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An introduction to the Regional Booking Photo Comparison System

Facial recognition technology is now available to law enforcement agencies throughout Snohomish, King and Pierce Counties, thanks to a $350,000 Urban Areas Study Initiative grant and a partnership between the Seattle Police Department (SPD) and South Sound 911. The Regional Booking Photo Comparison System (RBPCS) is the resulting product of nearly 5 years of work so that facial recognition could be implemented.

Year-to-date usage statistics:
- Ten years' worth of booking photos — approximately 570,000 photos — have been uploaded to the system from jailing facilities in Snohomish, King and Pierce Counties.
- The RBPCS has been used in 598 cases.
- The RBPCS generated 130 leads, resulting in arrests and/or further progress (in other words, it has a 22 percent lead generation success rate).
- There are 10-15 active users of the system from 10 agencies.

The RBPCS, while still new, is a direct result of agency partnership with the common goal of enhancing law enforcement capabilities to improve public safety. New funding is being sought to further propel the project and make it a shared, statewide law enforcement asset.

How it works

Searches are performed through facial recognition "workbenches" installed with IKENA and Forensica GPS software which is used to enhance poor-quality images and video. To date, "advanced workbenches" are installed at SPD, the King County Sheriff's Office, Snohomish County Sheriff's Office, Bellevue Police Department, Tacoma Police Department, Auburn Police Department, and at South Sound 911's Real-Time Crime Center (RTCC).

Example: Digitially enhancing an image using the advanced workbench.

Images of individuals involved in crimes are sent to the Dynamic Imaging Positive ID server housed at South Sound 911. There, images are compared against images included in the regional database of mugshots using NEC Face Recognition and Positive ID.

History

In 2012, South Sound 911 was performing background checks on vendors for a new mugshot booking system. During a visit with SPD to review one of the finalists for the system's RFP, it was discovered that SPD had been awarded grant funding for biometrics, specifically facial recognition — a technology that South Sound 911 requested in its RFP for the mugshot booking system.

By the end of 2013, SPD and South Sound 911 were able to proceed with their proposed program under a Washington State Co-operative Agreement. After a year of public scrutiny and legal review, the contract was in place in early 2014 with Dynamic Imaging, Inc., to implement a three-county facial recognition system now referred to as the Regional Booking Photo Comparison System.

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Case studies

There are too many active and sensitive cases to include here, but this is a small sampling of cases that show how the RBPCS is working in the region.

Debit Card Cloning: King County Sheriff's Office crime analysts helped identify a suspect using cloned debit cards from in-store video. The analyst rendered a frontal view from the original image and, using the RBPCS, performed comparisons to generate a lead based on facial recognition and criminal history information. Detectives further corroborated the information and apprehended the suspect.

KCSO crime analysts used this rendering to identify their suspect.

Fraud: Puyallup Police Department detectives needed leads on a person identified in a fake driver license used to purchase a vehicle. South Sound 911 crime analysts enhanced the photo's image clarity and ran a search using the RBPCS. One individual came up in multiple search results. After analyzing criminal history information and facial comparison data, the analyst provided the detective with a lead. After talking to the suspect's relatives and friends, the car was found back at the dealership. Detectives are investigating the suspect's possible involvement in other fraud cases.

Mail Fraud: A USPS investigator learned that packages were being sent to multiple individuals at the same residential address. After obtaining a copy of the individual's fake driver license used to receive shipments, the investigator, running out of leads, posted a BOLO. An Auburn Police Department analyst created a rendering from the BOLO and ran the enhanced image through the RBPCS, which provided an actionable lead for the investigator. The lead was provided to the USPS investigator and the suspect, who had a history of committing fraud crimes, was apprehended.

Feedback

"This type of technology greatly increases the solvability of many crimes committed in our communities. Advances in consumer electronics has increased the ability of citizens to capture images of subjects committing burglaries, vehicle prowls, vandalism, thefts and many other types of crimes. In addition, commercial businesses have invested in higher-quality cameras to capture images of shoplifters, burglary and robbery suspects. This type of technology... truly encourages a collaborative partnership with community members. The expectation of our tech-savvy population is that law enforcement agencies be equipped to solve their crimes with the images presented to us as evidence... [The Regional Booking Photo Comparison System] technology has provided us with another tool to assist in identifying suspects and we expect that it will not only help us solve crimes, but also deter crimes in our region."

— Chief of Police Bob Lee, Auburn Police Department

* Using the RBPCS, the Auburn Police Department successfully apprehended three suspects in three different cases.

"Your work was the essential break in the case and I would not have the suspect without what you have done through facial recognition. I'm sure the victim got the car back because of your work."

— Detective Scott Bramhall, Puyallup Police Department