






TACIDS

Facial Recognition in the Field




TACIDS – Business Case

- Routinely officers encounter individuals unwilling to provide identification
- San Diego officers report this happens on a daily basis
 - Lack of cooperation renders it impossible to positively identify the individual
 - The subjects provide false verbal identification information (sometimes on real people)
- Unable to detain persons long enough to confirm their identity and thus miss an opportunity to detain a wanted person

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Solution – TACIDS!

- ARJIS awarded a Grant from the National Institute of Justice to develop a Tactical Identification System
- Goal to implement a mobile application with facial recognition capabilities to assist in positive identification
- Leverages the ARJIS Mobile Program, infrastructure and applications



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TACIDS Team

- TACIDS Project Team
 - ARJIS staff
 - Terrorism Liaison Officers
 - San Diego County Sheriff's Department
 - Immigration Customs Enforcement
 - National City Police Department
 - San Diego State University Police
 - Carlsbad Police Department



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ARJIS eMobile

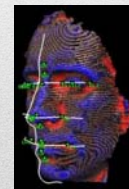
- **FBI CJIS Security Mandates for Mobile Devices Addressed**
 - Secure wireless connection to ARJIS network
 - Device firewall for Android
 - Encryption and virus protection for Android
 - Advanced authentication methods
 - First in nation to solve these mandates
- **TLO (Terrorist Liaison Officer) device rollout**
 - 250 Samsung Galaxy 7" tablets
 - 50 Samsung Galaxy S2 phones
- **Mobile ID (Test Phase)**
 - TACIDS – ARJIS Mobile Facial Recognition
 - MobileID – Sheriff Blue Check Fingerprint ID
 - Testers are existing subset of TLOs, and ICE agents



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TACIDS Development

- Facial recognition algorithms are based on mathematical measurements of points on the face
- Team determined that Cognitec algorithm has best chance of success in ARJIS environment
- **Data Sources selected:**
 - San Diego Sheriff Department's – 1,000,000+ booking photos
 - Chula Vista Police Department Offender Trak – 93,000 booking photos



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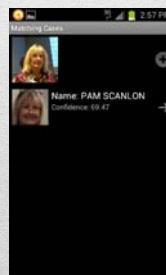
TACIDS

- Mobile application allows users to submit images to the TACIDS database, consisting 1,000,000+ mug shot photos
- Records are returned by level of confidence - highest to lowest
- System returns up to 10 candidates
- Officer makes positive identification on existing record or adds new record and picture for future comparison instantly
- 1 million plus images account for 313,000 individuals
- Up to five images per person (consolidated by fingerprint ID)



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- Matches occur within seconds
- Photos can be emailed to officers who have the software
- Ability to retrieve photos by photo match or name
- Suspicious activity reporting in process of being added
- Easy to use, very successful feedback from the field



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Success!

“The female subject had no ID and gave the name of a real person in AZ. The record’s check showed no criminal record. At this point she was not a suspect in the kidnappingbut we knew she was lying about her identity and were running out of detention time. Using TACIDS we identified her and learned she was a parolee at large. She was arrested for the warrant and identity theft...great tool.”

“The suspect had been using an alias successfully for the past year to avoid detection and when confronted with her real name after TACIDS identification, her words to the detective were ‘You’re good.’”

“In five days of utilizing the system three arrests have been made and several photos have been updated.”



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TACIDS Policy

- **TACIDS team vetting policy recommendations**
 - Following national policy and privacy practices
- **Officers ask permission to take subject’s photo**
- **Follow normal law enforcement detention and data gathering policies**
- **Officer must still make judgment call**



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TACIDS – Next Steps

- Seek funding for regional rollout
- Complete suspicious activity reporting
- Continue collaboration with Sheriff on Mobile ID fingerprint application
- Implement alerting functionality
- Fixed cameras – video feeds from court buildings, public transportation, etc.
- Scars, marks and tattoo recognition

