Homeland Security Investigations Expanding the Role of Biometrics in Child Exploitation Cases

The Problem

165,800,000+

500,000

The Problem

- There are currently only 10,900+ identified victims.
- There are over 50 Darknet boards with over 100,000 members with the sole purpose of facilitating the exchange of child abuse material.
- These are NOT kidnapped children.
- A NCMEC study showed that 79% of victims knew their abuser closely (parent/guardian, relative, teacher, coach, neighbor). Only 2% are trafficked.
- Worldwide there are approximately 6,000 law enforcement personnel fighting the fight against child exploitation.
- The offender community is anecdotally 1,000,000+

Our Data

- Lots and lots of faces from all possibilities of angle, pose, occlusion, illumination and resolution.
- Body parts. You name it we see it…
- Fingerprints.

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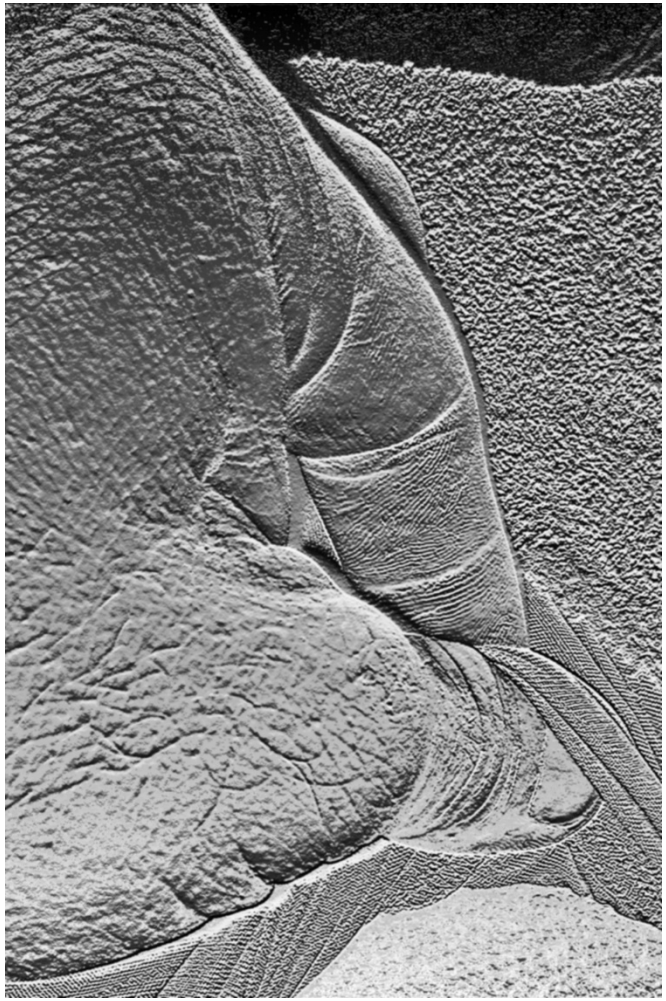

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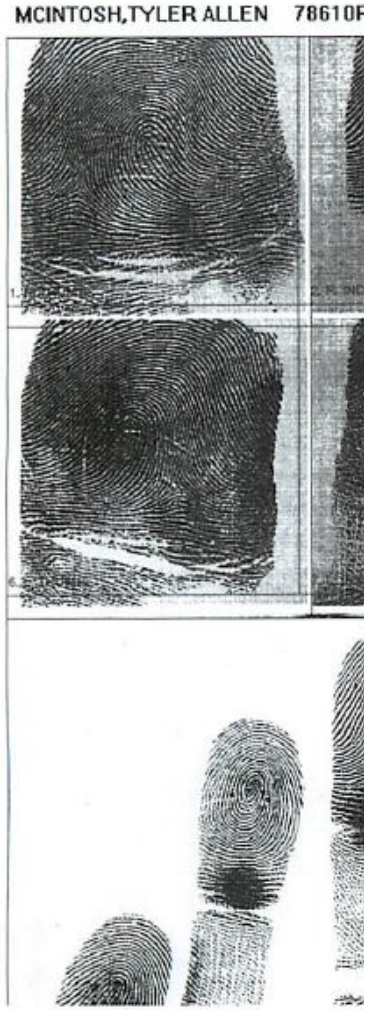

