.2

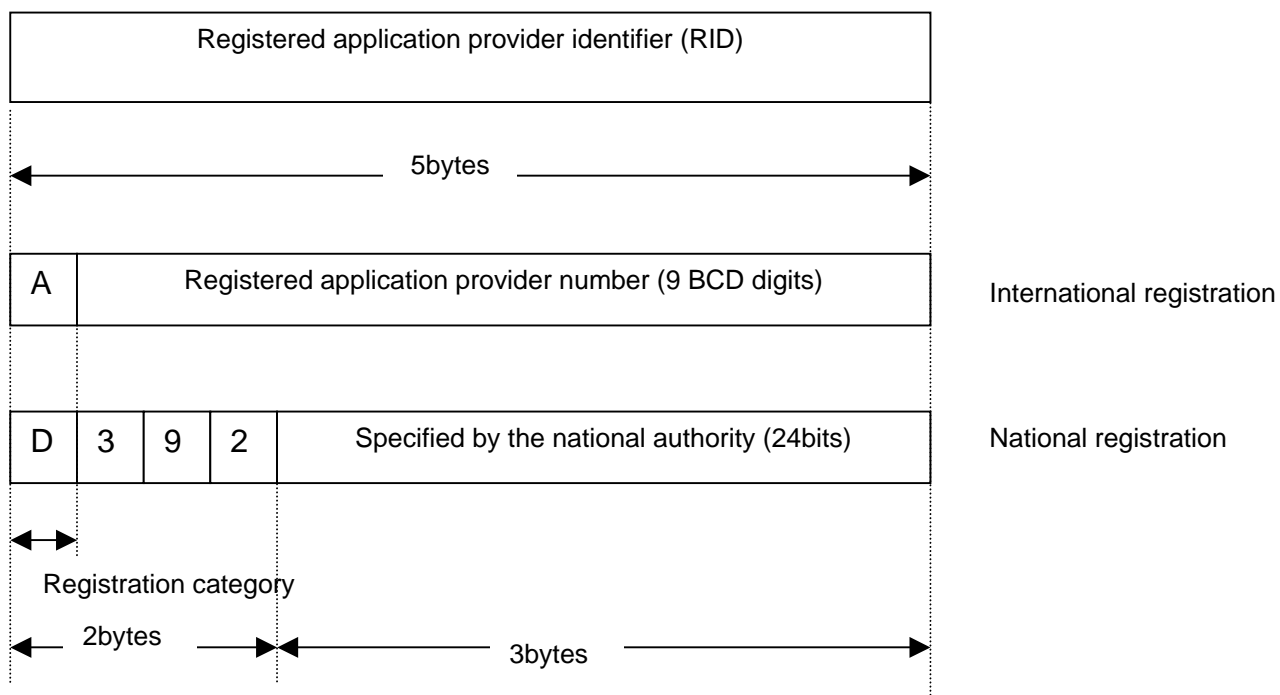


Figure 2 — Definitions of RID

Annex A (informative)

Examples of the registration procedure of IIN, the guidance and the issuing diagram

An example of the registration procedures of IIN for application providers can be found in the Chapter 6 "Application and registration procedure" of EN 1867.

An example of the guideline for national registration authorities can be found in the Annex C "Guidance for registration authorities at national level" of EN 1867

An example of the diagram of the issuing IINs and appeal procedures can be found in the Annex D "Diagram of the issuing of the health care sector, and appeal procedures" of EN 1867.