OSAC 2021-N-0020
Best Practice Recommendations for Limited Examinations

Friction Ridge Subcommittee
Physics/Pattern Scientific Area Committee
Organization of Scientific Area Committees (OSAC) for Forensic Science
Draft OSAC Proposed Standard

OSAC 2021-N-0020

Best Practice Recommendations for Limited Examinations

Prepared by
Friction Ridge Subcommittee
Version: 1.0
May 4, 2021

Disclaimer:

This OSAC Proposed Standard was written by the Friction Ridge Subcommittee of the Organization of Scientific Area Committees (OSAC) for Forensic Science following a process that includes an open comment period. This Proposed Standard will be submitted to a standards developing organization and is subject to change.

There may be references in an OSAC Proposed Standard to other publications under development by OSAC. The information in the Proposed Standard, and underlying concepts and methodologies, may be used by the forensic-science community before the completion of such companion publications.

Any identification of commercial equipment, instruments, or materials in the Proposed Standard is not a recommendation or endorsement by the U.S. Government and does not imply that the equipment, instruments, or materials are necessarily the best available for the purpose.
# Table of Contents

1. Introduction .................................................................................................................. 2
2. Scope ............................................................................................................................ 2
3. Terms and Definitions ................................................................................................. 3
4. General Recommendations ........................................................................................... 3
5. Appendix A: Change Log .............................................................................................. 5
1. Introduction

1.1. This document has been developed with the objective of improving the quality and consistency of friction ridge examination practices.

1.2. For the purposes of this document, examinations include both latent print processing conducted in a laboratory setting and friction ridge comparisons. These examinations and their results should be within the examination’s limitations and/or the probative needs of the customer and provided to customers in a timely manner. In some cases, limiting or deferring certain examinations that do not provide additional value to the needs of the case provides more timely results to the customer and conserves the resources of the forensic service provider (FSP).

1.3. Limited examinations are exams that are not exhaustive; evidence may exist that has not been partially or fully processed and/or latent prints exist that have not been analyzed and/or compared.

1.3.1. Limited examinations are not random sampling methods.

1.4. In some situations, limited examinations are advantageous to FSPs for any of the following reasons (not an all-inclusive list):

1.4.1. probative value of the evidence
1.4.2. crime type considerations (i.e. people versus property)
1.4.3. backlog reduction
1.4.4. increased case throughput
1.4.5. effective resource allocation and usage

1.5. If limited examinations are performed, they should be performed in a manner that has the lowest assessed risk on the evidence and case.

1.6. In this document, the following verbal forms are used: “shall” indicates a requirement, “should” indicates a recommendation; “may” indicates permission; and “can” indicates a possibility or capability.

2. Scope

2.1. This document describes what limited examinations are and provides the best practice recommendations on how limited examinations should be conducted. It also describes what documentation is necessary if limited examinations are utilized by a forensic service provider.

2.2. This document does not address limiting the collection and preservation of evidence.
3. Terms and Definitions

For the purposes of this document, the following terms and definitions apply.

3.1. Comparison (phase of the Examination methodology): The search for and detection of similarities and differences in the observed data between two potentially corresponding friction ridge impressions.

3.2. Customer: Client, authority, organization or person(s) requesting the forensic services.

3.3. Examination: The act or process of observing, searching, detecting, recording, prioritizing, collecting, analyzing, measuring, comparing, and/or interpreting.

3.4. Examiner (Friction Ridge)/Competent Friction Ridge Examiner: An individual who has successfully completed their FSP’s training program and has demonstrated to the FSP that they possess the knowledge, skills and abilities to perform the tasks required of their current position. An individual authorized to conduct friction ridge examinations for the FSP by observing and interpreting data, making decisions, forming conclusions and opinions, issuing reports and/or providing testimony.

3.5. Forensic Service Provider (FSP): A forensic science entity or forensic science practitioner providing forensic science services.

