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**INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

WS/T 543.3-2017

**Resident health card technical specifications - Part 3:
Application specification of the user card
(English Translation)**

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

WS/T 543 "Technical Specifications for Resident Health Cards" is divided into 6 parts.

--Part 1: General provisions;

- Part 2: Technical Specifications of User Card;
- Part 3: User Card Application Specification;
- Part 4: User card command set;
- Part 5: Terminal technical specifications;
- Part 6: User card and terminal product testing specifications;

This part is part 3 of WS/T 543.

Drafting organizations of this section. National Health and Family Planning Commission Statistical Information Center, Jiangsu Provincial Health and Family Planning Commission Information Center, Hunan Province Health and Family Planning Commission Information Center, Shijiazhuang Municipal Health and Family Planning Commission, Beijing Municipal Public Health Information Center, Peking Association and hospitals.

1 Scope of application

This part of WS/T 543 specifies the files, data items and data object list of the resident health card, and describes the various items of the resident health card.

The operation process clarifies the process of data exchange, information transmission, and data signature and verification in different application scenarios.

This section applies to medical and health institutions, third-party joint card issuers, and manufacturing companies that make, issue, and use resident health cards.

And units and departments such as the development and maintenance of the resident health card application system.

2 Normative references

The following documents are indispensable for the application of this document. For dated reference documents, only the dated version applies to this document.

For undated references, the latest version (including all amendments) applies to this document.

3.1 Terms and definitions

The following terms and definitions defined in WS/T 543.1 and WS/T 543.2 apply to this document.

3.1.1

Application

Application protocol and related data sets between IC card and terminal.

3.1.2

Command

A message sent from the terminal to the IC card, which initiates an operation or requests a response.

3.1.3

Interface device

The part of the terminal where the IC card is inserted, including the mechanical and electrical parts.

3.1.4

Response

After the IC card processes the received command message, it returns the message to the terminal.

4.1 File structure

The document organization structure in this standard follows the relevant requirements of GB/T 16649.4. The document structure defines the various aspects of the resident health card in the medical field.

This is a proprietary application, DDF1 is the application environment for residents' health cards, and DDF2 is other reserved application environments.

From the perspective of the terminal, the file on the IC card is a tree structure. Each branch of the tree is an application data file (ADF) or a directory definition file (DDF). An ADF is the entry point for one or more application elementary files (AEF). An ADF and its related data files are on the same branch of the tree. A DDF is the entry point of other ADFs or DDFs.

4.2 Application Data File (ADF)

From the perspective of the terminal, an ADF is a file that only contains data objects encapsulated in its file control information (FCI). ADF tree the structural requirements are as follows.

- a) Ability to associate data files with applications;
- b) Ensure the independence between applications;
- c) Access to its logical structure can be achieved through application selection.

4.3 Application Basic File (AEF)

In this document, an AEF contains one or more original BER-TLV data objects, or an unstructured pure data element. After choosing After a certain application, AEF makes an inquiry through its file identifier.

4.4 File structure mapping

Use the following mapping to GB/T 16649.4.

- a) A special document (DF) defined in GB/T 16649.4 is mapped to an ADF or a DDF. You can access the basic File and DF. The DF at the highest level in the IC card is called the master file (MF);
- b) An elementary document (EF) defined in GB/T 16649.4 corresponds to an AEF. EF will never be the entry point of another file.

4.5 File references

Depending on the type of file, the file can be referenced by file name. Any ADF or DDF in the IC card can be referenced by its DF name. ADF the DF name corresponds to its AID or AID is the beginning of the DF name. Each DF name in an IC card is unique in the card.

5.1.1 Overall operation process

Including resident health card user card search, power-on initialization, identification of card authenticity, validity period, external authentication read and write permissions, and access Corresponding read and write operations and other services.

- a) The user card is powered on and reset, and the card is located under the MF;
- b) Send the SELECT command to select the application environment DDF1 of the resident health card;
- c) Carry out the internal certification process and conduct internal certification on the card;
- d) Send the SELECT command and select EF05;
- e) Send the READ RECORD command to read the card validity period;
- f) Send the SELECT command to each application file;
- g) Choose whether to perform external authentication according to the read and write control authority of each application file;
- h) Read and write operations on corresponding files;
- i) The process ends.