

Public Comment Deadline: March 14, 2022

ASB Best Practice Recommendation 166, Best Practice Recommendation for Comparison and Evaluation of Friction Ridge Impressions

#	Section	Updated Section	Type of Comment (E)	Comments	Proposed Resolution	Final Resolution
77	General		T	This best practices document appropriately requires specific contemporaneous documentation during the comparison phase and requires that post-comparison changes to interpretations be clearly identified. But the Case record section does not explicitly require that all of this documentation be in the case record. What is meant by the "case record," as opposed to a "report" as opposed to a "case file"?	The document should define "case record" and make clear what should be in the case record and what should be in the report. All of the documentation identified in this document should be in the case record and any report should, at a minimum, note what is contained in the case file that is not in the report. For further guidance see forthcoming guidance from the Legal Task Group and NCFs, "Views of the Commission, Documentation, Case Record and Report Contents" at https://www.justice.gov/archives/ncfs/file/818191/download	Reject: The current document does indicate what information is retained in the case record and as a follow up the information included in the report is a subject of a different document.
60	Throughout		T	"Non-correspondence" (and its variations) are cited repeatedly throughout this document, but it is incorrect to state that "non-correspondence" is the same as "disagreement" (this is a logical error that often leads to false exclusion errors). Since the Conclusions document cites "strong correspondence" as the threshold for source identification and "strong disagreement" as the threshold for source exclusion, this document should also use the terms correspondence and disagreement. ASB Documents should be as consistent as possible with terminology.	Replace all instances of "non-correspondence" (and its variations) with "disagreement" (or an appropriate variation thereof) to be in line with Conclusions document.	Accept
53	Foreward		T	Many consider ACE-V to be a process, not a methodology	Replace "methodology" with "process"	Accept
76	General		T	The standard offers no information to show that the comparison-evaluation process it recommends (or any parts of it) are reliable and accurate.	Summarize the findings of studies of the reliability and validity of the comparison-evaluation process recommended here. If no studies to enable estimates of error probabilities and the like are available, acknowledge that.	Reject: ASB Manual, section 12.1 calls for normative references only if the document cannot be implemented without them and 19.1 says bibliographies are optional.
21	1		T	ACE-V is a process, not a methodology	change methodology to process	Accept
29	1		T	I see these best practice documents being used in court to say that you didn't do enough even if you met the requirements of the corresponding standard. I recently attended the AAFS conference and viewed a presentation by Heidi Eldridge. She had a thoughtful comment that I believe should be added to the scope of each of the best practice documents. She explained that the best practice documents work with the standards and provide how a FSP could meet the standard but are not the only way that a FSP could meet the standard. They are a recommendation from the OSAC and if the best practice document is followed, the standard will be met.	Add to the scope what a best practice document is so that it will not be interpreted as a standard in court.	Reject: ASB Manual explains the types of different documents. https://www.aafs.org/academy-standards-board/asb-documents-and-forms
54	1		T	Many consider ACE-V to be a process, not a methodology	Replace "methodology" with "process" throughout	Accept
65	1		T	The standard's statement of scope should note that the standard is limited to the dominant (and criticized) procedure for making judgments of posterior probabilities for hypotheses about the source of latent fingerprints, and it should give some justification for not considering reporting judgments about the degrees of support that the evidence provides for these hypotheses (likelihood ratios).	Note that the standard is limited to the dominant (and criticized) procedure for making judgments of posterior probabilities for hypotheses about the source of latent fingerprints and give some justification for not considering reporting judgments about the degrees of support that the evidence provides for these hypotheses (likelihood ratios).	Reject: Likelihood ratios are not an ACE.
22	3.1	3.2	T	ACE-V is a process, not a methodology	change methodology to process	Accept
30	3.1	3.2	E	Examination should not be capitalized	change Examination to examination	Accept
55	3.1	3.2	T	Many consider ACE-V to be a process, not a methodology	Replace "method" with "process"	Accept
78	1, 3.1, 3.3, 3.8	3.2, 3.4, 3.9	T	Methodology is not a term we use when referring to ACE-V now	Refer to ACE-V as a process rather than methodology	Accept
101	3.2	3.3	T	The definition of blind verification does not account for FSP policies that bias the verification process (i.e., FSP policy that only identifications must be verified) and does not consider the bias that arises from the verifier knowing the identity of the original examiner. See, e.g., Mattijssen et al, Cognitive bias in the peer review of bullet and cartridge case comparison, Science and Justice 60 (2020) 337-346.	Include in the definition that to be truly blind verification, this phase requires FSPs to adopt measures to ensure the verifier has no knowledge of the initial examiner's identity, and cannot infer decisions or conclusions from the fact that verification is taking place.	Reject: Too prescriptive for a definition and blind verification is a subject in a separate ASB document.
23	3.3	3.3	T	ACE-V is a process, not a methodology	change methodology to process	Accept
31	3.3	3.3	E	Examination should not be capitalized	change Examination to examination	Accept
56	3.3	3.3	T	Many consider ACE-V to be a process, not a methodology	Replace "method" with "process"	Accept

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102	3.4	3.5	T	The phrase "may require additional consideration" is vague and does not reflect the important fact that difficulty increases with complexity and that this correspondingly increases the risk for error.	The recommendation for rating complexity and this rating triggering additional quality measures appear to come from the recognition that there is greater risk for error in more complex comparisons. To promote transparency on this point, and to more clearly set out the importance of the BPR, the definition should spell this out. Replace "may require additional consideration" with "render comparisons more difficult, increase the risk of error, and therefore require additional quality assurance measures."	Reject: Too proscriptive for a definition. There are additional factors beyond complexity to be considered before instituting additional quality assurance measures.
