Biometric Consortium 2006 Conference

Austin Hicklin
Senior Principal
Mitretek Systems

3150 Fairview Park Drive South
Falls Church VA 22042
Phone: 703.610.1995
hicklin@mitretek.org

Topic: NIST Studies of Biometric Fusion

Abstract: An extensive evaluation of the efficacy of biometric fusion was recently conducted by NIST and Mitretek Systems. This talk will summarize these analyses of biometric fusion, which used operational face and fingerprint images from more than 185,000 people, with scores from a variety of recent fingerprint and face matchers. The evaluation compared different score-level fusion techniques, as well as analyses of the effects of multi-modal fusion using face and fingerprint data, of multi-instance fusion using various combinations of 2 to 10 fingerprints, of multi-matcher fusion using face or fingerprint matchers, and of multi-sample fusion using sets of fingerprints collected at different encounters. The results will be published as a NIST Interagency Report.

Biography: Austin Hicklin is a Senior Principal with Mitretek Systems, in the Biometrics Group. Mr. Hicklin is a subject matter expert in biometrics and identification systems. In eleven years with Mitretek Systems/the MITRE Corporation, Mr. Hicklin has had key roles in a broad range of biometrics projects for NIST, the FBI, DHS, the U.S. Department of Justice, and other government agencies. In addition to his biometrics experience, Mr. Hicklin has twenty years of experience in systems engineering and software design and development, in projects dealing with PKI, Web development, user interface design, and financial and project management software.

Mr. Hicklin has had key roles in a variety of biometric evaluations and programs over the last decade, including extensive work in evaluating the efficacy of biometric fusion; an evaluation of the proportion of US-VISIT users who have fingerprints that are hard to match; the Slap Segmentation Evaluation 2004 (SlapSeg04), which is the first rigorous evaluation of slap segmentation algorithms yet conducted; the Fingerprint Vendor Technology Evaluation (FpVTE) 2003, an extensive evaluation of the accuracy of fingerprint matching; the IDENT/IAFIS Image Quality Study, which was critical in defining the effect of poor-quality fingerprints and the comparative performance impact of flat and rolled fingerprints; and the Universal Latent Workstation, which is the latent fingerprint processing software that is distributed by the FBI to Federal, State, and Local agencies and has been responsible for thousands of identifications.

Mr. Hicklin has a Master of Science degree in Computer Science from Virginia Tech, and a Bachelor of Arts degree from the University of Virginia.