Homeland Security

U.S. Department of Homeland Security
U.S. Immigration and Customs Enforcement
Homeland Security Investigations
Forensic Laboratory

July 24, 2015

Laboratory Report
HSI-FL 15-01415
Page 1 of 1

Special Agent James Cole
U.S. Immigration and Customs Enforcement
11320 Random Hills Road
Suite 400
Fairfax, VA 22030
703-344-7292

REF: N/A

EXHIBIT(S):

1.1 Digital image of left index finger from photo
1.2 NGI fingerprint record for Tyler McIntosh FBI #78610PD9

FINDING(S):

The left index fingerprint impression appearing on exhibit 1.2 was made by the finger appearing in the photo in exhibit 1.1.

REMARK(S):

Comparison conclusions are reached using the Analysis, Comparison, Evaluation (ACE) process. Documentation supporting ACE, as applied in this case, is included in the case notes retained at the laboratory.

The evidence was received electronically on July 23, 2015. The report and copies of the evidence will be returned via email.

For Homeland Security Investigations, the Forensic Laboratory requires that Project Code 0E7 for Forensic Examination be entered into Case Management by the assigned case agent.

Conclusions, opinions, and interpretations contained in the finding(s) section of this report are based upon the examination(s) of the evidence conducted by the undersigned examiner as specified.

Laura J. Tierney
Fingerprint Specialist

Revision Number 6
Effective 06/10/2015

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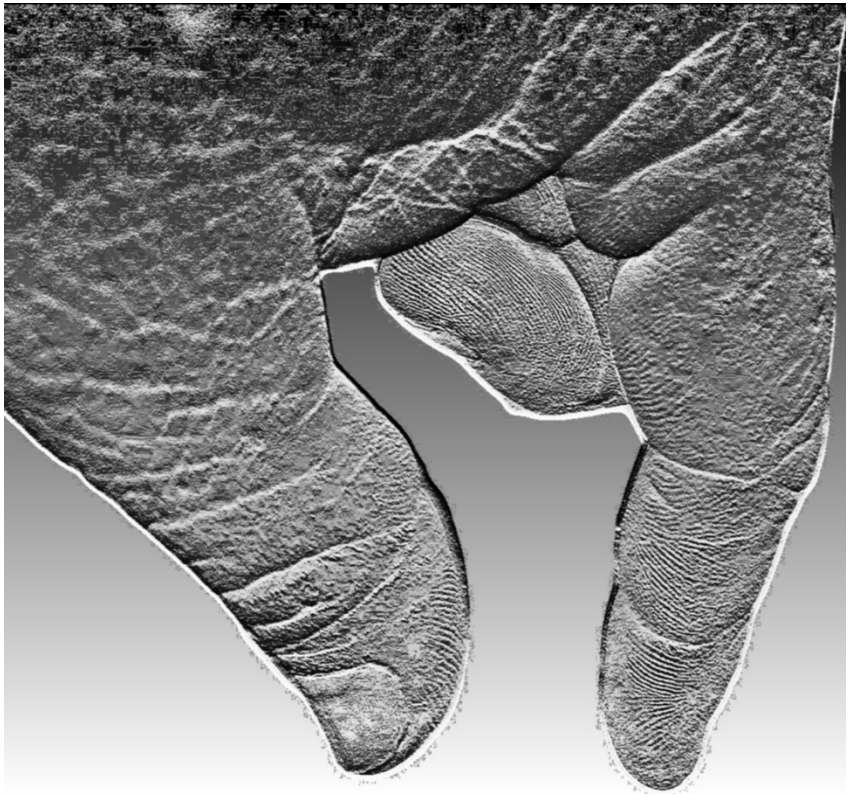