88	3.4; 3.5	3.5, 3.6	T	The definitions of 'complexity' do not really define complexity, rather they identify a need to address complexity	Consider providing a definition of complexity based on characteristics of the impression/comparison	Reject: Too proscriptive for a definition. Complexity is further clarified in the body of this document.
103	3.5	3.6	T	Same problem identified above in 3.4	Same proposed resolution as identified above in 3.4.	Reject: Too proscriptive for a definition. There are additional factors beyond complexity to be considered before instituting additional quality assurance measures.
1	3.6	3.7	E	change "consensus opinion" to "consensus review"	change "consensus opinion" to "consensus review", spelling of judgment (drop the e)	Accept with modification: Term and definition were updated.
34	3.6	3.7	E	Consensus opinion is defined as "A type of examination..."	Change to "A reported decision or conclusion that reflects the collective judgement (e.g., majority) of a group of examiners."	Accept with modification: Term and definition were updated.
89	3.6	3.7	T	The definition of "consensus opinion" begins with "A type of examination..." -- but really the consensus opinion is the <i>conclusion</i> formed on the basis of a collective judgment	Alter definition to better distinguish between process/examination and the conclusion	Accept with modification: Term and definition were updated.
90	3.6	3.7	T	Is a simple majority sufficient for something to be a "consensus?" We understand wanting to be broad/general enough that different FSPs can adapt, but suggesting "majority" might not be the best approach.	Perhaps: "...that reflects the collective judgment of a group of examiners. A consensus opinion does not need to be unanimous within the group."	Accept with modification: Term and definition were updated.
7	3.7	3.1	T	definition of agreement included but not a definition of the converse, disagreement. Insert the definition of disagreement	insert: disagreement A dissimilarity, or an accumulation of dissimilarities, that is deemed to be outside of expected variations in the appearance of impressions from the same source, resulting in overall nonconformity.	Accept
66	3.7	3.1	E	"Correspondence" seems to have two different definitions: "Observation of pattern type, ridge flow, and friction ridge features in sequence, of the same or similar type, in the same relative position to each other, with associated intervening ridge counts. An accumulation of similarities between two impressions resulting in overall conformity." The first sentence describes similarity. The second defines "correspondence" as a concatenation of similarities.	Define "correspondence" as a large number of similar features (if that is what is intended). Do not define it as an observation of X, but as X itself.	Reject: The definitions for correspondence, agreement, and disagreement provide the necessary definitions.
91	3.7	3.1	T	The definition for 'correspondence' concludes with the sentence "An accumulation of similarities between two impressions resulting in overall conformity." It seems this part of the determination-- the "accumulation of similarities" would be a judgment made during the evaluation phase.	Consider deleting "An accumulation..."	Reject: The definitions for correspondence, agreement, and disagreement provide the necessary definitions.
104	3.7	3.1	T	As written, this definition fails to reckon with the circular nature of the subjective standard "overall conformity". In a BPR aiming to elevate the standard of scientific practice in the discipline, it is critically important to be transparent about the limitations that still exist. In addition to being good science, it models the type of transparency and evidence-driven approach to forensics that OSAC and AAFS should be encouraging. See also Comment to Section 4.1.2.5(c)	Define overall conformity using objective criteria and data. If the scientific research does not provide objective, verifiable criteria to establish this threshold, make that clear in this Section.	Reject: Conformity is a generic concept.
24	3.8	3.9	T	ACE-V is a process, not a methodology	change methodology to process	Accept
32	3.8	3.9	E	Examination should not be capitalized	change Examination to examination	Accept
57	3.8	3.9	T	Many consider ACE-V to be a process, not a methodology	Replace "method" with "process"	Accept
92	3.8	3.9	T	Will it be clear to all readers what 'propositions' means in this context?	Consider including explanation or parenthetical to define this term	Reject: The term proposition is not used in this document therefore not included in section 3.
2	3.9	3.10	E	delete definition for "examination" as too generic and common meaning is intended, was removed from TR016	delete definition	Accept
105	3.13- 3:15	3.13- 3:15	T	This definition is circular, vague and fails to distinguish an "inconclusive" response from "inconclusive with dissimilarities" and "inconclusive with similarities". Currently the definition of an inconclusive is when there is not enough data to say ID or exclusion, but nothing in this BPR tells an examiner how much data <u>is</u> required for either of those calls.	As discussed in more detail below, consider foregoing the categorical source conclusions rubric as it lacks objective criteria allowing for reproducibility, population frequency data, and sufficient empirical studies investigating the accuracy of examiners' source conclusions.	Reject: The ASB CB is working on a separate document Std 013 and has agreed to move forward with these source conclusions.
46	3.13, 3.21, 3.22	3.13, 3.21, 3.22	T	Need to change these to remove the likelihood ratio-driven language until a likelihood ratio document is delivered. You are putting the cart way before the horse.	Re-word to the explanations given in the Standards for Conclusions document.	Reject: The ASB CB is working on a separate document Std 013 and has agreed to move forward with these source conclusions.
