



# Florida's Facial Recognition Network

*Hosted by Pinellas County Sheriff's Office*

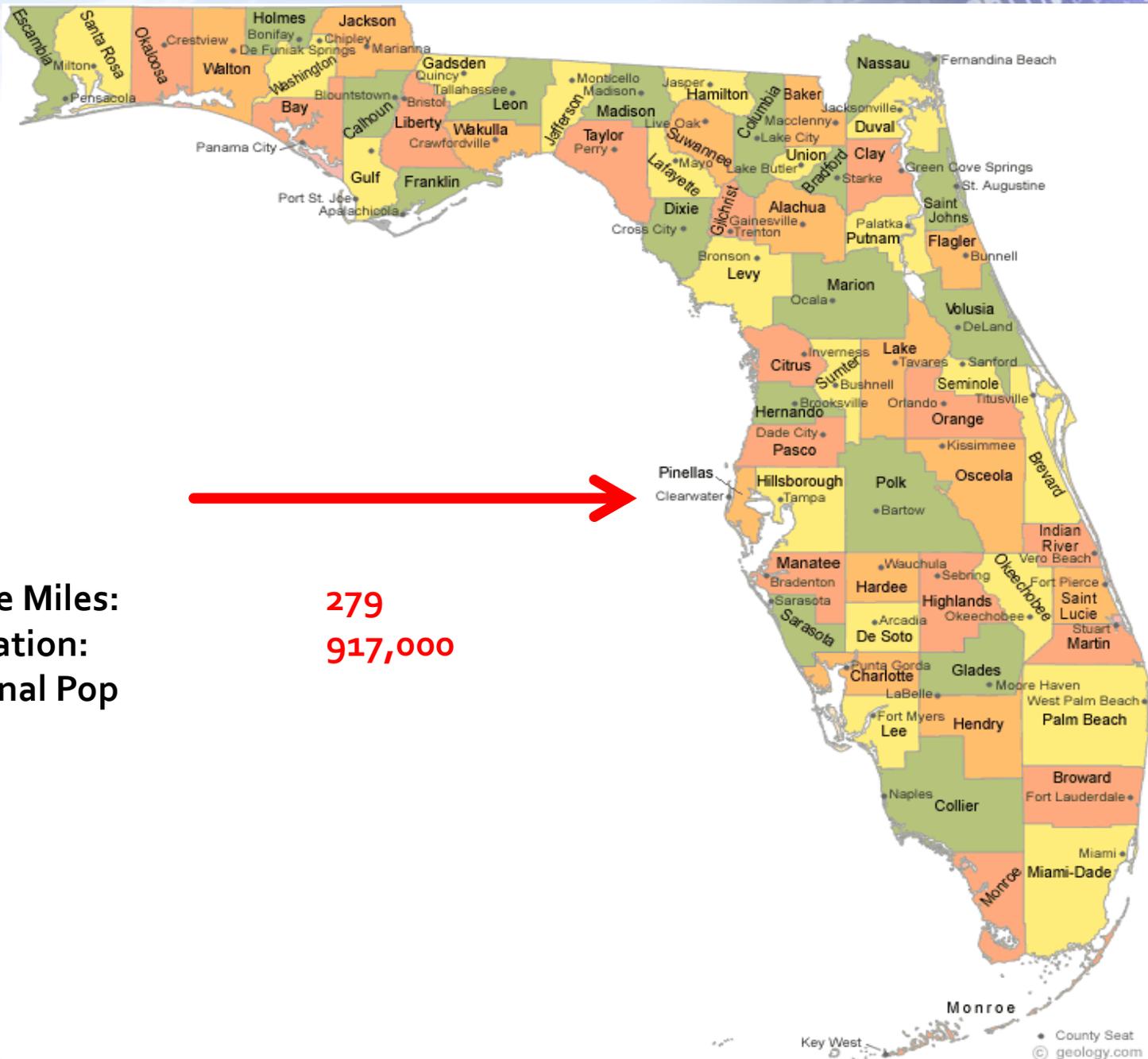
FACES

Face Analysis Comparison & Examination System



# Pinellas County Sheriff's Office





Square Miles:  
 Population:  
 Seasonal Pop

279  
 917,000



# Background



## Detention and Corrections Bureau

- Facial Recognition 2001
- Grant Funding
- Scott McCallum and Jake Ruberto
  
- Daily Inmate Intake
- Daily Population
- Yearly Inmate Intake



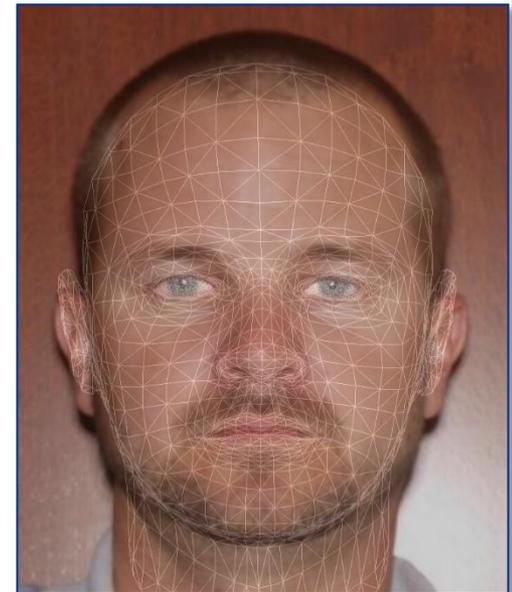
# Background

## PCSO Facial Recognition Components:

- *Corrections Processing* – Identification and Verification at Booking
- *Mobile Identification* – Street Level Identification
- *Investigations* – Investigative Browser Web Based Search Tool
- *Statewide FR Partnership* - to Authorized Users via FR-Net

## **2001 - 2008**

- ✓ Implemented Facial Recognition enabled mugshot system
- ✓ Deployed web-based Image Query and Facial Search
- ✓ **Initiated Statewide data sharing expansion effort**
- ✓ Deployed Mobile Identification Systems (MIS)
- ✓ Contract with DoD Irregular Warfare Support Program





# What's Driving the Need for FR?

- Ease of capturing, storing, copying, and sharing images
  - Proliferation of surveillance cameras, media, mobile phones, still and video cameras, camcorders
  - Photographs and videos depicting victims, suspects, and eyewitnesses are becoming the subject of investigations
- # Face is the Most Collected Biometric





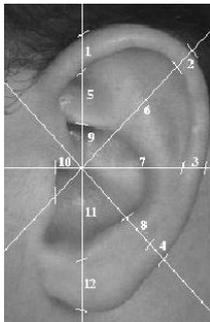
# Why Facial Recognition

## With other biometric solutions available, why FR?

- Face is the most collected Biometric
- Less constraint for sharing face data (Within law enforcement)
- Lack of physical evidence (Sometimes face is all we have)
- Interaction at safe distance.



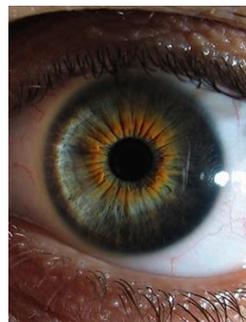
Vein Pattern