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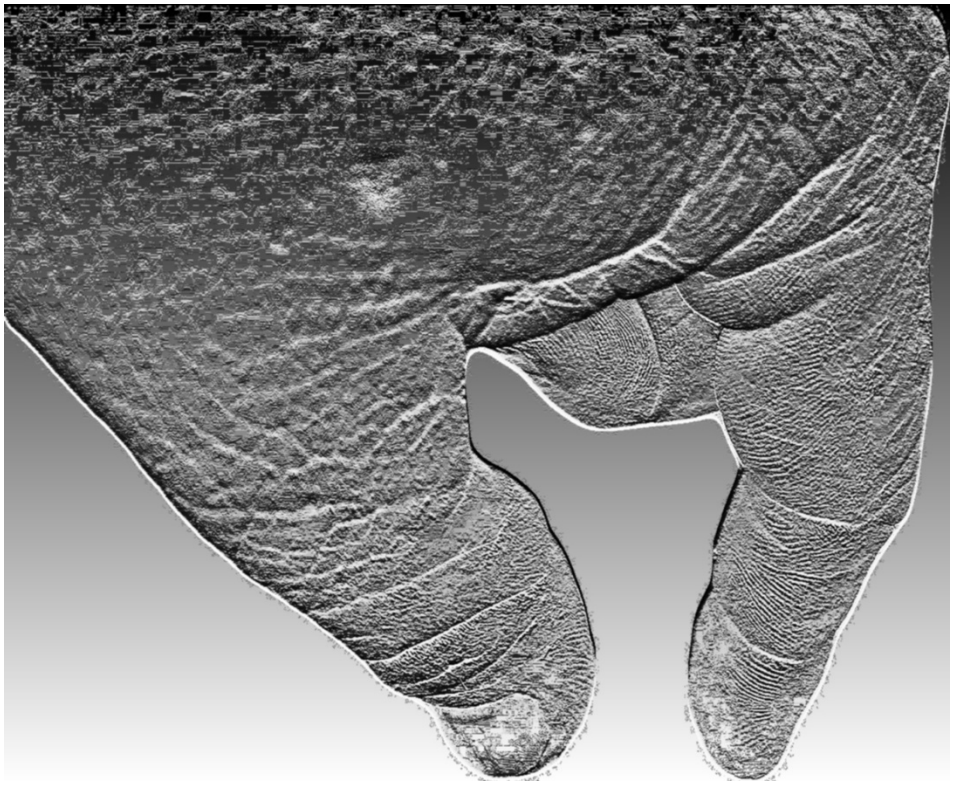

