

16-Nov-20

ASB Std 013, Standard for Friction Ridge Examination Conclusions, First Edition

#	Section	Type of Comment (E-)	Comments	Proposed Resolution	Final Resolution
7	Title	E		Consider changing the title to "Standard for Friction Ridge Examination Conclusions for Reporting and Testimony." The current title gives no context for the use of these conclusions.	Reject: Limiting to reporting and testimony would modify the scope. This document is establishing the conclusions, how they should be stated, and when they are to be used.
117	Title / Foreword; 3	E	Use of acronyms is sometimes difficult to follow. Some acronyms are used but not defined until later paragraphs (e.g., AAFS and ANFSI in the Title / Foreword).	Define acronyms in their first instance of use. Consider including a list of acronyms in section 3, so reader is not having to search through document to find first instance of their use.	Accept with modification. ASB, AAFS, and ANSI all called out in the Forward
264	title and 4.1	T	Since this document gives options for using different conclusions ('may use' all or some of the conclusions) it is not stating a 'standard' way that conclusions shall be given. It is not even a best practice since it does not indicate which conclusions are optional. This document does not follow the "ASB guide 001" definition of a standard or best practice.	Change 'may' to 'shall' if this is intended to be a 'standard'.	Reject. Examiners are not required to report any conclusion.
229	Foreword	E	The word "practice" should be removed from the first line. It seems out of place.	Remove the word "practice"	Accept with modification. The first paragraph of the forward was deleted as it is duplicative of content in the body of the document.
230	Foreword	T	In the first line, replace "to be reported" with "that may be reached". This will then match what is stated in section 1 and 4.1.	Remove the words "to be reported" and replace them with "that may be reached"	Accept with modification. The first paragraph of the forward was deleted as it is duplicative of content in the body of the document.

#	Section	Type of Comment (E-)	Comments	Proposed Resolution	Final Resolution
347	Foreword	E	<p>significant revision. In short, the research needed to implement the recommendations as drafted does not exist and the proposal is beyond the capacity of the average examiner to convey accurately to jurors. For the reasons given below we recommend instead three conclusions that eliminate the troublesome labels (identification, inconclusive and exclusion) and that are supported by the current state of the research. In addition, we urge you to require that the method's limitations and error rate be presented contemporaneously with any conclusion to ensure an accurate representation of the conclusion. Over a decade has passed since the National Research Council issued its (now infamous) statement that "[w]ith the exception of nuclear DNA analysis ... no forensic method has been rigorously shown to have the capacity to consistently, and with a high degree of certainty, demonstrate a connection between evidence and a specific individual or source." In that time much has changed (largely, if not exclusively, to the benefit of latent print examiners and stakeholders in the legal community). Published research has demonstrated that properly-trained analysts outperform lay people in the comparison of latent prints, granting empirical support to the legal system's otherwise merely-assumed faith in, and reliance on, the "expertise" of practitioners. See e.g., Thompson, et al., "Expertise in Fingerprint Identification," 58 J. For. Sci. 1519-1530 (2013). The FBI / NOBLIS group (among others) have produced significant, peer-reviewed black and white box studies that, while underscoring the subjectivity of every aspect of latent print analysis and comparison, also highlight relatively low rates of false positives (especially following appropriately unbiased verification). See e.g., Bradford T. Ulery et al., "Accuracy & Reliability of Forensic Latent Fingerprint Decisions," Proceedings of the National Academy of Sciences (2011); Bradford T. Ulery et al., "Repeatability and Reproducibility of Decisions By Latent Print Examiners," Proceedings of the National Academy of Sciences (2012). And many within the discipline have come to terms with the dangers of cognitive bias / circular reasoning and implemented robust systems to prevent potentially misleading influence from task-irrelevant information and exemplar prints. See e.g., OIG, "A Review of the FBI's Progress in Responding to the Recommendations in the Office of the Inspector General Report on the Fingerprint Misidentification in the Brandon Mayfield Case," U.S. Department of Justice, 105-06 (2011); Glenn Langenburg & Christophe Champod, "The GYRO System—A Recommended Approach to More Transparent Documentation," 61 Journal of Forensic Identification 377 (2011). But despite this laudable progress, significant gaps in the foundations of latent print analysis and comparison undeniably remain that warrant caution / restraint in the scope of justifiable conclusions issued by examiners. Although Swofford, Neumann, and others have begun the development of probabilistic models for latent print analysis and comparison, none have yet reached a point where they may claim widespread and fully realized validation, adoption by the community of practitioners, or acceptance by stakeholders and academics. Thus, it remains true that "[w]hile latent print examiners may well be able to exclude the preponderance of the human population as possible sources of a latent print, there is no scientific basis for estimating the number of people who could not be excluded and, consequently, no scientific basis for determining when the pool of possible sources is limited to a single person." American Association for the Advancement of Science, "Forensic Science Assessments: A Quality and Gap Analysis-Latent Fingerprint Examination," Report prepared by William Thompson, John Black, Anil Jain, &</p>	<p>LW NOTE: This is the same as comment #348 - because the comments are so long it copied over mutiple cells. Al comments highlighted in yellow are from the same commenter and linked to each other.</p>	

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			<p>see also National Research Council, "Strengthening Forensic Science in the United States: A Path Forward," National Academies Press, at 139-40 & 188-89 (2009) ("population statistics for fingerprints have not been developed"); Glenn Langenburg, "Scientific Research Supporting the Foundations of Friction Ridge Examinations," in The Fingerprint Sourcebook, at 14-19 (Dept. of Justice 2012) ("From a statistical viewpoint, the scientific foundation for fingerprint individuality is incredibly weak"); Sharath Pankanti et al., "On the Individuality of Fingerprints," 24 IEEE Trans. On Pattern Analysis & Machine Intelligence 1010, 1011 (2002) ("the underlying scientific basis of fingerprint individuality has not been rigorously studied or tested"); C. Neumann et al., "Quantifying the Weight of Evidence from a Forensic Fingerprint Comparison: A New Paradigm," 175 J. Royal Stat. Society 1, 2 (2012) ("the evaluation of the weight of evidence associated with any particular fingerprint comparison lacks both a scientific foundation and transparency"); Sir Anthony Campbell, "The Fingerprint Inquiry Report," APS Group of Scotland, at 605, 728 (2012) ("Examiners presently have insufficient objective evidence by which decisions as to the rarity of characteristics are assessed, and to the extent that such data is available, it is not utilized by examiners"); Organization of Scientific Area Committees, "OSAC Research Needs Assessment Form- Assessing the Sufficiency and Strength of Friction Ridge Features," at 2 (2015) ("Currently there is not a reliable assessment of the discriminating strength of specific friction ridge feature types...not knowing the weight of each feature type prohibits comprehensive standards for friction ridge evaluation decisions"); Working Group on Human Factors in Latent Print Analysis, "Latent Print Examination and Human Factors: Improving the Practice through a Systems Approach," National Institute of Justice at 8, 208 (2012) ("there is a strong need for systematic studies pertaining to the reproducibility and discriminating strength of fingerprint features...there is limited research that would allow a global assessment ... of the strength of minutiae configurations"). In fact, while commentators appear to agree that conclusions of identification would require sufficient data to "distinguish a set of details that occurs with a frequency of 1 in 100 billion or less from a set that occurs with a frequency of 1 in 10 billion or more," the bibliography of this proposed standard cites to not a single resource demonstrating that the field of latent print comparison has, since the pronouncements of the NRC, closed that foundational gap. AAAS, "Forensic Science Assessments, A Quality & Gap Analysis," at 63; see also Christophe Champod, "Fingerprint examination: towards more transparency," 7 L., Prob., & Risk 111 (2008). Worse still, distinct issues of examiner skill / performance intersect with and compound the consequences of missing frequency / rarity data. Although researchers from the field have provided stakeholders with reasonable assurance that the general rate of false positives for latent print comparison is low (under one percent in the FBI / NOBLIS study) we know much less regarding examiner performance and the potential for misidentifications in challenging cases involving significant distortion and/or close non-matches, and what we do know is cause for concern. As just two examples: (1) in the FBI / NOBLIS study the five prints (out of a total pool of 744) exhibiting tonal reversal produced five of the six total false positives captured by researchers (across a total of 4083 comparisons), and (2) recent work on close non-matches suggests that such prints may generate false positive rates in the double digits (perhaps as high as 38.2%). See Bradford T. Ulery et al., "Accuracy & Reliability of Forensic Latent Fingerprint Decisions," <i>Proceedings of the National Academy of Sciences</i> (2011); Koehler, Jonathan L. and Liu, Shiguang</p>		

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			<p>thus, it does the discipline no good to dodge the absence of frequency data (as it appears to attempt in this Standard) by instead focusing in on the reliability of expert performance based on skill, training, and experience. Given the variable success of examiners on prints bearing differing levels of coincidental correspondence, the absence of a statistical foundation for discriminatory value dooms not only identification decisions based on estimates of rarity, but also those based on faith in the performance of subjective expert assessments. And all that is without mentioning that, when we consider the repeatability and reproducibility of identification conclusions (rather than merely the rate of misidentification) the data is even less rosy for latent print examiners, who appear capable, at least on difficult prints, of repeating only 69% of identification conclusions and reproducing only 55%. See Bradford T. Ulery et al., "Repeatability and Reproducibility of Decisions By Latent Print Examiners," Proceedings of the National Academy of Sciences (2012). Any scientifically legitimate standard for conclusions in the latent print field must, as a result of the remaining gaps in data outlined above, reign in the desire of practitioners to substitute their own personal sense of confidence in associating a latent print to a particular individual for actual empirical evidence supporting reliable identification decisions. But that is not to say that the work of latent print examiners has no probative value. As Cedric Neumann recently noted, many defense attorneys have taken into account the substantial body of research thus far produced by the field and responded with more narrowly-focused criticisms. See Cedric Neumann, "Testifying on Fingerprint Examinations in 2019," 69 Journal of Forensic Identification 405 (2019). The problem, in other words, is not that latent print examiners must reshape the basic methodology underlying their practice to satisfy detractors, but rather that they must cease their repeated attempts to salvage a term as troubled as "identification" (which at one point was widely understood and used to imply absolute source attribution, to the exclusion of all others, with a zero error rate) by injecting it with ever-evolving meanings. Doing so does nothing to combat the lack of empirical data supporting associations to a single source, and ignores the substantial misapprehensions which persist among lay people about the reliability and significance of such opinions due to decades of misinformation and overblown claims disseminated by the field. See e.g., Simon A. Cole, "Individualization is dead, long live individualization! Reforms of reporting practices for fingerprint analysis in the United States," 13 Law, Prob., & Risk 117, 144 (2014); H.J. Swofford & J.G. Cino, "Lay Understanding of "Identification," 68 J. Forensic Identification 29 (2018) (study concluding that "71% of potential jurors may be expected to interpret expert testimony containing the word 'identification'...to imply a single source attribution 'to the exclusion of all others'"); Koehler, "Intuitive Error Rate Estimates for the Forensic Sciences," 57 Jurimetrics 153, 162 (2017) (finding that lay people estimate that errors would occur only about once per every 5.5 million cases latent print cases); Brandon Garrett & Gregory Mitchell, "How Jurors Evaluate Fingerprint Evidence: The Relative Importance of Match Language, Method Information, and Error Acknowledgment," 10 J. Empirical Legal Studies, 484, 498 (2011) (noting that proponents of fingerprint evidence "benefit from a widespread assumption among jurors that no two fingerprints are alike" as well, more generally, preconceptions that fingerprint science does not produce errors). At bottom, it is well past time for the latent print discipline to chart a course away from identification conclusions and towards more modest and empirically supportable claims. To that end, OSAC / ASB need not start from scratch when crafting appropriate conclusions. Multiple</p>		

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			<p>As a forensic discipline, latent print comparisons are inextricably tied up with the legal system and thus with communicating results to lay factfinders (judges and juries). The discipline's twin aims when formulating conclusions must therefore be to craft language that succeeds scientifically (by reflecting only empirically derived claims and avoiding overblown or speculative ones) as well as succeeds by properly informing (in other words by communicating results to factfinders in ways that actually allow them to adjust their sense of the weight of evidence). Doing away with the term identification and moderating the strength of claims of association satisfies the first of those aims. See e.g., American Association for the Advancement of Science, "Forensic Science Assessments: A Quality and Gap Analysis-Latent Fingerprint Examination," Report prepared by William Thompson, John Black, Anil Jain, & Joseph Kadane, at 58-67 (2017). And studies suggest that providing information regarding error rates satisfies the second. See Garrett & Mitchell, "How Jurors Evaluate Fingerprint Evidence," at 505. But by retaining source identifications and adopting a likelihood ratio format, Standard 13 fails on both counts. This comment has already addressed the significant problems with "identification" language and claims, but in addition, there are at least four reasons why the ASB should also avoid the likelihood ratio format currently central to Standard 13. Specifically, deploying likelihood ratios will fail as a matter of communication of results because it (1) is likely to confuse rather than robustly educate factfinders, and (2) will result in misstatements and misleading testimony by examiners (which will likely be repeated by attorneys during closing arguments). Additionally, the way in which the ASB has formulated its likelihood ratio approach fails as a matter of scientific legitimacy because it (1) continues to require examiners to overstate (or at least estimate through guesswork) available data on the frequency of arrangements of friction ridge skin / the probability of encountering correspondence randomly, and (2) suggests that examiners should utilize a conclusion framework that has undergone little to no validation or calibration. Beginning with the communication aspect, repeated studies demonstrate, and experts concerned with juror comprehension of statistics agree, that "there is considerable evidence that likelihood ratios are harder to understand and they may be slightly more prone to the prosecutor's fallacy" when compared to other statistical methods of expressing weight of the evidence." John Buckleton & James Curran, "A discussion of the merits of random man not excluded and likelihood ratios," 2 For. Sci. Int'l Genetics 343, 344 (2008); see also Jonathan J. Koehler, "Proving the Case: The Science of DNA: On Conveying the Probative Value of DNA Evidence: Frequencies, Likelihood Ratios, & Error Rates," 67 U. Colo. L. Rev. 859, 878-79 (1996) ("A review of the psychological literature on how people reason with probabilities provides good reason to believe jurors will have trouble understanding and using likelihood ratios...[and] are less likely to engage in sound probabilistic reasoning when provided with information in a conditional probability form than when provided with information in a frequency form"); William C. Thompson & Edward L. Schumann, "Interpretation of Statistical Evidence in Criminal Trials," 11 Law & Hum. Behav. 167 (1987) (concluding after experimentation that likelihood ratios unfairly favor the prosecution when compared to other types of statistical presentations). At bottom, "[p]eople often become confused about the meaning of forensic scientists' statements about conditional probabilities." American Association for the Advancement of Science, "Forensic Science Assessments: A Quality and Gap Analysis-Latent Fingerprint Examination," Report prepared by William Thompson, John Black, Anil Jain, & Joseph Kadane, at</p>		

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			<p>expecting lay factfinders to navigate these subtle differences, properly incorporate prior odds, and ultimately decide whether or not to adopt the expert's likelihood ratio as their own lays an immense, and unreasonable, burden at the feet of individuals unlikely to come into litigation with any statistical training to assist them. The fact that the Standard utilizes something like verbal equivalents (rather than numerical likelihood ratios) will likely do little to nothing to ameliorate these issues. See e.g., Kristy A. Martire et al., "The Psychology of Interpreting Expert Evaluative Opinions," 45 Australian J. F. Sci. 305 (2013) ("there are large differences between individuals in the attribution of numerical probabilities to the same verbal expressions of uncertainty...although there may be some benefit associated with verbal rather than numerical communication, there is also a substantial potential for miscommunication"); Kristy A. Martire et al., "The Expression and Interpretation of Uncertain Forensic Evidence: Verbal Equivalence, Evidence Strength, and the Weak Evidence Effect," 37 L. & Human Behav. 197, 206 (2013) (calling for evidence based verbal equivalents because "decision makers vary widely in their responses to uncertain forensic science evidence, revising their beliefs in vastly different ways than those predicted by Bayesian calculations"); Swaminathan et al., "Four model variants within a continuous forensic DNA mixture interpretation framework: Effects on evidential inference & reporting," 13(11) PLoS ONE (2018) ("Verbal expressions of the LR are prone to misunderstanding and cannot be coherently combined with other evidence"). The issue of factfinder confusion, standing alone, imposes a substantial hurdle to the adoption of a likelihood ratio / weight of the evidence approach even if we assume that testifying experts will be capable of clearly communicating their conclusions, reacting fluently to questioning about Bayesian reasoning, and themselves avoiding the prosecutor's fallacy and other misstatements. But we cannot and should not assume that latent print examiners are, on the whole, prepared to serve as competent guides to factfinders on the treacherous journey through likelihood ratio waters. Historically (and into the present) many (if not a majority) of latent print examiners (1) enter the field without any academic science or mathematics education, (2) receive training by their laboratory that does not include statistics generally or Bayesian reasoning more specifically, and (3) never testify using probability, propositions, or statistics. This likely explains the reluctance of examiners across a plethora of cases to so much as concede that their conclusions of identification are probabilistic in nature, as well as the discipline's long reliance on absolute statements of source attribution. But so too does it counsel against believing that such examiners will be capable of—after a few training sessions or perhaps none at all (given that the current draft of ASB Standard 14, while including mandatory instruction on these topics, grandfathered in examiners who reached competence before its publication)—not just testifying without committing fallacies, but also responding to robust questioning on topics essential to factfinder comprehension and appropriate use of likelihood ratios. In fact, even in the DNA context, where examiners have for years been trained to, and practiced in, testifying using statistics, multiple organizations and likelihood ratios proponents have nevertheless emphasized the difficulties of adopting such a framework, and the need for substantial training to assist practitioners. See e.g., Duncan Taylor et al., "Validating multiplexes for use in conjunction with modern interpretation strategies," 20 For. Sci. Int'l Genetics 6, 16 (2016) ("the switch to likelihood ratios from, say, exclusion probabilities may be one of the more challenging aspects" of transitioning to probabilistic reporting); B. Gill et al., "DNA Commission of the International</p>		

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348	Foreword	E	<p>See e.g., Norman Fenton et al., “When ‘Neutral’ Evidence Still Has Probative Value (with Implications from the Barry George Case),” 54 Sci. & Justice 274, 275 (2014) (emphasizing that “even the most senior evidence experts have encountered difficulty in formulating relevant hypotheses” critical to the appropriate function of likelihood ratios); Johann Streurer et al., “Communicating accuracy of tests to general practitioners: a controlled study,” 324 BMJ 824 (2002) (physicians rarely, only 22% of the time, arrive at correct posterior probabilities when estimating diagnostic value); Penny F. Whiting et al., “How well do health professionals interpret diagnostic information? A systematic review,” BMJ Open (2015) (conducting literature review and discovering that in only two of twenty-two studies did doctors make appropriate use of likelihood ratios); Koehler, “Proving the Case: The Science of DNA: On Conveying the Probative Value of DNA Evidence: frequencies, Likelihood Ratios, & Error Rates,” 67 U. Colo. L. Rev. at 876 (describing misuse and miscommunication of likelihood ratio evidence by the director of a Texas DNA laboratory); William C. Thompson, “Painting the target around the matching profile: the Texas sharpshooter fallacy in forensic DNA interpretation,” 8 L., Prob., & Risk 257, 268-69 (2009). (documenting example of DNA expert misuse or confusion in use of likelihood ratio, essentially DNA expert committing the prosecutor’s fallacy and transposing the conditional). There is therefore no reason to believe that, even if factfinders could theoretically be helped to understand likelihood ratios and utilize them appropriately, the average latent print examiner will be able to competently assist them in that endeavor. Of course, communication issues like those just discussed have not yet prevented DNA analysts from shifting into a likelihood ratio approach (though robust litigation challenging that paradigm shift continues across the United States, and should be expected to follow latent print examiners if the ASB leaves Standard 13 substantially unaltered following the public comment period, not to mention that NIST metrologists have persuasively argued against the acceptance and use of likelihood ratios). See Steven P. Lund & Hari Iyer, “Likelihood Ratio as Weight of Forensic Evidence: A Closer Look,” 12(2)(7) J. Research of Nat’l Inst. Standards & Tech., at 1-2 (2017) (“Because the likelihood ratio is subjective and personal, we find that the proposed framework in which a forensic expert provides a likelihood ratio for others to use in Bayes’ equation is unsupported by Bayesian decision theory, which applies only to personal decision making and not to the transfer of information from an expert to a separate decision maker, such as a juror”). But years of necessary research and software design came between that community’s decision to move towards likelihood ratios and their actual adoption. See e.g., Duncan Taylor et al., “The interpretation of single source and mixed DNA profiles,” 7 For. Sci. Int’l Genetics 516 (2013). Thus, while some in the DNA realm had advocated a shift to likelihood ratios in the 1990s, and the International Society of Forensic Genetics had endorsed them as “the preferred approach to mixture interpretation” in 2006, it was not until after a plethora of papers had been published on the underlying mathematics, and massive studies conducted on the accompanying systems, that the field actually began adopting likelihood ratios. See e.g., P. Gill et al., “DNA Commission of the International Society of Forensic Genetics: Recommendations on the interpretation of mixtures,” 160 For. Sci. Int’l 90, 96 (2006); Jo-Anne Bright et al., “Developmental validation of STRmix™, expert software for the interpretation of forensic DNA profiles,” 23 For. Sci. Int’l Genetics 226 (2016). In other words, the adoption of likelihood ratios is not a case of simple error in the realm of DNA had to wait the emergence</p>	<p>This standard should not invite the complications and confusion inherent to a likelihood ratio approach, reframe the inconclusive category before completing substantial validation and calibration testing of new “support for same source” and “support for different source” conclusions, insist on misleadingly labeling conclusion categories (ie using the word “identification”), or attempt to assign subjective adjectives without empirical backing as summaries for the level of corresponding features or the rarity of such features (ie “strong correspondence” or “overwhelming correspondence”). Thus, the Standard should remove or amend portions of the Foreword, Scope, 3.1, 3.10, 3.17, 3.20, 3.21, 3.23, 3.24, 4, and Annex A to reflect the following source conclusions and related concepts: (1) “The questioned impression (Ex. ?) and the exemplar impressions of XXXX (Ex. ?) display different friction ridge features. The questioned impression could not have been left by XXXX. (2) “The questioned impression (Ex. ?) and the exemplar impressions of XXXX (Ex. ?) display insufficient correspondence or disagreement of friction ridge features to assess whether the questioned impression could have been left by XXXX. (3) “The questioned impression (Ex. ?) and exemplar impression (Ex. ?) display corresponding detail of friction ridge features with no differences that would indicate they were made by different areas of friction ridge skin. There is no way to determine how many other people might have an area of friction ridge skin displaying a similar degree of corresponding detail and no appropriately validated model currently exists to provide a probability of encountering this level of corresponding detail in the friction ridge skin of other random people. But it is my subjective and personal assessment that encountering this level of corresponding detail in the friction ridge skin of another random person would be unusual.” Adopting the above conclusions and resisting the urge to unnecessarily label each (by calling them identification, inconclusive, and exclusion) avoids the confusion inherent to likelihood ratios, permits examiners to offer relevant and probative conclusions, and appropriately moderates language to reflect that while particular arrangements of friction ridge features may well be highly variable and discriminating, we cannot yet say with any confidence precisely how rare any specific arrangement might be. While the conclusion that would formerly have been termed exclusion might appear more conclusive and less moderated than the new form of the identification-style conclusion, that approach is appropriate and aligns with the course charted in the DNA field where exclusions are often reported without an accompanying statistic or verbal equivalent. If a latent print examiner has appropriately assessed that the observed differences between two impressions are not explainable (say due to age, or scarring, or distortion), probability and rarity play little to no role: given that fingerprints persist unchanged through life, unexplainable differences warrant a conclusive opinion that an impression showcasing such divergence could not have been left by a particular source. To the extent that concern stems from the fact that, in studies of examiner performance, false negatives generally exceed false positives, that issue can and must be addressed (as further detailed below) by requiring testimony on available error rates. As suggested above, in the place of attempting to summarize the extent of correspondence observed with words like “strong” or “overwhelming” this Standard should instead avoid the subjectivity and ambiguity injected by those words by requiring that examiners simply describe the correspondence or disagreement actually observed. For example an examiner might report: “The questioned impression (Ex. ?) and the exemplar impression (Ex. ?) share distinct ridge endings and</p>	<p>Reject with modification. These criticisms are all also true of the current 3-conclusion framework. Conclusion language clarified.</p>
362	Foreword	E	change "document establishes"	to "standard presents" or "standard recommends" or "standard proposes" or "standard requires"	Accept with modification. The first paragraph of the forward was deleted as it is duplicative of content in the body of the document.
363	Foreword	E	Unless ASB thinks readers would expect it to publish standards with outdated links at the time of publication, the sentence "All hyperlinks and web addresses shown in this document are current as of the publication date of this standard." is pointless.	Delete what should be taken for granted in a standard released by ASB.	Reject. Boilerplate ASB language

