

ISO/IEC 30137-1:2024-03 (E)

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

Contents		Page
Foreword.....		v
Introduction.....		vi
1	Scope	1
2	Normative references	2
3	Terms and definitions	2
	3.1 Terms related to the target subject.....	2
	3.2 Terms related to VSS.....	2
	3.3 Terms related to biometric systems.....	4
	3.4 Terms related to the environment and scenario.....	4
	3.5 Symbols and abbreviated terms.....	5
4	Comparison of terms used in biometric systems with those used in video surveillance	5
5	Architecture	6
6	Use cases	7
	6.1 General.....	7
	6.2 Post-event use cases.....	8
	6.3 Real-time use cases.....	8
	6.4 Enrolment use cases.....	9
7	Specification of hardware and software	9
	7.1 General.....	9
	7.2 Physical environment.....	10
	7.3 Illumination environment.....	10
	7.4 Inducing frontal view.....	10
	7.5 Cameras and supporting infrastructure.....	11
	7.5.1 Selection of cameras.....	11
	7.5.2 Positioning of cameras.....	12
	7.5.3 Infrastructure considerations.....	16
	7.6 Biometric software.....	17
	7.6.1 General.....	17
	7.6.2 Face detection software.....	17
	7.6.3 Face comparison software.....	18
	7.6.4 Algorithm selection and testing.....	18
	7.6.5 Other (non-biometric) software.....	19
	7.7 Computational requirements.....	19
	7.7.1 General.....	19
	7.7.2 Core biometric processes.....	19
	7.7.3 Reducing computational expense.....	20
	7.8 Specification for reference image database.....	21
	7.8.1 General.....	21
	7.8.2 Reference database size.....	21
	7.8.3 Reference image quality.....	21
	7.8.4 Reference database maintenance.....	22
8	Multiple camera operation	22
9	Interfaces to related software	23
10	Guidance for operator assistance	23
11	System design considerations	24

11.1	General.....	24
11.2	Establishing the business requirements.....	24
11.3	Site survey.....	24
11.4	Size and content of the watchlist.....	26
11.5	Performance requirements.....	26
11.5.1	General.....	26
11.5.2	Key metrics of performance.....	26
11.5.3	PAD performance metrics.....	27
11.6	Image data and metadata considerations.....	27
Annex A (informative) Related (non-biometric) video analytic techniques and applications.....		28
Annex B (informative) Societal considerations and governance processes.....		31
Annex C (informative) Case study: The use of AFR with VSS for traveller triaging at the border.....		33
Annex D (informative) Video acquisition measurements.....		35
Bibliography.....		45