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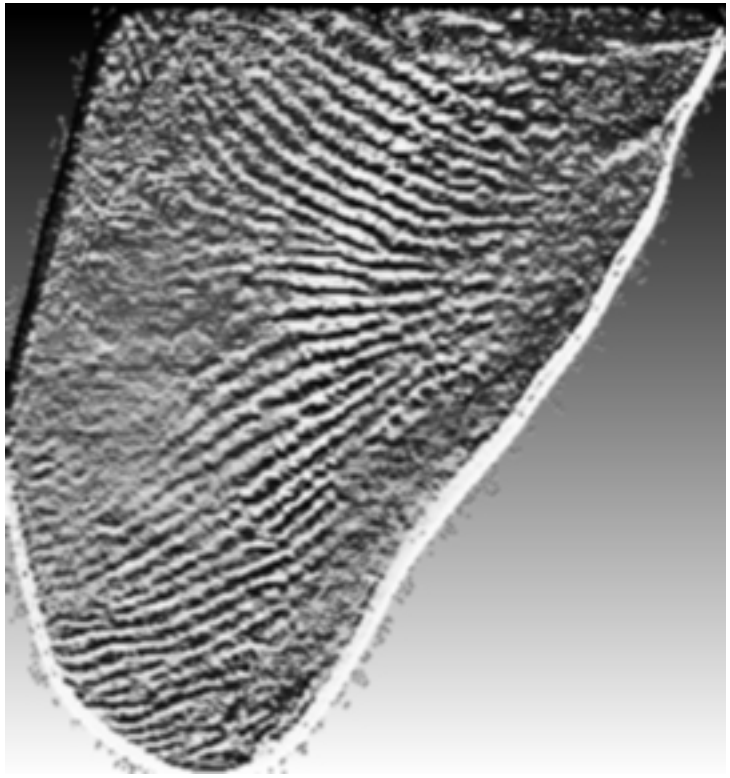
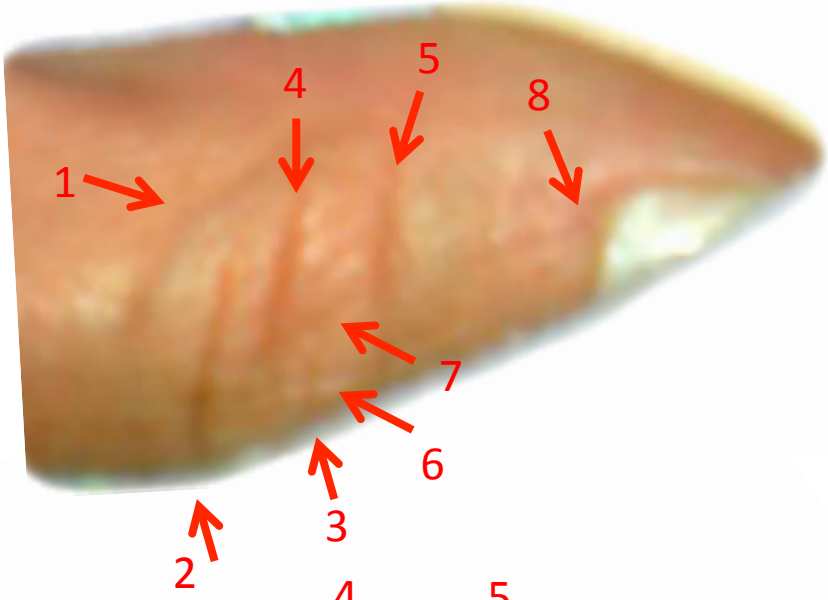


