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

GB/T 44261.1-2024

**Information technology - Use of biometrics in video
surveillance systems - Part 1: System design and specification**

信息技术 生物特征识别技术在视频监控系统中的应用 第1部分：系统设计和规范
(English Translation)

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting.

This document is Part 1 of GB/T 44261 "Application of Information Technology Biometric Recognition Technology in Video Surveillance Systems".

GB/T 44261 has published the following parts.

- Part 1: System design and specifications;
- Part 4: Ground truth and video annotation procedures.

This document is equivalent to ISO/IEC 30137-1:2024 "Application of information technology biometric recognition technology in video surveillance systems" Part 1: System design and specifications.

The following minimal editorial changes were made to this document.

- Terminology 3.4.3 Lux Note;
- Add explanations for symbols such as px.

Introduction

GB/T 44261 "Application of Information Technology Biometric Recognition Technology in Video Surveillance Systems" stipulates the application of biometric recognition technology in video surveillance systems.

How to better use and evaluate biometric recognition technology, including an introduction to the overall architecture, description of testing and reporting, data formats, and true Value and video labeling procedures. GB/T 44261 is intended to consist of 4 parts.

- Part 1: System design and specification. The purpose is to standardize and guide the overall application of biometric recognition technology in video surveillance systems.

It is suitable for the design and use of video surveillance systems with biometric recognition functions.

--- Part 2: Performance testing and reporting. The purpose is to clarify the performance evaluation criteria of biometric recognition technology in video surveillance systems.

The criteria and report content are suitable for evaluating the use of biometric recognition technology in video surveillance systems.

--- Part 3: Data format. The purpose is to standardize the relevant information generated when using biometric recognition technology in video surveillance systems.

The data recording format is suitable for the reuse and exchange of biometric identification related data between different video surveillance systems.

--- Part 4: Ground truth and video annotation procedures. The purpose is to standardize the annotation method of video data and is suitable for analyzing video surveillance systems.

The data collected by the system.

Significant improvements in the performance of automatic face recognition (AFR) technology have enabled many applications, such as using facial images encoded in electronic passports to identify Automatic border control and civil aviation airport video surveillance with identity recognition. In this system, travelers with uniform lighting and optimal posture can be obtained.

The success of first-generation AFR systems has encouraged vendors to consider other applications in less-than-optimal image collection environments where control is more limited.

Low-level identification applications have poor performance and may require more involvement and assistance from trained personnel.

This document provides the architecture, use cases, and system design. Use cases include real-time alerting of the presence of individuals of interest, law enforcement applications (e.g.

Pre-set watch lists (reviewing video footage from one or more cameras), commercial purposes [e.g. identifying individuals for priority service] and after observing its behavior in the video material, add (register) its face to the watch list].

Other scenarios include measuring crowd density and determining the number of individuals crossing a given point. While these are not the focus of this document, they is closely related, so this information is included in Appendix A.

Information Technology Biometrics in Video Surveillance Application in systems Part 1:
System design and specification

1 Scope

GB/T 44261 is applicable to various biometric recognition application scenarios of video surveillance systems (VSS), including real-time monitoring of watch lists.

Operation and post-video data analysis. In general, the biometric recognition mode selected is face recognition, but this document also provides other modes.

provides guidance for models such as gait recognition.

This document specifies the system design and specifications for biometric applications in VSS as follows.

- Defines key terms used in the biometric recognition technical specifications in VSS, including indicators used to define performance;
- Provides guidance on camera type selection, camera placement, image specifications, etc. for biometric recognition applications in VSS;
- Provides guidance for creating a library (or watch list) to match against facial images from VSS, including selecting a sufficiently Appropriate image quality and gallery size relative to performance requirements;
- Proposed a data format for facial images and other related information (including metadata) obtained from video clips.

Information is used to observe list images, or is obtained from operator observations;

- Specifies general principles for supporting VSS operators, including user interfaces and processes, and emphasizes the need for appropriately trained personnel to ensure efficient and effective operations;
- Emphasizes the need to establish robust governance processes to ensure that the security, privacy and personal data protection measures implemented are appropriate for the users.

VSS uses biometric identification technology (such as internationally recognized identifiers) and considers social factors in the deployed systems.

This document also provides information on related identification and detection tasks in VSS, including.

- Estimate crowd density;
- Determine the movement pattern of the individual;
- Identify individuals appearing in multiple cameras;
- Use other biometric modalities, such as gait or iris;