45	3.14, 3.15, 4.2.1.2, 4.2.1.4	3.14, 3.15, 4.2.1.2, 4.2.1.4	T	The Friction Ridge Subcommittee seems to believe the sliding five conclusion scale is the best way to go. This is not a foregone conclusion, and we will fight this to the bitter end. The existing three decision scale is fine with the new education we need to give to juries, legal professionals, and law enforcement. The five conclusion scale is too confusing and useless.	Delete.	Reject: The ASB CB is working on a separate document Std 013 and has agreed to move forward with these source conclusions.

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25	3.14	3.14	T	inconclusive with dissimilarities may be confusing to the jury and mislead them to believe exclusion	stick with inconclusive only - not lean one way or the other	Reject: The ASB CB is working on a separate document Std 013 and has agreed to move forward with these source conclusions.
26	3.15	3.15	T	inconclusive with similarities may be confusing to the jury and mislead them to believe identification	stick with inconclusive only - not lean one way or the other	Reject: The ASB CB is working on a separate document Std 013 and has agreed to move forward with these source conclusions.
33	3.17	3.17	E	Examination should not be capitalized	change Examination to examination	Accept
3	3.20	3.20	E	we have a definition of similarity but not one for dissimilarity included in this document. Add definition for dissimilarity	dissimilarity An observation that two impressions have a general difference of appearance when comparing an individual feature or detail. Not to be confused with "disagreement."	Accept
4	3.20	3.20	E	add "or agreement" after "correspondence"	add "or agreement" after "correspondence"	Accept with modification: Correspondence was replaced with agreement.
67	3.20	3.20	E	"Similarity" is defined as "and observation that" But similarity is what is observed (if the observer is accurate), not the observation of what is observed.	Define "similarity" as "A general likeness in a feature or detail as between two prints. Compare correspondence."	Reject: Definition is appropriate as stated.
68	3.21 and elsewhere	3.21 and elsewhere	E	OSAC does not like the word "conclusion" in standards.	Change or consider asking OSAC to change its position.	Reject: This document is being developed by ASB. OSAC preferred terms is a published document available https://www.nist.gov/system/files/documents/2021/12/14/OSAC%20Preferred%20Terms_December%202021.pdf
69	3.22	3.22	T	It would be better to avoid the term "identification" or "ID" in favor of a weaker phrase for the situation of "substantial support." It would also be better to avoid the term "substantial" without empirical support for such a high level of certainty (even though below "identification").	Use a term such as "source association," which could be defined as "an opinion based on the observed data that X cannot be excluded as a possible source."	Reject: The ASB CB is working on a separate document Std 013 and has agreed to move forward with these source conclusions.
5	3.23	3.24	E	double period	delete one period	Accept
79	3.23	3.24	E	There appears to be two "." at the end of the sentence	Remove one "."	Accept
106	3.23	3.24	E	There are two periods following "process"	Delete one (.) period.	Accept
47	3.25	3.23	E		Add "suitability" as a synonym. Makes it more consistent with 3.23. correct definition is: verification (phase of examination method) Independent examination by one or more examiners to ascertain if a decision, conclusion, or opinion is reproduced or is in conflict with the decision, conclusion, or opinion of another examiner. NOTE 1 Verification may be implemented in multiple ways including blind verification, open verification and consensus review. The general term verification is inclusive of these various types. NOTE 2 Verification is a quality assurance measure for friction ridge examination. NOTE 3 The use of the term "independent" indicates an autonomous examination but not necessarily one without knowledge of a prior decision, conclusion or opinion.	Accept
6	3.26	3.26	T	old definiton for "verification" used. Please update with latest one from TR016		Accept: Definition updated to be in line with ASB's proposed TR 016.
27	3.26	3.26	T	ACE-V is a process, not a methodology	change methodology to process	Accept
58	3.26	3.26	T	Many consider ACE-V to be a process, not a methodology	Replace "method" with "process"	Accept
80	3.26	3.26	E/T	Examination should be capitalized to follow the format of other definitions - "verification (phase of Examination...)" and method is not the appropriate term	Capitalize "Examination" after the verification header and refer to method as process	Reject: Examination is lower case for consistency throughout this document.
96	3.26	3.26	T	Verification is not mentioned in the Foreword at all, and there is a note below 3.17 indicating that verification is a quality control measure. This is presumably the reason for it's absence in all places except the definitions section, but maybe that should be clearly stated in the foreword and/or scope.	Consider addressing the absence of verification procedures in this document in the foreword and/or scope.	Reject: Verification is the subject of separate document in development, ASB Std 144.
93	4.1.1		T	No definitions or criteria are offered for "complexity of the impression" or "sequential or arbitrary selection." Additionally, no criteria are provided to help users choose between these options (a-c).	Provide definitions/criteria for complexity and sequential or arbitrary selection; provide guidance on how to choose between options	Accept with modification: Note added as ASB BPR 165 includes and provides the definition on complexity. Guidance on sequential arbitrary is self explanatory.
112	4.1.1		T	The order latent prints of value are compared in any particular case will vary widely, and many FSPs require comparison of all suitable impressions, making order of selection somewhat irrelevant	Remove "Selection should take..." and the bullet points	Reject: Recommendations are being offered as best practice.
107	4.1.1 (c)		T	The meaning of "sequential or arbitrary selection" is unclear	Add to the list of definitions "sequential selection" and "arbitrary selection".	Reject: These are common terms and are being used as stated.