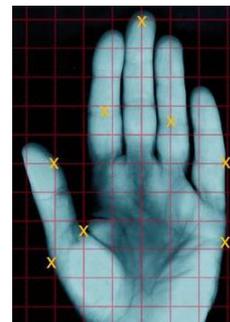
Ear Pattern



Fingerprint



Iris



Hand Geometry



Gait



Vein Pattern



# Forget fingerprints: New security technology tracks body odor

16 SIZE: + / - PRINT | REPRINTS



By Cheryl K. Chumley - The Washington Times

Friday, February 7, 2014

Follow @ckchumley



Enlarge Photo

Fingerprints and iris scans — those are so 2013. The newest security [technology](#) to hit the lines of passport presenters takes an entirely different tack: odor.

Scientists in Spain say they've created an "electronic bloodhound" that can sniff out the identifying qualities of one human over another. And, they say, in *The Daily Mail*, their system is so accurate and simple that it could one day replace fingerprinting and iris scanning.



# Facial Recognition Limitations

## Affects Review

- ✓ Twins
- ✓ Aging



## Will not work:

- ✓ Masks

## Affects Performance:

- ✓ Poor Image Quality
- ✓ Significant Aging
- ✓ Sunglasses
- ✓ Facial Hair
- ✓ Plastic Surgery





# Human role in making a match

Automated Face Recognition and obvious matching



**YOU... determine what a match is...**





# Background 2009-Present

**FACES** Pinellas County Sheriff's Office  
FR·NET

**Florida's Facial Recognition Network  
Hosted by the Pinellas County Sheriff's Office**



**Face Analysis Comparison & Examination System**

The Pinellas County Sheriff's Office (PCSO) has implemented the largest Facial Recognition (FR) system dedicated to law enforcement and corrections in the country. PCSO's FR project began in 2001 and has grown to include biometric components for identification and verification in booking processes, investigations and mobile identification. An expansive resource of image data is possible through multi-jurisdictional partnerships. PCSO provides open access to Image Query and authorized access to Facial Recognition via the FACES application.

