

IREX 2008

Iris Exchange Test 2008

Toward Standardized Compact Iris Images

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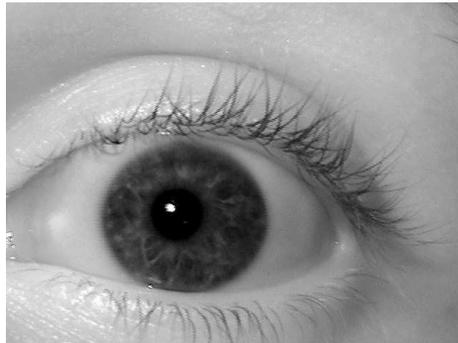
NIST Quality Workshop,
Gaithersburg, MD, November 7, 2007



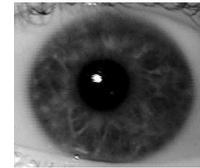
Goals

- § Support ISO/IEC 19794-6 Iris Image Format
 - § As data suitable for identity credentials (PIV Card)
 - § As data for transmission over band limited networks
- § How
 - § Conform ability to produce conformant samples
 - § Test interoperable accuracy
 - § Rectilinear + unsegmented + segmented polar formats
- § And
 - § Establish
 - § Segmentation parameters: inner and outer radii
 - § Limits for compression for JPEG, JPEG 2000, JPEG 2000 ROI
 - § Sampling parameters: radial + circumferential

ISO/IEC 19794-6:2005 – Three Formats

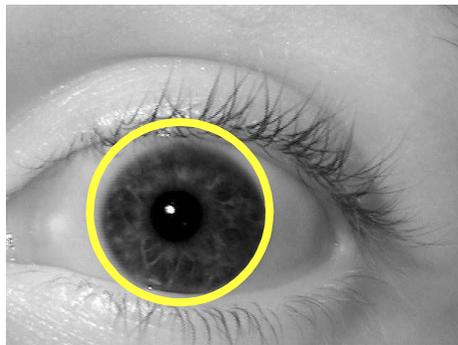


Rectilinear

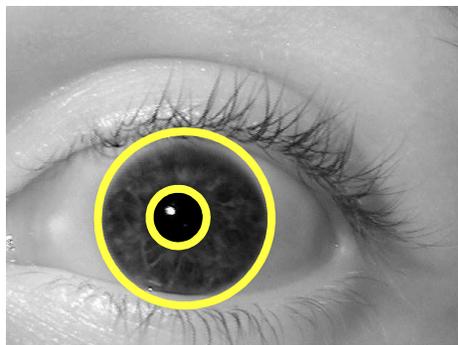
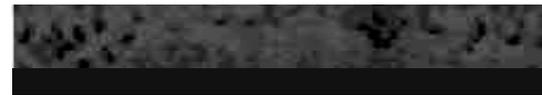


Then:

1. Compress
2. Feature extraction
3. Reconstruct via inverse polar, then feature extract and compare vs. features extracted from verification image



Unsegmented polar



Segmented polar



Status of ISO/IEC 19794-6

- § Two outstanding claims
 - § ISO/IEC 19794-6:2005 polar format is innately defective (i.e. cannot be interoperable)
 - § Cropped + compressed imagery is a viable alternative (claims of ~2KB)
- § DE + UK Proposal
 - § Drop polar format from the standard
- § Caveats
 - § Published studies have been intra-vendor (single matcher, single segmenter)
- § NIST Position: Will support removal of polar format if
 - § Compressed rectilinear proves interoperable, and
 - § Polar proves non-interoperable

Approximate Schedule

Date	Milestone
July, 2008	SC 37 Working Group 3 meeting in Korea
March, 2008	Completion of final validated operable SDKs to NIST
March, 2008	Delivery of beta SDKs to NIST, validation
February, 2007	Conclusion of second comment period
January, 2007	Release of second CONOPS + API, for comment
January, 2008	SC 37 Working Group 3 meeting in Tel Aviv, Israel
December, 2007	Conclusion of Initial comment period
November 16, 2007	Release of initial CONOPS + API. Open for comment



Thank You

Feedback is welcome now and later

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IREX

<http://iris.nist.gov/irex>

NIST