Standards Development Activities Related to Friction Ridge Examination

Heidi Eldridge, MS, PhD Chair, Friction Ridge Subcommittee (FRS), OSAC; Chair, Friction Ridge Consensus Body (FRCB), ASB

> Henry Swofford, MSFS, PhD Chair, Physics/Pattern SAC, OSAC

American Academy of Forensic Sciences - AAFS February 22, 2024

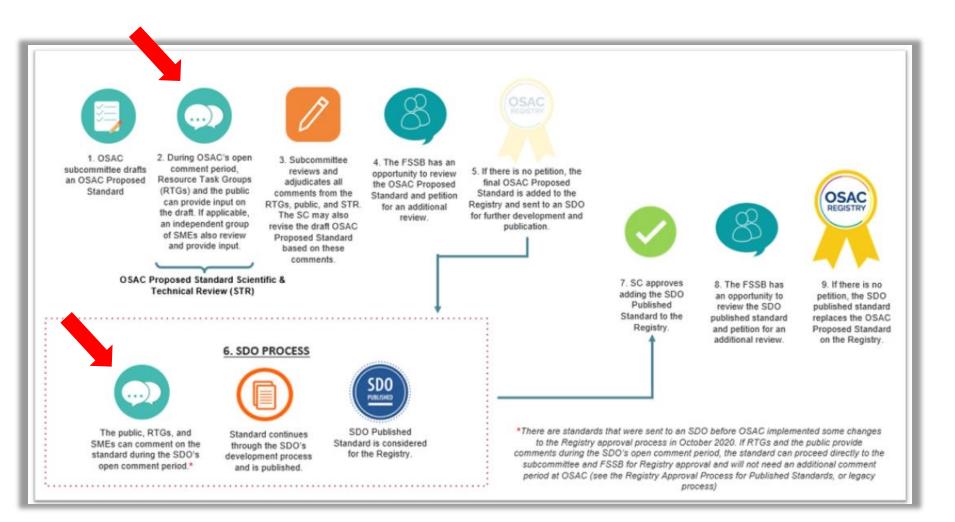
Disclaimer

The opinions contained in this presentation are the private views of the author and are not to be construed as official or reflecting the views of NIST, OSAC, ASB, or AAFS.

Two organizations working together

- OSAC was established in 2014 to replace SWGs
- OSAC is administered by the National Institute of Standards and Technology (NIST)
- ASB was established in 2015 to be an ANSI-accredited Standards Development Organization (SDO)
- ASB is administered by the AAFS
- Both organizations work together to facilitate the promote the development and implementation of standards and best practice recommendations relating to friction ridge examination and have a balance of interests represented and opportunities for public involvement

OSAC and Standards Development



https://www.nist.gov/organization-scientific-area-committees-forensic-science/registry-approval-process

The ASB Process

- New Work Proposal received
- ASB Board review/approval
- Working Group formed to review/draft document
- WG document presented to Consensus Body for review/comment/vote
- Document goes to Public Comment
- Comments adjudicated
- Additional rounds of comment on any changes made, if necessary
- Final approval by Consensus Body
- ANSI Process Review
- Document returns to OSAC to be considered for placement on OSAC Registry



FRS Published Proposed Standards & BPRs

- 1. Std for Proficiency Testing in Friction Ridge Examination*
- 2. BPR for Limited Examinations*

5.

6.

7.

8.

9.

10.

Std

BPF

BP

Std

BPF

BPR

- 3. Std for Processing Evidence for the Detection of Friction Ridge Impressions*
- 4. Std for Feature Selection in Friction Ridge Examination*

"All published documents are completed work products of the OSAC Friction Ridge Subcommittee and have passed a rigorous technical and quality review by the subcommittee. The subcommittee encourages the forensic science community to implement these proposed standards."

- 11. Std for Friction Ridge Examination Conclusions***
- 12. Std for Reporting Results from Friction Ridge Examinations
- 13. BPR for Technical Review in Friction Ridge Identification
- 14. BPR for Testimony Monitoring
- 15. BPR for Articulating a Source Identification in Friction Ridge Examination
- 16. Std for Friction Ridge Examination Training Program

FRS Documents Under Development

- 1. Acceptance of a Request for Friction Ridge Examinations (BPR)
- 2. Task Relevant Information in Friction Ridge Examination (TR)
- 3. Method Validation (Standard and BPRs)
- 4. Automated Biometric Identification System Best Practices
- 5. Recruiting/Selection for Pattern Recognition
- 6. *Process Map Update
- 7. *OSAC Implementation Guides
- 8. *R&D Needs Assessments

*Supplemental guides; not resulting in a standard or best practice recommendation document

OSAC FRS R&D Needs

- 1. ACE-V Bias
- 2. Assessing the Sufficiency and Strength of Friction Ridge Features
- 3. Close Non-Match Assessment
- 4. Complexity in Analysis and Comparison of Friction Ridge Impressions
- 5. Culture, Communication, Comprehension and Psychology in Friction Ridge Evidence
- 6. Determination of the Relevance of Marks to an Incident in Question Through Age and Activity Estimation
- 7. Development and Processing Techniques
- 8. Examiner Consistency During Friction Ridge Feature Mark-Up
- 9. Friction Ridge Statistical Modeling
- 10. Latent Fingerprint Image Quality Usage
- 11. Personnel Selection and Retention of Friction Ridge Science Practitioners
- 12. Technical Review and Verification

https://www.nist.gov/organization-scientific-area-committees-forensic-science/osac-research-and-development-needs

NIST Interactive Process Map

Free tool → Links users to helpful related content associated with steps in the process standards, best practices, trainings, tools, and research associated with each step, and provides controls that allow users to create an individual highlighted path as they navigate through the process, to show and record the course of their own examination.

LATENT PRINT EXAMINATION PROCESS	1000 Administrative Assessment	2000 Technical Assessment	3000 Latent Analysis	4000 Known Analysis	5000 Comparison /Evaluation	6000 Reporting /Verification	≡	۹
	WELCOME TO THE LATENT PRINT Examination process map							
	This tool presents t a latent print exami interactive process It allows you to brow see details and link content associated process.	nation, presented a map. wse the process ma s to helpful related	s an					
	It also provides con left of the map), tha individual highlighte through the process the course of your o	at allow you to created path as you navious, to show and reco	te an gate	ENTER THE F	PROCESS MAP			

Checklists Factsheets Training

These resources made possible through the following financial assistance award 70NANB21H097 awarded to AAFS from U.S. Department of Commerce, National Institute of Standards and Technology

NIST-AAFS Cooperative Agreement



Heidi Eldridge, CLPE, Ph.D.

Chair, Friction Ridge Consensus Body, ASB Chair, Friction Ridge Subcommittee, OSAC George Washington University heidi.eldridge@gwu.edu

Henry Swofford, CLPE, Ph.D.

Chair, Physics/Pattern SAC, OSAC National Institute of Standards and Technology Henry.Swofford@nist.gov

OSAC

https://www.nist.gov/osac/friction-ridge-subcommittee

ASB

https://www.aafs.org/academy-standards-board