48	4.1.1, 4.1.2		T	What does this mean? What is the purpose? Why are we selecting a questioned impression based on criteria? Or does this mean re-analyzing the impression?	Re-word to clear up ambiguity, or get rid of it entirely.	Reject: Recommendations are being offered as best practice. These are common terms and are being used as stated.
94	4.1.2		T	The phrase "apparent similarity" seems quite similar to the comparison task itself. Is there a way to distinguish or clarify what you mean?	Clarify the phrase "apparent similarity"	Reject: Apparent is a common term and similarity is defined in section 3.

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113	4.1.2		T	See comment above; more relevant for which knowns to start with.	Remove bullet "c) sequential or arbitrary"	Reject: Recommendations are being offered as best practice. These are common terms and are being used as stated.
35	4.1.3		T	"The exemplar impression is analyzed for its complexity and utility for comparison." How far are we going with the analysis for complexity and utility of the knowns. Are you expecting a quality markup and a documentation of features here? It seems excessive unless you have a low quality known.	Clarify what is expected here. Are we expecting analysis to the level of Best Practice 165?	Accept: Section was updated for clarity.
43	4.1.3		T	This section is unclear if the standard is to be analyzed in its entirety or if each finger or segment should be analyzed separately.	Clarify	Reject: See section 4.1.2, clarification is not needed as sections provide sequential recommendation.
36	4.1.4		T	I agree with 4.1.4 but the second sentence says "If the lower quality impression is determined to be the exemplar impression, a full and independent analysis should be conducted on the exemplar prior to comparison." That second sentence is problematic. I assume that you are allowed to do some level of comparison prior to this because 4.1.2 says "Selection of an exemplar impression for comparison should take into consideration: a) apparent similarity of the exemplar impression to the questioned impression; NOTE Similarity can be determined by visual observation or automated comparison algorithms." The issue that I have is that we could have a very high quality latent print with pores and shapes visible and 20+ minutiae for comparison that is compared to livescan knowns that rarely have good 3rd level detail. This is going to potentially force a comparison that is basically a low risk known to known comparison to be documented excessively. It seems like this should be a requirement if the quality of the known impression is complex but not if it is low complexity but less quality than the latent print.	The extra documentation should only be for knowns considered to be "high complexity"	Accept with modification: See updated section and second sentence added to section 4.1.3.
97	4.1.4		E	The second sentence indicates that if the exemplar is lower quality than the questioned impression, a "full and independent" analysis should be conducted. "Independent" might imply that it needs to be conducted by another examiner -- is that how you intended it? If not, consider editing for clarity	consider deleting "independent"	Accept with modification: Section 4.1.4 was updated and so was section 4.1.3.
37	4.1.6	4.1.6	T	"Comparison of features should account for all of the features interpreted during analysis." For smaller or high complexity comparisons I agree but you could have a high quality impression that does not require this. Some of those features may not even be recorded on the knowns.	Take into account complexity of comparison and should only apply to the overlapping area.	Reject: Comparison is a holistic process. Documentation related recommendations are separate and appear later in this document.
8	4.1.7		T	replace "correspondence" and "non-correspondence" with "agreement" and "disagreement" as these terms are clearly defined in the document.	replace "correspondence" and "non-correspondence" with "agreement" and "disagreement" as these terms are clearly defined in the document.	Accept with modification: replaced "non-correspondence" with "disagreement" but kept "correspondence" per comment #60 (cited in line 7, cell G)
9	4.1.8		T	replace "correspondence" and "non-correspondence" with "agreement" and "disagreement" as these terms are clearly defined in the document.	replace "correspondence" and "non-correspondence" with "agreement" and "disagreement" as these terms are clearly defined in the document.	Accept with modification: replaced "non-correspondence" with "disagreement" but kept "correspondence" per comment #60 (cited in line 7, cell G)
40	4.1.8		E	The second sentence of this clause should be amended to state that non-corresponding features be documented in addition to corresponding. It is as important to note similarities to reach source inclusions, as it is to note dissimilarities to reach source exclusions.	Revise to state: <i>Features assessed as non-corresponding should also be documented.</i>	Accept with modification: replaced "non-correspondence" with "disagreement" but kept "correspondence" per comment #60 (cited in line 7, cell G)
42	4.1.8		T	I am not sure I understand why the documentation of non-correspondence is not required. When, e.g., the result is a conclusion of Source Identification or Inconclusive with Similarities, it would seem that, for transparency, the documentation of non-corresponding features is at least as important as the documentation of corresponding features.	Require documentation of correspondence or non-correspondence of all features documented during Analysis.	Reject: The discipline does not have a consensus based method for documenting disagreement at this time.
95	4.1.8		T	Why are there different standards for documenting 'features assessed as corresponding' (should be documented) and documenting 'features assessed as non-corresponding' (may be documented)? To better mitigate bias, the standard should encourage similar documentation practices for similar/dissimilar information. In some comparisons perhaps there are an endless supply of 'features assessed as non-corresponding' but there might still be a better way to address this issue to encourage examiners to equally consider similar and dissimilar information, especially when the conclusion is something other than an exclusion	Consider using comparable standards for documentation	Reject: The discipline does not have a consensus based method for documenting disagreement at this time.