#	Section	Type of Comment (E-)	Comments	Proposed Resolution	Final Resolution
1	General	T/E	<p>This standard attempts to use the same categorical reporting framework for two vastly different approaches to fingerprint examination. Examiners who rely on traditional methods for comparison and reporting are expected to use a statistical framework that includes language that they would have difficulty explaining, while examiners using a statistical model are not provided with the details needed to employ this methodology. For example, this standard would be more effective for traditional fingerprint examiners if the use of propositions is eliminated from the document. The document only provides a clear case of the data that can be used to formulate one proposition and not both propositions. Traditional fingerprint examiners should not be forced to use probabilistic terminology if only one proposition can be formulated. If the places in which discussions of probability and propositions are removed, the standard is much easier to follow and looming questions pertaining to what constitutes the proposition used for the denominator are eliminated. For examiners using a statistical model, the information which comprises the competing propositions should be easily defined. The document only provides a clear case of the data that can be used to formulate one proposition and not both propositions. In addition, neither group is given proper guidance on the criteria that define the thresholds separating each level of expert opinion. Categorical exclusions are critical for the defense of innocent people and this standard, without clearly defined criteria, may take evidence that previously qualified as an exclusion and distributes it among two categories, "exclusion" and "support for different sources." This standard serves neither the traditional examiner nor the examiner using a statistical model well due to an overwhelming number of missing details from the document.</p>	<p>This standard would be strengthened by a restructuring, either by: 1) Splitting this document into two documents, one for traditional fingerprint examination and another for examiners using a statistical modeling approach. This approach allows the option of developing different terms for conclusions reached by the different methods. Alternatively, if the same categories are used for both documents, these terms and the accompanying definitions must apply equally well for both documents, with additional context provided in the body of each standard. Each respective standard will provide proper context on how to establish thresholds for each level of expert opinion, and will provide examples of language that can be used to communicate conclusions; or 2) Keeping the standard as one document, separated into two sections for traditional examination and for statistical modeling. The terms and the accompanying definitions that are used must apply equally well for both sections, with additional context stated in each respective section. Each section would define how thresholds for expert level opinion would be established. In the statistical modeling section, a note should be added to address potential misinterpretations that may arise in a Bayesian framework presenting results as "degrees of inclusion" based on software that only generate positive score values or likelihood ratios (LR). In either approach, the examples in the annex need to be more explicit in differentiating between traditional examination and when statistical software is used.</p>	<p>Reject: Since there are no generally accepted and validated statistical models in use, it would not be appropriate to separate this into two documents. The Scope states that this does not cover conclusions derived directly from and entirely dependent upon validated probability models or quantitative processes</p>
2	General	T/E	<p>The need for a fundamental restructuring is exemplified further in Section 4. The requirements for traditional examiners and examiners using a statistical model need to be separated. Defining comparisons and giving conclusions in terms of competing propositions is not suitable for a traditional examiner making subjective decisions based on observed features. Stating that a traditional examiner can use their knowledge, training, and experience to formulate propositions allows an examiner to cite the number of cases they worked on without documenting it. The thresholds that define the five conclusion categories offered by an examiner are not the same for a traditional examiner and one using a statistical model.</p>	<p>Section 4 should be rewritten as two sections within the same or in different documents aimed for examiners who conduct traditional comparisons and examiners who use a statistical model. Greater detail must be provided on how these two different methods allow for the same five conclusions to be reached.</p>	<p>Reject: Since there are no generally accepted and validated statistical models in use, it would not be appropriate to separate the document. The Scope states that this does not cover conclusions derived directly from and entirely dependent upon validated probability models or quantitative processes</p>
3	General	T/E	<p>Both traditional examiners and examiners using a statistical model must convey information about sources and measures of uncertainty of their conclusions.</p>	<p>Regardless of whether this document is revised into two separate documents or remains as one document separated into two sections, the sources of uncertainty in the conclusions for both methods should be explained in what is currently Section 4.</p>	<p>Reject. Section 5 details the limitations of the conclusions.</p>

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4	General	T/E	The definitions for correspondence, disagreement, dissimilarity, and similarity lack proper explanation of how clarity and complexity of the questioned or known print are factored into the observations that contribute to the conclusions that can be offered.	The definitions for complexity and clarity need to be added to the terms and definitions. These terms should be linked to the role they in play in determining correspondence, disagreement, dissimilarity, and similarity. Clarity (clear) is mentioned in several examples in the annex, but complexity is not. If ambiguity (ambiguous) in the examples for “support for difference sources” is meant to convey complexity, that is not clear. General Comment: The definitions provided in section 3 for the conclusion categories are repeated in Section 4.	Reject. Complexity is only used in a parantheical item and the definition of clarity can be found in a standard english dictionary and does not need to be defined in this document. The terminology group will determine if a defintion of complexity will need to be defined
5	General	T/E	The definitions provided in section 3 for the conclusion categories are repeated in Section 4.	Shorten the definitions for the conclusion categories in Section 3 to a single sentence and provide the more extensive discussion for each in Section 4.	Accept
6	General	E	Requiring practitioners to specify details from the print that support their conclusions is an upgrade from the traditional framework. These conclusions should be bolstered by strong documentation standards. Another strength of the document is the “Qualifications and Limitations Section.”		This appears to be a comment supporting the document with no action or resolution needed.
157	Overall document	T	The philosophical/scientific/academic basis for the standard is unclear. There are several ways of presenting/communicating/conveying forensic science opinion evidence. The 'best' way to present opinions in different contexts has not been resolved in the literature or tested for efficacy. In other words, the document does not describe the reasoning or the source for the basis of presenting or defining the things that are presented and defined.	Describe the basis, reasoning, and source for the proposed standard.	Reject. Nothing in the ASB Manual requires that a standard contain a basis, reasoning, and source, let alone be resolved in the literature or tested for efficacy.
284	Many places	T	Is 'same source' the same as SI?	If 'same source' is the same as 'source identification' please use the same wording in different places to avoid confusion. If 'same source' is different than 'source identification' then please define 'same source' and add it to the possible conclusions.	Reject. Same Source is not the same as support for same source, and support for same source is not the same as source identification.
285	Many places	T	Is 'different source' the same as an exclusion?	If 'different source' is the same as 'exclusion' please use the same wording in different places to avoid confusion. If 'different source' is different than 'exclusion' then please define 'different source' and add it to the possible conclusions.	Reject. Different source is not the same as support for different source, and support for different source is not the same as source exclusion.
177	0	t	We have commented on core sections of the document, and not on Terms & Definitions or on the informative Annex.	If our proposals for the core sections are accepted, the Terms & Definitions and the informative Annex should be revised accordingly.	Noted.

#	Section	Type of Comment (E-)	Comments	Proposed Resolution	Final Resolution
349	Scope	E	As indicated in the comments to the foreword and Section 4, the ASB should reject, or at the very least amend the weight-of-evidence approach adopted in this Standard, please refer to those comments and proposed resolutions for recommended changes to this Scope. Additionally, the scope presently specifies that Standard 13 does not cover "conclusions derived directly from and entirely dependent upon validated probability models or quantitative processes." That caveat does not go far enough. If examiners are using probability models or quantitative processes even to supplement (rather than derive) their conclusions this Standard must either address how to properly do so, or alter its language to reflect that such issues will be addressed in other documents.	Please refer to the proposed resolutions for the Foreword and Section 4. Additionally, amend the first caveat to read "conclusions derived directly from, entirely dependent upon, or supported in any way by validated probability models or quantitative processes." Otherwise substantially expand this Standard to address how examiners should report conclusions and testify when they have reached a conclusion using standard methods and wish to supplement their opinion with data from probability models or quantitative processes.	Reject: Since there are no generally accepted and validated statistical models in use, it would not be appropriate to separate the document. The Scope states that this does not cover conclusions derived directly from and entirely dependent upon validated probability models or quantitative processes. The proposed resolution is not the intent of this document as the scope is written.
8	1	T/E	The statement that "This standard does not cover.....the manner by which examiners arrive at their assessment of the strength or weight of the findings with respect to the source of the questioned impression" is somewhat of a misstatement. Although ACE-V is not mentioned in the standard, how examiners arrive at their assessments is by comparison. The level of correspondence is identified by the presence or absence of specific features, which in turn is used to determine weight or strength of a conclusion. Performing the comparison implies there will be a weighted conclusion. This point is further supported by the language in the annex and the use of weighted scales.	Consider removing the statement "the manner by which examiners arrive at their assessments of strength or weight of the findings with respect to the source of the questioned impression" from the list of what is not included in the scope of the document. While the scales are visually helpful, they should be removed if the aforementioned statement is going to remain in the document.	Reject. The Annex contains examples and the manner by which examiners arrive at their assessments of the strength or weight of the findings with respect to the source of the questioned impression is not provided in this document.
9	1	T/E	The statement that "This standard does not cover...documentation of conclusions" is also somewhat misleading in that the standard does discuss the documenting the basis upon which a conclusion opinion is made (see examples in Annex A).	Consider removing the statement or revising to clarify the standard does not cover documentation of the methods of analysis supporting stated conclusions.	Reject. This document does not give requirements for how the documentation of conclusions is to be done.
10	1	T/E		The scope needs to specify if the conclusions presented only apply to comparisons between unknown evidence fingerprints and fingerprints from known individuals.	Reject. The scope already states that the document applies to friction ridge comparison and not further specificity is necessary.
52	1	T	Second statement beginning with "For the purpose..." is redundant. The term 'conclusion' is defined in section 3	remove statement from Section 1	Accept
53	1	T	First bullet starting with "conclusions derived..." is redundant. It is also the manner by which an assessment can be made which is stated in the second bullet of this section	remove first bullet from Section 1	Reject: The first two bullet items are not redundant. They deal with different aspects of friction ridge examination.
54	1	T	bullets are lowercase in this section but bullets in remainder of document are capitalized	capitalize first letter of each bullet in Section 1 for consistency with document	Reject. Not all of the bullets in this section are complete sentences, therefore they are a lower-case list and separated appropriately. Each list is dealt with separately.
115	1	E	"For the purpose of this document, conclusions are defined as expert opinions based on the friction ridge detail and information under observation and interpreted using acquired knowledge, skill, and experience of a friction ridge examiner." There are instances in this document where 'conclusion' is defined (in foreword, and in 3.1), and the definition is slightly different. It would be clearer to define it once only in section 3.	Present this definition in section 3, and as its own definition.	Accept with modification. The second paragraph of the scope has been deleted.

#	Section	Type of Comment (E-	Comments	Proposed Resolution	Final Resolution
116	1	T	This document mentions 'documentation of conclusions' and 'reporting conclusions' but unclear precisely what is meant by these terms.	Clarify what 'documentation of conclusions' refers to, as well as 'reporting conclusions', and when or in what context these processes occur.	Reject. Reporting and documentation are not in the scope of this document. They may be addressed specifically in future documents.
178	1	t	<p>"This standard does not cover the following topics: – conclusions derived directly from and entirely dependent upon validated probability models or quantitative processes; – the manner by which examiners arrive at their assessments of the strength or weight of the findings with respect to the source of the questioned impression; ... – how an agency or other forensic service provider (FSP) will define or validate the criteria used for selecting source conclusions."</p> <p>The document attempts to present a set of expressions for the conclusion of a forensic interpretation process, but the scope excludes any consideration of the interpretation process itself. Unless one can describe (and provide requirements and recommendations) for the process and criteria by which one arrives at a particular conclusion, the conclusion is meaningless and the process by which it was reached is not transparent. It is a fatal flaw to attempt to write an isolated standard on the expression of conclusions that is divorced from consideration the interpretation process by which the conclusions are reached.</p> <p>Unless the process and criteria by which one arrives at a particular conclusion have been validated, the conclusion is meaningless. Interpretation and validation could be covered in separate, but related, documents. The present document does not cover interpretation or validation, and does not reference another document that covers validation.</p>	<p>Replace the existing document with a document that provides requirements and recommendations for interpretation of observations made on friction-ridge impressions. This should include the expression of conclusions as the result of the interpretation process.</p> <p>Either in the revised document, or in a related document that is referenced in the revised document, provide requirements and recommendations for validation of the interpretation process by which the conclusions are reached.</p> <p>We are unable to provide more explicit proposals because to do so would be to write the revised document.</p>	Reject: The document addresses the scope as it is written and the proposed resolution is beyond the scope of this document. ISO is working on an interpretation document at this time, so the content is not addressed here.
198	1	T	The Scope indicates that the standard does not cover "how an agency or other forensic service provider (FSP) will define or validate the criteria used for selecting source conclusions." By expanding the conclusion scale without providing further information, criteria, or guidelines on how they should be applied, there is risk for greater inconsistency and conflict in reported conclusions between intra- and inter-laboratory fingerprint examiners. Moreover, the verification process may require more conflict resolution using the 5 conclusions.	Add criteria or guidelines for the minimum amount of information or data observations required for each of the different source conclusions. Include both qualitative and quantitative requirements in one document and define requirements or guidelines for both. This will promote more consistency and less conflict across those practicing in the friction ridge discipline.	Reject. This is outside of the scope of this document. The criteria will most likely be addressed in a future document.
199	1	T	The Scope indicates "For the purpose of this document, conclusions are defined as expert opinions based on the friction ridge detail and information under observation and interpreted using acquired knowledge, skill, and experience of a friction ridge examiner."	Specify how knowledge, skill, and experience was acquired (ex. extensive and standardized training)	Reject. The paragraph was deleted. Training is being addressed in a different document and is outside the scope of this document.

#	Section	Type of Comment (E-)	Comments	Proposed Resolution	Final Resolution
231	1	T	The second paragraph in the scope, "...for the purpose of this document..." should be removed. The definition given for conclusions is unclear. Section 3 - Terms and Definitions states it more clearly. If the purpose of that paragraph is to state that an expert opinion of the conclusions is based on acquired knowledge, skill, and experience of a friction ridge examiner, the way it is written does not clearly get that across.	Remove the second paragraph under section 1. Scope.	Accept
364	1 Scope	E	Shorten the first sentence to	This standard describes how conclusions that may be reached following friction ridge comparisons should be expressed.	Reject. This modification changes the intent of the document.
365	1 Scope	E	Rephrase the second sentence and put the definition in Section 3.	For the purpose of this document, conclusions are opinions as to the source of a mark from friction ridge skin.	Accept with modification. Paragraph deleted.
271	18 occurrences	T	The term strong is used 18 times but not defined. The term is too vague to be useful; it results in a standard without a clear criteria (which is not a usable standard). What is considered 'strong' will most likely be included in a method document, showing this document does not stand on its own and cannot be used until a methodology document is developed.	Hold this document and roll it out with a methodology document that states when to use each conclusion.	Reject. Other documents will be published as they make it through the consensus process and they can then be used together.
55	3	T	definitions are not in alphabetical order	organize Section 3 alphabetically	Accept
56	3	T	the term "ambiguity" is used throughout the document but is not defined	add a definition of "ambiguity" to the document. Definition should read "ambiguity - the presence of external factors that can lead to a misinterpretation of data within a latent and/or known impression."	Reject. Standard English meaning. Only used in an informative example.
57	3	T	use of the word "source" in front of conclusions, exclusion, and identification conflicts with the limitation of not asserting source attributions. The inclusion of the word "source" in front of conclusions, exclusion, and identification is misleading	remove the word "source" from in front of the terms "conclusion", "exclusion", and "identification" throughout entire document	Reject. These terms are defined in TR016
60	3	T	needed - definition for Incomplete (see comments #10 and #11 for additional information and proposed resolution)	define Incomplete in document as "A determination that the observed data in the latent impression cannot be fully compared to an exemplar due to a lack of data present within the exemplar to complete the examination. A conclusion cannot be reached until additional exemplars are submitted for examination	Reject. Only used in an informative example.
118	3	E	Difficult to follow the definitions as they are not correctly alphabetised.	Correctly alphabetise terms and definitions in section 3.	Accept
119	3	E	"For purposes of this document, the following definitions apply." should include colon, not period.	Change to colon at end of sentence, rather than period.	Reject. ASB style is to use period.
120	3	T	Consider defining 'examiner', as this term is used throughout the document but not specifically defined. FSP is specifically defined, and so it seems logical that 'examiner' should also be defined.	Define 'examiner' in section 3.	Accept.
121	3	T	An earlier definition of 'conclusion' (in the Foreword) states mentions that information is "interpreted using acquired knowledge, skill, and experience of a friction ridge examiner." Consider providing definitions for each of these terms in section 3.	Define 'knowledge', 'skills', and 'experience' in section 3.	Reject. Standard English/industry definitions.
337	3	E	The list of Terms and definitions should be in alphabetical order	correctly alphabetize the list of Terms and Definitions	Accept

#	Section	Type of Comment (E-)	Comments	Proposed Resolution	Final Resolution
14	3.10	T/E	This is an example of a statement formed in terms of propositions that should be revised. A neutral definition based on observed characteristics should be provided.	Change the definition to: Is the conclusion that the observed data do not provide a sufficient degree of support for one of the four other categorical opinions.	Reject with modification. The proposition framework is appropriate. Definition clarified.
47	3.1	E/T	SDS and SSS are subjective and not objective. Inadequate research to further these conclusions. As evident by the NAS, PCAST, AAAS, et al. the forensic community has been pushing towards a more quantifiable scientific and objective methodology to our discipline. There is no universally agreed upon quantifiable studies to support these additions. There are no universally agreed upon statistical models. Even current research from Dr. Busey is limited in scope with regards to expanded scale and no published research has garnered any serious readership regarding potential influence on jurors. To continue down this subjective approach flies in the face of what had been recommended and instead of advancing the science, crafty wordsmanship with "propositions" or "support" is proving a hasty retreat.	Until further research has been conducted, peer reviewed and universally accepted in the science, to add these conclusions are woefully premature at best; morbidly deceptive at worst.	Reject with modification. These criticisms are all also true of the current 3-conclusion framework. Definition clarified.
48	3.1	E/T	proposition	It's stated under source conclusions. Call it a conclusion. Eliminate "proposition". Unnecessary definition.	Reject with modification. Definition from TR016 is used. Distinction between "conclusion" and "proposition" clarified.
98	3.1	E	Can remove "Is the..."	Replace with "The..."(for consistency with the formatting of other definitions)	Accept
232	3.1	E	First line may sound better reading, "Statements expressed as an opinion..."	Add the word an before opinion	Reject with modification. Omission of "an" is intentional. Definition clarified.
312	3.1	T	In the definition of conclusions/ source conclusions it states "Examiners may offer one of the following conclusions". This implies that all FSPs will be changing their SOPs to reflect the use of all 5 options. This document does not encompass the specific criteria required to reach each conclusion and for some FSPs that criteria may never be met per SOP.	Add to the definition, "per FSP SOPs."	Reject with modification. The requirement is to allow only the 5 specified conclusions, but not to require any FSP to use more than 3. A paragraph was added to section 4.1 to outline the option of using 3 conclusions and how the 5 conclusions would be encompassed. Definition clarified.
350	3.1	E	Please refer to the comments made to the Foreword and Section 4.	Please refer to the proposed resolutions for the Foreword and Section 4.	Reject with modification. These criticisms are all also true of the current 3-conclusion framework. Definition clarified.
366	3.1 conclusion	E	conclusion in general is not defined here.	Replace the definition of "conclusion" with the one proposed above.	Reject with modification. Definition from TR016 is used. Definition clarified.
367	3.1 source conclusions and 3.14	T	There are several problems with 3.1, but read together with 3.14, the definitions loop around without defining anything. Also, stating a categorical scale for conclusions does not define "conclusion."	Define "source conclusion" as a statement about the particular patch of friction ridge skin that produced a mark.	Reject with modification. Definition from TR016 is used. Definition clarified.
122	3.1; Annex A (now Annex B)	T	Unclear precisely what is meant by 'observed data' and 'data'. Similarly, in the figures in the Annex, are the balls with different sizes and colors supposed to represent 'observed data'?	Clarify definitions of 'data' and 'observed data', and what the figures in Annex A represent.	Accept. Definition of observed data has been clarified.

#	Section	Type of Comment (E-)	Comments	Proposed Resolution	Final Resolution
283	3.2 and 3.18	T	<p>The definition of correspondence is almost 50 words and is very confusing.</p> <p>It appears that the definition states that things are similar, however, the definition of similar says not correspondence and therefore definitions 3.2 and 3.18 conflict.</p> <p>Correspondence appears to be defined to be only be for SI, which means it is indicating a measurement of sufficiency. If this is correct then why not simply use the phrase 'sufficient similarity' instead of 'correspondence'?</p>	Please clarify the definition so that it is understandable and does not conflict with the definition of similarity. If it is indicating sufficiency, this needs to be clarified.	Reject. Correspondence is an accumulation of similarities. It does not mean "sufficiency." The term is now used in more conclusions than just Source Identification.
126	3.3, 3.5	T	The difference between the terms 3.3 disagreement and 3.5 dissimilarity is not clear.	Make the distinction between the terms 'dissimilarity' and 'disagreement' more clear.	Accept. Distinction has been clarified.
12	3.3	T/E	The definition of disagreement is confusing and needs further clarification. What is causing the dissimilarity? What are expected variations? Are expected variations something that would factor into the proposition used for the denominator of the LR? Why aren't expected variations communicated in the examples for comparison in the annex? Also, the use of the term "nonconformity" is unclear here as this term has other meanings in the forensic context.	Clarify what causes a "single dissimilarity that is deemed to be outside of expected variation" and "an accumulation of dissimilarities" and how they are different from one or more dissimilarities that do not result in a disagreement. If this is a matter of clarity or complexity of the impression, that point should be included in the definition. Please define "nonconformity" as it applies in this context.	Reject. Proposed resolution is beyond the scope of a definition.
124	3.3	E	Phrasing is slightly unclear due to punctuation use.	Add semi-colon to separate the two clauses: "A single dissimilarity that is deemed to be outside of expected variations in the appearance of impressions from the same source; or an accumulation of dissimilarities between two impressions resulting in overall nonconformity."	Accept with modification. Sentence has been clarified.
158	3.3	E	The term "disagreement" is defined in Section 3.3 but then appears to be used in a different context in Section 3.20 i.e. "strong disagreement" and "level of disagreement." The same use occurs in Section 4. 2. This use adds ambiguity and inconsistency which should not be present in a standard.	Replace the word "disgreement" in Sections 3.20 and 4.2 with another term.	Reject. Degrees of disagreement can exist. Disagreement Noted requires only disagreement, but Source Exclusion requires strong disagreement.
200	3.3	T	Revise definition for "Examination - Act or process of observing, searching, detecting, recording, prioritizing, collecting, analyzing, measuring, comparing and/or interpreting." What is meant by prioritizing? The definition seems to combine processes for both evidence processing examination and impression methodology examination.	Define prioritizing or make it more clear what this means. Distinguish between which terms are related to evidence processing and which terms refer to the methodology.	Accept with modification. Definition deleted.
319	3.3	T	Including wording of "single dissimilarity" seems out of date vs. only including "accumulation of dissimilarities"	An accumulation of dissimilarities between two impressions that is deemed to be outside of expected variations in the appearance of impressions from the same source resulting in overall nonconformity.	Accept with modification. Word "single" deleted.
58	3.4	T	The term "examination" includes a lot of other terms that conflicts with it's use in the document	simplify definition of "examination" to be "Act or process of observing, interpreting, and comparing data." to comply with it's use in the document	Reject with modification. Definition deleted.
201	3.4	E	A comma is needed between the words "comparing" and "and/or"	insert necessary comma	Reject with modification. Definition deleted.

#	Section	Type of Comment (E-)	Comments	Proposed Resolution	Final Resolution
13	3.5	T/E	The definition for dissimilarity needs further clarification. Although the definition states that this term is not to be confused with disagreement, the definitions as written do not make the differences between these two terms clear.	Consider editing the definition to "An observation that two impressions that have a general difference or lack correspondence of friction ridge details and/or features" [Delete the statement "not to be confused with disagreement."] These additions make it clear that the two impressions are not similar at all.	Accept. Definition of "disagreement" clarified.
125	3.5	E	"Not to be confused with disagreement." Include single quotation marks, and add the section number, to make clear you are referring to a definition.	Change to "Not to be confused with 'disagreement' " and add "(3.3)" to specify you are referring to the specific definition	Accept
59	3.7	T	examples of friction ridge detail include the terms "macroscopic information" and "microscopic information" which are not standard terms used within the friction ridge discipline and are not used within the document	remove examples of "macroscopic information" and "microscopic information" from document	Accept.
127	3.7	T	No definitions for some of the terms used (Microscopic vs macroscopic detail; 1st/2nd/3rd level details).	Include definitions for terms, or cite relevant document that contains definitions.	Accept with modification. Terms "microscopic" and "macroscopic" have been removed.
202	3.7	E	The words and/or are missing between macroscopic and microscopic information	insert and/or	Reject with modification. Terms "microscopic" and "macroscopic" have been removed.
278	3.7	T	1st Level detail, 2nd Level detail, 3rd Level detail, macroscopic information, microscopic information are not clearly defined and therefore they are not helpful to the definition.	Define 1st Level detail, 2nd Level detail, 3rd Level detail, macroscopic information, microscopic information. Or remove these words as examples.	Accept. Removed.
320	3.7	E	Missing "and" in statement "macroscopic information, microscopic information"	macroscopic information, and microscopic information	Reject with modification. Terms "microscopic" and "macroscopic" have been removed.
128	3.8	T	Defines friction ridge skin as "The skin found on the palms of the hands and soles of the feet." but this should also include fingers and toes.	Specify inclusion of fingers and toes in this definition.	Accept.
203	3.8	E/T	The definition appears to limit FRS to palms and soles, what about fingers and toes	Broaden definition	Accept.
234	3.8	T	It should read the skin found on the palmar surface of the hands and plantar surface of the feet. The way it currently reads technically excludes the fingers of the hand. If soles of the feet would like to be kept, at a minimum the palmar surface of the hands should be changed to include the fingers.	Change the definition of friction ridge skin to read: The skin found on the palmar surface of the hands and plantar surface of the feet.	Accept.
321	3.8	T	To stay consistent with biological definition, change palms of hands to palmar surface of hands	on the palmar surface of the hands and soles....	Accept.
129	3.9	E	"referred to as latent/questioned(unknown) impressions, or exemplar(known) impressions (refer to those definitions for further clarification)." Should include the section numbers for these definitions, for ease of reference.	Specify the number / position on list where these definitions are found (3.11 and 3.12).	Reject. Style preference.
130	3.9	E	"referred to as latent/questioned(unknown) impressions, or exemplar(known) impressions (refer to those definitions for further clarification)." Ensure these terms match the terms in the subsequent definitions. In section 3.11 the term used is "latent/questioned impression (latent or unknown)"; and in section 3.12 the term used is "exemplar impression (exemplar or known)".	Ensure terms used across definitions are consistent.	Accept.
313	3.9	T	In the definition of impression (friction ridge impression) does not encompass digital images of the fingers, for example when an image has an unknown individual in the process of a criminal act. These types of images are not by contact or transfer, but may be of comparison quality.	Add to the definition, "digital images of friction ridge skin". Or add a definition to encompass this type of image separately or add "usually" to mirror 3.11.	Resolved by changing definition of Questioned Impression. Not all questioned impressions are Friction Ridge Impressions.