1A



3

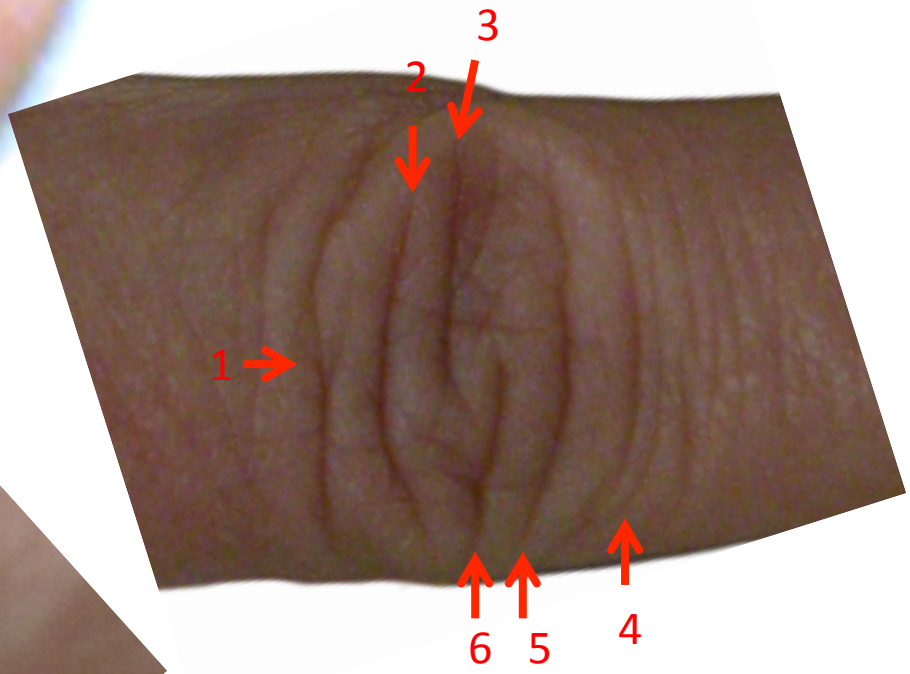
2B

7

4

2B

7



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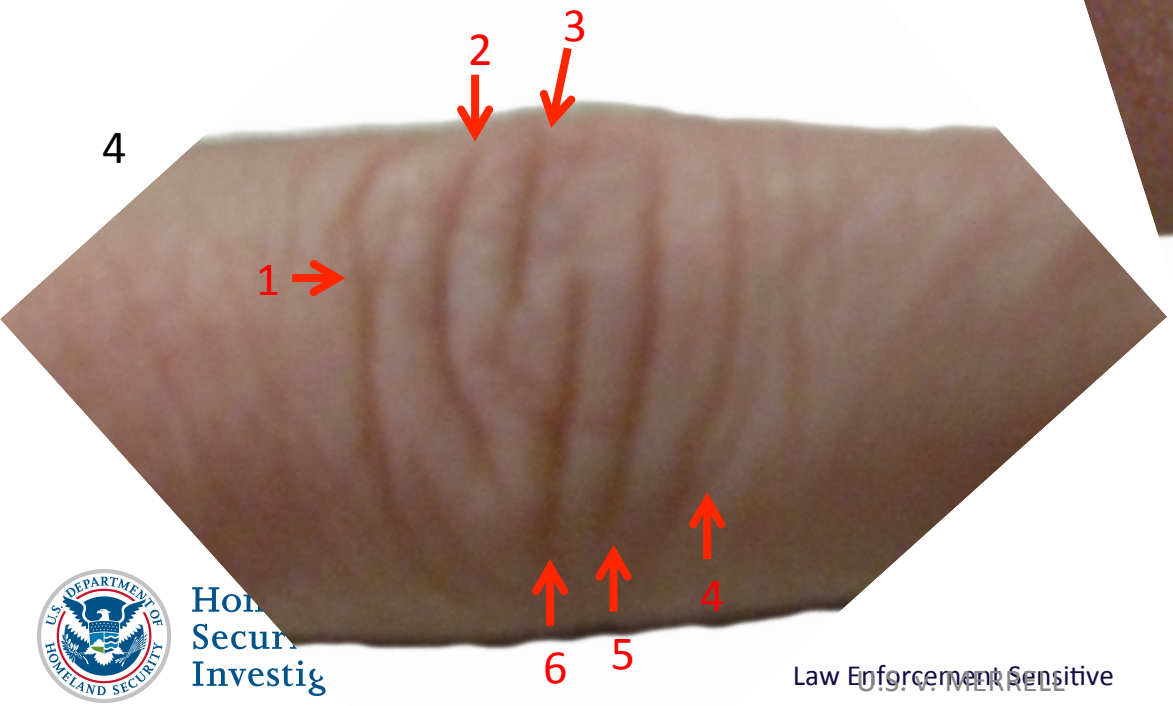