*[Preview the new FACES application, coming soon!](#)*

**[Image Query](#)**  
Multi-jurisdictional image query and retrieval tool

**[Investigative Browser](#)**  
Facial Recognition enrollment and search tool

**\*\*Authorized Users\*\***

If your agency has a case where facial recognition may assist contact

[Scott McCallum](#)  
727-453-7193

# FR-Net available through CJNET



Monday, July 09, 2012 **CJNet**

Florida Criminal Justice Network

**law enforcement links**

- DAVID (formerly DLIRS)
- JusticeExchange
- Mutual Aid
- nextTEST: On-Line CJIS Testing
- Sexual Predators Search
- Career Offender Search
- More...

**judicial links**

- Attorney General
- LOGAN Submit Disposition Data
- FLJS General Counsel
- Public Defenders
- State Courts Administrator
- More...

**corrections links**

- Connections Offender Search
- Juvenile Justice Information System
- Parole Commission
- Recidivism Report
- More...

**linkcategories**

- All
- Applications
- Web Sites
- Downloads
- Services

**law enforcement links**

- New IP: Miami Dade Police Department CJNet Site Miami Dade Police Department
- ATMS2 Automated Training Management System Florida Department of Law Enforcement
- Broward County Name Search and Pawn Ticket Search (BSO EADS) Broward County Sheriff's Office
- Broward Sheriff's Office Juvenile Photos Broward County Sheriff's Office
- BSOPICS Broward County Sheriff's Office
- BSOWNS Broward County Sheriff's Office
- Career Offender Search Florida Department of Law Enforcement
- CAST (Child Abduction Response Team) Florida Department of Law Enforcement
- CJIS IDT Resource Center Florida Department of Law Enforcement
- Consumer Sentinel - ID Theft Database Federal Trade Commission
- Crime Laboratory Evidence Submission Manual - 2010 Florida Department of Law Enforcement
- CSI Court Security Intelligence Statewide Web Alachua County Sheriff's Office
- DAVID Driver and Vehicle Information Database (formerly DLIRS) Florida Department of Law Enforcement
- Department of Highway Safety and Motor Vehicles Internet Site Department of Highway Safety and Motor Vehicles
- FACTS Florida Department of Law Enforcement
- SOPICS - Florida Sheriff's Consolidated Mugshot & Facial Recognition System Pinellas County Sheriff's Office
- South Florida Investigative Support Center CJNet Site South Florida Investigative Support Center
- Southeast Law Enforcement Information Exchange Naval Criminal Investigative Service
- State and Local Government Information on the Net Piper Resources- Law Enforcement
- Stolen Vessels Florida Fish and Wildlife Conservation Commission
- UCR Data Submission Standards Florida Department of Law Enforcement
- Volusia County Sheriff's Office CJNet Site Volusia County Sheriff's Office

**FACES** Pinellas County Sheriff's Office  
FR·NET

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**FR-Net is available through the law enforcement links section of CJNET**

**1500+ Florida LE users and growing**



# Face Analysis Comparison & Examination System

A screenshot of the Pinellas County Sheriff's Office Facial Recognition Program interface. The interface displays the title "Pinellas County Sheriff's Office Facial Recognition Program" and "Pinellas County Sheriff's Office" at the top. Below the title, there are navigation tabs: "Image Query", "Search Criteria", "Search", "Demographics", "Reset", "Enroll Image", and "Help". The user information "USER: PCSONET\smccallum" is visible in the top right corner. The main area shows a grid of face images, with a "remove" button and a small thumbnail image on the left side.

Pinellas County Sheriff's Office  
Facial Recognition Program  
Pinellas County Sheriff's Office

Image Query Search Criteria Search Demographics Reset Enroll Image Help USER: PCSONET\smccallum

remove

- ✓ **FACES: web-based FR search tool** that can search against 28+ million faces from 40 sources.
- ✓ PCSO administers FACES and grants **open access** to authorized trained users.
- ✓ **PCSO provides LE training** of best practices for automated facial search and manual face comparisons.