108	4.1.8		T	Features assessed as non-corresponding is critical information that the defense is likely entitled to in court proceedings, regardless of the ultimate opinion reached by the examiner. It is just as important to document these points of dissimilarity as it is to document the similarities.	Change "features assessed as non-corresponding may be documented" to "features assessed as non-corresponding shall be documented".	Reject: The discipline does not have a consensus based method for documenting disagreement at this time.
114	4.1.8		T	Full documentation of features on a high-quality known impression in a non-complex comparison does not add to the quality of a case or conclusion. The BPR for analysis would already have the latent annotated/documented.	Even though these are already "shoulds", clarify that the amount of documentation recommended by 4.1.8.1-4.1.8.3 for known impressions may vary based on complexity.	Reject: Too prescriptive.
83	4.1.8, 4.1.8.1-4.1.8.4		T	I agree with stating this as a "should" but correspondence in high quality prints do not need to be documented digitally. We need to balance documentation and efficiency and there are times when correspondence is so easy to see that extra documentation should not be necessary. Also, not everyone is operating fully digitally so it may be difficult or time consuming to document things digitally on every print that has correspondence.	I recommend changing these statements to say correspondence should be documented in lower quality or more complex print situations. Also, allow extra documentation, when needed, to be written rather than referring to only digital documentation/annotation.	Reject: Too prescriptive.

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49	4.1.8.1		T	Why recommend how the documentation should be preserved? If it's preserved in a permanent format, shouldn't that be enough? This part is too prescriptive.	Delete.	Reject: Pursuant to the analysis document (ASB BPR 165) this is the most practical recommendation.
41	4.1.8.3		E	The term "source" used here sounds like the clause is directing the examiner to document features until they find an association.	Strikeout the term "source". The clause should read: <i>Documentation should continue until an accumulation of features supports a conclusion.</i>	Accept with modification: The definition for source conclusion was added to section 3.
115	4.1.9.1 e		T	Choosing numerical values for how many features can be "changed" does not align with the "weight of the evidence" illustrations in the conclusions document and will lead to issues with performing a full analysis and comparison transparently. What does "not consistent" mean? Something major like presence/absence of a feature or minor adjustments in type/angle/placement?	Eliminate the requirement for a specific number of features, or change to "minimal features"; define "not consistent"	Accept with modification: Section was updated for clarity.
84	4.1.9.1 e, 4.1.9.2 e, 4.1.9.3 e		T	I disagree with putting a number on observations between analysis and comparison. There may be instances where there is a large portion of excellent quality latent print or known print available for comparison and a small area with distortion present. If that distorted area has more than 3 inconsistencies, by policy, it is no longer a non-complex (or low complexity) print, despite overwhelming clarity elsewhere.	Remove "e" or at least get rid of "three features" and make a more qualitative statement to address inconsistencies	Accept with modification: Sections were updated for clarity.
70	4.1.9.1 et seq.		E/T	In this subsection and elsewhere, there are references to things like "Category 3 (green) quality or higher during analysis." The color categories are not defined within this document, and there is no reference to anything that does define them. Without this information, the standard cannot be implemented. Apparently, it is in an separate standard on "analysis." It would be a boon to readers to combine the two standards.	Combine this standard with ASB 165 on analysis.	Accept with modification: Annex A from ASB BPR 165 was added to this document.
38	4.1.9.1, 4.1.9.2, 4.1.9.3		T	I like the work done here to standardize non-complex, low complexity, and high complexity comparisons. I do think that information should be added regarding the specificity of features. For example, if the entire print is a delta or a pattern force area, it should at a minimum be deemed a low-complex comparison.	Add information about pattern force areas making the comparison complex.	Reject: Pattern force area is not necessarily directly related to complexity.
50	4.1.9.2 and 4.1.9.3		E	Listing the conditions out in both sections seems redundant.	Combine sections into one or list conditions a) through e) in 4.1.9.2 and in 4.1.9.3 reference the listed conditions.	Reject: The document is appropriate as written to maintain clarity.
116	4.1.9.2 e		T	See 4.1.9.1 e	Eliminate the requirement for a specific number of features and define "not consistent"	Accept with modification: Section was updated for clarity.
81	4.14	4.1.4	T	Comparison of features has always been taught to proceed from latent to known. If the exemplar is of worse quality than the latent, we don't necessarily know that until we have already started the comparison so it's impossible to do a full analysis prior to comparison	Change to "...should proceed from the latent to the exemplar..." because it's impossible and time consuming to do a full analysis on a known print you may not know is of lower quality than the latent until you have started comparing. Also, remove the 2nd statement entirely.	Accept with modification: Section 4.1.4 was updated and so was section 4.1.3.
82	4.15	4.1.5	T	See above for 4.14. Comparison should proceed from latent to known	Change "A target group in the lower quality impression..." to "...in the latent print..."	Reject: The lower quality impression may not be the latent print.
10	4.2.1		T	replace "differences" with "dissimilarities"	replace "differences" with "dissimilarities"	Accept: Change made and definition added to section 3.
44	4.2.1		T	It appears that in reading this section that any area/feature marked in red would preclude almost any conclusion (except inconclusive). Why is this quality category available/acknowledged in 165 if it would preclude any conclusion (other than inconclusive) being reached if present?	Clarify document 165 or allow some amount of red when reaching a conclusion (other than inconclusive) based on the quantity/quality of other information present.	Reject with modification: Sections 4.2.1.1-a, 4.2.1.2-a, 4.2.1.3 -a, 4.2.1.4-a, and 4.2.1.5-a were updated for clarity.