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351	3.10	E	Please refer to the comments made to the Foreword and Section 4.	Please refer to the proposed resolutions for the Foreword and Section 4.	Reject with modification. These criticisms are all also true of the current 3-conclusion framework. Definition clarified.
131	3.10	E	The style of this definition is not consistent with the style of others.	Remove the "is" from beginning of sentence, to match the style / format of the other definitions in the document.	Accept.
280	3.10-	T	The definition of inconclusive refers to propositions in general and not what propositions are under consideration, therefore leaving the definition of inconclusive very unclear.	State the propositions being referred to so the meaning of inconclusive is clear.	Reject with modification. The propositions are not necessarily the same in all cases. Definition clarified.
339	3.10 and 4.4	T	In conversation with examiners and comments from the audience at Reno it seems the biggest resistance to the adoption of these new conclusions seem to stem from the connotations or suggested reference to "Support for Same Source." Perhaps correctly examiners are cautious of testimony sounding like a "possible ID" or "almost an ID" to the jury and this being misleading and prejudicial. To correct these issues I suggest using more transparent different terms that are harder to misinterpret by the layperson. "Inconclusive" also has baggage being used in lots of FSP's across the US with different definitions.	Instead of using EXC << SDS < INC > SSS >> SID I suggest using other titles for the conclusions but the definitions remaining the same. I believe the titles EXC << Disagreement Noted < Incomplete > Correspondence Noted >> SID would be an improvement. Another suggestion could be EXC << Not identified < Undecided > Ridge Detail Consistent >> SID.	Accept with modification. Titles changed.
204	3.11	E	A comma is needed after "typically"	insert necessary comma	Reject with modification. Definition deleted.
42	3.12	T	"Mikrosil" is a proprietary compound	Remove the reference to "mikrosil" for proprietary reasons; Alternatively, refer to "casted prints" as a generic description of the process though since casting is relatively uncommon, you may simply not mention this method and allow it to be covered under the "not limited to" qualification.	Reject with modification. Definition deleted.
99	3.12	E	Punctuation needed after the word "individual" at the end of the 1st sentence	Insert a period after the word "individual"	Reject with modification. Definition deleted.
100	3.12	E	Commas needed after the word "include" and after "to" in second sentence	Insert necessary commas	Reject with modification. Definition deleted.
132	3.12	E	"exemplar impression (exemplar or known): The deliberately recorded images or impressions from the friction ridge skin of an individual Examples may include but are not limited to inked tenprints, inked palm prints, Livescan prints, powder and lift prints, mikrosil, or photographs of friction ridge skin." Livescan prints are mentioned here but are then referred to as Livescan impression (exemplar or known) in 3.13.	Consider consistent use of the terminology relating to Livescan prints/impression.	Accept. Definition of Livescan impressions deleted.
133	3.12	T	Livescan prints/impression is the only example from 3.12 that receives its own definition but it is not mentioned again in the main body of the document (so not clear why a definition of it is really necessary).	Consider removing definition of 'Livescan impression (exemplar or known)'.	Accept.
205	3.12	E	A comma is needed after "Examples may include"	insert necessary comma	Accept.
235	3.12	E	There needs to be a period after the word individual.	Add a period after the word individual.	Accept.
255	3.12	E	Period needed at the end of the first sentence.	Insert necessary period	Accept.
279	3.12	T	This definition is not in alphabetical order	Put in alphabetical order.	Accept.
322	3.12	E	Period needed at end of first sentence.	Add necessary period.	Accept.

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281	3.12 and 3.13	T	(Exemplar and known) in parentheses is confusing. In 3.12 it is repetitive to the main word being defined (maybe this is an i.e.). For 3.13, it appears what is in parentheses is an e.g.	Clarify the meaning of why the words are in parenthesis by adding either e.g. or i.e.	Reject with modification. Definition deleted.
236	3.13	T	The words "in a digital format" at the end seem out of place. It may read better if it read, "An inkless, electronic means of digitally capturing impressions..."	Remove the words "in a digital format" from the end and add the word "digitally" before the word capturing.	Reject with modification. Definition deleted.
15	3.14	T/E	The use of professional judgement by a traditional fingerprint examiner to form propositions seems contrary to prohibiting examiners to cite the number of cases they may have worked on in giving a conclusion. Consider removing "professional judgement" from the definition.	Consider the following definition "an evaluation of observed data and information gathered through the forensic process which results in conclusions being drawn."	Accept with modification. Definition edited.
101	3.14	E	Punctuation needed at the end of the sentence	Insert a period at the end of the sentence	Reject with modification. Definition edited.
134	3.14	T	"Use of professional judgement to provide conclusions and/or opinions on hypotheses/propositions, based on observed data and information gathered through the forensic process". The inclusion of 'professional' seems irrelevant here, as the document is about expert judgement / interpretation.	Remove the word 'professional'.	Accept with modification. Definition edited.
135	3.14	E	Period is missing.	Add period to the end of the sentence.	Reject with modification. Definition edited.
206	3.14	E	Include a period at end of the definition	insert period	Reject with modification. Definition edited.
237	3.14	E	I don't believe you need a comma after the word propositions. It doesn't read clearly with it.	Remove comma after the word propositions.	Reject with modification. Definition edited.
256	3.14	E	Period needed at the end of the sentence.	Insert necessary period	Reject with modification. Definition edited.
16	3.16	E	The term probability is not used in the body of the document. It is found in the scope and the in the definition for probability. This term does not improve the clarity of the standard.	How probability factors into the conclusions given in this document is not intuitive to the reader. The term should be removed from the document if it is not going to be used in the body of the document.	Reject with modification. The term is now used in the document.
34	3.16	T	The definition of probability currently states, Probability is an expression of the chance that a particular event occurs. Probability estimates can be calculated using an appropriate model or assigned by considering a subjective assessment that is based upon observations interpreted using the examiner's experience. Most of us are not using a calculated probability model and the second part of the sentence states that we should consider a subjective assessment based on our expertise. What does this sound like when we mention it in court. How am I suppose to use this with my expertise?	I like the first part of the definition but the second sentence needs to be clearly defined. Something needs to state that an approved model has not been determined yet and how to clearly use probability with the statement of expertise.	Accept with modification. Second sentence deleted.
136	3.16	E	The style of this definition is not consistent with the style of others.	Remove "probability is" from beginning of sentence, to match the style /format of other definitions.	Accept.
137	3.16	E	Definition is slightly unclear due to punctuation use.	Add a comma: "...using an appropriate model, or assigned by considering a subjective assessment..."	Reject with modification. Affected language has been deleted.
172	3.16	T	If this document does not address conclusions derived directly from or entirely dependent upon validated probability models then why is the first part of the definition included?	Remove the portion of the definition which address probability models.	Accept.

#	Section	Type of Comment (E-	Comments	Proposed Resolution	Final Resolution
221	3.16	T	probability estimates can be assigned by considering the a subjective assessment . . . based upon observations interpreted using the examiner's experience seems to be going back to "based on my training and experience" which the field has tried hard to move away from	calculation of probability estimates should be based on something tangible that the end user (judge, jury) can see and understand. Since an approved statistical model doesn't currently exist, probability estimates should either not be used or this document should fully explain how the examiner is to determine them based on their experience.	Accept. Reference to probability estimates deleted.
238	3.16	E	The definition is not clear. I believe it may read better if it read "Probability is an expression of the chance that a particular even occurs. Probability estimates can be calculated using an appropriate model or may be assigned by considering a subjective assessment based upon observations interpreted using the examiner's experience.	Add the word "may be" before assigned. Remove the words "that is" after subjective assessment.	Reject with modification.Affected language has been deleted.
267	3.16	T	The definition of probability assumes a person CAN derive a probability subjectively when there is no means of doing so in this discipline. The best a person can do is guess which is not the same as a subjective probability.	Remove the term probability from this document since practitioners cannot determine a probability.	Reject with modification. Reference to subjective probability has been deleted.
268	3.16	T	The word probability is not used in this document and therefore does not need to be defined.	Remove the definition of probability.	Reject with modification. The term is now used in the document.
323	3.16	T	Inclusion of the option to subjectively assign a probability based on observations using the examiners experience seems to contradict what the goal of using probability models is trying to do - eliminate subjectivity.	Delete "or assigned by considering a subjective assessment that is based upon observations interpreted using the examiner's experience."	Accept.
344	3.16	T	The term "probability" is properly defined here in part - while probability estimates can be calculated, there is no currently validated method of calculating such statistics in the friction ridge discipline. There are a few current attempts at such calculations being tested, but research in the arena has been attempted for over 100 years, dating back to Galton in 1892, with no success to date.	Probability should be removed from the friction ridge discipline altogether until there is an accurate, validated method for determining such statistics. (If/when such a method is developed and validated, the document can easily be revised.)	Reject. Evidence is inherently probabilistic. The FRCB cannot "remove" probability from the discipline.
352	3.16	E	Please refer to the comments made to the Foreword and Section 4.	Please refer to the proposed resolutions for the Foreword and Section 4.	Reject with modification. These criticisms are all also true of the current 3-conclusion framework.
17	3.17	T/E	The last sentence and the example given in this definition need to be relocated to section 4 of this document. The example given for the propositions used in this document appears to be the only set of propositions that can be used by examiners.	Section 4 can be reorganized to address the needs of traditional fingerprint examiners and those using a statistical model separately. The sentence "it is best practice to use exhaustive propositions" can be moved to the section that explains statistical models. That section can also address the following questions: Why is it best practice to use exhaustive propositions? If it is not required to use exhaustive propositions, how does this affect the conclusions stated in this document? If an examiner is giving their opinion how can they give an exhaustive proposition if an exhaustive proposition requires a known truth? The conclusions that can be drawn from exhaustive propositions need to be specified. Lastly, if the example given is the only proposition pair that can be offered that should be made clear. If not, examples of different propositions need to be provided in an annex. The use of different propositions can result in different conclusions. It needs to be clarified if different propositions can be used to come to these same conclusions. There is also the option to create separate documents.	Reject with modification. Acceptable propositions are discussed in section 4.1. The language about exhaustive propositions has been moved to a Noate and is, therefore, informative only.

#	Section	Type of Comment (E-)	Comments	Proposed Resolution	Final Resolution
49	3.17	E/T	Propositions (hypotheses) Addition of yet another definition. In two pages you have three definitions to one word?	Simplify. To even the casual reader, this section is confusing. Quite frankly; unnecessary. Also, in science if the positive is true then the inverse should also be true. There is no explanation for this in your definition. For example: If a subject has whorls in all ten fingers and the latent print obtained from the crime scene is clearly a tented arch, there is no way a person with all whorls is leaving a tented arch impression. Common sense, deductive and inductive reasoning and visual acuity and prove this without "support" or a "proposition/hypothesis" So, as such, if a print can be excluded (inverse) then a print can be identified (positive).	Accept. The definition has been simplified.
63	3.17	T	the definition of "proposition" is inaccurate and conflicts with it's use in the document. Propositions and hypotheses are different concepts but the definition implies that they are similar and can be used interchangeably. The definition as written conflicts with the work in the friction ridge discipline as we do not deal with states of nature	reword definition to be in line with how it's used in science and logic and in order to not conflict with document. Proposed wording would be "a conjectural relationship between concepts that is stated in a declarative form. Propositions cannot be tested directly and are instead tested indirectly by examining the relationship between observed data. Propositions are generally arrived at through deductive or inductive reasoning and must be able to be empirically tested through data."	Reject with modification. The definition has been simplified.
64	3.17	T	example given for a proposition conflicts with the stated limitations with Section 5	remove example from document	Reject with modification. The example has been moved to a Note and is, therefore, informative only.
138	3.17	E	The style of this definition is not consistent with the style of others.	Rephrase slightly to match style / format of other definitions: "Statements or hypotheses about the state of nature..."	Accept.
139	3.17	E	Definition is slightly unclear due to punctuation use.	Adjust punctuation for clarity: "For that purpose, propositions have to be mutually exclusive, meaning that one or the other can be true, or neither can be true; and that the evidence logically only should be able to support one of the propositions (unless exactly equivocal)"	Reject with modification. Definition has been rewritten.
207	3.17	T	For example, two mutually exclusive and exhaustive propositions are that person X is the source of the latent print (H1) and that person X is not the source (H2). Wouldn't person X is not the source be H0? Wouldn't the new additional categories (support for same source and support for different source) make this problematic? Are we testing for these too? If so, more hypotheses are needed.	Determine if H0 should be used instead of H2 and if more hypotheses are needed.	Reject with modification. The example has been moved to a Note and is, therefore, informative only.
239	3.17	E	Fix the wording and punctuation in the statement "...or neither can be true and that the evidence, logically, should only be able to support one of the propositions".	Add a comma before and after logically, and switch the words "should" and "only".	Reject with modification. Definition has been rewritten.
269	3.17	T	The definition of mutually exclusive is incorrect. It currently states, "mutually exclusive, meaning that one can be true, the other can be true, or neither can be true". This is incomplete, it does not say whether the two propositions can or cannot both be true.	Add an accurate definition of mutually exclusive.	Accept. Definition has been rewritten.
270	3.17	T	The definition for proposition is including another definition within it, a definition for 'mutually exclusive' should be defined separately.	Add a definition for mutually exclusive.	Accept. Definition has been rewritten.
282	3.17	T	I don't know what an exhaustive proposition is.	Please clarify the intended meaning of 'exhaustive proposition' or use more standard terms so that the meaning is clear.	Accept. That phrase has been deleted.

#	Section	Type of Comment (E-)	Comments	Proposed Resolution	Final Resolution
353	3.17	E	As indicated in the comments to the Foreword above, the ASB should abandon its shift to a likelihood ratio / weight-of-the evidence approach, thus eliminating the need for Section 3.17. While it is unlikely to effect the subjective assessment of likelihood ratios and equivalents adopted in this Standard, if the ASB rejects our comments to the Foreword and retains likelihood ratios, it should then amend the language making exhaustive propositions only a "best practice." Bayes Theorum requires the propositions compared by a likelihood ratio to be <i>both</i> mutually exclusive and mutually exhaustive. <i>See e.g., Norman Fenton et al., "When 'neutral' evidence still has probative value (with implications from the Barry George Case)," 54 Sci. & Justice 274, 275 (2014) ("When the assumption of mutually exclusive and exhaustive hypotheses is either wittingly or unwittingly undermined, the relationship between the LR and the notion of 'probative value' of the evidence can change dramatically); Norman Fenton, Martin Neil, & Daniel Berger, "Bayes & the Law," 3 Ann. Rev. Stat. Appl. 51, 64 (2016) ("The proof of the meaning of probative value ... relies both on Bayes' theorem and on the fact that Hp and Hd are mutually exclusive and exhaustive, i.e., are negations of each other"). And this Standard cannot, and should not, do away with the latter requirement for mere convenience sake.</i>	Reject a weight-of-evidence approach and adopt the conclusion framework outlined in the above proposed resolution to the Foreword. If not, amend the language to 3.17 to read: "Propositions (hypotheses) are statements about the state of nature. Propositions are often framed in pairs with the goal of choosing between them. For that purpose, propositions have to be mutually exclusive (both could not simultaneously be true) and mutually exhaustive (both could not simultaneously be false)."	Accept. Language amended.
18	3.18	T/E		The definition for similarity does not provide enough of a distinction to not be confused with correspondence. Similar is used throughout the definition of correspondence. In section 4.1 it reads "Similarities generally provide support for the proposition...". This definition needs further clarity.	Reject. Definitions are clear that correspondence is an accumulation of similarity.
140	3.18	E	Could be clearer that you are referring to a specific definition.	Change to "Not to be confused with 'correspondence' (3.2)" to make clear that it is a specific term, and where it is defined.	Accept.
208	3.18	T	Similarity - An observation that two impressions share a general likeness when comparing an individual feature or detail. Not to be confused with correspondence. What is general likeness and how is that determined?	Define or state how general likeness is determined.	Reject. Out of scope of a definition.
19	3.19	T/E		The definition of source does not work when it is used within other terms in the document (i.e. source exclusion, source conclusion). The examiner is never examining the individual's friction ridge skin directly, they are looking at an impression. Consider editing the definition to "the area of friction ridge skin responsible for an impression left by an individual."	Accept.
141	3.19	E	Could be clearer that you are referring to a specific definition.	Change to "The area of 'friction ridge skin' (3.8) from an individual."	Reject. Unnecessary to use quotation marks in this case.
314	3.19	T	The definition of source, "The area of friction ridge skin from an individual" is not clear what area it may or may not be referring to. An example, one can exclude to the fingers but not necessarily all friction ridge areas of an individual.	Add to the definition, "all or a part of the area of friction ridge skin from an individual."	Accept with modification. Definition edited.
368	3.19	E	FRS is not "from an individual" (unless it has been removed).	Replace "from" with "on" or "of".	Accept

#	Section	Type of Comment (E-)	Comments	Proposed Resolution	Final Resolution
11	3.2	T/E		Forensic science has many terms that are used interchangeably but have different meanings depending on the context. Conformity needs to be defined or substituted with a term that is defined in the document.	Reject. "Conformity" is not used in the body of the document. We do not define terms that are only used in definitions.
20	3.20	T/E	This is another example of a statement formed in terms of propositions that should be revised. A neutral definition based on observed characteristics should be provided.	Change the definition to: Source Exclusion. The conclusion that the observed data provide strong support that the two impressions originated from different sources. The rest of 3.20 can be removed but as it is included later in the document.	Accept with modification. Discussion of propositions remains as it provides the logical framework behind the observed data. All sentences after first have been removed.
123	3.2	E	"Observation of pattern type, ridge flow, friction ridge features in sequence, of the same or similar type, in similar relative positions to each other, and/or with the same associated intervening ridge counts." Not really clear what is meant by this sentence in 'Correspondence' definition; it is grammatically confusing. Are these separate factors that can be considered when determining correspondence? If so, add semi-colons etc. to make clear what the separate components are.	Reconsider punctuation use to make meaning clear.	Accept with modification. Definition edited.
209	3.2	E	Insert an "s" after at the end of the word "provide", it should be "provides."	insert s	Reject. "Data" is plural.
210	3.2	T	Source Exclusion - The conclusion that the observed data provide substantially stronger support that the two impressions originated from different sources rather than the same source. There is a strong disagreement present such that the examiner would not expect to see that level of disagreement in an impression from the same source. What is meant by substantially stronger support (one disagreement/discrepancy, two, etc.)?	Define or state how substantially stronger support is determined.	Reject. Out of scope of a definition.
233	3.2	E	The current definition of correspondance seems misworded. Maybe have it read... Observation of pattern type, ridge flow and friction ridge features, in sequence, of the same or similar type....	Add the word "and" before friction ridge features, and a comma after the word features.	Accept with modification. "And" added." Comma not added.
324	3.2	E	Missing "s" on "provide" in first sentence.	Add necessary "s"	Reject. "Data" is plural.
354	3.20	E	Please refer to the comments made to the Foreword and Section 4.	Please refer to the proposed resolutions for the Foreword and Section 4.	Reject with modification. These criticisms are all also true of the current 3-conclusion framework. Definition clarified.
345	3.20 3.21 4.2 4.6	T	To define something as "substantially stronger" than something else implies that there is some manner of quantifying the value of it. In the friction ridge discipline, there is no method or ability to quantify the strength of corresponding ridge detail, which means we are basically trading one subjective statement for another, slightly more confusing (to a lay person) subjective statement. This lends nothing of benefit to the science. As a practitioner in this field for several years, I can say that when I come to the conclusion of "identification" or "exclusion" it is because I am confident in that conclusion - it is not because I think or it could be an identification/exclusion. By implementing such conclusions involving "support for a proposition" we are relaying to a lay person that we are not entirely confident in our conclusion, in which case the question becomes "why are even bothering?"	Remove the terms "substantially strong support for" - the definition of "source identification" should remain a conclusion by the examiner, based on the observed friction ridge details, that the two impressions originated from the same source. Likewise, the definition for "source exclusion" should remain a conclusion by the examiner, based on the observed friction ridge details, that the two impressions did not originate from the same source.	Reject. Proposed definitions have benefit of not overstating value of evidence.

#	Section	Type of Comment (E-)	Comments	Proposed Resolution	Final Resolution
315	3.20, 3.21, 3.23 & 3.24	T	The definitions in these four sections all mention source, but the source is implied to be all area of friction ridge skin from 3.19.	No action needed if the addition above to 3.19 is made. If not add to the definitions, "source should be specified and may include all or part of the individual's friction ridge skin."	No action needed. See resolution of comment #314
21	3.21	T/E	The term Source Identification should not be used.	Change to Strong Support for Same Source. The conclusion that the observed data provide strong support that the two impressions originated from the same source. The rest of 3.21 can be removed but as it is included later in the document.	Reject. FRCB consensus is to continue to use terms "source identification" and "source exclusion."
102	3.21	E	Can remove "Source identification is the..." as an introductory clause from the 1st sentence	Replace with "The..." (for consistency with the formatting of other definitions)	Accept.
142	3.21	E	The style of this definition is not consistent with the style of others.	Remove "Source identification is" from beginning of sentence, to match the style / format of other definitions.	Accept.
211	3.21	T	Source Identification - Source identification is the conclusion that the observed data provides substantially stronger support that the two impressions originated from the same source rather than different sources. There is strong correspondence present such that the examiner would not expect to see the same arrangement of details repeated in an impression from another source. What is mean by substantially stronger support (8, 9, 10 matching minutiae)?	Define or state how substantially stronger support is determined.	Reject. Out of scope of a definition.
240	3.21	T	The wording "substantially stronger support that the two impressions originated from the same source rather than different sources." allows for some degree of disagreement meaning that there may be support for different sources just at a significantly lower level. In an identification, that should not be the case. All of the other source concusions may have varying "support" but the source identification should not.	Remove the words "substantially stronger"	Reject. There is always some support for the alternative hypothesis.
355	3.21	E	Please refer to the comments made to the Foreword and Section 4.	Please refer to the proposed resolutions for the Foreword and Section 4.	Reject with modification. These criticisms are all also true of the current 3-conclusion framework. Definition clarified.
103	3.22	E	Punctuation needed at the end of the sentence	Insert a period at the end of the sentence	Reject with modification. Definition deleted.
143	3.22	E	Period is missing.	Add period to end of the sentence.	Reject with modification. Definition deleted.
241	3.22	E	A period needs to be added after the word deposited.	Add a period after the word desposited.	Reject with modification. Definition deleted.
257	3.22	E	Period needed at the end of the sentence.	Insert necessary period	Reject with modification. Definition deleted.
22	3.23	T/E	This is another example of a statement formed in terms of propositions that should be revised. A neutral definition based on observed characteristics should be provided.	Change the definition to: Support for Different Sources. Support for different sources is the conclusion that the observed data provide support that the impressions originated from different sources; however, there is insufficient support for a Source Exclusion. The rest of 3.22 can be removed but as it is included later in the document.	Accept with modification. Discussion of propositions remains as it provides the logical framework behind the observed data. All sentences after first have been removed.
104	3.23	E	Can remove "Support for different sources is the..." as an introductory clause from the 1st sentence	Replace with "The..." (for consistency with the formatting of other definitions)	Accept
105	3.23	E	Can add the word "of" between the words "degree" and "support" in last sentence	Insert "of" so that last sentence ends, "...degree of support."	Reject with modification. Sentence deleted.
144	3.23	T	Meaning of terms "substantially stronger support" and "provides more support" is unclear	Make it clear how you are quantifying these terms / what you mean by these terms.	Reject. "Substantially stronger support" is not equivalent to, and greater than, "more support."

