NIST Biometric Quality Workshop

November 7, 2007

Biometrics Sample Quality Challenge

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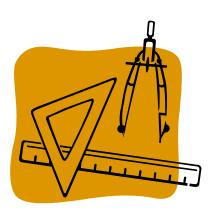
Biometrics Sample Quality Concerns The Collection Challenge

- 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?



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