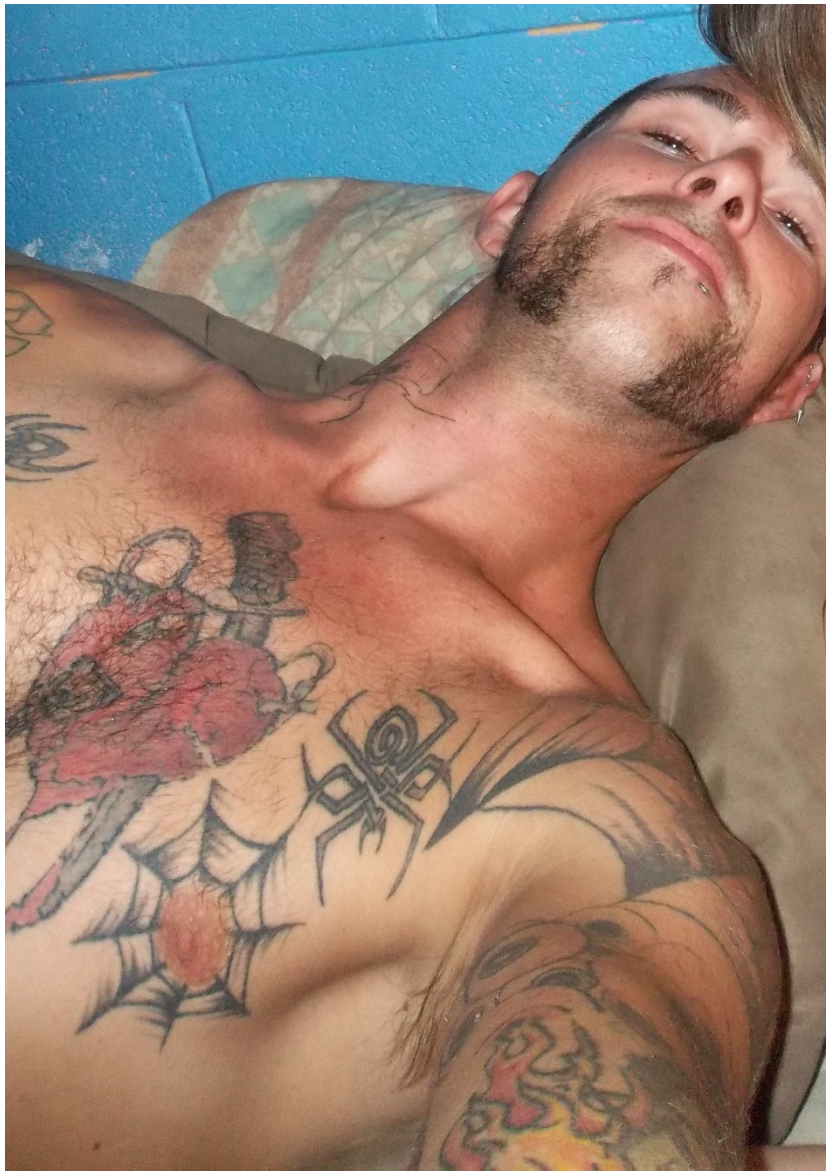
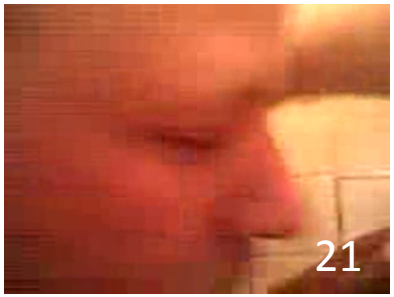
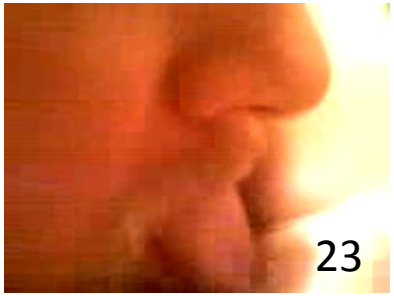
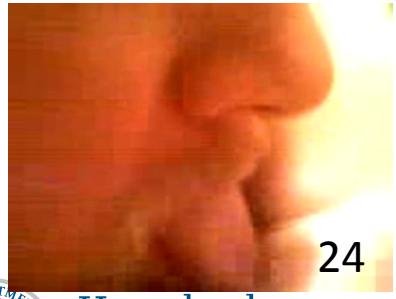
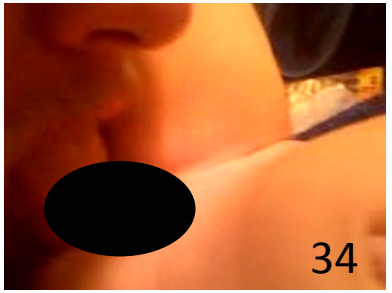


Photo URL
Report Abuse
Share









Dorsum nasi

Alar nasal suculus

Ala nasi

Anterior naris (nostril)