#	Section	Type of Comment (E-)	Comments	Proposed Resolution	Final Resolution
145	3.23	E	The style of this definition is not consistent with the style of others; and inconsistent phrasing between terms.	Remove "Support for different sources is" from beginning of sentence, to match the style / format of other definitions. Rephrase this section (or sections 3.20 and 3.21) so that they have consistent phrasing. Either all of these sections should say "support for the proposition that...", or they should all say "support that".	Accept
146	3.23	T	<p>"Support for different sources is the conclusion that the observed data provides more support for the proposition that the impressions originated from different sources rather than the same source; however, there is insufficient support for a source Exclusion. There are observed dissimilarities between the impressions and a lack of correspondence present. The degree of support may range from limited to strong or similar descriptors of the degree support."</p> <p>Inconsistencies across the definitions. If "provide substantially stronger support" (from 3.20 and 3.21) is being used to mean the same thing as "provides more support", then rephrase so these definitions are all consistent.</p>	Ensure terms and phrasing used across definitions are consistent.	Reject. "Substantially stronger support" is not equivalent to, and greater than, "more support."
147	3.23	E	Definition is slightly unclear due to punctuation use.	Adjust punctuation: "The degree of support may range from 'limited' to 'strong', or include similar descriptors of the degree of support."	Reject with modification. Sentence deleted.
222	3.23	T	observed data provides more support . . . Degree of support may range from limited to strong; this seems extremely arbitrary. How are the different degrees explained?	How the degrees of support are determined should be clearly explained? Where's the line between limited and moderate support? It should be explained in a way that is transparent and that the end user can understand. The examples in the annex do not provide that.	Reject with modification. Out of scope of a definition. Language about degrees of support has been deleted. The Annex has been edited to provide a clearer explanation.
242	3.23	T	When would there be insufficient support for a source exclusion if there are observed dissimilarities and a lack of correspondence? If this source conclusion is included to encompass those agencies or examiners that require a core or delta to be present to report an exclusion, then maybe rewording it to be make the threshold between source exclusion and support for different source clearer.	Reword/redefine support for different source conclusion.	Reject. Out of scope of a definition.
356	3.23	E	Please refer to the comments made to the Foreword and Section 4.	Please refer to the proposed resolutions for the Foreword and Section 4.	Reject with modification. These criticisms are all also true of the current 3-conclusion framework. Definition clarified.

#	Section	Type of Comment (E-)	Comments	Proposed Resolution	Final Resolution
346	3.23 3.24 4.3 4.5	T	<p>Both "support for same source" and "support for different sources" are essentially stating exactly what "inconclusive" states - that there is not enough information available in the impressions for the examiner to be confident in concluding the they did (identification) or did not (exclusion) originate from the same source. Why does there need to be another option in between the standard 3 conclusions? If the examiner cannot provide the detective with a confident conclusion of identification or exclusion, then there is no benefit to the case or to the justice system in providing a named individual with a conclusion that is basically stating (especially to the layperson in the jury) "it could be, but I'm not quite sure" or "it might not be, but I'm not quite sure".</p> <p>Furthermore, since the initial suggestion of these 5 conclusions, some friction ridge examiners - including myself - have taken it upon themselves to query the public (including lawyers, officers, and laypersons), asking them their interpretations of these conclusions. The overwhelming majority of responses indicated that there was no comprehension of the differences between "support for source identification," "inconclusive" and "support for source exclusion." Additional feedback also included severe confusion as to what these conclusions mean, and what action can be taken based on their use. The bottom line across the board, however, was that if the examiner is not sure, why can't s/he just conclude that the result is "inconclusive" as opposed to muddying up the verbiage and causing further confusion?!</p> <p>Some additional information to consider: Using these options, especially when there are many Friction Ridge Examiners that are not in agreement with the five possible results conclusion, will be detrimental to casework. This can be ethical line that many Examiners will not be able to agree with, especially during verifications and technical reviews. Even if the Examiner used the conclusion "support for same source" or "support for different source" for some of the latent prints in an examination, the verifier/reviewer may not be able to agree with this outcome because it is a</p>	The options to conclude "support for same source" and "support for different sources" should be omitted entirely. Adherence to the 3-conclusion option should be made standard, with language that supports the concept of examiner confidence.	Reject with modification. Titles of the 2 intermediate conclusions have been changed to "inconclusive with . . ."
50	3.23 ,3.24, 4.3, 4.5	E/T	See above comments for 3.1	See above comments for 3.1 Further, "Strong/Stronger" and "Weak/Weaker" are subjective and not quantifiable.	Reject with modification. These criticisms are all also true of the current 3-conclusion framework. Definition clarified.
65	3.23 and 3.24	T	SDS and SSS are not conclusions. They are examples of Inconclusive conclusions and should be stated as such so as not to be misleading or misused to imply a higher degree or conformity/nonconformity	remove as separate definitions and include as examples of Inconclusive conclusions	Reject with modification. Titles of the 2 intermediate conclusions have been changed to "inconclusive with . . ."
325	3.23 and 3.24	T	The degrees of support range we are being asked to use is not defined nor explained enough to be able to use accurately and appropriately based on the information in this document. This will lead to an even larger variety of conclusion support wording than we already encounter in the discipline.	Propose a scale and/or definitions of degrees of support and what they mean as related to each source conclusion.	Reject with modification. Out of scope of a definition. Language about degrees of support has been deleted.

#	Section	Type of Comment (E-)	Comments	Proposed Resolution	Final Resolution
338	3.23 and 4.3	T	In conversation with examiners and comments from the audience at Reno it seems the biggest resistance to the adoption of these new conclusions seem to stem from the connotations or suggested reference to "Support for Same Source." Perhaps correctly examiners are cautious of testimony sounding like a "possible ID" or "almost an ID" to the jury and this being misleading and prejudicial. To correct these issues I suggest using more transparent different terms that are harder to misinterpret by the layperson. "Inconclusive" also has baggage being used in lots of FSP's across the US with different definitions.	Instead of using EXC << SDS < INC > SSS >> SID I suggest using other titles for the conclusions but the definitions remaining the same. I believe the titles EXC << Disagreement Noted < Incomplete > Correspondence Noted >> SID would be an improvement. Another suggestion could be EXC << Not identified < Undecided > Ridge Detail Consistent >> SID.	Accept with modification. Titles changed.
296	3.23, 3.24, 4.3	T	The degree of support may range from limited to strong or similar descriptors of the degree of support.	I AM in favor of the 5 conclusion scale. I am NOT in favor of breaking down each of the proposed 5 conclusions to "limited/strong" ect. at this time. Please give the community time to adjust to the 5 conclusion scale without putting that mandate on them - If ASB keeps this please change to FSP may elect to further define the degree of support ranging from limited to strong or similar descriptors of the degree of support."	Reject. It is essential to offer the degree of support.
23	3.24	T/E	This is another example of a statement formed in terms of propositions that should be revised. A neutral definition based on observed characteristics should be provided.	Change the definition to: Support for Same Source. Support for different sources is the conclusion that the observed data provide support that the impressions originated from the same source. The rest of 3.24 can be removed but as it is included later in the document.	Accept with modification. Discussion of propositions remains as it provides the logical framework behind the observed data. All sentences after first have been removed.
106	3.24	E	Can remove "Support for same sources is the..." as an introductory clause from the 1st sentence	Replace with "The..." (for consistency with the formatting of other definitions)	Accept
243	3.24	T	If there is insufficient support for a source identification, then that would mean the latent should have been deemed no value, or that it needs to be inconclusive whether it is due to insufficient support for either an identification or exclusion or that there is a need for better knowns. Giving this conclusion does not provide the investigation with any more information than a no value print or inconclusive conclusion. This conclusion is addressing an issue that should have been addressed in the analysis phase when reaching value determinations and/or opens the agency up to providing investigative leads which should be agency dependant and not a accepted standard on conclusions for the discipline.	Remove the support for same source conclusion.	Reject with modification. Titles of the 2 intermediate conclusions have been changed to "inconclusive with . . ."
272	3.24	T	The phrase SSS is highly misleading. The term is being used to mean 'consistent with another item' however the term SSS is swaying others to believe consistency implies an association is likely. This is not true and is extremely biasing.	Change the phrase SSS to be 'consistency exists' (and then state the amount of consistency).	Accept with modification. Titles of the 2 intermediate conclusions have been changed to "inconclusive with . . ."
357	3.24	E	Please refer to the comments made to the Foreword and Section 4.	Please refer to the proposed resolutions for the Foreword and Section 4.	Reject with modification. These criticisms are all also true of the current 3-conclusion framework. Definition clarified.

#	Section	Type of Comment (E-	Comments	Proposed Resolution	Final Resolution
340	3.24 and 4.5	T	In conversation with examiners and comments from the audience at Reno it seems the biggest resistance to the adoption of these new conclusions seem to stem from the connotations or suggested reference to "Support for Same Source." Perhaps correctly examiners are cautious of testimony sounding like a "possible ID" or "almost an ID" to the jury and this being misleading and prejudicial. To correct these issues I suggest using more transparent different terms that are harder to misinterpret by the layperson. "Inconclusive" also has baggage being used in lots of FSP's across the US with different definitions.	Instead of using EXC << SDS < INC > SSS >> SID I suggest using other titles for the conclusions but the definitions remaining the same. I believe the titles EXC << Disagreement Noted < Incomplete > Correspondence Noted >> SID would be an improvement. Another suggestion could be EXC << Not identified < Undecided > Ridge Detail Consistent >> SID.	Accept with modification. Titles changed.
194	4	T	The five different source conclusions is dangerous. Undue weight can be given to a finding of "Support for Same Source or Support for Different Source Conclusions". There are a lot of dangerously close prints that have information that would preclude a "Same Source Conclusion" under the current standard, that under the new standard would be presented as having some agreement. Forensic Scientists have an obligation to not present information that could be misleading or insufficient for a finding as a possible fact. The five different source conclusions weaken Same Source and the Source Exclusions Conclusions. If Forensic Scientists can not be depended on to be able to be definitive, if given sufficient information, what is the point of having the examination done.	Leave the current standard of three different source conclusions, Same Source, Inconclusive and Source Exclusion.	Reject with modification. Titles of the 2 intermediate conclusions have been changed to "inconclusive with . . ."
326	4	T	Where are these statements expected to be listed? Report, evaluation documentation in case file, both places? Do we have the ability to abbreviate and include this information partially in the report and partially in the supporting documentation in the case file? The amount of language included in these conclusions is going to lead to confusion by our customers who already struggle with understanding some of the most recent SWGFAST recommended conclusions.	Clarify where these conclusions are to be listed (report or supporting documentation) and whether an abbreviated version of a conclusion can be provided in a report and the full conclusion provided in supporting documentation.	Reject. Out of scope of document. See Reporting Results document.

#	Section	Type of Comment (E-)	Comments	Proposed Resolution	Final Resolution
358	4	E	<p>If the ASB remains unconvinced by our comments above to the Foreword, and chooses to instead retain the likelihood ratio / weight of the evidence approach adopted thus far in Standard 13, it must, at minimum, make substantial changes to the document in order to correct the ways that the Standard currently waters down / ignores concepts and concerns central to deploying likelihood ratios in a manner that enjoys widespread acceptance among forensic scientists, statisticians, and other experts in metrology. Specifically, the ASB must amend Standard 13 to (1) correct its perverse fusion of categorical and weight-of-evidence frameworks, and (2) require examiners to provide more robust contextualizing information for the conclusions they offer. Of these, the first is perhaps the greatest source of our dissatisfaction with this Standard as written. Our comments to the Foreword have already demonstrated in great detail that the latent print discipline presently lacks the frequency and variability data necessary to permit examiners to opine, without speculation, that they "would not expect to see the same arrangement of details repeated in an impression from another source," and we will not rehash those concerns again. But adopting a likelihood ratio approach actually aggravates the problems with overblown identification statements rather than charting a path of reform. At bottom, the use of likelihood ratios does not sit at all comfortably with the deployment of categorical conclusions. <i>See e.g., Swaminathan et al., "Four model variants within a continuous forensic DNA mixture interpretation framework: Effects on evidential inference & reporting," 13(11) PLoS ONE (2018) ("We note that categorizing a continuous estimate, such as the LR, into bins has not acquired full consensus in the scientific literature").</i> In fact, utilizing such an approach is specifically designed to avoid binary thinking and arbitrary decision thresholds. <i>See e.g., Michael D. Coble & Jo-Anne Bright, "Probabilistic genotyping software: an overview," 38 For. Sci. Int'l Genetics 220 (2019).</i> Thus, the ASB was only partially correct in saying, as part of Section 4.1, that "it may be ideal to report conclusions in terms of the weight of the evidence alone." In the context of deploying propositions and making use of a likelihood ratio-style framework, reporting conclusions in terms of weight of the evidence rather than categorically, is not just ideal, it is both vital and possible. As the AAAS report points out, the numerous European forensic networks, from which the ASB clearly drew inspiration, do not separate out "source identification" conclusions into a stand-alone category; instead, examiners from top to bottom simply provide factfinders with a sense of the weight of the evidence (whether numerically or fusing verbal equivalents). <i>See "Forensic Science Assessments: A Quality and Gap Analysis-Latent Fingerprint Examination," Report prepared by William Thompson, John Black, Anil Jain, & Joseph Kadane, at 65-66 (2017).</i> And, despite the almost unimaginably massive likelihood ratios possible in the realm of DNA analysis (soaring above even the octillions and nonillions), even that field has refused to establish some arbitrary point at which the evidence becomes strong enough to justify a categorical match conclusion. <i>See e.g., Scientific Working Group on DNA Analysis Methods, "Recommendations of the SWGDAM Ad Hoc Working Group on reporting Genotyping Results Reported as Likelihood ratios," (2019).</i> And so we reach the rub: the evidence discussed in our comments to the Foreword clearly demonstrates that no scientifically credible justification exists for separating out "source identification" conclusions, and the examples set in Europe and now by American DNA analysts show that neither does any practical bar exist. But the example set by DNA analysts actually has more work to do, because it clearly showcases the absurdity and the very practical danger of melding a weight of the evidence approach with categorical identification statements. Imagine a case involving both DNA and latent print analysis (say testing of blood found on a bedsheet and a latent print fund on a window believed to be the point of entry for a home invasion). Given the source of the DNA evidence we might expect something close to a robust, single-source profile, and thus a likelihood ratio in the septillions or more. Even assuming that, given the medium of glass, the latent print developed allowed the analyst to uncover numerous friction ridge features in common, and thus achieve a reliable comparison that could fairly fall within the bounds of the error rates from the FBI / NOBIS study, presenting a conclusion of "source identification" in this context would surely mislead a jury and unfairly prejudice the defendant. Specifically, the DNA analyst (despite benefiting from a massive, empirically derived, and rigorously tested likelihood ratio) would report nothing stronger than that their "analysis provides very strong support for the proposition that [the Defendant] is a contributor to the DNA" from the bedsheet. The latent print analyst, in contrast (and despite lacking equivalent frequency data), would somehow nonetheless report a conclusion above and beyond that offered from DNA analysis. In fact, one could imagine a line of</p>	<p>Pursuant to the accompanying comments to Section 4, the ASB should amend Standard 13 (specifically the Foreword, 3.1, 3.4, 4.1, 4.6, and Annex A) to remove the categorical conclusion of "Source identification." Instead examiners should be permitted to testify at most that: "The observed data provides strong support for the proposition that the impressions originated from the same source rather than different sources," and that conclusion should be accompanied by the same caveats regarding frequency data and error rates outlined in our proposed resolution to the Foreword. The ASB should also delay the roll out of "support for same source" and "support for different source" conclusions until the discipline has produced data regarding the reliability of such conclusions. Finally, the Standard should require examiners to testify, per our comments, to information that allows jurors to evaluate the fitness of a conclusion and develop their own personal likelihood ratio (including, if the ASB chooses to retain support for same source" and "support for different source") that absolutely no data is available to support the reliability of those conclusions, which have never undergone testing of any kind.</p>	<p>Reject with modification. Titles of the 2 intermediate conclusions have been changed to "inconclusive with . . ."</p>
307	4.1, 4.0 in general	T	<p>May use statistical or probabilistic systems is meaningless at this point in time. Does this mean FRStats or Xena? Could it mean an 8 point standard versus a 12-point standard? Until a published, peer-reviewed, validated, and accepted "probabilistic system" has been recognized, it should not be left wide open to interpretation.</p>	<p>Remove this section and leave in place the three-bin scheme that has been used and recognized as good science for the past century, while encouraging research, validation, and publication of a five-bin standard to replace it. Otherwise, this amounts to little more than a purely subjective "Identification, maybe, so, can't tell, maybe, no, exclusion" personal examiner system of bins.</p>	<p>Reject with modification. Titles of the 2 intermediate conclusions have been changed to "inconclusive with . . ."</p>
369	4.1 first sentence	T	<p>Without a definition of "weight of evidence alone," this sentence may not be intelligible to a large number of practitioners. What is the justification for recommending what is admittedly not the best thing to do?</p>	<p>Provide some justification for adopting this categorical scale that mixes statements of beliefs in the truth of hypotheses with statements of evidentiary support for the hypotheses. Clarify the difference.</p>	<p>Reject with modification. Justification for the standard is outside the scope of the document. The scale consists of statements of beliefs in the truth of hypotheses based on evidentiary support for the hypotheses. Sentence deleted.</p>
370	4.1 first sentence	E	<p>change "a categorical reporting framework" to</p>	<p>categories for reporting a source conclusion rather than categories for the weight of the evidence</p>	<p>Reject with modification. Sentence deleted.</p>
24	4.1	T/E		<p>The opening paragraph of this section would benefit from a simplifying statement. Consider the following edit "This document defines a verbal scale for a categorical reporting framework."</p>	<p>Reject. First sentence of paragraph deleted, and FRCB is comfortable with current opening sentence.</p>

#	Section	Type of Comment (E-)	Comments	Proposed Resolution	Final Resolution
25	4.1	T/E		The 2 nd paragraph can be rewritten to take out the terms "relative support" and the discussion of propositions.	Accept with modification. "relative support" removed and sentenced revised for clarity. Discussion of propositions remains as it provides the logical framework behind the observed data.
26	4.1	T/E		Can you provide clarity on what is meant by knowledge, training and experience to evaluate how much support the observed similarities or dissimilarities provide for one proposition over the other? That can be interpreted as knowledge, training and experience acting as the proposition in the denominator. While the standard states that knowledge, training, and experience cannot be articulated in the conclusion, the standard is not explaining where and how this is factored into the formulation of propositions. Additional explanation of how this information is factored into decision-making is needed.	Reject. This is outside the scope of this document and will be covered in the Standard for Examination and the BPR for Comparison and Evaluation when discussing interpretation. These are separate documents and will be released when they are through the consensus process.
27	4.1	E	The following statements seem contradictory "Conclusions derived directly from and entirely dependent upon validated probability models or quantitative processes;" and "Each one of these "slices" or delineations between the categories is as a result of a threshold being used or interpreted either by the examiner or by some probabilistic model."	Consider removing the first statement from the scope of the document.	Reject with modification: The Scope states that this does not cover conclusions derived directly from and entirely dependent upon validated probability models or quantitative processes. The last sentence of 4.1 was revised to be consistent with the statement in the scope.
43	4.1	T	"The FSP shall only select one of these conclusions, and only as written and described in 4.2 through 4.6." This statement is confusing because the FSP does not produce conclusions. Did you mean to say the "Examiner shall only select"?	Recommend replacing "FSP" with "examiner"	Accept
44	4.1	T	Within numerous discussions in the FRCB, a number of members stated their support for any given FSP to administratively choose whether to adopt all five conclusions or to adopt only three of the conclusions (effectively consolidating the middle three under the INC decision). This administrative flexibility could allow for a smoother transition to the new conclusion wording and allow time for adjustment and research into the additional conclusion categories for those that need more time.	Recommend that we add a "Note" that while the standard is 5 conclusions, a FSP may choose to adopt a subset of the conclusions provided that the conclusion wording, qualifications, and limitations are not changed.	Reject with modification. Because the 2 intermediate conclusions have been renamed "inconclusive with . . .," this is not necessary.
51	4.1	E/T	Graphical Representation of source conclusions	REMOVAL AT ONCE. This is deceptive and misleading. The graphic purports that the vast majority of conclusions (other than Source EXC, Source ID or Incl) are SDS and SSS. There is NO research that proves this. In the 100+ years of combined comparison experience with myself and my colleagues this graphic statement is a fallacy. Until peer reviewed research is available and universally accepted, this is dangerous!	Reject with modification. The image is intended to be a visual aid of source conclusions and is not intended to indicate that any set of conclusions are the vast majority. Figure and title revised for clarification
66	4.1	T	Section references 5 conclusions when there are actually only 3 with various sub-bins within	update wording throughout to refer to 3 conclusions: EXC, INC, ID	Reject with modification. Titles of the 2 intermediate conclusions have been changed to "inconclusive with . . ."

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68	4.1	T	no general statement provided for when an examination cannot be completed due to lack of exemplars	include a general statement regarding incomplete examinations. Wording should say something like: If there is evidence to support that the area being examined in an unknown friction ridge impression is not recorded in the known exemplars or from an area of friction ridge skin that has no submitted exemplar for comparison, for example a foot impression, no conclusion shall be reached. The examination will be listed as Incomplete with a request that additional exemplars be submitted for comparison	Reject. The information for incomplete examinations is contained in Annex A in the Inconclusive section.
69	4.1	T	the graphic included implies that SDS and SSS are standalone conclusions when they are sub-bins of an Inconclusive conclusion	redo graphic to incorporate SDS and SSS as sub-bins of Inconclusive and include 2 other sub-bins for Inconclusive, cannot locate and cannot EXC or ID (see comment 19	Reject with modification. Titles of the 2 intermediate conclusions have been changed to "inconclusive with . . ."
87	4.1	T	in the second and third paragraph the word "dissimilarities" is used which is inconsistent with the definition	replace "dissimilarities" with "differences"	Reject. Dissimilarity is correctly used in this section as it is defined.
148	4.1	T	It is not clear what the model depicted in Figure 1. is supposed to show. Is this the expected or demonstrated distribution of source conclusions made by examiners? What is the 'threshold' being 'used or interpreted'?	Convey meaning of graphical representation, i.e. why the conclusions are represented by different size 'slices'. Alternatively, recreate graphical display to represent conclusions equally.	Reject with modification. The image is intended to be a visual aid of source conclusions and is not intended to indicate that any set of conclusions are the vast majority. Figure and title revised for clarification and "not to scale" statement added.
162	4.1	T	Jurors might not understand the difference between Exclude/ID and Support for Different/Same Source(s) and give more weight to SDS/SSS conclusions than warranted	Merge the two conclusions with Inconclusive, allow FSP's to determine if SDS/SSS will be included in Inconclusive reporting	Reject with modification. Titles of the 2 intermediate conclusions have been changed to "inconclusive with . . ."
167	4.1	E	as seems unnecessary in final paragraph	Remove "as" from sentence	Accept

#	Section	Type of Comment (E-)	Comments	Proposed Resolution	Final Resolution
179	4.1	t	<p>While it may be ideal to report conclusions in terms of the weight of the evidence alone, this document instead defines a categorical reporting framework."</p> <p>"weight of the evidence" and "categorical reporting framework" are not defined, so the meaning of this sentence is unclear. If "weight of the evidence" is intended to refer to likelihood ratios and if "categorical reporting framework" is intended to refer to an ordered list of verbal expressions, then these two things are not generally considered to be mutually exclusive. We are advocates of using numeric likelihood ratios calculated using relevant data, quantitative measurements and statistical models, but the logical of the likelihood-ratio framework can be applied using subjective judgment and conclusions consistent with the logical of the likelihood-ratio framework can be expressed using a verbal expression selected from an ordinally ranked set of verbal expressions. We do not advocate this practice (see criticism in Maquis et al, 2016, and Morrison & Enzinger, 2016), but it is a practice advocated by the European Network of Forensic Science Institutes (ENFSI; Willis et al, 2015) among others. The sentence does not include any requirements or recommendations.</p> <p>REFERENCES:</p> <p>Marquis R., Biedermann A., Cadola L., Champod C., Gueissaz L., Massonnet G., Mazzella W.D., Taroni F., Hicks T.N. (2016). Discussion on how to implement a verbal scale in a forensic laboratory: Benefits, pitfalls and suggestions to avoid misunderstandings. <i>Science & Justice</i> , 56, 364–370. http://dx.doi.org/10.1016/j.scijus.2016.05.009</p> <p>Morrison G.S., Enzinger E. (2016). What should a forensic practitioner's likelihood ratio be? <i>Science & Justice</i> , 56, 374–379. http://dx.doi.org/10.1016/j.scijus.2016.05.007</p> <p>Willis S.M., McKenna L., McDermott S., O'Donell G., Barrett A., Rasmusson A., Nordgaard A., Berger C.E.H., Sjerps M.J., Lucena-Molina J.J., Zadora G., Aitken C.G.G., Lunt L., Champod C., Biedermann A., Hicks T.N., Taroni F. (2015). ENFSI guideline for evaluative reporting in forensic science, European Network of Forensic Science Institutes. http://enfsi.eu/wp-content/uploads/2016/09/m1_guideline.pdf</p>	Delete this sentence.	Accept.