71	4.2.1.1		T	To say that source exclusion occurs when "b) the observed data between [sic] the impressions do not correspond" and that "correspondence is "An accumulation of similarities between two impressions resulting in overall conformity" overlooks the fact that exclusion is a belief or a judgment of the examiner rather than a state of nature. Although the scope section promises "specification of] the criteria for supporting source conclusions," words like "correspondence" and "accumulation of similarities" do not provide any criteria.	Either provide more fully articulated criteria for the label "exclusion" or modify the standard so that it does not claim to offer such criteria.	Accept
11	4.2.1.1(b)		T	suggest using the terms as defined in the document. Suggest replacing "between the impressions do not correspond." with "display disagreement"	section should read: "the observed data display disagreement, resulting in overall nonconformity"	Accept with modification: Section updated for clarity.
72	4.2.1.2		T	The judgment "Inconclusive with dissimilarities" applies when "a) the observed data between the impressions do not appear to correspond, but a more definitive determination of non-correspondence cannot be made due to limiting factors; the limiting factor(s) affecting a more definitive determination should be documented."	Are there any studies to show that examiners can reliably and validly make these judgments? If not, the standard should acknowledge this gap.	Reject: This is outside the scope of this document.
12	4.2.1.2(a)		T	suggest using the terms as defined in the document. Suggest replacing "do not appear to correspond" with "display dissimilarities" and replace "non-correspondence" with "disagreement"	section should read: "the observed data display dissimilarities, but a more definitive determination of disagreement cannot be made due to limiting factors; the limiting factor(s) affecting a more definitive determination should be documented."	Accept with modification: Section was updated for clarity.

#	Section	Updated Section	Type of Comment (E)	Comments	Proposed Resolution	Final Resolution
13	4.2.1.3(a)		T	suggest using the terms as defined in the document. Suggest replacing "correspondence" with "agreement" and replace "non-correspondence" with "disagreement"	section should read: "the observed data in the relevant area of at least one of the impressions are not present or designated as Category 1 (red) quality or lower during analysis thus preventing a determination of agreement or disagreement, the limiting factor(s) affecting a more definitive determination should be documented;"	Accept: "Correspondence" was replaced with "agreement".
61	4.2.1.3 b)		T	Conclusions document uses the terms "similarity" and "dissimilarity". It does not use the term "difference".	Replace "differences" in the requirement with "dissimilarities" to be consistent with the Conclusions document.	Accept with modification: Section updated for clarity.
14	4.2.1.3(b)		T	suggest using the terms as defined in the document. Suggest replacing "differences" with "dissimilarities"; replace "correspondence" with "agreement" and replace "non-correspondence" with "disagreement"	section should read: "the similarities and dissimilarities of the observed data are insufficient to support either agreement or disagreement, the limiting factor(s) affecting a more definitive determination should be documented."	Reject with modification: Section updated for clarity.
73	4.2.1.4		T	The judgment "Inconclusive with similarities" applies when "a) The observed data between the impressions appear to correspond, but a more definitive determination of correspondence cannot be made due to limiting factors, the limiting factor(s) affecting a more definitive determination should be documented."	Are there any studies to show that examiners can reliably and validly make these judgments? If not, the standard should acknowledge this gap.	Reject: This is outside the scope of this document.
15	4.2.1.4(a)		T	suggest using the terms as defined in the document. Suggest replacing "appear to correspond" with "display similarities" and replace "correspondence" with "agreement"	section should read: "the observed data display similarities, but a more definitive determination of agreement cannot be made due to limiting factors; the limiting factor(s) affecting a more definitive determination should be documented."	Accept with modification: Section updated for clarity.
28	4.2.1.5		T	the requirement of at least 8 minutia is not scientifically based	remove the minimum number required	Reject: This document contains best practice recommendations not requirements, and is accepted by consensus. See section 4.2.1.5-C note added to provide clarity. Also section 4.2.2 describes how to handle exceptions.
74	4.2.1.5		T	The judgment "source identification " occurs when "a) the observed data in the relevant areas of both impressions are present and designated as Category 2 (yellow) quality or higher during analysis; b) the observed data between the impressions correspond; c) the corresponding data include at least 8 minutiae designated as Category 3 (green) quality or higher and documented during analysis. "	Are there any studies to show that examiners can reliably and validly make these judgments? If not, the standard should acknowledge this gap.	Reject. ASB Manual, section 12.1 calls for normative references only if the document cannot be implemented without them and 19.1 says bibliographies are optional.
87	4.2.1.5		T	There should be more elaboration for corresponding data than just a single point standard for category 3. Since its based on complexity\quality and quantity, the number for correspondance has to be more fluid based on the presence of discriminating factors such as anchor points and third level correspondance.	Include a more elaborate outline for corresponding data to include a range for an increase to categories 4 and 5. Increasing clear 3rd level makes up for X minutiae and shall be charted. I think the same should apply to other discriminating features as anchor points.	Reject: This document contains best practice recommendations not requirements, and is accepted by consensus. See section 4.2.1.5-C note added to provide clarity. Also section 4.2.2 describes how to handle exceptions.

