ISO/IEC 29794-6:2015-07 (E)

Information technology - Biometric sample quality - Part 6: Iris image data

Contents

Page

Foreword v

Introduction vi

1 Scope 1

2 Conformance 1

3 Normative references 2

4 Termsanddefinitions 2

5 Acronyms and abbreviated terms 3

6 Iris image quality metrics 3
6.1 General 3
6.2 Required iris image quality metrics computed from a single image 4
6.2.1 Usable iris area 4
6.2.2 Iris-sclera contrast 5
6.2.3 Iris-pupil contrast 6
6.2.4 Pupil boundary circularity 7
6.2.5 Grey scale utilisation 8
6.2.6 Iris radius 8
6.2.7 Pupil dilation 9
6.2.8 Iris pupil concentricity 9
6.2.9 Margin adequacy 10
6.2.10 Sharpness 12
6.3 Recommended iris image quality metrics computed from a single image 13
6.3.1 Frontal gaze-elevation 13
6.3.2 Frontal gaze-azimuth 13
6.3.3 Motion blur 15
6.4 Iris image quality metrics computed from two images 15
6.4.1 Common usable iris area 15
6.4.2 Dilation constancy 15
6.4.3 Illumination similarity 16
6.5 Unified (overall) quality score 16
6.5.1 General 16
6.5.2 Computational method 16

7 Iris acquisition quality 17
7.1 General 17
7.2 Dedicated illumination 17
7.2.1 Description 17
7.2.2 Units of measure 17
7.2.3 Computational method 18
7.2.4 Value range/threshold 18
7.3 Modulation transfer function 18
7.3.1 Description 18
7.3.2 Units of measure 18
7.3.3 Computational method 18
7.3.4 Value range/threshold 18
7.4 Spatial sampling rate 18

7.4.1 Description 18
7.4.2 Units of measure 19
7.4.3 Computational method 19
7.4.4 Value range/threshold 19
7.5 Optical distortion 19
7.6 Pixel aspect ratio 19
7.6.1 Description 19
7.6.2 Units of measure 19

7.6.3 Computational method 19
7.6.4 Value range/threshold 19
7.7 Sensor signal-to-noise ratio 19
7.7.1 Description 19
7.7.2 Units of measure 19
7.7.3 Computational method 20
7.7.4 Value range/threshold 20

8 Iris image quality data record 20
8.1 Binary encoding 20
8.2 XML encoding 22

Annex A (normative) Conformance test assertions 24

Annex B (informative) Iris image quality 25

Bibliography 29