#	Section	Type of Comment (E-	Comments	Proposed Resolution	Final Resolution
180	4.1	t	<p>"In reaching a conclusion, an examiner considers the observed similarities and dissimilarities and assesses the relative support of the observations under the following two propositions: the two impressions originated from the same source or from different sources."</p> <p>This sentence does not state a requirement or a recommendation, and is not grammatical: To be grammatical it would be "relative support of the observations <u>for</u> the following hypotheses", or "relative <u>probability</u> of the observation under the following hypotheses". The latter would be preferred as it provides the clearer expression of a likelihood ratio. There are, however, additional problems with the consideration of "similarities" or "dissimilarities" as the basis for the assessment of a likelihood ratio as assessments of this type do not take account of typicality with respect to the relevant population (see Morrison & Enzinger, 2018; Neumann & Austemore, 2020; Neumann et al, 2020). The proposal provides a more correct description of a likelihood ratio. It also rewords the sentence as a requirement.</p> <p>REFERENCES: Morrison G.S., Enzinger E. (2018). Score based procedures for the calculation of forensic likelihood ratios – Scores should take account of both similarity and typicality. <i>Science & Justice</i> , 58, 47–58. http://dx.doi.org/10.1016/j.scijus.2017.06.005a Neumann C., Ausdemore M. (2020). Defence against the modern arts: the curse of statistics –Part II: ‘Score-based likelihood ratios’, <i>Law, Probability and Risk</i> , 19, 21–42. http://dx.doi.org/10.1093/lpr/mgaa006 Neumann C., Hendricks J., Ausdemore M. (2020). Statistical support for conclusions in fingerprint examinations. In Banks D.L., Kafadar K., Kaye D.H., Tackett M. (Eds.), <i>Handbook of Forensic Statistics</i> (pp. 277–324). Boca Raton, FL: CRC. https://doi.org/10.1201/9780367527709</p>	<p>replace with:</p> <p>In reaching a conclusion, an examiner shall consider the relative probabilities of the observed properties of the two friction ridge impressions under two mutually exclusive propositions: (1) the two impressions originated form the same source, and (2) the two impressions originated from different sources.</p>	<p>Accept with modification. Sentence revised to "In reaching a conclusion, an examiner considers the relative probability of the observed data and assesses the similarities and dissimilarities under the following two propositions: the two impressions originated from the same source or from different sources."</p>
181	4.1	t	<p>"Similarities generally provide support for the proposition that two impressions originated from the same source, while dissimilarities generally provide support for the proposition that two impressions originated from different sources."</p> <p>This sentence is problematic for the reason given in the previous comment. This sentence does not include a requirement or a recommendation.</p>	<p>Delete this sentence.</p>	<p>Reject: The sentence establishes the basis for logical framework.</p>

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182	4.1	t	<p>"An examiner may utilize their knowledge, training, and experience as well as statistical or probabilistic systems to evaluate how much support the observed similarities or dissimilarities provide for one proposition over another."</p> <p>The proposal corrects this sentence in accordance with the reasoning given in earlier comments.</p> <p>"statistical or probabilistic systems":</p> <p>The term "statistical model" would be more usual than "statistical system".</p> <p>"probabilistic system" appears to be novel term which appears to by a synonym for "statistical model".</p> <p>The wording of the original gives permission for the examiner to use all the techniques combined, but does not suggest any alternatives that they would also be permitted to use. It would seem more appropriate to require the examiner to use this combination.</p>	<p>replace with:</p> <p>An examiner shall utilize their knowledge, training, and experience as well as statistical models in order to evaluate the relative probabilities of the observed properties of the two friction ridge impressions if one proposition versus if the other proposition were true.</p>	Accept with modification. Revised all probability models to statistical models. May to shall not accepted as one cannot validate the use of knowledge, training, and experience.
183	4.1	t	<p>"This document defines the five conclusions that may be selected by examiners when reaching a conclusion after comparing friction ridge impressions. The FSP shall only select one of these conclusions, and only as written and described in 4.2 through 4.6."</p> <p>Upon reading the details, there appear to be 7 rather than 5 conclusion-expressions. What is to be selected is an expression of the conclusion not a means of reaching a conclusion.</p> <p>The second sentence changes the agent from the examiner to the forensic service provider. Surely it is the examiner who is responsible for the conclusion (contrary to the definition given in §3.6, the term "forensic service provider" is usually used to refer to the organization, not to an individual examiner). "only as written and described" does not appear to serve any purpose given that the first sentence gave permission to use one of these expressions, which does not exclude using some other expression of the conclusion.</p>	<p>replace with:</p> <p>In stating their conclusion, the examiner may select one of the written expressions provided below.</p>	Accept with modification. "FSP" changed to "examiner" The rest of the sentence remains as written to maintain the requirement.
184	4.1	t	<p>"Each one of these "slices" or delineations between the categories is as a result of a threshold being used or interpreted either by the examiner or by some probabilistic model."</p> <p>This sentence does not include a requirement or a recommendation, and does not provide any information that is not self evidence – in order to put something that is continuously valued into one of multiple categories, a threshold has to be applied. (thresholds are not "interpreted")</p>	Delete this sentence.	Accept
185	4.1	t	Figure 1 does not provide information in a clearer or more succinct manner than it can be provided in the text, in fact the figure consists of mostly text rather than diagrams.	<p>Delete Figure 1.</p> <p>List each written expression as a bullet point. (Put any comments on each written experssion at a more indented level.)</p>	Reject. Some users may prefer the visual representation, and it is informational.

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223	4.1	T	. . . assesses the relative support of the observations. How is this done? The document doesn't explain and the examples are inadequate.	How the assessment is done should be explained? Is it assessed based on what we've learned from studies such as those on the frequency of minutiae. The document should explain concrete, tangible things used to make the assessment.	Reject with modification. Statement removed based on other comments. Explanations of the assessment is outside the scope of this document.
224	4.1	T	examiner may utilize knowledge, training, and experience . . . This is neither tangible nor transparent.	The document should define what tangible information the examiner is using to determine the level of support. There a numerous studies out there about minutiae and its frequency that could be used as well as other information that could easily be explained to the end user.	Reject. This is outside the scope of this document and will be covered in the Standard for Examination and the BPR for Comparison and Evaluation when discussing interpretation. These are separate documents and will be released when they are through the consensus process.
265	4.1	T	These conclusions cannot be used consistently without a standard methodology. The document does not stand on its own.	Hold this document and roll it out with a methodology document that states how and when to use each conclusion.	Reject. These are separate documents and will be released when they are through the consensus process.
297	4.1	E	5th paragraph, 1st sentence statement is redundant	This document defines the five conclusions that may be selected by examiners when reaching a conclusion after comparing friction ridge impressions.	Reject. Sentence maintained for clarity.
298	4.1	E	6th paragraph, 1st sentence - suggest alternate wording to "slices" and remove "as" from "is as a result"	remove word "slices" or use alternative wording "sections" "segments" and remove "as" from "Each one of these "slices" or delineations between the categories is as a result of"	Accept with modification. Sentence deleted.
316	4.1	T	This section states "This document defines the five conclusions that may be selected by examiners". Much like the comment in 3.1, a statement should be added to reflect "per their agency SOPs".	Add to the statement, "per their agency SOPs."	Reject. "per the agency SOPs" is implied and not necessary to state.
317	4.1	T	This section refers to the examiner when stating "may utilize their knowledge, training and experience..." and in "This document defines the five conclusions that may be selected by examiners...". Then the statement refers to the FSP in "The FSP shall only select one...". This makes it sound like the examiner can reach the five conclusions, but the FSP can only use one.	For clarity, FSP should be changed to examiner in the statement that refers to the FSP.	Accept.
359	4.1	E	Please refer to the comments made to the Foreword and Section 4. Additionally, unlike the rest of this standard, when Section 4.1 refers to "statistical or probabilistic systems" it does not specific that such systems must be validated appropriately, and it should do so.	Please refer to the proposed resolutions for the Foreword and Section 4. Additionally, add the word validated before the words "statistical or probabilistic systems."	Reject with modification. "probabilistic systems" replaced with "model". There is no criteria for what is validated.
286	4.1 2nd paragraph, 2nd line	T	4.1 states similarity is being measured but it implies correspondence is being measured. The document discusses correspondence but does not state when correspondence exists.	Clarify the difference between similarity/dissimilarity and correspondence/non-correspondence so that the document does not conflict with itself.	Accept. Definitions have been edited.

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28	4/Figure 1	T/E		Additional information is needed to describe the factors or criteria for each of the five conclusion categories. If a gradation exists within each category, it will also be necessary to define criteria for the use of different wording (e.g., moderate support, or limited support) that is suggested within each category, and to apply these terms in the examples in the Annex. In addition, the sizes of the various boxes in Figure 1 may inadvertently give people misleading impressions regarding the relative frequency of the different conclusions. It should be changed to either reflect the actual proportion of all analyses (not just analyses that are used as part of trial testimony) if that data is reliably available, or changed to equal size boxes. Any terms that are developed to be used within the categories should also be included in Figure 1 (i.e. highly confident, could, etc.)	Reject with modification. The criteria are outside the scope of this document and will be covered in the Standard for Examination and the BPR for Comparison and Evaluation when discussing interpretation. These are separate documents and will be released when they are through the consensus process. NOTE added to figure for clarification that it is an informative figure.
30	4.2	T/E	Why is it optional for an examiner to state if they are not excluding all the friction ridge detail in a conclusion?	The sentence should be edited to "If an examiner is not excluding all the friction ridge detail of an individual it shall be so stated and a conclusion of inconclusive may be more appropriate, for example the feet of an individual. "Additionally, this sentence would be better placed under the explanation for inconclusive since the document is advising for an inconclusive conclusion and not a source exclusion.	Reject with modification. Paragraph deleted and modified to be a note. Section revised for clarification.
35	4.2	T	In the 2nd paragraph it states "If an examiner is not excluding all the friction ridge detail of an individual it should be so stated and a conclusion of inconclusive may be more appropriate, for example the feet of an individual." Does this mean we need to state we aren't excluding their feet even if we believe the print is not from a foot?	If a print is clearly from or believed to be from a finger or palm, an examiner should feel like they can exclude a person. If this is not the intention of the statement, I suggest the foot comment be removed entirely.	Accept.
71	4.2	T	the second statement about an inconclusive is not needed	remove second statement from 4.2	Accept with modification, statement revised and modified to be a note.
92	4.2	T	If we clearly have an unknown fingerprint or palm print we should not need to mention anything about known footprints. In almost 20 years of experience I have had only 2 cases in which footprints were present. In those cases we obtained known footprints for comparison and they were listed as such in my report.	Remove the example of feet. I'm ok with listing exclusions of fingerprints and/or palm prints.	Accept.
149	4.2	T	"all the friction ridge detail of an individual" sounds like it refers to the entire body. It is not clear if this refers to FR detail present in a source, or not included in the source.	Specify what "all the friction ridge skin of an individual" refers to.	Reject with modification. Paragraph deleted and modified to be a note. All friction ridge skin includes the entire palmar and plantar surface of an individual and does not need to be defined for users of this document.
150	4.2	E	The example of "feet of an individual" lacks context	Provide more context / explanation of the example used.	Accept with modification. Statement deleted.
168	4.2	T	Is excluding all friction ridge detail necessary if a latent print is demonstrably not a foot/toe print (whole hand print) or improbably a foot? I understand this is a "should" statement.	Perhaps make the example more specific to impressions of unknown origin or if the location makes origin uncertain.	Accept with modification. Statement deleted.

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186	4.2	t	<p>"4.2 Source Exclusion</p> <p>Source exclusion is the conclusion that the observed data provide substantially stronger support that the two impressions originated from different sources rather than the same source."</p> <p>The term "source exclusion" has much stronger connotations than suggested by the definition provided. This term is misleading and all should not be used.</p> <p>The remainder of the proposal alters the wording in line with earlier comments.</p>	<p>Replace with:</p> <ul style="list-style-type: none"> The observed properties of the two friction ridge impressions are substantially more probable if they came from different sources than if they came from the same source. 	Reject with modification. Statement revised based on other comments for clarity. Proposed resolution does not provide additional clarity.
187	4.2	t	<p>"If an examiner is not excluding all the friction ridge detail of an individual it should be so stated and a conclusion of inconclusive may be more appropriate, for example the feet of an individual."</p> <p>This sentence includes a recommendation and a permission, but they do not make sense in the context of the task with was defined in terms of the comparison of two friction ridge impressions. The example given in the final clause does not appear to be an example of anything in the earlier part of the sentence.</p>	Delete this sentence.	Accept with modification, statement revised and modified to be a note.
212	4.2	T	<p>Revise the Definition of Source Exclusion: Source exclusion is the conclusion that the observed data provide substantially stronger support that the two impressions originated from different sources rather than the same source. There is a strong disagreement present such that the examiner would not expect to see that level of disagreement in an impression from the same source. Replace the word "disagreement" with the word "discrepancy."</p> <p>Add to the word "discrepancy" to the definitions in the document.</p> <p>What is substantially stronger support and how is that determined.</p>	<p>Source Exclusion: Source exclusion is the conclusion that the observed data provide substantially stronger support that the two impressions originated from different sources rather than the same source. There is a strong discrepancy present such that the examiner would not expect to see that level of a discrepancy in an impression from the same source. Discrepancy - The presence of friction ridge detail in one impression that does not exist in the corresponding area of another impression (Fingerprint Sourcebook)</p> <p>Define or state how substantially stronger support is determined.</p>	Reject. Discrepancy is the same as disagreement and does not need to be revised in this document, as it is appropriately defined and used throughout the document. Defining how substantially stronger support is determined is outside the scope of this document and will be covered in the Standard for Examination and the BPR for Comparison and Evaluation when discussing interpretation. These are separate documents and will be released when they are through the consensus process.
247	4.2	T	<p>In the 2nd paragraph it states "If an examiner is not excluding all the friction ridge detail of an individual it should be so stated and a conclusion of inconclusive may be more appropriate, for example the feet of an individual." Does this mean we need to state we aren't excluding their feet even if we believe the print is not from a foot?</p>	<p>If a print is clearly from or believed to be from a finger or palm, an examiner should not need to state they are not excluding someone's feet. If this is not the intention of the statement, I suggest the foot comment be removed entirely. Perhaps a better approach would be to focus on what IS being excluded rather than what is NOT being excluded. If only a particular source of FR detail is being excluded, it should be stated which area IS being excluded. For example, if you have an unknown impression and you're only excluding the fingers of a person, it should be stated that only the fingers are being excluded.</p>	Accept with modification, statement revised and modified to be a note.
308	4.2	E	<p>"If an examiner is not excluding all the friction ridge detail of an individual it should be so stated and a conclusion of inconclusive may be more appropriate, for example the feet of an individual." - Is this to be applied for impression where the anatomical source is unknown or will it be applied to all impressions when foot exemplars are not provided?</p>		No resolution proposed. Section modified for clarification.

#	Section	Type of Comment (E-)	Comments	Proposed Resolution	Final Resolution
29	4.2, 4.3, 4.4, 4.5, 4.6	T/E		4.2, 4.3, 4.4, 4.5, and 4.6 should all be revised to provide a thorough explanation for how conclusions are reached by an examiner that use and don't use statistical models for conclusion. Forcing traditional examiners to use propositions is neither beneficial to them as experts or to a jury seeking clear explanation.	Reject. That level of detail is out of scope of this document. There is no requirement for practitioners to use a statistical model for conclusions. The use of propositions in decision framework was being inducted by examiners previous to this document.
311	4.2 and 4.6	E	How should this transition and difference in the source identification and source exclusion be explained from the historically used identification and exclusion conclusions since the definitions would use the same terms ("source", "identification", "exclusion") but are not the same in the meaning?		No resolution proposed
371	4.2 to 4.6	T	The words confuse statements of support for source conclusions with statements of the source conclusions.	Rewrite to follow consistently the admittedly better approach of making statements of the degree of support for hypotheses rather than statements of belief ("opinions") on the hypotheses themselves. Specifically, Change 4.2 to "Lots of Support for Different Sources" (or a more formal version of that) and 4.6 to "Lots of Support for for the Same Source". Do not continue to use terms that have established meanings in the field ("exclusion" and "identification") to denote things that are conceptually different.	Reject. FRCB consensus is to continue to use terms "identification" and "exclusion."
152	4.2, 4.6	E	Source Exclusion and Source Identification definitions/examples should theoretically mirror each other. But the definitions/examples are very different from one another and do not mirror one another.	Make the 4.2 and 4.6 definitions/examples mirror each other.	Reject. FRCB consensus is to use these definitions. Mirrored definitions were considered but did not command consensus.
290	4.2-4.6	T	These sections seem to be restating definitions and therefore unnecessary. If the standard is to use these conclusion only then 4.1 is the only real requirement.	Remove 4.2-4.6 because it's unnecessarily repetitive, it adds bulk but not content.	Reject with modification. Requirements retained, but definitions have been shortened, reducing repetition.
36	4.3	T	Support for Different Source is confusing to the agencies that we serve and to potential juries.	This should still be considered an inconclusive. I feel like if we say that it we see dissimilarities but lack of support for an exclusion then they only hear that it could still be or may not be. I think we should be clear that its inconclusive and not lean them one direction or the other.	Reject with modification. Titles of the 2 intermediate conclusions have been changed to "inconclusive with . . ."
67	4.3	T	SDS is not a conclusion. It is a sub-bin of an Inconclusive conclusion	remove SDS as a standalone section and include an example in the Annex under Inconclusive	Reject with modification. Titles of the 2 intermediate conclusions have been changed to "inconclusive with . . ."
72	4.3	T	SDS is not a conclusion. It is a sub-bin of an Inconclusive conclusion	remove from Section 4	Reject with modification. Titles of the 2 intermediate conclusions have been changed to "inconclusive with . . ."
93	4.3	T	I feel the support for different sources conclusion is misleading.	Keep this conclusion in the inconclusive category.	Reject with modification. Titles of the 2 intermediate conclusions have been changed to "inconclusive with . . ."
96	4.3	T	A friction ridge impression that lacks a clear focal point cannot reliably demonstrate any dissimilarity to a known. The examiner is essentially "unable to locate" a target area, this does not indicate any differences.	Move this type of comparison to the Inconclusive category (section 4.4).	Reject with modification. Titles of the 2 intermediate conclusions have been changed to "inconclusive with . . ."
163	4.3	T	Support for Different Sources is ambiguous and biasing information	Remove Support for Different Sources as a viable conclusion	Reject with modification. Titles of the 2 intermediate conclusions have been changed to "inconclusive with . . ."
170	4.3	T	As a delineated, specific conclusion there is concern Support for Different Sources could be misinterpreted by investigators, lawyers, and juries. Even if we state what this conclusion actually means, do others read/hear it that way?	Include Support for Different Sources as a sub-category of Inconclusive.	Reject with modification. Titles of the 2 intermediate conclusions have been changed to "inconclusive with . . ."

#	Section	Type of Comment (E)	Comments	Proposed Resolution	Final Resolution
188	4.3	t	<p>"4.3 Support for Different Sources Support for different sources is the conclusion that the observed data provides more support for the proposition that the impressions originated from different sources rather than the same source; however, there is insufficient support for a source exclusion. ... The degree of support may range from limited to strong or similar descriptors of the degree of support. Any use of this conclusion shall include a statement of the degree of support and the factor(s) limiting a stronger conclusion."</p> <p>There appear to be two categories here "strong" and "limited". They should be clearly stated as two categories. The proposal uses "much more probable" and "slightly more probable".</p> <p>The requirement that the examiner state why a stronger conclusion was not stated is problematic. Such statements are likely to be taken as inferring that the examiner really believes that the evidence is stronger but they have been prohibited from stating what they really believe. Such statements should not be made.</p>	<p>Replace with:</p> <ul style="list-style-type: none"> • The observed properties of the two friction ridge impressions are much more probable if they came from different sources than if they came from the same source. • The observed properties of the two friction ridge impressions are slightly more probable if they came from different sources than if they came from the same source. 	Reject. FRCB consensus is to use no more than 5 categories.
213	4.3	T	Support for Different Sources. Without well defined criteria and definitions, the conclusion will give rise to more subjectivity, inconsistency, and conflict in interpreting and applying the reasoning behind the conclusion with terms such as, "Strong vs Substantial," "Limited," or "Weak". Intra- and Inter-laboratory examiners may have more difficulty articulating and defending their conclusions during testimony, and may be perceived as incompetent or unreliable.	Eliminate this Conclusion.	Reject with modification. Titles of the 2 intermediate conclusions have been changed to "inconclusive with . . ."
248	4.3	T	Support for different sources conclusion is concerning, as I feel it may mislead our contributors, attorneys, judges, and juries. Stating this conclusion may come across the same as an exclusion.	Remove this conclusion or at least do NOT require examiners to report this conclusion (and make it clear in the document these conclusions are not standards that must be followed). Inconclusive is sufficient.	Accept with modification. Examiners are not required to report any conclusions. Titles of the 2 intermediate conclusions have been changed to "inconclusive with . . ."
261	4.3	T,E	The terms Source Exclusion and Source Inclusion are defined, in part, by referring to the examiner's expectations regarding the likelihood of the observed data under the propositions of same source or different source. For the sake of consistency and transparency, I suggest that the terms Support for Different Sources (SDS) and Support for Same Source (SSS) be defined the same way. The definition should include a statement about how the examiner views the probability of the observed data under the propositions being evaluated. Adding this material will make the logic of the examiner's determination more transparent by clarifying that it ultimately rests on a judgment about the relative probability of the observed data under the relevant propositions.	At the end of the sentence that begins "There are observed dissimilarities between the impressions and a lack of correspondence present" add the following: "such that the examiner believes the observed data are more probable if the impressions have a different sources than the same source."	Accept.

#	Section	Type of Comment (E)	Comments	Proposed Resolution	Final Resolution
276	4.3	T	SDS is biasing towards an exclusion. The examples show that this conclusion is based on assumptions and not data. SDS is also not mutually exclusive to inconclusive, it is a reason for an inconclusive conclusion, not a conclusion within itself.	Remove SDS and include this as a reason for an inconclusive conclusion.	Accept with modification. Titles of the 2 intermediate conclusions have been changed to "inconclusive with . . ."
334	4.3	T	At this point, in my opinion, we should not be assigning the degree of support for either the support for different sources or support for same sources categories.	Until we have better research indicating the degree of support for a set of features as high or low and that examiners can use the degree correctly, mentioning whether support is high or low is not appropriate.	Reject. Indicating the degree of support adds transparency.
91	4.3 & 4.5	Technical	I am, frankly, shocked that this organization would consider "support" conclusions. We are not comparing a drug, or a shoe impression. These are people who may lose their freedom or even life. A conclusion of support for same source will intentionally introduce bias. Please do not forget how much sway we have over a jury. That "same source" seed has been planted and no number of warnings or disclaimers can undo it. You are directing us to give a questioned impression, lacking sufficiency for a same source conclusion, a "maybe" bias. We cannot say it's him, but it might be. Bias is one of the main issues thrown at us in court, and you want to introduce an intentional source of bias that will come directly from us?	I would like the document to make it clear that "support for" conclusions are not mandatory, but if used they will follow these guidelines.	Accept with modification. Examiners are not required to report any conclusions. Titles of the 2 intermediate conclusions have been changed to "inconclusive with . . ."
299	4.3 & 4.5	T	The degree of support may range from limited to strong or similar descriptors of the degree of support. Any use of this conclusion shall include a statement of the degree of support and the factor(s) limiting a stronger conclusion. (See Annex A (now Annex B), Section Support for Different Source).	If ASB does decide to continue to include "degree of support" which I am NOT in favor of - may want to define if the expectation to "include a statement of the degree of support and the factor(s) limiting a stronger conclusion." is required in the report or the notes. I would be in favor of a general description of what SSD SSS mean in the report and leaving the details as presented in the appendix to to the notes and conversations with the parties involved - it is too much to put in reports.	Reject. "Documentation of conclusions" is outside the Scope of the document. See Reporting of Results document.
328	4.3 and 4.5	T	The degrees of support range we are being asked to use is not defined nor explained enough to be able to use accurately and appropriately based on the information in this document. This will lead to an even larger variety of conclusion support wording than we already encounter in the discipline.	Propose a scale and/or definitions of degrees of support and what they mean as related to each source conclusion.	Reject. Proposal is not specific enough to act on.
330	4.3 and 4.5	T	Both the "support for different source" and "support for same source" conclusions require reporting a degree of support (strong, weak, etc). However, aside from a few examples in the annex, there is no guidance about how to properly define or justify the weight of the conclusion that is chosen. This has the potential to contribute to less standardization in the field, as agencies are likely to define their levels of support differently.	Two proposed resolutions: 1) provide fully developed definitions and criteria for the levels of support for any agency that chooses to use the "support for..." conclusions. Or 2) Allow the agency to use "support for same/different source" (no degrees) with an explanation of factors limiting a stronger conclusion for each comparison.	Accept. Sentence added to both 4.3 and 4.5 for clarification.
41	4.3, 4.5	T	We agree that the wording for source exclusion, inconclusive, or source identification needs to change to reflect the research behind friction ridge comparisons. Until a useable statistical model is developed or until likelihood ratios become standard in North America, the three conclusions used now are sufficient. A sliding scale of five conclusions is confusing and useless to our customers.	Remove sections.	Reject with modification. Titles of the 2 intermediate conclusions have been changed to "inconclusive with . . ."

