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

GA/T 1400.4-2017

**Video and image information application system for public
security-Part 4: Interface protocol requirements**

公安视频图像信息应用系统 第4部分：接口协议要求

(English Translation)

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Foreword

The GA/T 1400 Public Security Video and Image Information Application System is divided into four parts.

- Part 1. General technical requirements;
- Part 2. Application Platform Technical Requirements;
- Part 3. Database technical requirements;
- Part 4. Interface protocol requirements.

This section is Part 4 of the GA/T 1400.

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

1 Scope

This section specifies the interface classification and protocol structure, interface function, interface resource description, and interface of the public security video and image information application system.

Technical requirements such as messages, message interaction processes, and message interaction security.

This section applies to the public security video image information application system planning and design, software development and interface protocol compliance testing.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only dated versions apply to this article Pieces. For undated references, the latest version (including all amendments) applies to this document.

GB/T 28181-2016 Technical requirements for information transmission, exchange and control of public safety video surveillance networking systems
GA/T 669.1-2008 Technical Standard for Urban Monitoring and Alarming Networking System Part 1. General Technical Requirements
GA/T 669.7-2008 Urban Monitoring and Alarming Networking System Technical Standards Part 7. Management Platform Technical Requirements
GA/T 1399-2017 Public Security Video Image Analysis System
GA/T 1400.1-2017 Public Security Video and Image Information Application System Part 1. General Technical Requirements
GA/T 1400.2-2017 Public Security Video and Image Information Application System Part 2. Application Platform Technical Requirements
GA/T 1400.3-2017 Public Security Video and Image Information Application System Part 3. Database Technical Requirements
IETF RFC 2045 Multipurpose Internet Mail Extensions (MIME) Part I. Internet Information Format

(Multipurpose Internet Mail Extensions (MIME) Part One: Format of Internet Message Bodies) IETF RFC 2616 Hypertext Transfer Protocol - HTTP/1.1
(Hypertext Transfer Protocol - HTTP/1.1) IETF RFC 2617 HTTP basic authentication and digest authentication (HTTP Authentication: Basic and Digest Access Authentication) IETF RFC 2818 Secure Hypertext Transfer Protocol (HTTP over TLS)

3.1 Terms and Definitions

GB/T 28181-2016, GA/T 669.1-2008, GA/T 669.7-2008, GA/T 1399-2017, GA/T 1400.1-the terms and definitions defined in 2017, GA/T 1400.2-2017 and GA/T 1400.3-2017 apply to this document.

3.2 Abbreviations

GB/T 28181-2016, GA/T 669.1-2008, GA/T 669.7-2008, GA/T 1399-2017, GA/T 1400.1-the abbreviations defined in 2017, GA/T 1400.2-2017 and GA/T 1400.3-2017 apply to this document. In addition, the following abbreviations Applicable to this document.

C. Create

CR. Create and Retrieve CRD. Create, Retrieve, and Delete R. Retrieve RU. Read and Update (Retrieve and Update) RUD. Read, Update, and Delete (Retrieve, Update, and Delete) U. Update

4.1 Interface Classification

4.1.1

The interface of the public security video image information application system (hereinafter referred to as the application system) includes the acquisition interface, data service interface, and level connection.

Interfaces and analysis interfaces, and interactions between various interfaces are shown in Figure 1.

Figure 1 Interface interaction entity diagram

4.1.2

Acquisition interface for public security video image information database (hereinafter referred to as visual gallery) and online video image information acquisition equipment (below Abbreviation acquisition equipment), online video image information acquisition system (hereinafter referred to as acquisition system), public security video image analysis system (hereinafter referred to as points Analyze the interaction of data between systems.

4.1.3

Data service interface for visual library and public security video image information

application platform (hereinafter referred to as application platform), analysis system, and other Interactions between data systems, etc.

4.1.4

Cascaded interfaces are used to visualize the data exchange between the gallery and the visual gallery.

4.1.5

The analysis interface is used to analyze the data interaction between the system and the application platform.

4.2 Protocol Structure

4.2.1

The interface protocol structure shall comply with the provisions of GA/T 1400.1-2017.

4.2.2

All interface interaction information is defined as a resource under the REST architecture and is uniquely identified using a URI. According to GA/T 1400.1-as stipulated in 2017, interface-corresponding resources are organized using a tree-like hierarchical structure.

4.2.3

Interfaces for interactive connections should support HTTP long and short connections, and the implementation mechanism should be consistent with that in IETF RFC2616 Provisions.

4.2.4

The application system interface access form shall comply with A.3 in Appendix A.

4.2.5

The HTTP request header field should be expanded to increase \u003cUser-Identify\u003e The identity of the system user ID that carries the requester is used for Know the requester.

5.1 Common Functions

5.1.1

Should support registration, keep-alive, cancellation, and school hours. When the registration fails, the registration should be delayed after a random time within 300s. registration success After that, no heartbeat is kept in the 90s without interaction. The registration relationship between registration, keepalive, and cancellation and the interface message in Chapter 7 is shown in Table 1.

Table 1 Comparison of Registration, Keepalive, Logout, and Interface Messages

No. Function Correspondence Interface Message Chapter Implementation Method 1 registered 7.2.1, 7.3.1 POST