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

GB/T 29268.3-2012

**Information technology -- Biometric performance testing and
reporting -- Part 3: Modality-specific testing**

信息技术 生物特征识别性能测试和报告 第3部分：模态特定性测试

(English Translation)

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Foreword

GB/T 29268 "Information technology - Biometric performance testing and reporting" is divided into the following seven sections.

- Part 1. Principles and Framework;
- Part 2. Test methods and technology scene evaluation;
- Part 3. Modal specific tests;
- Part 4. Interoperability performance testing;
- Part 5. biometric access control system scene evaluation;
- Part 6. Test methods of performance evaluation;
- Part 7. biometric identification card alignment algorithm testing.

This section GB/T 29268 Part 3.

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

This section uses the translation method identical with the international standard ISO/IEC TR19795-3:2007 "Information technology - Biometric performance Testing and reporting - Part 3. Modal particular test. " Please note that some of the content of this document may involve patents. Release mechanism of the present document does not assume responsibility for the identification of these patents.

This part of the National Information Technology Standardization Technical Committee (SAC/TC28) and focal points.

This section drafted by. China Electronics Standardization Institute, Changchun Hongda Guang Electronics Co., Ltd. and biometric identification technology.

Introduction

In the biometric performance testing and reporting, we need to pay special attention to each of the modal characteristic differences (such as fingerprint, face, iris, etc.).

These differences in the requirements of GB/T 29268.1 "Part 1 Information technology - Biometric performance testing and reporting. principles and framework" Common test methods described.

Since there are many differences between modes, each designated modes need to adopt specific test method and reporting to ensure that biometric technology Art experts and non-professionals can be reasonably accurate testing.

Impact Assessment method involves the following features.

--- User features, including the definition of counterfeiters;

--- Bio-modal limited practical use.

Counterfeiters feature False (2) based on the modal behavior; (1) a variety of biometric data from the same individual. the definition is determined by considering two factors counterfeiters those who try to take, such as voice or signature.

For the same individual, a variety of biometric data can be collected, such as finger (the same individual fingerprint fingers), iris (the same Two individual iris images), for allowing or prohibiting the use of these data as impostor attempts needs clearly defined rules.

Based on the modal behavior for counterfeiters to try false match rate (FMR) or false acceptance rate (FAR) of the test results may Impersonator will be whether (or to what extent) to try to mimic the behavior of authorized users. For example, in the FMR or FAR measured After the test, the impersonator authorized user's signature hand-to describe the test results obtained by merely looking at counterfeiters and the resulting signature and

imitate Test results to be significantly different. For these modes, you need to define the extent of counterfeiting attempts standards.

Modal characteristics of the particular application in general, almost all biometric modality can be used for user authorization and authentication, but some modes can also have a variety of different types Type applications such as face recognition to monitor widely used in various fields. We can expect in a situation with the user, but can not be expected in another situation complex. To this end, according to the test method requires changes in the modal manner in practical applications.

These limitations can be divided into two categories.

--- User-related factors, such as facial expressions, wearing glasses affect the face contour, contact lenses affect the iris;

--- And is not associated with the external environment or system control algorithm factors, such as a human face or voice illumination change in background noise.

These factors affect their biometric performance, and the type and number of different factors in each modality. In test Test and report these modal differences need to be considered. In addition, the robustness of the test should be introduced in order to assess the relevant technology to various environmental factors Sensitivity or robustness, in order to avoid changes in these factors seriously affect the observed performance.

This section describes methods that differences associated with specific modal characteristics. The purpose of this section is that, for a particular student Modal biometric identification, propose and define methods to determine how to design and implement a technical performance test.

Information technology - Biometric performance testing and reporting Part 3. Modal specific tests

1 Scope

This section GB/T 29268 specifies the performance of inter-modal general method described specific differences. The purpose of this section is specific Biometric modality, propose and define ways to achieve a particular technical performance testing.

This section applies to a particular method and modal related. Provisions in biometric performance testing and reporting, we need to take full account of such as fingerprints, face, iris and other differences in characteristics between modes.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references,

the latest edition (including any amendments) applies to this document.

Part 1 GB/T 29268.1-2012 Information technology - Biometric performance testing and reporting. principles and boxes Rack (ISO/IEC 19795-1:2006, IDT)

3 Terms and Definitions

GB/T 29268.1 defined and the following terms and definitions apply to this document.

Factor influencing factors Factors affecting the performance.

Robustness testing robustness test Evaluation of specific factor on the biometric properties affect the degree of testing.

Active forgery attempt Impersonator tried generic biometric sample or intentionally modify their own biometric template stored with other individuals for comparison.

Forge types forgery type the method adopted by counterfeiters forged type.

Forgery rating forgery level Try forgery difficulty level.

4 Abbreviations

ROC receiver operating characteristic (Receiver Operating Characteristic) CMR cumulative match rate (Cumulative Matching Rate)