#	Section	Type of Comment (E)	Comments	Proposed Resolution	Final Resolution
151	4.3, 4.5	T	"The degree of support may range from limited to strong or similar descriptors of the degree of support" -- 'similar descriptors' might be listed exhaustively.	Specify the precise language that may be used to describe degree of support. Is this language supposed to be standardised?	Reject. Examples of precise language are given in Annex B.
160	4.3/4.5	T	Use of Support for Different/Same Source(s) could lead to increased conflict between examiner conclusions during verification	Merge the two conclusions with Inconclusive, allow FSP's to determine if SDS/SSS will be included in Inconclusive reporting	Reject with modification. Titles of the 2 intermediate conclusions have been changed to "inconclusive with . . ."
73	4.4	T	need an additional statement that no additional exemplars from a compared exemplar will lead to a different conclusion to be consistent with an Incomplete examination	add the statement "No additional exemplars submitted for the source compared would lead to a different conclusion."	Reject. The information for incomplete examinations is contained in Annex A in the Inconclusive section.
166	4.4	T	Historically and in this current document "Inconclusive" is recommended whenever the analyst is unable to make all appropriate comparisons due to a lack of source standards (eg., fp standards are available and have been compared, but palm standards are not available) or when the appropriate standards are available but they cannot be fully compared due to smudged and incomplete areas. I would propose using the term "Incomplete" for those types of comparison results. This will help the customer/reader limit their confusion around the term "Inconclusive" as it would only apply to a finalized comparison. It will help provide better context and understanding that additional comparisons could be conducted if the appropriate standards were available. A conclusion would only be formalized once the analyst believes that all reasonable comparisons have been made and no additional standards are required. If the analyst believes that additional standards are required, the comparison would be reported as "Incomplete" with the specific reason. (Reporting Example- "The latent print marked (designator) was compared to a set of fingerprint standards from (subject name), but this comparison was incomplete due to smudged and incomplete recordings of the fingertip areas. It is recommended that additional fingerprint standards, which clearly and completely record the extreme tip areas of each finger, are collected from (subject name) for submission to the laboratory.")	Remove first two examples under Inconclusive (Section 4.4). Instead, incorporate "Incomplete comparison" as a comparison result for these types of situations.	Reject. The information for incomplete examinations is contained in Annex A in the Inconclusive section.
189	4.4	t	"4.4 Inconclusive Inconclusive is the conclusion that the observed data does not provide a sufficient degree of support for one proposition over the other. Any use of this conclusion shall include a statement of the factor(s) limiting other conclusions." Proposal is in accordance with earlier comments.	Replace with: • The observed properties of the two friction ridge impressions are equally probable irrespective of whether they came from the same source or from different sources.	Reject. Proposed language is not clearer.
266	4.4	T	The definition of inconclusive is not understandable; is 'incomplete' suppose to be included in this category? Using one term for two different conclusions (#1-a conclusive conclusion can never be arrived at, and #2-a comparison has not been completed as of yet) is not transparent or clear to the end customer, and therefore not useful.	Add incomplete as its own conclusion.	Reject. The information for incomplete examinations is contained in Annex A in the Inconclusive section.
300	4.4	T	Any use of this conclusion shall include a statement of the factor(s) limiting other conclusions.	In report or Notes? I am in favor of a general statement in report- I am NOT in favor of a latent by latent break down of the factors for each comparison in the report.	Reject. "Documentation of conclusions" is outside the Scope of the document. See Reporting of Results document.

#	Section	Type of Comment (E-	Comments	Proposed Resolution	Final Resolution
327	4.4	T	Are there limits and/or confines to the range of inconclusive conclusion factors statements? Such as commonly used statements "no corresponding ridge detail observed" which has historically been used as a catch-all when an examiner cannot come to an ID, SSS, SDS, EXC conclusion.	Acknowledge or define whether there are limits to the factors statements that may be used.	Accept: A statement has been added for clarification.
244	4.4, 3.10	T	The wording "not provide a sufficient degree of support" seems unnecessary and could open one up to potential questioning as to what numerical "degree" of support was given. It sounds too similar to "reasonable degree of scientific certainty", which is a qualification and limitation of the conclusions. It could simply read "does not provide sufficient support for one proposition over the other".	Remove the words "a" and "degree of" from inconclusive definitions throughout.	Accept
37	4.5	T	Support for Same Source is confusing to the agencies that we serve and to potential juries.	This should still be considered an inconclusive. I feel like if we say that we some characteristics in agreement but can't say that its an identification then the jury is only going to hear that it an identification and not understand that this must be weighted to not an identification. I think an inconclusive statement does not lean the detectives or the jury in either way.	Accept with modification. Titles of the 2 intermediate conclusions have been changed to "inconclusive with . . ."
74	4.5	T	SSS is not a conclusion. It is a sub-bin of an Inconclusive conclusion	remove from Section 4	Reject with modification. Titles of the 2 intermediate conclusions have been changed to "inconclusive with . . ."
94	4.5	T	I feel the support for same sources conclusion is misleading.	Keep this conclusion in the inconclusive category	Reject with modification. Titles of the 2 intermediate conclusions have been changed to "inconclusive with . . ."
113	4.5	T	The term "support" and observation of similarities is appropriate, since it accurately describes what an observer is doing. However, the notion that "same source" propositions can receive "more support" than not, based on such observations would need to be established by empirical research. Absent any empirical basis to reach a conclusion about degrees of support, this entire section is calling for subjective and opinion-based conclusions that are not grounded in any validated probabilities. The section calls for conjecture and it does not note that any such "conclusion" brings with it known error rates.	While little is known about what the empirical basis is for concluding that patterns originated from the "same source," something is known about error rates in work by latent examiners. If anything is to be reported, it should be what is empirical known: error rates. Both error rates from larger scale or black box studies should be reported as well as the examiner's own proficiency, if rigorously tested. That information is objective and it should inform any reporting of conclusions, since absent such information there is no way of assessing whether the examiner's personal observations should be credited in any way.	Reject. Outside the Scope of document. Conclusions are not error rates. Nothing in this document precludes the use of error rate data.
164	4.5	T	Support for Same Source is ambiguous and biasing information	Remove Support for Different Sources as a viable conclusion	Reject with modification. Titles of the 2 intermediate conclusions have been changed to "inconclusive with . . ."
171	4.5	T	As a delineated, specific conclusion there is concern Support for Same Source could be misinterpreted by investigators, lawyers, and juries. Even if we state what this conclusion actually means, do others read/hear it that way?	Include Support for Same Source as a sub-category of Inconclusive.	Reject with modification. Titles of the 2 intermediate conclusions have been changed to "inconclusive with . . ."

#	Section	Type of Comment (E-	Comments	Proposed Resolution	Final Resolution
190	4.5	t	<p>"4.5 Support for Same Source Support for same source is the conclusion that the observed data provides more support for the proposition that the impressions originated from the same source rather than different sources; however, there is insufficient support for a source identification. ... The degree of support may range from limited to strong or similar descriptors of the degree of support. Any use of this conclusion shall include a statement of the degree of support and the factor(s) limiting a stronger conclusion."</p> <p>Proposal is in accordance with earlier comments.</p>	<p>Replace with:</p> <ul style="list-style-type: none"> • The observed properties of the two friction ridge impressions are slightly more probable if they came from the same source than if they came from different sources. • The observed properties of the two friction ridge impressions are much more probable if they came from the same source than if they came from different sources. 	Reject. FRCB consensus is to use no more than 5 categories.
214	4.5	T	<p>Support for Same Source. Without well defined criteria and definitions, the conclusion will give rise to more subjectivity, inconsistency, and conflict in interpreting and applying the reasoning behind the conclusion with terms such as, "Strong vs Substantial," "Limited," or "Weak". Intra- and Inter-laboratory examiners may have more difficulty articulating and defending their conclusions during testimony, and may be perceived as incompetent or unreliable. Further, OSAC FRS should provide guidance on the definition for the suitability decision "Of Value". The approach of "Value for Identification" (Document #10 Standards for Examining Friction Ridge Impressions and Resulting Conclusions, 5.1.4.2.1) would need to be eliminated or revised to include "Strong Support for Same Source" decisions.</p>	Eliminate this Conclusion.	Reject with modification. Titles of the 2 intermediate conclusions have been changed to "inconclusive with . . ."
249	4.5	T	Support for same source conclusion is concerning, as I feel it may mislead our contributors, attorneys, judges, and juries. Stating this conclusion may come across the same as an identification.	Remove this conclusion or at least do NOT require examiners to report this conclusion (and make it clear in the document these conclusions are not standards that must be followed). Inconclusive is sufficient.	Accept with modification. Examiners are not required to report any conclusions. Titles of the 2 intermediate conclusions have been changed to "inconclusive with . . ."
252	4.5	T	I believe that this will murky the waters of using fingerprints in court. I testified for many years where prosecutors wanted a "maybe" and I think this gives that to them. I am making this statement knowing that these standards will not directly affect me as I do not go to court any longer, but will effect the discipline.	I would just leave as inconclusive and an explanation why	Reject with modification. Titles of the 2 intermediate conclusions have been changed to "inconclusive with . . ."
262	4.5	T, E	The terms Source Exclusion and Source Inclusion are defined, in part, by referring to the examiner's expectations regarding the likelihood of the observed data under the propositions of same source or different source. For the sake of consistency and transparency, I suggest that the terms Support for Different Sources (SDS) and Support for Same Source (SSS) be defined the same way. The definition should include a statement about how the examiner views the probability of the observed data under the propositions being evaluated. Adding this material will make the logic of the examiner's determination more transparent by clarifying that it ultimately rests on a judgment about the relative probability of the observed data under the relevant propositions.	<p>Revise the second sentence to read as follows: "There are observed similarities between the impressions and some correspondence present, such that the examiner believes the observed data are more probable if the impressions have the same source than a different source; however the examiner may also expect to see similar correspondence in another source."</p>	Accept.

#	Section	Type of Comment (E)	Comments	Proposed Resolution	Final Resolution
273	4.5	T	SSS (4.5) is not a conclusion within itself, it is a reason for an inconclusive conclusion (4.4).	Remove SSS as a conclusion and list it as a reason behind an inconclusive conclusion (in 4.4)	Reject with modification. Titles of the 2 intermediate conclusions have been changed to "inconclusive with . . ."
274	4.5	T	(Same comment as written for the definition, but I am now stating the same comment for the requirements section) The phrase SSS is highly misleading. The term is being used to mean 'consistent with another item' however the term SSS is swaying others to believe consistency implies something is likely. This is extremely biasing.	Change the phrase SSS to be 'some consistency exists' and then require that the amount of consistency be stated.	Reject. Intent is for the examiner to make a subjective judgment about the relative likelihood of the consistency.
295	4.5 and 4.6	T	If SI is not stating a fact, it is 'support' for a conclusion, the SSS is the same thing (it is also support for a conclusion). The definitions somewhat clarify the difference but the phrase SSS is highly misleading.	Change the title if SI to SSS and change the title of SSS to be 'consistency but an insufficient amount to establish an association'.	Reject. FRCB consensus is to continue to use term "identification."
38	4.6/5	T	the definition of source identification, stonger support that two impressions originated from the same source tather than different sources, sounds very similar to Section 5, an examiner shall not assert that two impression were made by the same source.	Originated and made are technically the same word. I feel like these statements need to be clearer on how to express this is court and on reports that they don't sound the same.	Reject. The difference between the two statements lies in the words "support that," rather than in a distinction between originated and made.
176	4.6/5	T	In Section 5 it states "An examiner shall not assert that two impressions were made by the same source..." and in Section 4.6 it states the correspondence is strong enough "...the examiner would not expect to see the same arrangement of details repeated in an impression from another source." - I think I know what OSAC/ASB is getting at, but these two statements seem somewhat contradictory on the surface.	Add clarifying verbiage that the expectation is the opinion of the examiner and although not expected to be seen in another source, it can't be empirically asserted.	Reject. We do not think proposal will clarify matters.
31	4.6	T/E	Although the note implies the historical meaning of source identification does not correspond to the definition used in this document, what is being done to make this information clear to readers of a report or listeners in a jury? More must be done to make this distinction clear.	Repurposing the term source identification may be too big of a challenge when the term already has historical meaning for practitioners and laypersons. The note does not do enough to create the space needed for a new interpretation; new language is needed to ensure there isn't confusion about this term. We would suggest using "strong support for same source" instead of Source Identification.	Reject. FRCB consensus is to continue to use "identification."
75	4.6	T	Note is not consistent with the definition within the document as Source Identification is being used the same way it has been historically been used no matter how worded	remove NOTE from Section 4.6	Reject. FRCB disagrees.
76	4.6	T	not all Identifications are the same and it should be stated as such in Section 4.6 for clarity	include a sentence at the end of Section 4.6 that states: The degree of support may range from limited (complex) to strong (basic) or similar descriptors.	Reject. Section 4.6 deals only with substantially stronger support and only occurs when substantially stronger support is present.
114	4.6	T	The words "source identification" and "substantially stronger" and "strong" should not be used in this section because they are not defined, there are no criteria based on validated research to form such conclusions, and there is no qualification providing information regarding error rates associated with such conclusions when a method is used or when an examiner conducts this work.	Subsection 4.6 should be deleted. The most that an examiner can say is that there are "observed similarities," a conclusion which is set out in 4.5. Nothing more can be said about how "strong" or "substantially" strong such conclusions are absent research, based on population data, to permit such probalistic statements.	Reject. FRCB consensus is to continue to use term "identification."
153	4.6	T	The meaning of 'identification used historically in the discipline' needs to be clarified.	Clarify what is meant by 'meaning of identification used historically', and how this is distinguished from the way 'identification' is being used in the current document.	Accept.

#	Section	Type of Comment (E-)	Comments	Proposed Resolution	Final Resolution
159	4.6	T	Despite the language in this draft, I believe that "Source identification" will be understood by juries and judges to mean exactly what "identification" used to mean, namely that the POI (Person of Interest) left the latent print. The problem is that the number of people who may have the same characteristics as those found in common between the latent and the POI is unknown. Hence the inferential power of "source identification" is likely exaggerated. I think "support for same source" is as far as the science can support.	deletion, with necessary changes elsewhere to accommodate.	Reject. FRCB consensus is to continue to use "identification."
191	4.6	t	"4.6 Source Identification Source identification is the conclusion that the observed data provides substantially stronger support that the two impressions originated from the same source rather than different sources. ... NOTE Source identification does not correspond to the meaning of identification used historically in the discipline." Proposal is in accordance with earlier comments. The note actually provides a reason for why the term "identification" should not be used.	Replace with: • The observed properties of the two friction ridge impressions are substantially more probable if they came from the same source than if they came from different sources.	Reject. The proposed resolution is not substantially different from the current text in the document, the current text is appropriate as written.
215	4.6	E	Colon is missing after the word "NOTE."	Insert colon after NOTE.	Reject. ASB Style
246	4.6	T	The document changes the historical definition of "Source Identification." This is likely to cause confusion going forward if the Standard is adopted. When the phrase "Source Identification" is encountered in lab reports, testimony, transcripts, legal documents, literature etc., it will not necessarily be clear whether the reader/consumer should ascribe the historical definition (identified to the exclusion of all others) or the definition listed in section 4.6. The NOTE does not help. It actually further confused the issue. If it does not correspond, why is the same language being used? Use of the same language would seem a poor way to prevent such confusion. 4.6 alone negates and compromises this entire document. Additionally, the language is really just another way of saying "to the exclusion of all others." It still does not allow or provide for objective support for the opinion that can be reviewed by another qualified examiner.	The best resolution is simply to delete 4.6. The degree of support for the same source would then be provided by the examiner, either quantitatively or qualitatively. This would be far more consistent with the direction that forensic science as a whole is headed. It would be forward looking rather than backward looking. It would give stakeholders far more confidence in conclusions provided by fingerprint examiners.	Reject. FRCB consensus is to continue to use "identification."
258	4.6	E	Colon needed after "NOTE"	Insert necessary colon	Reject. ASB Style
301	4.6	T	Unclear what ASB intended here: "NOTE Source identification does not correspond to the meaning of identification used historically in the discipline."	Need to further define given that Definition says? "3.21 source identification ID"	Accept with modification. Deleted "ID" from 3.21.
310	4.6	E	For the Note - could the assumed historical definition of identification be provided in this document?		Accept.

#	Section	Type of Comment (E-)	Comments	Proposed Resolution	Final Resolution
341	4.6	E	I commend ASB on this document which improves upon the status quo. I suggest not using the terms "source identification" and "source exclusion." The document redefines these terms beyond their historically accepted meanings, both in common language (see Dictionary.com: "to recognize or establish as being a particular person or thing") and the discipline. This will confuse both consumers and practitioners.	Change to "strong support for same source" and "strong support for different sources"	Reject. FRCB consensus is to continue to use terms "identification" and "exclusion."
331	4.6 NOTE	T	Using the term "identification" and trying to say it now has a different definition will only create confusion. If the discipline really thinks "identification" has too much baggage from the years of "exclusion of all others, 100% certainty", etc., then a new term needs to be chosen. To be honest, "Source identification" sounds like an even stronger conclusion than "identification" to me, so I don't think the issues of potentially overstating are solved by using that term.	Two suggestions: 1) Change the conclusion to "Source Correspondence" (to be consistent with definitions used) or "Source Association". 2) Take out the note, and use "Identification" rather than "Source Identification", as I believe most of the concerns are addressed in Section 5.	Reject. FRCB consensus is to continue to use terms "identification" and "exclusion."
192	4.7	t	<p>"substantially more probable" would appear to lie between these rather than being greater than "much more probable". Proposal is to reorder the expressions.</p> <p>Choice of wording should actually be based on research as to how the wording is interpreted by potential jury members, e.g., Thompson et al (2018).</p> <p>REFERENCE: Thompson W.C., Grady R., Lai E., Stern H.S. (2018). Perceived strength of forensic scientists' reporting statements about source conclusions. <i>Law, Probability and Risk</i>, 17, 133–155 http://doi.org/10.1093/lpr/mgy012</p>	<p>Reorder the expression as:</p> <ul style="list-style-type: none"> • The observed properties of the two friction ridge impressions are much more probable if they came from different sources than if they came from the same source. • The observed properties of the two friction ridge impressions are substantially more probable if they came from different sources than if they came from the same source. • The observed properties of the two friction ridge impressions are slightly more probable if they came from different sources than if they came from the same source. • The observed properties of the two friction ridge impressions are equally probable irrespective of whether they came from the same source or from different sources. • The observed properties of the two friction ridge impressions are slightly more probable if they came from the same source than if they came from different sources. • The observed properties of the two friction ridge impressions are substantially more probable if they came from the same source than if they came from different sources. • The observed properties of the two friction ridge impressions are much more probable if they came from the same source than if they came from different sources. 	Reject with modification. FRCB consensus is to use no more than 5 categories.

#	Section	Type of Comment (E)	Comments	Proposed Resolution	Final Resolution
40	5	T	The first sentence states, in part, "...shall be included." What does this mean? Are these limitations to be part of the written report, or are examiners simply supposed to keep these limitations in mind as they write the report?	Reword to clear ambiguity.	Accept. Section has been edited.
45	5	T	Next to last bullet (statement beginning "Whenever categorical...") The discussion of bins and thresholds is a fundamental quality of categorization and need not be explicitly stated here. It seems that the pertinent qualification being made here is related to the inherent subjectivity of latent print examinations and not directly to categorization.	Recommend replacing this statement with the following "Latent print examinations are subjective in nature"	Accept with modification. This language has been added to section 4.1.
46	5	T	Last bullet (statement beginning "Likewise there...") The discussion of "sub-bins" is too granular for a general qualification statement. Furthermore, as the NWP referencing the example categories was not approved, the included example is not appropriate. It seems that the qualification intended here is that latent print examinations vary in terms of complexity, but I question that such a pronouncement is actually needed.	Recommend removing this statement. If not removed, replace with "Latent print examinations vary in complexity"	Accept.
77	5	T	The first bullet point includes the word "individualization" which is not defined. This makes the statement unclear as there is no indication of how the term "individualization" in this statement differs from the term "identification"	replace the word "individualization" to "identification"	Reject. Dictionary definition of individualization is being used, so a technical definition is not necessary. Also, we do not want to define a term we say not to use.
78	5	T	the fourth bullet is not always an option when testifying and should be reworded	reword to say: An examiner shall not cite the number of friction ridge comparisons performed in their career as a measure for the accuracy of a conclusion offered in the case at hand in an examination report.	Reject. It is an option not to cite it as a measure for accuracy.
79	5	T	No qualification or limitation related to an Investigative Lead generated from an AFIS search	add the following under Section 5: If an investigative lead is being reported out on an Inconclusive AFIS candidate, it shall be noted on the report that the investigative lead does not assert or imply an Identification to the reported candidate.	Reject. It should be evident that an inconclusive conclusion is not a source identification.
88	5	T	use of "his or her" is offensive as it implies a binary non supported by science	replace "his and her" with the gender neutral term "their"	Accept.
89	5	T	missing an ending paranthetical in the last bullet	add another ending parenthetical to close out example properly	Reject with modification. This language has been deleted.
154	5	E	Change the list of qualifications / limitations to be numbered, so they can be referred to more easily.	Change the list of qualifications / limitations to be numbered, so they can be referred to more easily.	Accept.
161	5	T	Stating that thresholds will be used to determine the decision of a conclusion limits the amount of detail looked at in the latent when making said decisions, since the presence of scars, ridge/pore structure, and distortion is not easily quantifiable	Remove threshold standard, allow FSP's to determine how to make the conclusion decision	Accept. Threshold language removed.
169	5	T	What are the "bins" to which the document refers in the last 2 bullet points? It's unclear.	If the "bins" are the source conclusions described in Section 4.1 and represented in Figure 1, perhaps reference the term "bins" in that section as well so the connection is clear.	Accept with modification. The little that is left of this language has been moved to section 4.1.

#	Section	Type of Comment (E-	Comments	Proposed Resolution	Final Resolution
193	5	t	<p>"– Whenever categorical conclusions or “bins” are used there will be a threshold for those bins and a subjective decision is made as to what side of the threshold the decision lies.</p> <p>– Likewise there might also be sub bins within the category as not all conclusions are considered the same. (e.g., basic/advanced/complex source identifications (complexity of comparisons))."</p> <p>These sentences do not include requirements or recommendations.</p>	Delete these sentences.	Accept.
195	5	T	I disagree that "an examiner shall not assert that two impressions were made by the same source."	If this is referring to cumulative simultaneous impression comparisons, then it needs to be re-written to be much clearer regarding this reference. Otherwise, I don't understand why we are being restricted from asserting that two impressions were made by the same source.	Reject. FRCB consensus is that same source conclusion is always uncertain.
196	5	T	I do not understand the connection between assertion that "two impressions were made by the same source" and the restriction to "imply an individualization to the exclusion of all other sources."	Please separate these two unrelated concepts onto their own lines.	Reject. FRCB perceives them as equivalent statements.
197	5	E	Remove "individualization" from first limitation statement. It is not defined in the document.	Replace with "identification," which is defined	Reject. Dictionary definition of individualization is being used, so a technical definition is not necessary. Also, we do not want to define a term we say not to use.
220	5	T	Whenever categorical conclusions or 'bins' are used there will be a threshold for those bins and a subjective decision is made as to what side of the threshold the decision lies. So it is precisely the subjective decisions about the threshold of these bins where the human factors/potential bias can sneak in.	Define the threshold so the decision can be more objective.	Reject with modification. This language has been deleted.
225	5	T	examiner shall not use certainty as an expression of accuracy is ambiguous. Is it saying an examiner shouldn't say they are 100% it was made by this person or that they shouldn't say they are 100% certain in their conclusion? Is it okay if an examiner says they're 100% confident in their conclusion but they acknowledge that doesn't mean they are right.	This needs to be clarified and fully state what is meant. An example would also help with the explanation.	Accept. Statement has been clarified.
245	5	E	Add comma after the word likewise.	Add comma after the word likewise.	Reject with modification. This language has been deleted.
250	5	T	The 2nd to last and last bullet points discuss "bins" - is this simply in reference to the conclusions that can be made? "Bins" seems like an unnecessary term.	Clearly define or change the word "bins" or use it more frequently in the document so it's clear what is being referenced.	Reject with modification. This language has been deleted.
253	5	T	I total disagree with not stating a same source conclusion , it strips the whole meaning of our work if you can not state that a print was made by one individual and one alone	I would remove this from the document	Reject. FRCB consensus is that same source conclusion is always uncertain.
254	5	T	I also disagree with forbidding using a degree of scientific certainty as there have been scientific studies to support the chances of two prints not being from a different individual when you have a number of characteristics in the same relative positions	I would remove this from the document	Reject. Disuse of "reasonable degree of scientific certainty" has been recommended by National Commission on Forensic Science.
259	5	E	The last bulleted note needs an additional parenthesis at the end.	Insert necessary parenthesis	Reject with modification. This language has been deleted.

