Facial Comparison and Identification Training
Module 1: Introduction to the FBI Face Training Program

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Agenda

• Training Program Background and Drivers
• Training Program Development and Support
• Training Program Overview
Face Training Program
Background and Drivers
Module 1
Face Training Background and Drivers

• There is an overwhelming need for a comprehensive state-of-the-art, skills-based training program due to:
  – The emerging prominence of FR and FI
  – The need to prepare for the introduction of facial capabilities into the FBI’s Next Generation Identification (NGI) program in 2014
  – The growing demand for FR and FI services across the government and for training that can be used not only by the FBI, but also by its law enforcement, criminal justice, and intelligence community partners
Face Training Background and Drivers

• The Facial Comparison and Identification Training Program has been developed to provide students with awareness and understanding of the facial comparison discipline
• This training will facilitate the expanded use of face technologies, interpretation of the output of FR systems, and better integration of face biometrics into law enforcement and intelligence work
Face Training Background and Drivers – FBI Facial Use Cases

- Identifying fugitives and missing persons in FR systems
- Identifying unknown persons of interest from images (1:N)
- Tracking subjects movements to/from critical events (e.g., 9/11)
- Conducting automated surveillance at lookout locations (1:M, where 1<M<<N)
- Identifying subjects in public datasets
- Identifying subjects from images in seized systems
- Verifying mug shots against National Criminal Information Center (NCIC) records (1:1)
- Controlling access
Face Training Program Development and Support

- **FBI Forensic Audio, Video and Image Analysis Unit (FAVIAU)**
  - Accredited laboratory that conducts examinations in the disciplines of video, image, and audio analysis in support of the FBI’s investigative programs
  - FBI Facial Comparison and Identification Training modules and practical exercises were built off of existing FAVIAU training materials

- **FBI Biometric Center of Excellence (BCOE)**
  - Center dedicated to providing “a one-stop shop for biometric collaboration and expertise”
  - Sponsors the Facial Comparison and Identification Training and is responsible for the initial training development funding

- **Biometric Services Section Training and Records Testimony Team (BSS TRTT)**
  - Unit responsible for coordinating delivering, and maintaining the biometrics courses available to government biometrics personnel
  - Responsible for the Facial Comparison and Identification training request coordination and processing, training delivery (course instructors) and for maintaining and updating the training content
The Forensic Audio, Video and Image Analysis Unit (FAVIAU)

• Mission
  – FAVIAU’s mission is to provide methods, tools, and techniques for video, and audio analysis

• The FBI’s FI and FR work is performed within the FAVIAU

• In conjunction with the FBI BCOE, is leading the effort to incorporate FR into FBI operations
The Biometric Center of Excellence (BCOE)

- **Mission**
  - To strengthen the Government’s ability to combat crime and terrorism with state-of-the-art biometrics technology. Biometrics are the measurable biological (anatomical and physiological) and behavioral characteristics used for recognition such as fingerprints, irises, voice patterns, deoxyribonucleic acid (DNA), palm prints, and facial patterns.

- Is the FBI’s program for exploring and advancing the use of new and enhanced biometric technologies and capabilities for integration into operations

- Helped establish the Face Training in conjunction with the FAVIAU
Biometric Services Section (BSS) Training and Records Testimony Team (TRTT)

• Mission
  – To uphold and support the accuracy, integrity, and timeliness of friction ridge individualizations and criminal history records by providing the highest quality training to law enforcement and criminal justice communities.
  – The Biometric Services Section (BSS) Training and Records Testimony Team (TRTT) is responsible for coordinating, developing, and providing BSS employees with all training and materials needed to successfully perform their functions and further prepare them for the multimodal biometric capabilities of the future.
Face Training Program Overview
Module 1
Face Training Program Structure

• The current training is comprised of 17 modules and 6 practical exercises
• Past training efforts have shown there is a wide spectrum of needs in the areas of FR and FI, and a one-size fits all model is not be the best approach to meeting these varying needs
Face Training Program Structure

• Training modules have been designed to be stand alone, but can be paired with others to create a unique training course to meet the specific needs of the requesting agency
• Practical exercises provide an opportunity to apply and reinforce the skills and techniques addressed in the training modules
• Courses designed for:
  – 1 week
  – 2 days
  – Individual 1 to 4 hour blocks
# BCOE Facial Comparison and Identification Training – 1 Week Course