Apex

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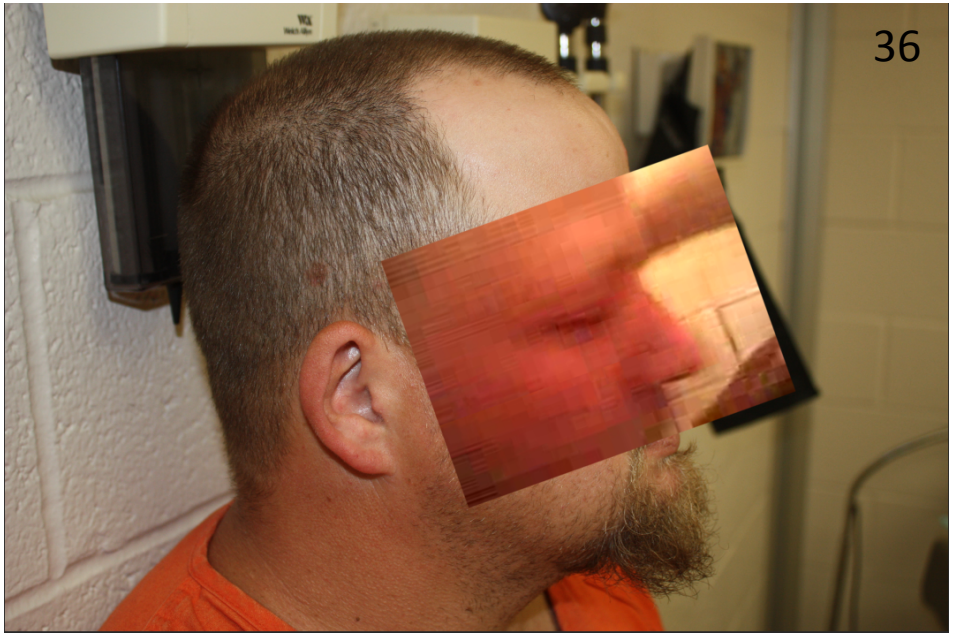
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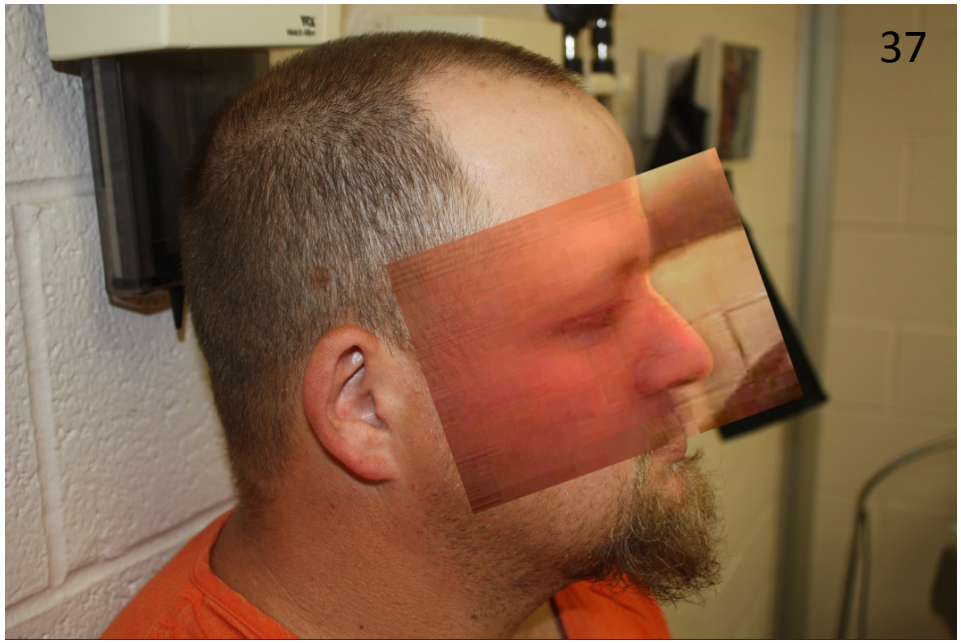
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U.S. Immigration and Customs Enforcement

ATTEMPT TO LOCATE SUBJECT – BE ON THE LOOKOUT FOR SUBJECT OF CHILD EXPLOITATION INVESTIGATION

Artist Rendition

- Child victim is a 5 – 8 year old white female with blond hair.
- Subject has a thin build.
- Subject is approximately 19 - 23 years of age.
- Subject has a Southern accent.
- Subject has a military style "high and tight" haircut.
- Video is believed have been created in 2011.