#	Section	Type of Comment (E-	Comments	Proposed Resolution	Final Resolution
287	5	T	The limitations are not limitation for using these conclusions, they are for the discipline in general and mostly for articulation and are outside the bounds of this document. This results in this information just being filler.	Remove limitations that are outside the bounds of using these conclusions, and outside the bounds of the topic title. Add limitations of using these conclusions, such as 'there is no criteria for each of these conclusions at this time, making them highly subjective conclusions'.	Reject with modification. Purpose of section as a list of prohibited statements has been clarified. FRCB consensus is that there is a value to including these in this document.
291	5	T	The word individualization is used in the first bullet which implies 'individualize' is a possible conclusion.	If the word individualize is the same as 'source identification' or 'same source' then it would be best to be consistent with prior wording. If individualize is different then it should be defined. Add individualization to the possible conclusions.	Reject. Dictionary definition of individualization is being used, so a technical definition is not necessary. Also, we do not want to define a term we say not to use.
292	5	T	The 3rd bullet says friction ridge 'examinations' are not infallible. I am assuming it is intended to say friction ridge 'conclusions' are not infallible.	Change 'examinations' to 'conclusions'.	Accept.
293	5	T	The 6th bullet says: Whenever categorical conclusions or "bins" are used there will be a threshold for those bins and a subjective decision is made as to what side of the threshold the decision lies. This is contradictory because if there is a threshold then there is no need for a subjective decision.	State the threshold or change to clearly indicate that no threshold exists and that is why a subjective decision is made.	Reject with modification. This language has been deleted.
294	5	T	The last bullet says: Likewise there might also be sub bins within the category as not all conclusions are considered the same. (e.g., basic/advanced/complex source identifications (complexity of comparisons). I don't think sub bins are a limitation; perhaps it is a limitation of this standard that sub bins are not identified within each conclusion.	Sub bins need to be stated within each conclusion, OR restate the limitation to indicate it is a limitation of this standard not a limitation within the discipline.	Reject with modification. This language has been deleted.
302	5	T	"When one of the five conclusions is reached the following qualifications and limitations are also held in concert with these conclusions and shall be included."	Included where? Hopefully not in every report -	Reject with modification. Purpose of section as a list of prohibited statements has been clarified.
303	5	T	Ⓜ Whenever categorical conclusions or "bins" are used there will be a threshold for those bins and a subjective decision is made as to what side of the threshold the decision lies.	move to strike - unless ASB can give more guidance on developing discipline wide thresholds for the "bins" or maybe rephrase to say "Whenever categorical conclusions or "bins" are used, a subjective decision is being made by the analysts involved as to which "bins" and to what side of the threshold the decision lies.	Accept.
304	5	T	Likewise there might also be sub bins within the category as not all conclusions are considered the same. (e.g., basic/advanced/complex source identifications (complexity of comparisons).	move to strike or rephrase similar to above. These types of policies/understandings are more appropriate in methods/quality manuals and in testimony.	Accept.
309	5	T	What are the "categorical conclusions or bins" being reference here referring to? How should the thresholds be established or defined?		Accept with modification. This language has been deleted.
318	5	T	It is unclear what is meant by "shall be included." Does this mean that the 7 bullet points are to be included in the report with the previous 5 conclusions? Or is it meant to direct examiners not to state or imply the 7 bullet points? If a "shall" is being utilized here, it should be more specific what the intended action by examiner is.	Clarify what "shall be included" means. If it is meant as statements examiners can't say or imply then specifically state that.	Accept with modification. That phrase has been deleted.

#	Section	Type of Comment (E-)	Comments	Proposed Resolution	Final Resolution
329	5	T	Opening sentence explains that the qualifications and limitations statements "shall be included", but does not say whether this is to be included in a report or in the supporting documentation.	Clarify where these statements are to be listed (report or supporting documentation).	Accept with modification. Purpose of section as a list of prohibited statements has been clarified.
332	5	T	"the following qualifications...shall be included". I'm unclear where they shall be included - in SOPs, every report, specifically stated during testimony?	Reword or specify what is meant by "shall be included". Since I'm unsure how this was intended, I don't know that I can offer a suggestion for what that rewording should be.	Accept with modification. That phrase has been deleted.
360	5	E	Please refer to the comments made to the Foreword and Section 4. Specifically, but not exhaustively, this section should require additional caveats regarding the lack of frequency / variability data, the lack of testing of new "support for" conclusions if retained, and the absence of statistical / probability models. Because they have caused substantial problems within the latent print discipline specifically and do not enjoy scientific support, this section should specifically prohibit use of the terms "practical certainty" and "practical impossibility," reference to the possibility of error as "negligible," and characterization of prints as unique. <i>See e.g. Simon A. Cole, "Individualization is dead, long live individualization! Reforms of reporting practices for fingerprint analysis in the United States," 13 Law, Prob., & Risk 117, 144 (2014); see also William Tobin & Peter Blau, "Hypothesis Testing of the Critical Underlying Premise of Discernible Uniqueness in Firearms-Toolmark Forensic Practice" 53 Jurimetrics 121, 131 (2013); Mark Page et al., "Uniqueness in the Forensic Identification Sciences-Fact or Fiction?" 206 Forensic Sci. Int. 12, 15 (2011).</i>	Please refer to the proposed resolutions for the Foreword and Section 4, and include the additional caveats noted in the comments to this section.	Accept with modification. A statement about subjectivity has been added to Section 4.1. Statements about practical certainty, "practical impossibility," and "unique" have been added
155	8.5	E	comma needed between words 'forensic' and 'government'	insert necessary comma	Reject. There is no section 8.5 and no use of the term "forensic government" in the document.
228	Annex section	T	All of the examples seem to include a numerical value to support their premise. The field has try to get away from the concept of "point counting" for years since there is much more taken into consideration.	These examples should be reworked and discuss things like area of the print (tip, pattern force area, etc.), type of minutiae, combination of minutiae, etc. Studies showing the frequency and rarity of types of minutiae and their combinations would lend themselves to the support given for the various conclusions.	Reject with modification. The purpose of this annex is to assist readers' understanding by illustrating situations in which each conclusion might be used. They are just examples and are not to be used to test conformance. This list is not representative of all possible situations that would justify a particular conclusion. Each conclusion used by an FSP needs to be supported based on FSP requirements. Clarifying language and qualifiers added and, where possible, specific numbers changed to broad verbal characterizations.
288	Annex (now Annex B)	T	The examples are highly subjective showing how a person MIGHT use the conclusions, they are not examples of how a person SHOULD use the conclusions.	Remove examples until a document stating how to use these conclusions is developed. Hold this document until a method is presented on how each conclusion is to be used.	Reject. Moving forward with document.
32	Annex A (now Annex B)	E	"The unknown friction ridge impression is a clear whorl pattern with a distinctive core and no distortion or interpretation issues noted. The exemplars utilized for comparison of this source contained no whorl type patterns, and I therefore concluded that the impression could not have been left by the source being compared. This statement may work for a traditional examiner but it may not work as well for one using a statistical software.	The use of "could not" in this example eliminates any possibility of uncertainty. The use of "highly unlikely" could work better for an examiner using statistical software.	Accept.

#	Section	Type of Comment (E)	Comments	Proposed Resolution	Final Resolution
33	Annex A (now Annex B)	E		In Annex A there are examples that seem to be better for examiners performing traditional comparisons and those using statistical software. It would be helpful to indicate examples that should be traditional examiners and examiners using statistical software.	Reject. This is ASB style
39	Annex A (now Annex B)	t	All examples that are listed for possible comparison. Unsure if this for how to address our reports or to be used in our notes. I don't know if the individuals who wrote this have ever had a case with 25 prints of value and 9 people to compare. This would be a terrible long report and would not be understood easily by our clients. It also suggest that we have a point standard or certain criteria that we use to make identifications.	I suggest getting rid of the numbers and keeping information in our reports clear and not lengthy. I also suggest getting rid of anything that has a value to it. We do not have points standards and I do not feel comfortable putting that on a report or even notes when it could be used against me in court.	Reject with modification. The purpose of this annex is to assist readers' understanding by illustrating situations in which each conclusion might be used. They are just examples and are not to be used to test conformance. This list is not representative of all possible situations that would justify a particular conclusion. Each conclusion used by an FSP needs to be supported based on FSP requirements. Clarifying language and qualifiers added and, where possible, specific numbers changed to broad verbal characterizations.
61	Annex A (now Annex B)	T	The first two examples given for Inconclusive are incomplete examinations. This leads two 2 different definitions for Inconclusive which makes the document confusing and unclear.	Examples of Inconclusive should be specific to actual examinations performed to be in line with definition for a conclusion. The first two examples should be removed.	Reject with modification. Clarifying language added.
62	Annex A (now Annex B)	T	The third example given for SSS is an incomplete example	The third example should be removed	Reject with modification. Clarifying language added.
70	Annex A (now Annex B)	T	examples of SDS and SSS are treated as standalone conclusions when they should be incorporated into an Inconclusive conclusion	move examples of SDS and SSS under examples of Inconclusive	Reject with modification. Titles of the 2 intermediate conclusions have been changed to "inconclusive with . . ."
80	Annex A (now Annex B)	T	use of the words "substantial", "strong", "weak", and "overwhelming" are vague and misleading in the examples given	remove use of the terms "substantial", "strong", "weak", and "overwhelming" from examples	Reject. These examples are not intended to be language used in reports.
81	Annex A (now Annex B)	T	Several examples includes use of the first person	reword examples to only include aspects of the data considered	Accept
82	Annex A (now Annex B)	T	the first example given under SSS is inappropriate and problematic. SSS implies an examination is close to being an ID and there is no support that 2 ridge endings in a tip has that level of specificity. This example will lead to associating individuals based on data that is common among large portions of the population. It is an overstated example with the potential of being used to falsely associate individuals to evidence with no support	remove this example from the document	Reject with modification. Example clarified. To be clear SSS does not imply almost ID. This is why an example with weak support was provided.
83	Annex A (now Annex B)	T	the word "informative" under Annex A is unnecessary as the first statement in Annex A states that the examples are informative	remove "(informative)" from under Annex A	Reject. ASB Style
84	Annex A (now Annex B)	T	Inconsistent use of a comma after "i.e." in examples	add a comma after each instance of "i.e." for consistency	Accept
85	Annex A (now Annex B)	T	bracket used instead of a parenthetical in the first example given under Inconclusive	use a parenthetical instead of a bracket for consistency	Reject with modification. Fixed in accordance with ASB style.
86	Annex A (now Annex B)	T	presence of "For example" not needed after the conclusion titles since the first statement in Annex A states that everything below is an example	remove "for example" after each conclusion in Annex A	Reject. The informative nature of examples was not clear to many other commenters.

#	Section	Type of Comment (E-	Comments	Proposed Resolution	Final Resolution
95	Annex A (now Annex B)	T	The conclusion examples are extremely detailed and complex.	Remove these lengthy examples or at least make it clear we are not held to this type of report conclusion so we are not unintentionally forced to do so by an accrediting body.	Reject with modification. The purpose of this annex is to assist readers' understanding by illustrating situations in which each conclusion might be used. They are just examples and are not to be used to test conformance. This list is not representative of all possible situations that would justify a particular conclusion. Each conclusion used by an FSP needs to be supported based on FSP requirements. Clarifying language and qualifiers added and, where possible, specific numbers changed to broad verbal characterizations.
173	Annex A (now Annex B)	T	Nearly all the examples provided include some sort of numerical reference/criterion. My concern is this is getting dangerously close to a numerical standard. I share this concern to make sure ASB is not pushing the discipline in this direction, given the qualitative nature of what this standard purports to cover.	Remove numerical references from examples.	Reject with modification. The purpose of this annex is to assist readers' understanding by illustrating situations in which each conclusion might be used. They are just examples and are not to be used to test conformance. This list is not representative of all possible situations that would justify a particular conclusion. Each conclusion used by an FSP needs to be supported based on FSP requirements. Clarifying language and qualifiers added and, where possible, specific numbers changed to broad verbal characterizations.
174	Annex A (now Annex B)	E	Formatting inconsistencies between the presence and lack of commas following "(i.e)"	Add necessary commas after i.e. in: SDS (first 2 examples) and Source Identification (first example)	Accept
175	Annex A (now Annex B)	E	Should "i.e" (that is) actually be "e.g" (for example)?	Make the change to e.g. if that is the correct abbreviation to use.	Reject. These are explanations, not examples.
251	Annex A (now Annex B)	T	It states these are "Examples" but what are these examples to be used for? Is this the type of documentation expected in our notes for each and every print examined? While incredibly thorough, this type of documentation is not realistic for normal casework.	Clarify what these examples are for AND make it clear that we are not held to this type of documentation standard so that no accrediting body can require us to note this type of detailed information.	Accept with modification. The purpose of this annex is to assist readers' understanding by illustrating situations in which each conclusion might be used. They are just examples and are not to be used to test conformance. This list is not representative of all possible situations that would justify a particular conclusion. Each conclusion used by an FSP needs to be supported based on FSP requirements. Clarifying language and qualifiers added and, where possible, specific numbers changed to broad verbal characterizations.
263	Annex A (now Annex B)	T, E	The term "overwhelming correspondence" is confusing. It is not clear that readers of a forensic science report will know what that means. If this term is to be used in reporting it should be defined in this standard. If, as I expect, there is no objective definition of this term, and it refers simply to the examiner's impression that the observed data are very much more likely under the proposition of same source than different source, then the reporting language should make that clear. Otherwise, readers of reports are likely to be misled.	Change the phrase "Similar overwhelming correspondence..." to "Such substantial correspondence.. " wherever it occurs in the Annex. Also, eliminate the use of passive voice (e.g., "...would not be expected...") and rewrite all such sentences in active voice to communicate that the expectations in question are those of the examiner. For example, change "Similar overwhelming correspondence would not be expected in a different source" to "The examiner would not expect to observe such substantial correspondence in impressions from a different source."	Accept with modification. "Similar" changed to "such." Changed to "the examiner" in some places. In other places, passive voice used to signal objectivity. These examples are not intended to be language used in reports.

#	Section	Type of Comment (E-	Comments	Proposed Resolution	Final Resolution
305	Annex A (now Annex B)	T	Would like ASB to give further guidance on if these "examples" is related to notes or reports.	I am NOT in favor of these types of "examples" being used in reporting.	Reject with modification. The purpose of this annex is to assist readers' understanding by illustrating situations in which each conclusion might be used. They are just examples and are not to be used to test conformance. This list is not representative of all possible situations that would justify a particular conclusion. Each conclusion used by an FSP needs to be supported based on FSP requirements. Clarifying language and qualifiers added and, where possible, specific numbers changed to broad verbal characterizations.
306	Annex A (now Annex B)	T		If these examples stand - would like to see it phrased more like "If you have a situation where the unknown friction ridge impression is a clear whorl pattern with a distinctive core and no distortion or interpretation issues noted. The exemplars utilized for comparison of this source contained no whorl type patterns, and you therefore concluded that the impression could not have been left by the source being compared." then report out as "Source Exclusion" or Source - Exclusion, i.e., Substantial disagreement observed, evidence is in support for Source EXC."	Accept.
335	Annex A (now Annex B)	T	While I understand the purpose of Annex A I found some of the examples a little unrealistic. I am not sure two ridge endings in a tip constitutes SSS, weak or otherwise. Likewise, I would argue that unless it can be shown with data, five points around a delta is not strong support for same source. With no evidence against and five points around a delta, SSS seems appropriate but that qualifier of strong does not.	Again, data needs to drive the use of low or high in the degree of support for the SSS and SDS categories. Once an effective way to measure the support exists, then the low and high qualifier can be used. Furthermore, the SSS examples should be reworked. The example of the five points around the delta of the index finger and the six points in the hypothenar area are good but the others are not. I would also suggest that the AFIS example be removed unless it is to advocate for the use of a investigative lead. If that is the case it should be better explained and possibly add a disclaimer about using SSS from a database. However, six points around a delta does not, in my view, warrant a strong SSS and I would be very hesitant, even as an investigative lead, to release it in a report as such.	Accept with modification. Examples clarified. To be clear, SSS does not imply almost ID.
336	Annex A (now Annex B)	T	The use of the inconclusive category should be reworked. The five categorical conclusions should be seen as terminal conclusions. When all of the data and exemplars has been collected and available then a terminal conclusion can be made. If exemplars are needed the examination cannot be completed and therefore a terminal conclusion cannot be reached. This is a distinct category from inconclusive.	The use of a term similar to incomplete should be used when additional exemplars, tips, palms, feet, etc. are needed to complete the examination. Inconclusive is used as a terminal conclusion when nothing new would help in the decision making process. Using a category like incomplete should relay the idea that until the area needed is provided the examination cannot be completed.	Reject. Each conclusion used by an FSP needs to be supported based on FSP requirements.

#	Section	Type of Comment (E-)	Comments	Proposed Resolution	Final Resolution
343	Annex A (now Annex B)	T	One issue within this document is the inclusion of the word "discriminability." Research shows that there are certain key words within the English language that have a negative impact on the cognitive thought processes of an individual, thus affecting his/her emotional response to the word, the phrase, or even the individual stating such words. The word "discriminability," as a derivative of "discriminate" – a word with a long-standing history of injustice – is just such a key word (also referred to as a "target word"). It then stands to reason that there is a high risk that a juror hearing a word such as this would have a negative emotional response to the expert witness using such language. Such an emotional response could range from mild discomfort to a complete shut-out of the entire testimony.	Use a different word - perhaps some variation of "differentiate" or "distinguish"	Reject. This term is defined in TR 016
361	Annex A (now Annex B)	E	Please refer to the comments made to the Foreword and Section 4.	Please refer to the proposed resolutions for the Foreword and Section 4.	Reject. These examples are not intended to be language used in reports.
372	Annex A (now Annex B)	T	See comment above	Change to implement the suggestion above.	Reject. FRCB consensus is to continue to use terms "identification" and "exclusion."
333	Annex A (now Annex B), Support for Same Source, third example	T	"The lack of correspondence was due to the limited quality and quantity of information observed in the exemplar , the provision of further exemplars may assist in supporting a different conclusion." This is getting into dangerous territory in my opinion - you could report support for same source, request different exemplars, and then report an exclusion - especially in this specific example of 5 ridge endings around a delta. That can potentially lead to confusion. Worse, if the agency never sends in the exemplars that would have led to an exclusion, the "support for same source" report could end up in court and be completely misleading.	Any comparison that could be helped by the provision of further exemplars should only be reported as inconclusive (with the request for a specific area of friction ridge skin if some amount of correspondence was observed).	Reject with modification. If an SSS can be reached with existing information, but additional standards may allow a stronger conclusion, this is not an Inconclusive. Clarifying language added.
260	Annex A (now Annex B) Support for Same Source	E	Period needed at the end of the "i.e. statements" in the last two segments.	Insert necessary periods	Accept
216	Annex A (now Annex B) 4.3	E	Finish the sentence after "There were no observable anchor points...in the latent impression." with a period. Also add a comma after the word "observations" - "From my observations,..."	Split the run on sentence	Accept
226	Annex (now Annex B) section 4.3	T	This example doesn't seem to make sense. If the examiner isn't sure the target group is actually present in the latent why wouldn't they move to a different target group?	The example isn't helpful and should be removed.	Accept with modification. Language clarified. That is the only target group.
217	Annex A (now Annex B) 4.4	E	Insert the word "however" in the sentence "The suspected area of friction ridge detail was not available or represented in the provided exemplars; however, the provision of further exemplars may support a different conclusion."	Insert conjunction	Accept

#	Section	Type of Comment (E)	Comments	Proposed Resolution	Final Resolution
275	Annex A (now Annex B); 3rd example of SDS	T	This example of Support for Different Source conflicts with 4.3, the criteria for SDS, which states that observable dissimilarities need to exist.	Remove this example since it does not have the requirements stated.	Accept
277	Annex A (now Annex B); all examples of SDS	T	These examples are extremely subjective and based on assumptions. Words like ambiguous, not confident, and suspected area and orientation are used instead of having the area and orientation be clearly evident.	Remove examples of SDS since they are not based on data, they are based on assumptions and guesswork.	Reject. These examples are not intended to be language used in reports.
227	Annex section 4.5	T	This example seems to say that two ridge endings in correspondence and no other information should be support for same source. This seems extremely dangerous. We all know that two ridge endings in correspondence can be found in a latent impression and known print from different sources. Using this limited information to suggest support for same source is ridiculous and has the potential to bias the end user.	This example should be removed.	Reject with modification. Example clarified. To be clear, SSS does not imply almost ID. This is why an example with weak support was provided.
218	Annex A (now Annex B) 4.5 (page 8)	E	Insert the word "thus" in the sentence "The lack of correspondence was due to the limited quality and quantity of information observed in the latent impression, thus the provision of further exemplars will not assist in supporting a different conclusion."	Insert thus (or equivalent word).	Accept
219	Annex A (now Annex B) 4.5 (page 9)	E	Insert the word "thus" in the sentence "The lack of correspondence was due to the limited quality and quantity of information observed in the exemplar, thus the provision of further exemplars may assist in supporting a different conclusion."	Insert thus (or equivalent word).	Accept
107	Annex A (now Annex B), pg. 9	E	Punctuation needed at the end of the sentence of the paraphrased section for 4th example	Insert a period after the sentence, "On balance, the evidence in support is insufficient for a Source ID due to latent"	Accept
108	Annex A (now Annex B), pg. 9	E	Comma needed between words "impression" and "however" in 1st sentence of 5th example	Insert necessary comma	Accept
109	Annex A (now Annex B), pg. 9	E	Punctuation needed at the end of the sentence of the paraphrased section for 5th example	Insert a period after the sentence, "On balance, the evidence in support is insufficient for a Source ID due to AFIS"	Accept
110	Annex A (now Annex B) pg. 10	E	2nd example: comma needed between the words "detail" and "including" in 1st sentence	Insert necessary comma	Accept
111	Annex A (now Annex B) pg. 10	E	2nd example: remove comma between "i.e." and "Substantial"	Remove unnecessary comma	Reject with modification. Commas added elsewhere for consistency.

#	Section	Type of Comment (E)	Comments	Proposed Resolution	Final Resolution
112	Annex A (now Annex B) pg. 10	E	3rd example: remove comma between "i.e." and "Substantial"	Remove unnecessary comma	Reject with modification. Commas added elsewhere for consistency.
156	Annex B (now Annex C)	E	No definition of what NGI stands for	Define NGI acronym	Accept with modification. Acronym deleted.
373	Annex B (now Annex C)	E	If "[t]he goal of the bibliography is to provide examples of publications addressed in the standard," it should be deleted. Maybe I missed it, but is either publication mentioned in the standard?	Rewrite the sentence to state what the sentence is intended to say. I am not sure what that is.	Accept with modification. Bibliograpjy deleted.
374	Annex B (now Annex C)	T	A bibliography should lead the reader to materials that will clarify or justify (along with those that dispute) the choices made in the standard. This skimpy bibliography does neither.	Either expand the bibliography to meet normal scientific standards for a bibliography or pick out a few references that are the most important in the field (including, I would have thought, the book by Champod et al.), or just forego having a bibliography.	Accept. Bibliograpjy deleted.
289	Bibliography	T	The references do not seem to be relevant.	Either reference in the document where each are applicable or remove the references.	Accept. Bibliograpjy deleted.
90			As to whether or not to report out conclusions in "support for different sources" or "support for same source" should be a decision made by the reporting agency if they wish to include this range of conclusions. For those agencies that do wish to add this range of conclusions it should be required that the conclusion be qualified "that the result of this conclusion is only being provided for investigative purposes and that it should be understood that the comparison does not carry enough weight for source attribution or exclusion". The reason for qualification is my personal belief that running a course down this road could ultimately lead to many miscarriages of justice without the qualification.		No resolution proposed. Titles of the 2 intermediate conclusions have been changed to "inconclusive with . . ."
97			I just have a comment on the prospect of 5 conclusions instead of 3. I think it is confusing and would be more difficult to explain in court or to officers. Part of the problem is that all examiners are not on the same page with terminology this just makes things more confusing. I like having only 3 conclusions		No resolution proposed. Titles of the 2 intermediate conclusions have been changed to "inconclusive with . . ."
165	Linked to comment 163 and 164		There can be no value for either of these inconclusive results. The only way these could be interpreted beyond the inconclusive result could be potentially damaging to a viable defense or prosecution, without merit.		No resolution proposed. Titles of the 2 intermediate conclusions have been changed to "inconclusive with . . ."

