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Florida Facial Recognition System Unmasks Identity, Boosts Arrests

Pulled over for running a red light, the driver tells the officer who stopped him that his name is John Smith and he must have left his wallet at home. Does the officer a) let him go with a warning, b) take him into the station for fingerprinting and further attempts at establishing his identity, or c) take his picture?

If the officer is a Pinellas County, Fla., sheriff's deputy, then "c" is the correct answer. After plugging the easy-to-use digital camera into the car's laptop, the deputy can continue to keep an eye on the driver while the computer automatically downloads the image, opens the sheriff's office facial recognition program, converts the image with a binary algorithm, runs a search of the county's database and produces a gallery of potential matches, all in less than 30 seconds.

It might turn out that the driver's name isn't John Smith after all.

Using initial funding provided through the U.S. Department of Justice's Office of Community Oriented Policing Services (COPS), Pinellas County has adapted a facial recognition system that has grown from a replacement for the county jail's mug shot database into a partnership system that encompasses 14 of the state's 67 counties and could well serve as a model for similar systems in other states. The software was developed by Viisage of Massachusetts.

Pinellas County Capt. Jim Main explains that when the project started in 2001, the idea was to use a facial recognition algorithm with seven years' worth of jail system digital images to help positively identify individuals who might be giving fictitious names or who could not provide identification. From its inception, staff photographed everyone brought into the county jail at the sally port and compared their images to those already in the database.

"Shortly after we went live, the patrol deputies pointed out that if they pull someone over who is playing the 'name game' and doesn't have a driver's license, they have to decide if there is justification for bringing that person in for fingerprinting," Main says. "They thought it would be great to be able to take an image on the street and get results back."

Pinellas County began phasing that capability into patrol cars in 2004. By 2009, deputies made 496 arrests that could be directly attributed to identification made by the facial recognition technology and confirmed another 485 identities that did not require arrest, according to Systems Analyst Scott McCallum.

"The premise was to keep it short and simple for the deputy," Main says. "We didn't want them on the side of the street making extensive clicks and opening windows, so we worked with the vendor to completely automate

Facial Recognition System Arrests

The Pinellas County Sheriff's Office facial recognition system has been responsible for hundreds of arrests annually, arrests that might not have been made without assistance from the system. Here are just a few examples:

- On July 1, 2009, the Sheriff's Technical Operations Unit received a request from the Miami Police Department for help with identifying a bank robbery suspect. The suspect provided Miami police with a homeless shelter ID. Pinellas County ran the image and within minutes came up with a booking photo match for the suspect, who had been previously arrested in Orange County, Fla., in 2003, under a different name. That image led to a positive identification of the suspect, who was arrested in St. Louis the next day.
- A deputy on patrol on Feb. 11, 2009, spotted a white Ford Explorer with an expired temporary tag. The deputy learned the registered owner's driver's license expired in 2007, and therefore pulled over the driver and two passengers for a routine traffic stop. The driver

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had no photo identification and claimed the vehicle belonged to a friend. The deputy used his facial recognition system and found no matches for the driver. The deputy then asked if either of the two passengers in the vehicle had a valid driver's license, and one provided a Guatemalan driver's license. The deputy then used facial recognition to attempt to identify the passenger and found three photos from previous arrests in Pinellas County under a different name. He located a record of an expired Florida driver's license for this subject and an active Pinellas County warrant for failure to appear for soliciting prostitution. The deputy took the suspect into custody.

- On May 7, 2009, a North Miami Police Department detective contacted the Pinellas County Sheriff's Office with a request for facial recognition identification of an attempted bank robbery suspect. Surveillance photos showed a man passing a note to a teller demanding money. When the frightened teller moved away from the window, the man left the bank. A search returned three potential matches — one from the Florida Department of Corrections and two from the Miami-Dade area. The man initially identified as the suspect was eventually arrested and confessed to the robbery attempt.
- On Sept. 11, 2004, Pinellas County deputies responded to reports of a disorderly female in a mobile home park. The woman could not provide identification and gave what deputies believed to be a false name. The responding deputies requested assistance from a facial recognition-equipped unit and that deputy took two digital pictures and submitted them to the facial recognition system. After receiving a gallery of photos, the deputy compared the photos to four possible matches. He determined that all four photos were the same person and located two outstanding Pinellas County warrants for the subject related to drug possession and prostitution.

the process. It's all pretty much hands-off; the deputy can keep an eye on the suspect while the computer does the work. However, if it brings up several potential matches, then the deputy does have to do some work to see if there is more information available, such as scars, marks and tattoos."

The system also benefits the county's correctional services, Main says, by ensuring the deputies know exactly who they are dealing with, not only with regard to identity, but also past history, including violent tendencies, chemical dependency issues and medical conditions.

These benefits began with the system developed using the original COPS grant, which went toward initial development. The county has since obtained additional funding to expand the system to 14 major metropolitan counties throughout Florida, and recently initiated a pilot project with the Florida Department of Motor Vehicles. The partnerships enable Pinellas County to search the other counties' databases, and vice versa.

"The more images you get, the greater chance you have of making a match," Main says.

Although the Florida system has expanded about as far as the licensing agreement will allow, other states and jurisdictions can purchase their own licenses from the same vendor and use them to establish their own compatible systems that use the same binary algorithm. Main says that agencies in both South Carolina and West Virginia have expressed interest in setting up similar programs. When these other systems come online, they will be able to transmit images back and forth to Pinellas County and perform reciprocal searches for each other. Even without compatible interfaces between other agencies, Pinellas County provides mutual aid and performs searches of its system for outside requests. For example, a recent request from the South Carolina Fusion Center resulted in a positive ID for a man who had been using numerous driver's licenses with different aliases.

For more information on the Pinellas County facial recognition project, contact Capt. Jim Main at (727) 582-6339 or e-mail jmain@pcsonet.

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