If your agency has any information concerning contact with or the current whereabouts of this subject, please contact:

ICE Homeland Security Investigations, Child Exploitation Investigations Center
Special Agent James Cole
(703) 593-0437 or jim.d.cole@ice.dhs.gov

January 15, 2014

U.S. Immigration and Customs Enforcement

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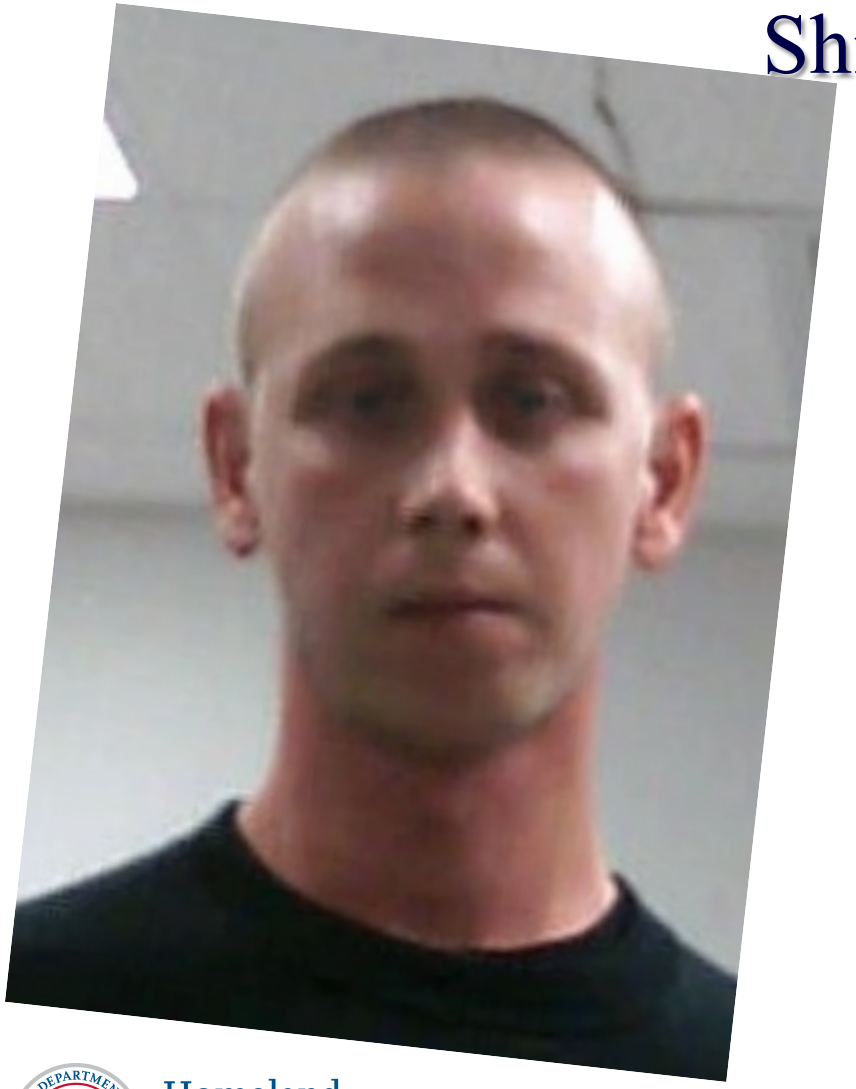
ShirtPlaid



Homeland Security Investigations (HSI)

DHS S&T/HSI CEIU Child Exploitation Imagery Analysis - CHEXIA

Homeland Security
Science and Technology

NIST noblis For the best of reasons

Overview

- Two year (2015 – 2017) project funded for 2.9M on Janurary 28, 2015.
- Goal of developing open facial detection and recognition and tattoo and text detection and recognition capability for adoption in LE tools.
- Phase I
  - Fund development of annotation tool into Analyze DI – Completed.
  - Utilize annotation tool to ground truth CE data – Completed.
- Phase II
  - Original state data will be utilized by the National Institute of Standards Technology (NIST) in order to test current and state-of-the-art algorithms against the data using ground truthed data to determine accuracy. Ground truthed data will be utilized to confirm results. Entire effort occurring at C3 – In progress.
- Phase III
  - Contract Noblis to develop and code algorithm implementation – In progress.
  - Contract to NetClean to build API and GUI.
- Phase IV
  - Test and Deploy

GRIFFEYE

Face

Homeland Security Investigations

Facial Grouping

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HOMELAND SECURITY
INVESTIGATIONS
U S
SPECIAL AGENT
Protecting the Borders Against Illicit Trade, Travel, and Finance