NIST Biometric Quality Workshop

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Biometrics Sample Quality Challenge

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*From Science and Technology… Security and Trust*

Homeland Security
Biometrics Sample Quality Concerns

The Collection Challenge

- Most biometric matching capabilities focus on using “good” or “excellent” quality biometric samples to obtain a reasonable level of confidence with respect to match results.

- The volume of biometric samples of strategic value but lower quality has grown.

- Work is needed to increase yield of “excellent” and “good” quality biometric samples.
Biometrics Sample Quality Concerns

The Research Challenge

• Research on quality must not be limited to an academic exercise!!

• Biometric sample quality approaches must:
  • Provide a normalized predictor of matching performance
  • Be agnostic with different vendor matching algorithms
  • Be agnostic with different sensor technologies
  • Transcend organizational and application boundaries

• Biometric implementations must provide users with reasonable degree of confidence that biometric match results are accurate, comparable and reliable
Biometrics Sample Quality Concerns

The Operational Challenge

• We must ensure that emerging biometrics technologies will support the future operational use of multi-modal biometric applications
  • How do we determine consistent and meaningful quality thresholds in controlled and uncontrolled environments?
  • How do we improve the human-sensor interface to maximize the reliable collection of biometric samples of sufficient quality?
  • How can we provide feedback to permit automated or manual intervention to improve reacquisition of samples?
  • How do we take the guess work out of interpreting quality and match scores to enable users and make them more effective and efficient?
Contact Information

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