# *FR-Net Partnerships & Expansion*





# FR Network of Users

Florida's Law Enforcement Facial Recognition Network Hosted by the Pinellas County Sheriff's Office



# FR-NET QUARTERLY







## FEATURE NEWS

### ANOTHER STEP CLOSER TO ORWELL'S "1984"?

*Smile. Seattle cops to use facial recognition software*

March 14, 2014

 Like  Tweet  g+1  Share

(SEATTLE, WA) -- So you thought all those wonderfully clear photos of yourself, not to mention all the personal details of your life that you willingly plastered all over Facebook and lord knows where else would never come back to haunt you.

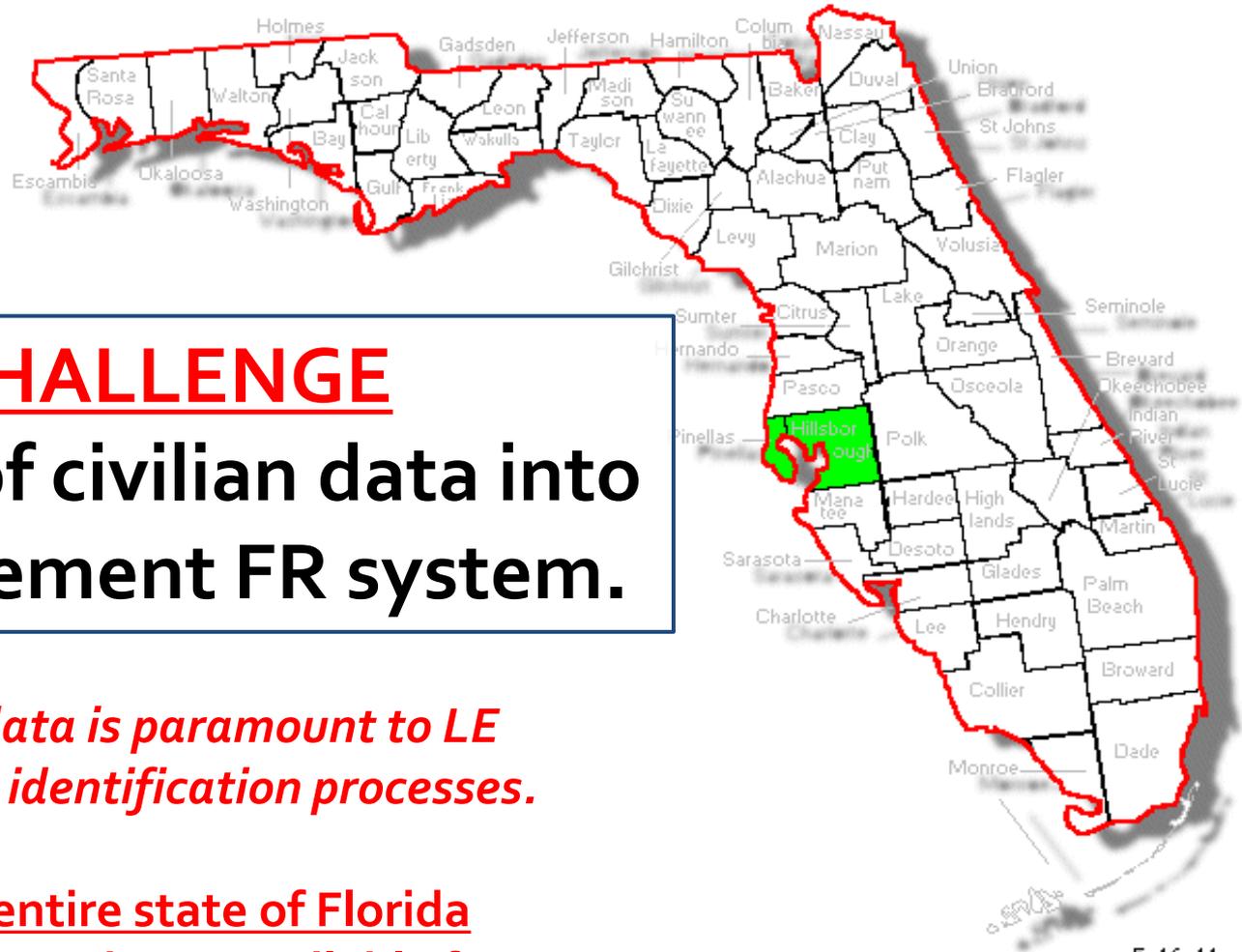
Facial recognition software is the new holy grail of the law enforcement (LE) business. It's this era's new fingerprint technology and all the badges want it bad -- from the feds down to your local cop shop in some areas.