#	Section	Updated Section	Type of Comment (E)	Comments	Proposed Resolution	Final Resolution
109	4.2.1.5		T	The categorical "source identification" conclusion uses subjective, undefined terms that misleadingly convey statistical certainty despite the absence of data to support the statement. "Substantially stronger support" is not defined and is highly variable from examiner to examiner based on their personal judgment. Simply stating "identification" without any number associated (such as 100% certainty) does not remedy this problem. Recently, the American Statistical Association (ASA) has cautioned against the use of categorical statements by forensic practitioners whose subjective methodology lacks an empirical basis. Position on Statistical Statements for Forensic Evidence, AMERICAN STATISTICAL ASSOCIATION, Jan. 2, 2019, available at https://www.amstat.org/asa/files/pdfs/POL-ForensicScience.pdf . The ASA explains that providing the opinion that two friction ridge impressions originated from the same source "requires knowledge of how common or rare the association is, based on empirical data linked to the case at hand." 2019 ASA Report at 2. In other words, to have an empirical basis for conclusions such as – the patterns between the questioned and known impression match and, as a result, came from the same source— an examiner must be able to relate the probability of seeing a certain degree of agreement if the samples are from the same source to the probability of a certain level of agreement if the samples are from two different sources. Id. An examiner's subjective level of certainty reflects their impression of evidence encountered throughout his career, but does not establish a reliable measurement for uncertainty. Id. These categorical source conclusions may not use numbers or confidence intervals, but the assertions nevertheless connote a statistical assessment. The ASA explains that categories like, "source identification" suggest certainty and necessarily rest on an understanding of the variability of impressions within one source and on the frequencies of these features in a given population. Put another way, the power of this conclusion depends on how common or rare these set of observations are in the "population." Id. These limits of measuring uncertainty in friction ridge analysis, particularly the lack of any objective measure of the rarity of a set of characteristics in a potential source population, show that examiners mislead fact-finders by overstating the strength of the evidence. To account for these dangerous overstatements, the ASA "strongly discourages statements to the effect that a specific individual or object is the source of the forensic science evidence." Id. at 4.	Revise "source identification" to a more measured conclusion of "cannot exclude".	REJECT - The definition of source identification has been extensively discussed and agreed upon within the consensus body. The proposed resolution is in conflict with this approved definition.
16	4.2.1.5(b)		T	suggest using the terms as defined in the document. Suggest replacing "between the impressions correspond." with "display agreement, resulting in overall conformity"	section should read: "the observed data display agreement, resulting in overall conformity."	Accept
110	4.2.1.5 (c)		T	To our knowledge, the eight feature threshold is not a validated threshold that guarantees (with some known degree of uncertainty) that two prints that rise to this level of correspondence derive from the same source.	This provides further support for a "cannot exclude" formulation. At the very least, this caveat should be clearly communicated in this section.	Reject: This document contains best practice recommendations not requirements, and is accepted by consensus. See section 4.2.1.5-C note added to provide clarity. Also section 4.2.2 describes how to handle exceptions.
59	4.2.1.5 c		T	Why are we now putting arbitrary numbers to evaluation opinions? What's the basis for these? Are we inviting more opportunities for criticism? I also understand this is a best practice, but I can imagine a number of agencies treating this like a standard.	Removal of c)? Bulk up b)? All or preponderance of data between the impressions correspond and do not support a lesser source conclusion.	Reject: This document contains best practice recommendations not requirements, and is accepted by consensus. See section 4.2.1.5-C note added to provide clarity. Also section 4.2.2 describes how to handle exceptions.
117	4.2.1.5 c		T	Is the inclusion of an 8 point standard based on statistical research? It was my understanding that statistical models still supported the IAI's position that there's no scientific basis for a predetermined minimum number of minutia to support ID. Or is it a historical/common/consensus value chosen as a QA measure to draw a line for more stringent QC measures?	If 8 minutia was chosen based on research, include all relevant studies as references. If it was chosen for any other reason, include a note that it is not based on data, but solely to be used as a means of standardization and was the value chosen by the subcommittee.	Reject: This document contains best practice recommendations not requirements, and is accepted by consensus. See section 4.2.1.5-C note added to provide clarity. Also section 4.2.2 describes how to handle exceptions.
39	4.2.1.5 c)		T	"The corresponding data include at least 8 minutiae designated as Category 3 (green) quality or higher and documented during analysis." This is dangerous. I can see labs going green, 8 = ID. What if this is in a pattern force area. Seems like we are just counting points now.	Add cautionary information about pattern force areas.	Reject: This document contains best practice recommendations not requirements, and is accepted by consensus. See section 4.2.1.5-C note added to provide clarity. Also section 4.2.2 describes how to handle exceptions.
17	4.2.1.5©		T	possible replacement of "corresponding data" with "observed data in agreement"	section could read: "the observed data in agreement include at least 8 minutiae designated as Category 3 (green) quality or higher and documented during analysis."	Accept
85	4.2.1.5c		T	I absolutely do not agree with putting a number of minutiae in policy as a basis for an ID. Not only is the color scheme subjective (you haven't even defined the color scheme in this document so I'm not sure what it is), but also THERE IS NO BASIS FOR REQUIRING A MINIMUM NUMBER OF CORRESPONDING MINUTIAE FOR AN IDENTIFICATION. By putting "8" green quality minutiae in policy, you are effectively stating there is a minimum number of points needed to make an ID and that goes against everything the IAI and the discipline has determined over the years.	Absolutely remove c, there is no basis to state a minimum point standard, which is effectively what is done by putting that in policy.	Reject: This document contains best practice recommendations not requirements, and is accepted by consensus. See section 4.2.1.5-C note added to provide clarity. Also section 4.2.2 describes how to handle exceptions.