3.6. Friction Ridge Detail/Features: The combination of ridge flow, ridge characteristics, and ridge structure of friction ridge skin, as observed and reproduced in an impression. A large subset of the observed data used to compare and interpret similarity or dissimilarity between two impressions.

3.7. Minutia: The point where a friction ridge begins, terminates, or splits into two or more ridges. A subset of the friction ridge detail/features traditionally consisting of ridge endings, bifurcations, and dots/short ridges used to compare and interpret similarity and dissimilarity between two impressions.

3.8. Observed Data: Any demonstrable information observed within an impression that an examiner relies upon to reach a decision, conclusion or opinion. This has historically been expressed as “features” or “minutiae,” but the use of the broader term “observed data” is inclusive of other types of data that may be considered beyond minutiae, such as quality, scars, creases, edge shapes, pore structure, and other friction ridge features.

4. General Recommendations

4.1. Evidence Processing

4.1.1. The probative value of evidence should be assessed when deciding which evidence to process first (i.e. not processing items determined to be irrelevant to
the case, halting comparisons after multiple identifications have been made to the
same individual, etc.).

4.1.2. Offense type may be considered when determining which cases to process first.
Offenses that present a more egregious threat to public safety may be prioritized;
however, consideration should be given when determining the extent to which any
particular case may be examined.

4.1.3. When considering backlog mitigation strategies, selecting specific processing
techniques with higher sensitivity instead of conducting full sequential processing
may be necessary to improve efficiency and throughput. When selecting limited
processing techniques, the FSP should consider the potential of a given technique
for negating subsequent processing. At a minimum, any friction ridge detail of
potential value that has been developed shall be photographed and/or retained and
the integrity of the item shall be maintained for potential future examination.
Backlog reduction may also include conducting limited processing of certain
items (e.g. cartridge cases, locks, etc.) that have a low success rate.

4.1.4. FSP submission guidelines may include packaging recommendations that will
maximize latent print processing results (i.e. separating drugs from the packaging
prior to submission).

4.2. Friction Ridge Impression Comparisons

4.2.1. Examiners may compare and search friction ridge impressions on the most
probative items where friction ridge detail is developed first and may stop when
the investigative needs of the customer have been met (i.e. person(s) of interest
is/are identified). Additional comparisons can be completed by the request of the
customer.

4.2.2. Develop and retain all suitable friction ridge impressions; however, defer any
remaining manual comparisons once each named person of interest has been
identified on the surface or item(s).

4.2.3. Submit and search all AFIS quality friction ridge impressions first and report any
conclusions made from the automated searches. Non-AFIS quality friction ridge
impression comparisons may be completed upon an additional request from the
customer.

4.2.4. Perform automated searches using auto-extracted minutiae first (e.g. an LFIS
search) and if no identifications are made, perform a second search by using
manually-encoded minutiae or ‘cleaning up’ the auto-extracted minutiae.

4.2.5. Limit the number of respondents reviewed from the automated system candidate
response list or adjust the score that must be obtained in order to review the
respondents.
4.2.6. FSP policy may allow or require the restriction on which databases are searched to reduce the amount of time spent on each examination (e.g. only search a local database for specific types of crimes).

4.3. Necessary Documentation and Reporting

4.3.1. The FSP shall communicate with the relevant stakeholders and customers when performing limited examinations; both to determine if the examination is still required and to establish the extent or order of the examinations.

4.3.2. Any FSP that performs or plans to perform limited examinations shall notify any customers of that policy in advance. The extent of the examination shall be documented in the case file and reported to the customer. This documentation shall include any evidence that was not processed and/or any friction ridge impressions that were of value that were not compared.

4.3.3. Any limited examination approach should be conducted with respect to reducing the inhibition of future processing and/or comparisons. This would allow additional examinations at a later date. It is up to the FSP to weigh the costs versus benefits in deciding whether to implement a limited examination policy.

5. Appendix A: Change Log

<table>
<thead>
<tr>
<th>Version</th>
<th>Date</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>DD/MM/YYYY</td>
<td>Original Issue</td>
</tr>
</tbody>
</table>