

National Institute of Justice

Award Title: Matching Forensic Sketches to Large Face Image Databases

Award Description:

The applicant proposes to build a prototype forensic sketch face recognition system that will better enable the matching of forensic sketches to facial photograph databases. This application includes participation by law enforcement practitioners. The Pinellas County Sheriff's Office (PCSO) in Florida, which operates Florida's Facial Recognition Network (FR-NET), will provide support in expanding the size of the sketch database, evaluating the sketch recognition system, and providing feedback on system performance and usability. A team of forensic artists from the Michigan State Police have agreed to provide their sketching services.

Forensic sketches are routinely used by law enforcement agencies to identify suspects when only a verbal description of their facial appearance is available. Despite progress in face recognition technology, the ability to automatically match forensic sketches to large facial photograph databases (e.g. mug shot, driver's license) does not exist.

The goal of the proposed research is to build a prototype of forensic sketch face recognition which consists of following tasks:

1. Develop a face recognition algorithm that leads to higher accuracies in matching forensic sketches to photographs,
2. Increase the size of the database of forensic sketches and corresponding photographs to refine the matching algorithm and evaluate the system performance,
3. Identify appropriate representation and matching schemes for computer generated facial composites,
4. Install the prototype system at the Pinellas County Sheriff's Office (PCSO) as well as other interested agencies for evaluation and feedback for improving the system performance, and
5. Document and disseminate research results in the form of papers, reports, dissertations, and presentations as appropriate.

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Awardee Name: Michigan State University

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