#	Section	Updated Section	Type of Comment (E)	Comments	Proposed Resolution	Final Resolution
18	4.2.2		E	replace "control" with "assurance"; replace "opinion" with "review"	Section should read: "Source conclusions that are not supported by the criteria specified in 4.2.1 should be subject to additional quality assurance measures, such as blind verification, multiple verifications, or consensus review. Additionally, written approval by a quality assurance manager or supervisor should be documented."	Accept with modification: This section was update for clarity.
62	4.2.2		T	The Verification document and the Conflict Resolution document both clarified their use of Consensus processes and now refer to the Consensus process as "Consensus Review"	Replace "consensus opinion" with "consensus review" to be in line with other ASB documents.	Accept
86	4.2.2		T	What good does it do to have written approval by a QA manager/supervisor if the criteria are not met? The QAMs (and in many places, the supervisors as well) are not qualified to "approve" anything technically in the latent print discipline. Written approval by that position does nothing to support the conclusion.	Remove written approval entirely. Just require more documentation or QA measures such as blind verification.	Accept with modification: This section was update for clarity.
98	4.2.2		E	"Additionally, written approval by a quality assurance manager or supervisor should be documented." Written approval of what?	Clarify what is being approved by a quality assurance manager/supervisor	Accept with modification: This section was updated for clarity.
100	4.2.2		E/T	The list of who can grant approvals should include technical leaders. A lot of labs have technical leaders, who are responsible for granting such approvals as in 4.2.2.	Add "technical leader" to the list - "...approval by a quality assurance manager, supervisor, or technical leader should be documented."	Accept with modification: "technical lead" was added.
111	4.2.2		T	Pursuant to the document's own best practices as well as the information set out in the above comment addressing 4.2.1.5, source conclusions should be extremely limited and certainly should never be permitted in the absence of criteria specified in 4.2.1. Furthermore, given the increased risk of error associated with highly complex comparisons, the enhanced quality assurance measures must be mandatory and rigorous.	Amend the language as follows: "Source conclusions that are not supported by the criteria specified in 4.2.1 shall not be permitted . Highly complex comparisons shall be subject to additional quality control measures, such as blind verification, multiple verifications and consensus opinion."	Reject: This document contains best practice recommendations not requirements, and is accepted by consensus. The recommendation for highly complex print is provided as a list of options.
118	4.2.2		T	Include consultation as an additional QC measure	Add consultation as an option for additional QC	Accept
119	4.2.2		T	Is this suggesting approval by QA on top of BV or other QC for each reported conclusion?	Clarify the "written approval" statement.	Accept with modification: This section was updated for clarity.
51	4.2.2		T	This is too prescriptive. Our agency uses technical leaders. These are assistants to the quality manager, but they are subject matter experts. By prescribing specific titles, you take out the possibility of different titles among FSPs. FSPs should be allowed to decide how they conduct additional quality control measures and by whom.	Just delete the second sentence.	Reject with modification: "technical lead" was added to the list.
75	4.2.2		T	The section states that "Source conclusions that are not supported by the criteria specified in 4.2.1 should be subject to additional quality control measures, such as blind verification, multiple verifications, or consensus opinion. Additionally, written approval by a quality assurance manager or supervisor should be documented." The phrase "additional quality measures" is open-ended. "Additional" compared to what?	Make the list of recommended "additional ... measures" exhaustive, so that examiners must use at least one of the ones so listed.	Reject with modification: Added consultation, but list does not need to be exhaustive.
120	4.2.3		T	See 4.1.8	Vary amount of documentation on the known impressions based on complexity	Reject: Too prescriptive.
99	4.2.5		T	It's not clear that all of the annotations done as part of the comparison/evaluation process are being documented, especially because part (d) could be read as instructing that ONLY the corresponding data for inclusive conclusions. It seems that all the markup and annotations should be documented as well	Clarify/consider more explicitly stating that all annotations should be documented	Reject: Document recommendation is correct. Corresponding data should be documented. Additional documentation is at the discretion of the FSP and Examiner.
19	4.2.5 (d)		T	possible replacement of "corresponding data" with "observed similarities"; replace "necessary" with "used" and define "inclusive source conclusions"	section could read: "the observed similarities used to support inclusive source conclusions (ie. Inconclusive with Similarities' or 'Source Identification')."	Accept with modification: Section updated for clarity.
63	4.2.5 d)		E	"inclusive source conclusions"	Since this is an uncommon designation, I recommend adding a list either parenthetically or after a semi-colon of the inclusive source conclusions for clarity	Accept
52	4.2.6		T	Again, too prescriptive. The FSP should decide how to routinely monitor the performance of an examiner. Prescribing this for each and every technical review is an undue burden on the FSP.	Delete, or make it clear this is an example and not the only way to properly monitor performance.	Accept
64	4.2.6		T	Recommendations are not part of the application of Comparison and Evaluation and are outside of the scope of this document. By the requirements own statement, monitoring is done in Verification and Technical Review (which are separate documents).	Delete Section 4.2.6 as they are all quality assurance matters and not part of the Examination Process.	Accept
20	4.2.6(a)		T	possible replacement of "corresponding data" with "observed similarities";	Section could read: "assessment and documentation of observed similarities on images of each impression;	Reject: This section was deleted.