<table>
<thead>
<tr>
<th>Day 1</th>
<th>1. Introduction to the FBI Face Training Program</th>
<th>1 hour</th>
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<tbody>
<tr>
<td></td>
<td>2. History of Photographic Comparison</td>
<td>1-2 hours</td>
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<td>3. Principles of Photographic Comparison</td>
<td>1-2 hours</td>
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<td>4. Basic Image Science</td>
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<td></td>
<td>➢ <em>Photographic Comparison Practical Exercise with Vehicles</em></td>
<td>1-1.5 hours</td>
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<td>Day 2</td>
<td>5. History of Facial Comparison</td>
<td>2 hours</td>
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<td>6. Facial Identification Methods Overview</td>
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<td></td>
<td>➢ <em>Facial Comparison Practical Exercise using different Facial Identification techniques</em></td>
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<td></td>
<td>➢ Photo-anthropometry</td>
<td>2 hours</td>
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<td></td>
<td>➢ Morphological</td>
<td>30 min</td>
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<td>➢ Superimposition</td>
<td>1.5 hours</td>
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<td>Day 3</td>
<td>7. Bones &amp; Muscles of the Face</td>
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<td>8. Dermatology</td>
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<td>9. Facial Shapes &amp; Landmarks</td>
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<td>10. Human Ear</td>
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<td>11. Aging and Alterations</td>
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<td></td>
<td>➢ <em>Human Ear Practical Exercise</em></td>
<td>1.5 hours</td>
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<td>Day 4</td>
<td>12. Biometrics Overview</td>
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<td>13. Image Processing</td>
<td>1-2 hours</td>
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<td>➢ <em>Advanced Image Overlay Demonstration/ Practical Exercise</em></td>
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<td>➢ <em>Gallery Practical Exercise</em></td>
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<td>Day 5</td>
<td>14. Imaging Conditions Affecting Facial Comparison</td>
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<td>15. Case Law and Admissibility</td>
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<td>16. Emerging Approaches, Tools, and Techniques</td>
<td>1-2 hours</td>
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<td>17. Documenting and Presenting Facial Analysis Results</td>
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Standalone Training Courses

• **Introduction to FBI Facial Comparison and Identification (1 hour)**
  – Module 1: Introduction to the FBI Face Training Program

• **Face Biometrics Best Practices (3-4 hours)**
  – Module 6: Facial Identification Methods Overview
  – Module 16: Emerging Approaches, Tools, and Techniques

• **Facial Recognition Techniques Overview (3-4 hours)**
  – Module 6: Facial Identification Methods Overview
  – Module 7: Bones and Muscles of the Face

• **FBI Investigative Use of Face as a Biometric (8 hours)**
  – Module 12: Biometrics Overview
  – Module 3: Principles of Photographic Comparison
  – Module 5: History of Facial identification
  – Module 6: Facial Identification Methods Overview
Who Can Benefit from Training?

FBI
- New Special Agents
- Operational Personnel
- Biometric Analysts
- Facial Comparison Examiners

Local, State, and Federal Law Enforcement Partners
- Biometric Analysts
- Facial Comparison Examiners

Intelligence Community (IC) Partners
- Biometric Analysts
- Facial Comparison Examiners
For Further Information

• The BSS TRTT maintains a catalog of the most current classes, workshops, and presentations being offered

• All training requests or requests for the current course catalog may be directed to BSS TRTT using one of the following:
  – **Telephone:** (304) 625-4478
  – **Fax:** (304) 625-2337
  – **Email:** biometric_training@leo.gov

• Individuals can also access training information online at [www.leo.gov](http://www.leo.gov)
  – From the Law Enforcement Online (LEO) home page, click on the Special Interest Groups (SIGs) tab, click on Public, click on the BSS-TRTT Seal/Logo, and click on Course Catalog Folder
  – There are several options from there including a link to all Criminal Justice Information Services (CJIS) Division training courses offered free of charge
Summary

• The prominence of the FI and FR fields has created the need for extensive training for personnel in the law enforcement and intelligence communities
• The FBI’s FAVIAU and BCOE have jointly taken the initiative to develop this training program, in partnership with CJIS to manage and deliver the training program
• The training program consists of a series of modules and practical exercises that can be combined to offer unique courses tailored for each audience
Questions?

**FEDERAL BUREAU OF INVESTIGATION**
**BIOMETRIC SERVICES SECTION**
**TRAINING AND RECORDS TESTIMONY TEAM**

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