Orwell's 1984: Face time is a good time.



# Facial Recognition DMV Expansion Project



## **BIG CHALLENGE**

**Integration of civilian data into a law enforcement FR system.**

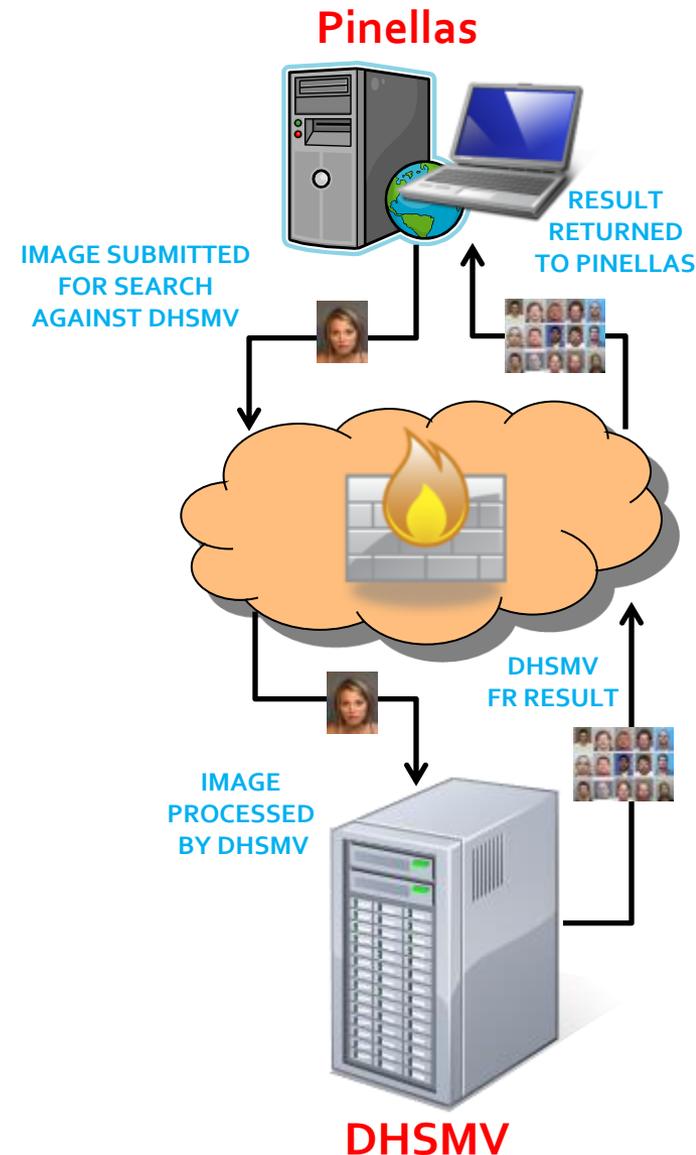
*Driver's license data is paramount to LE investigations and identification processes.*

\*As of January 2013, entire state of Florida driver's license and ID cards are available for search, which is close to 19 million images.



# DHSMV/PCSO Interface

- DHSMV provides a service to Pinellas to allow face recognition search against driver's license.
- All records remain with DHSMV for the pilot. No driver's license records have been transferred to the Pinellas County Sheriff's Office.
- Pinellas submits an image for search against the DHSMV face recognition system.
- DHSMV returns the face recognition result to Pinellas for review.





# Privacy Concerns and Responsibilities

- Access to 19 million Civilian images
- System users
- Legal and ethical use of dataset
- Organizational oversight
- Checks and Balances
- Agency MOU
- Agency On-line Training
- User Agreements
- Bi-annual User Confirmation
- Non-use access termination



# Florida Facial Recognition Network

- Network Users
  - 35 contributing Florida counties
  - 193 local, state and Federal partners with access
  - 3400 network users
- Images available for FR Search
  - PCSO-2,020,000
  - Partners-8,130,000
  - DHSMV-19,000,000

**29,150,000**  
**Images**



# Facial Recognition

Questions?



**Face Analysis Comparison & Examination System**



# FACES

Face Analysis Comparison & Examination System

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