#	Section	Type of Comment (E-	Comments	Proposed Resolution	Final Resolution
342			<p>I don't feel this document is ready for publication because there are many items that still need to be fixed or improved. Some examples include:
</p> <p>-The definitions are not in alphabetical order (resolution: put in correct order)
</p> <p>-I feel the definition of mutually exclusive is not correct. The current definition does not say that the two propositions cannot occur at the same time. Also, if mutually exclusive is being defined, I feel that it should be listed as an independent definition, not simply defined within another definition. (resolution: put as a definition and correct the definition)
</p> <p>-I feel that the difference between 'source identification', 'same source', and 'individualization' is not clearly stated. As an example, is 'support for same source' meaning 'support for source identification'? If these terms are being used differently then they should each be defined (which they are not). (resolution: words/phrases that are being used very specifically need to be defined to ensure the correct words are being used in the appropriate instance)
</p> <p>-I don't see how the references are relevant (resolution: reference where these are relevant within the document)
</p> <p>-I feel that 'support for same source' and 'support for different source' are both biasing the end user towards a conclusion (resolution: use wording for conclusions that is not biasing - i.e., change to 'consistency exists but not a sufficient amount to indication a potential source' and 'no consistency found, but does not mean that no consistency exists').
</p> <p>-I do not feel that giving options to use some or all of these conclusions meets the definition of a standard (or a best practice) since it does not state which conclusions are required (or best to use) (resolution: state which conclusions are required to be use and when they should be used)</p>		<p>- Accept. Alphabetized; - Reject. Dictionary definition of "mutually exclusive" is intended; - Reject. "support for same source" is not "support for source identification." "Same source" is a proposition, and "source identification" is a conclusion. Definitions are provided; - Accept; - Accept with modification. Titles of the 2 intermediate conclusions have been changed to "inconclusive with . . ."; - Reject. Examiners are not required to report any conclusion.</p>

	A	D	E	F	G	H
2	ASB Std 013, Standard for Friction Ridge Examination Conclusions					
3						
4						
5	#	Section	Type of Comment	Comments	Proposed Resolution	Final Resolution
6	41	Title - type of document	T	<p>The requirements in this document cannot be a 'Standard' with no means of arriving at the proposed requirements (the proposed conclusions). It does not hold up to the ASB definition of a standard which requires:</p> <p>"sets objectively verifiable requirements, provides for common and repeated use, rules or characteristics for activities or their results, and is aimed at the achievement of the optimum degree of order in a given context." - There cannot be repeated use until the rules for when to use these conclusions are provided.</p> <p>The annex supports that there are no requirements as it states that users 'might' use the conclusions in this manner. The annex says, "The purpose of this annex is to assist readers' understanding by illustrating situations in which each conclusion might be used. They are just examples and are not to be used to test conformance."</p> <p>By definition, the way this document is written, it falls under the category of a guidance document (which was not an option when this document was proposed). Now that a guidance document is an option, the title of this document needs to be changed.</p>	Change this to a 'guidance' document	Reject. Please note that comments on a re-circulation are generally accepted only on revised section of a document. Comments made on text not revised from the previous public comment period are generally not accepted.
7	42	Title of Document	T	The title of the document says it is about examination conclusions, however, inspecting an item for latent prints is also a type of examination and results in a conclusion (e.g., no ridge detail found) and therefore the title is not specific enough to indicate what is in the document.	Change the title from, "...Friction Ridge Examination Conclusions" to be "...Friction Ridge Comparison Conclusions" or "...Friction Ridge Source Conclusions".	Reject. Please note that comments on a re-circulation are generally accepted only on revised section of a document. Comments made on text not revised from the previous public comment period are generally not accepted. .
8	40	Document as a whole	T	<p>I do not feel that this proposal can be appropriately assessed without a finalized document on the process that leads to conclusions (i.e., these conclusions are dependent on other information and cannot be assessed in isolation).</p> <p>A quick evaluation of possible conclusions shows there are conclusions that are not listed in this proposal (e.g., easy tenprint identification vs. an identification with limited and/or ambiguous information). This document recognizes the importance of subdividing different 'inconclusive' conclusions and requires to state the weight of inconclusive conclusions, but does not recognize the importance of subdividing different 'identification' conclusions and stating the associated weight. Subdividing the 'identification' category is a necessary requirement to included in a discipline 'Standard'. Not recommending these additional conclusions is equivalent to telling doctors that it is 'Standard' to simply determine that a bone is broken without indicating if it is a hairline fracture or a compound fracture.</p>	Hold any assessment of this document until foundational documents are available.	Reject with modification. Holding documents for other documents could lead to an endless cycle. Regarding subdividing identification, that's the whole point of the 5 bins. If it's not a clear identification, it should go in "support". If there is limited/ambiguous information it should not be an identification.
9	111	General	T/E	The content in this document does not meet the requirements for a standard or best practice recommendation. The ASB manual states, "The requirements in a Standard are expressed as imperative sentences or stated in 'shall' language..." It also notes, "When writing a standard, the use of other verb forms, such as 'should', 'may', or 'can', are allowed only when their use is necessary to explain a secondary aspect of a requirement such as an option." The document includes limited 'shall' statements, and instead often resorts to "may" or "can" statements which are not in support of a prior requirement. Furthermore, a best practice recommendation is a document which "identifies and sets forth the optimal way to carry out an action or actions". As proposed, there is not a basis for describing this as optimal.	Rewrite this document as a Technical Report on the state of the science, where it's going, and what needs to be done to develop this as a standard.	Accept with modification. Document has been edited for consistency with ASB requirements for a Standard.
10	112	General	T/E	The added scale on degree of support of source conclusions (strong, moderate, weak) is questionable. Diving these two categories into random subcategories allows for nine proposed conclusions as opposed to the original five. This is a huge change that is not supported by thorough research.	Research must be performed establishing the reliability and validity of these conclusion categories before including it in a proposed standard.	Reject with modification. This document is consensus-based, not research based. Although some characterization of the degree of support is required, the category labels "weak" and "moderate" are not.
11	113	General	T/E	There should be a bibliography available for review. We cannot assess the warrant for the claim without the evidence and the nature of the research that has been done contributes directly to what can be said about forensic conclusions.	Add a bibliography.	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.
12	134	general		<p>I do not feel as though the document is usable (or reviewable) until a document on how to arrive at these conclusions (i.e., the specific method (015)) is finalized. Once the method is fleshed out, we may find that the method results in other/different conclusions.
</p> <p>
</p> <p>I will send any other comments I may have in with the public comments.</p>		No resolution proposed.

	A	D	E	F	G	H
5	#	Section	Type of Comment	Comments	Proposed Resolution	Final Resolution
	15	Overall document	E + T	<p>Nowhere in this document does it make any distinction between sole source recorded print identifications and evidence print identifications. Thousands of recorded 10-print identifications are made to their sole source every day. The majority of these positive identifications are made using AFIS and most of these identifications are made without human intervention. Depending on the system being used, most identifications are made using just one or two fingers or thumbs, and just as with latent print identifications they rarely involve all the features of the entire print. The ability to provide unique identifications to a specific person is well established. It is supported by science and is now a billion dollar plus biometrics industry.</p> <p>This document could have generated some discussion 75 or 80 years ago. Today, it is not supported by the now well-established record of the field of friction ridge identification to make sole source identifications. This document ignores the current technology, the empirical knowledge gained through much experience, and extensive scientific research that supports the field.</p> <p>In addition to an established track record of success in identifying latent print evidence solving millions of crimes over the years, fingerprints are used to positively identify individuals for security clearances, background investigations, and to establish criminal history rap sheets. Rap sheet entries are made after the individual's identity has been verified by fingerprints. Would we now say that this criminal record is yours unless another person could share a mythical matching fingerprint that has never been found and is not supported by science? Do we go back and say that although we would not expect to see the same arrangement of features repeated in another impression, but it is always possible? This statement could provide a reasonable doubt to some jurors and perhaps grounds for appeal for previous convictions.</p> <p>The sliding scale of conclusions in this document is modeled after document examination conclusions. The variability of the features used for comparison in documents differs greatly from that of friction ridge skin. That is why latent print examiners who have compared these methods of identification in the past, have rejected such a sliding scale approach. It is not uncommon for opposing conclusions to be offered by different document examiners during litigation.</p> <p>This document is an example of a solution looking for a problem. This work appears to be partially based on the NAS report "Strengthening Forensic Science..." and the PCAST Report. Both of these reports were based primarily on the commentary of the authors and lack scientific research to support their positions. These reports have been partially debunked by the courts and through responses by professional organizations.</p> <p>For example, the 2009 NAS Report was rejected by the DC Court: United States v. Rashaun Gee, No. 10-CF-1494 (DC Cir. 2012) Affirmed Trial Court ruling that the 2009 NAS Report, "Strengthening Forensic Science in the United States: A Path Forward", is not a "learned treatise and cannot be read or quoted as a learned treatise as related to fingerprint evidence", and the California appellate court: People v. O.D. (2013) 221 Cal. App. 4th 1001; 164 Cal. Rptr. 3d 578; 2013 Cal. App. LEXIS 960. "Decisions from</p>	Re-think the need for this document.	Reject. A Standard for Conclusions has value.
13				Appellate court: People v. O.D. (2013) 221 Cal. App. 4th 1001; 164 Cal. Rptr. 3d 578; 2013 Cal. App. LEXIS 960. "Decisions from		
14	43	Scope	T	The scope has a 'may' in it, which seems to contradict the idea of this being a 'standard'.	Change the word 'may' to be 'shall'.	Reject with modification. ASB Manual, section 11, states Scopes should not contain "shall" OR "may." Sentence edited.
15	114	Scope	T/E	If the standard does not include the listed topics, it must be clarified whether these topics are covered in other standards.	It should be stated whether there are standards or BPRs for the topic areas not covered in this document. If there are, it must be referred to, and if not, then this standard cannot be established until all others are available.	Reject. ASB Manual, section D.5.1, does not suggest including references to other documents when describing what the document does not include.
16	94	1	T	First bullet starting with "conclusions derived..." is redundant. It is also the manner by which an assessment can be made which is stated in the second bullet of this section. both statements deal with how the conclusion is reached; utilizing a statistical model as the basis for measuring the weight of an examination is the same as an examiner utilizing their skill and experience as the basis for the weight they give a comparison and the conclusion they reached. These are the same concepts and should be combined.	remove first bullet from Section 1	Accept.
17	8	3	E	The term Incomplete is mentioned several times but a definition is not provided.	Provide a definition for incomplete. The conclusion that the observed data within a set of exemplar impressions does not contain all of the necessary or appropriate parts and additional exemplar impressions would impact the support for one proposition over another.	Reject. Deictionary definition of "incomplete" is sufficient.
18	95	3	T	use of the word "source" in front of conclusions, exclusion, and identification conflicts with the limitation of not asserting source attributions. The inclusion of the word "source" in front of conclusions, exclusion, and identification is misleading. just because the use of the word "source" is defined in TR016 does not negate that it is misleading and conflicts with the limitation of not asserting "source" attributions. The basis of a rejection should include more basis than not wanting to update another document to ensure the overall quality of documents being published.	remove the word "source" from in front of the terms "conclusion", "exclusion", and "identification" throughout entire document	Reject with modification. The use of the word "source" is not intended to refer to "source attribution," but to distinguish it from identification of class of objects (e.g., drugs). A Revision to the NOTE in section 4.6 has been added to clarify this. The CB feels the use of the word source is still necessary to distinguish the "new" meaning of "identification" from the "old" meaning.
19	96	3	T	needed - definition for incomplete (see comments #10 and #11 for additional information and proposed resolution). Issue still remains that incomplete does not mean the same thing as inconclusive; incomplete is the lack of a comparison being completed while inconclusive is a complete comparison but support for a conclusion is lacking. For clarity, incomplete should be removed from the umbrella of inconclusive and be addressed separately or completely removed from document if it is outside the scope of the document	define incomplete in document as "A determination that the observed data in the latent impression cannot be fully compared to an exemplar due to a lack of data present within the exemplar to complete the examination. A conclusion cannot be reached until additional exemplars are submitted for examination	Reject. Deictionary definition of "incomplete" is sufficient.

	A	D	E	F	G	H
5	#	Section	Type of Comment	Comments	Proposed Resolution	Final Resolution
20	118	3	T	The definitions of correspondence, disagreement, dissimilarity, and similarity are not standard in the field. Defining correspondence as a group of similarities and defining dissimilarity as a group of disagreements is confusing and non-standard. It is especially confusing to define disagreement as "a dissimilarity" and then to define dissimilarity as "not to be confused with disagreement". Even further, the words conformity and nonconformity are included in these definitions without being defined themselves. (Note: This was a weakness of the original OSAC document as well.)	Simplify these definitions to more standard terms where correspondence, similarity, conformity, and agreement are essentially synonyms describing the same concept. Same for dissimilarity, nonconformity, disagreement, and difference.	Reject. These terms are shared across many Friction Ridge Consensus Body documents. The FRCB's master terminology document, TR 016, has been submitted for public comment. Please comment directly on that document.
21	73	3 vs. 4.1 vs. 4.2 and 4.6 vs. Annex	T	The document seems to conflict with itself (or perhaps it just needs to be clarified to reduce potential conflicts in understanding). -Sections 3 and 4 say to use the terms source identification and source exclusion. -Yet in section 5 it states not to indicate that two impressions were made by the same source. Stating 'source identification' IS indicating that two impressions were made by the same source, even if that is not the intent. -Additionally, the abbreviations say you can use ID and EXC without the word 'source'. If it is unnecessary to use the word 'source' then a person should be able to use the word 'identification' and 'exclusion' without the word 'source' in front of it. -However, the last paragraph of section 4.1 says that these are to be used "only as written and described in 4.2 through 4.6". -The abbreviations used in the annex do not follow the abbreviations stated. Instead of using ID and EXC, the annex uses source ID and source EXC. -And, the note in section 4.6 says that 'source identification' is not the same as the use of identification.	Decide on the direction of the standard and make sure the entire document is in line with the desired direction. Otherwise people can pick and choose how to interpret the standard, and the parts they wish to follow (the document says to 'use as stated' but then it is stated differently in the definitions). Standards should be clear, not interpretable. If the standard is to be interpreted as a person/agency sees fit then the document is simply window dressing, and not standardizing or improving anything.	Accept. The use of the word "source" is not intended to refer to "source attribution," but to distinguish it from identification of class of objects (e.g., drugs). A Revision to the NOTE in section 4.6 has been added to clarify this. The CB feels the use of the word source is still necessary to distinguish the "new" meaning of "identification" from the "old" meaning. With regard to the abbreviations, given that the terminology document, TR 016, is currently out for public comment, Working Group 013 will make a comment on it suggesting the commentor's proposed change.
22	45	3.1 use of 'conclusion' throughout the document	T	4.1 says, "A conclusion shall be expressed as an opinion", yet throughout the document conclusions are expressed as 'conclusions'.	Express results as opinions as indicated in the standard. Then there is no need to define 'conclusion' and the definition can be removed.	Reject. The Consensus Body shares the concerns about the term "conclusion" and notes a recent OSAC document discouraging use of the term in new documents going forward. However, the CB is not satisfied with OSAC's definition of the term "opinion," and notes that the term "conclusion" is widely used. Ultimately, the CB prefers to retain the term "conclusion" for the time being while remaining open to consideration of a transition to a better defined term, such as "opinion" or something else.
23	44	3.1	T	The definition for 'conclusion' seems to assume a symmetric relationship between the words conclusion and opinion simply because the word 'conclusion' sounds better than the word opinion. Stating that a conclusion is an opinion is giving a synonym, not a definition, but not a correct synonym for the situation at hand. A conclusion is not always an opinion (it may be a person's opinion that a latent was deposited by a suspect but the opinion is not a conclusion unless it can be supported with data). The error here is similar to assuming that a rectangle is a square simply because a square is a rectangle. An opinion may change, a conclusion is final (i.e., conclude, come to an end). Additionally, the current definition is too narrow and does not account for other possible 'conclusions' (it only accounts for comparison conclusions). Example: I may process a gun and conclude that there were no friction ridge details worth capturing or retaining. The current definition does not allow for this, or other, important 'conclusions' (processing, value determinations, and source conclusions). This is stated in the scope and therefore it may be better to define 'comparison conclusions' instead of just the word 'conclusion'.	Use the word 'opinion' throughout the document for the sake of honesty and transparency; this would also alleviate other parts of the document that currently sound like overstatements. Or, change the definition of conclusion to be, "The end result that is reported out." This definition works for any type of conclusion and does not conflict with the scope on what is not included in this document. Or, define 'Source Conclusion' instead of 'Conclusion'.	Reject. The Consensus Body shares the concerns about the term "conclusion" and notes a recent OSAC document discouraging use of the term in new documents going forward. However, the CB is not satisfied with OSAC's definition of the term "opinion," and notes that the term "conclusion" is widely used. Ultimately, the CB prefers to retain the term "conclusion" for the time being while remaining open to consideration of a transition to a better defined term, such as "opinion" or something else.
24	87	3.1	T	The use of "personal judgement" discounts the knowledge, training and expertise of an examiner and implies that it is a personal decision, not a professional decision/opinion/conclusion.	Update to state "professional judgement"	Accept. Given that the terminology document, TR 016, is currently out for public comment, Working Group 013 will make a comment on it suggesting the commentor's proposed change.
25	18	3.2	T	Definition of Correspondence states "...in the same relative position to each other, with associated intervening ridge counts" but does not mention orientation or direction of friction ridge features which must also be same/similar	Consider revising to "...in the same relative position and orientation/direction to each other, with associated intervening ridge counts."	Reject. These terms are shared across many Friction Ridge Consensus Body documents. The FRCB's master terminology document, TR 016, has been submitted for public comment. Please comment directly on that document.
26	116	3.2	E	The definition of correspondence needs clarification that the observation of features must be similar as well as not dissimilar in any way.	Change to, "An accumulation of similarities <i>and an absence of dissimilarities</i> between two impressions resulting in overall conformity."	Reject. These terms are shared across many Friction Ridge Consensus Body documents. The FRCB's master terminology document, TR 016, has been submitted for public comment. Please comment directly on that document.

	A	D	E	F	G	H
5	#	Section	Type of Comment	Comments	Proposed Resolution	Final Resolution
79		3.2, 3.3, 3.4, 3.17, 3.10	T	<p>Difference, discordance, dissimilarity, disagreement, similarities, correspondence, agreement – the use of different definitions for words that are synonyms in the English language has caused considerable confusion within the friction community. In training classes I can tell you, without a doubt, that everyone uses these terms differently. This document is continuing the confusion with dissimilarity/disagreement and correspondence/similarity. In a comparison, examiners do not know “ground truth” of disagreement or agreement (or correspondence or disagreement), just like they don’t know ground truth of “source”. The inability to correctly assess differences is a leading cause of false exclusions in numerous studies. Each time a region of skin contacts a surface, the features of the skin are recorded with major or minor variations (differences) in appearance. Differences between impressions of the same region of skin are dependent on the circumstances of touch (distortion). The more similar the circumstances of touch, the more similar the impressions should look. Ideally, the value of the similarities in the features far outweighs the value of any differences when the two impressions are made by the same source. There can, however, be significant differences between impressions from the same source that impact the ultimate source conclusion.</p> <p>Impressions from different regions of skin can share similarities due to the shared development and morphology of the hands and feet. These shared characteristics permit predictions of anatomical region and distal orientation of the questioned print and focus the analyst’s attention on certain regions of the known prints for side-by-side comparison. Once the analyst is focused on a particular region of the known, significant differences between the two impressions, particularly in the noisier features, should become readily detected when the two impressions originated from different sources. Ideally, the value of the differences far outweighs the value of any coincidental similarities when the two impressions are made by different sources. There can, however, be significant similarities among impressions from different source skin that impact the ultimate conclusion. The ease of interpretation of the similarities and differences is influenced by four primary factors:</p> <ul style="list-style-type: none">•Humans share some similarities due to the common general form and developmental processes of the hands and feet•Impressions from the same source skin inevitably display differences•The amount and diversity of features available in the impressions•The ability of the examiners to detect the features <p>Due to humans sharing some similarities and each impression from the same source displaying some variation, there will inevitably be both similarities and differences between the latent and known print. This is expected because the similarities found during the search are typically what lead to the side-by-side comparison. With sufficient number or diversity of features or unambiguous interpretation of the details, the differences are often readily resolved, and a conclusion appropriately supported. If there is limited number or diversity of features or ambiguity in the interpretation of those features, it may be difficult to resolve the similarities and differences and determine if 1) the impressions came from the same source but are displaying unexpected differences or 2) the impressions came from different sources but are displaying unexpected similarities.</p>	<p>3.2 Correspondence- delete 3.3 Disagreement – delete 3.4 Dissimilarity – replace with difference definition below 3.17 Similarity – edit below</p> <p>Similarity – observation of likeness in the appearance of specific features or features sets among friction ridge impressions Difference – observation of dissimilarities in the appearance of specific features or feature sets among friction ridge impressions.</p> <p>I propose limiting the terms to similarities and differences and then tying in how the examiner weighs these in the conclusions section. I advocate the choice of “similarities and differences” rather than “similarities and dissimilarities” because “similarities and differences” are plain English, easier to say when testifying (don’t result in tongue tying), which also makes these terms easier to follow during testimony. If “dissimilarity” is included in the definition for difference, then I think 3.10 “inconclusive with dissimilarities” is ok as is, but changing to “inconclusive with differences” adds consistency.</p>	<p>Reject. These terms are shared across many Friction Ridge Consensus Body documents. The FRCB’s master terminology document, TR 016, has been submitted for public comment. Please comment directly on that document.</p>
27						
46		3.3	T	<p>The definition of disagreement: “A dissimilarity... <u>resulting in overall nonconformity</u>” seems to be circular reasoning because the feature, or features, can be labeled after the conclusion is derived (the way the definition is written, the label of disagreement is dependent on the conclusion, which is circular reasoning). Unless the intent is to say ‘Disagreement is when there is sufficient dissimilarity for a source exclusion’. If that is the intent, then this should be clarified so the definition is not circular (if a feature is labeled first, and then a conclusion determined, then it is circular reasoning).</p>	<p>Modify the definition of disagreement to state that disagreement is independent from the conclusion, or a factor leading to a conclusion (as it appears is the intent from reading section 4.2) If disagreement is not independent from the conclusion then clarify that ‘disagreement’ is based on the conclusion (or determined by the conclusion); and then modify 4.2 to go in line with the definition.</p>	<p>Reject. These terms are shared across many Friction Ridge Consensus Body documents. The FRCB’s master terminology document, TR 016, has been submitted for public comment. Please comment directly on that document.</p>
28						
47		3.3	T	<p>It is unclear if features are labeled as disagreement prior to arriving at a conclusion.</p>	<p>Clarify in the definition of 3.3 (disagreement) to state when features are labeled (prior to a conclusion or after a conclusion). The definitions should state that this designation is considered (is a factor) when arriving at conclusions, if it is used for this.</p>	<p>Reject. These terms are shared across many Friction Ridge Consensus Body documents. The FRCB’s master terminology document, TR 016, has been submitted for public comment. Please comment directly on that document.</p>
29						
48		3.3	T	<p>Is ‘overall nonconformity’ a source exclusion? The definition of disagreement seems reliant on the amount of dissimilarity and then determines a conclusion of overall nonconformity. It seems as though disagreement is a source exclusion since only 4.2 and the example in the Annex of ‘source exclusion’ discuss disagreement.</p>	<p>If ‘overall nonconformity’ is a source exclusion then add an i.e., source exclusion. If it is not a source exclusion then explain what is meant by ‘overall nonconformity’ and give an example in the Annex that shows the meaning and how it is to be used.</p>	<p>Reject. These terms are shared across many Friction Ridge Consensus Body documents. The FRCB’s master terminology document, TR 016, has been submitted for public comment. Please comment directly on that document.</p>
30						
49		3.3	T	<p>A definition (for disagreement) should not list requirements; stating the required result is stating a requirement (the way it is currently worded).</p>	<p>Remove the requirement of “... resulting in overall nonconformity” from the definition and put it in the body of the document. (i.e., Make the definition stand on its own without being reliant on the conclusion. Then put this requirement in the body of the document.)</p>	<p>Reject. These terms are shared across many Friction Ridge Consensus Body documents. The FRCB’s master terminology document, TR 016, has been submitted for public comment. Please comment directly on that document.</p>
31						
50		3.3	T	<p>How is disagreement determined? If an examiner cannot determine a discrepancy (the common term that has been used in the discipline), instead of refraining from using the term discrepancy, a new word is being suggested (disagreement), but the parameters to establish disagreement are still unclear/undefined. It also appears that, by this definition, to support the one dissimilarity rule which was written about by Thornton as dogma in 1977. If there is no way to differentiate between a feature/detail is a dissimilarity or disagreement prior to arriving at a conclusion then there is no value in using these designators.</p>	<p>State how disagreement is determined (vs. dissimilarities). It appears that the difference is that disagreement is when there is enough dissimilarities to exclude but this is not clear (it is very vague). This is also a great example of why the foundational documents are needed in order to assess this document.</p>	<p>Reject. These terms are shared across many Friction Ridge Consensus Body documents. The FRCB’s master terminology document, TR 016, has been submitted for public comment. Please comment directly on that document.</p>
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5	#	Section	Type of Comment	Comments	Proposed Resolution	Final Resolution
33	51	3.4	T	In the definition of dissimilarity, what is a 'general' difference of appearance.	Remove the word 'general' from the definition of dissimilarity.	Reject. Please note that comments on a re-circulation are generally accepted only on revised section of a document. Comments made on text not revised from the previous public comment period are generally not accepted.
34	52	3.4	T	It is unclear if features are labeled as dissimilarities prior to arriving at a conclusion; during a comparison.	Clarify in the definition of 3.4 (dissimilarity) to state when features are labeled (prior to a conclusion or after a conclusion). The definitions should state that this is "a factor in arriving at conclusions", if they are used for this.	Reject. Please note that comments on a re-circulation are generally accepted only on revised section of a document. Comments made on text not revised from the previous public comment period are generally not accepted.
35	34	3.7	E	The definition of friction ridge skin can be worded in a more simple, parentheses free, manner.	The definition of friction ridge skin could read, "The skin found on the palmar surface on the hands and the plantar surface of the feet".	Reject. These terms are shared across many Friction Ridge Consensus Body documents. The FRCB's master terminology document, TR 016, has been submitted for public comment. Please comment directly on that document.
36	35	3.8	E	The word produced in the first sentence seems redundant.	The definition of friction ridge impression could read, "A reproduction of an area of friction ridge skin on a substrate by contact or transfer.	Reject. These terms are shared across many Friction Ridge Consensus Body documents. The FRCB's master terminology document, TR 016, has been submitted for public comment. Please comment directly on that document.
37	53	3.8	T	The definition of impression states that an impression is from friction ridge skin. This is not always the case, an impression needs to be assessed in order to determine if it is friction ridge skin. Many sprue marks have been mis-identified as a FR impression. Sprue marks are impressions that need to be captured and retained for assessment in order to determine if the impression is from friction ridge skin. Additionally, if an impression 'appears' to be friction ridge detail then the impression would need to be compared.	Change the definition of impression to allow for impressions that may appear to be friction ridge skin, since these types of impressions are a reality of the discipline, and these types of impressions still need to be compared.	Reject. These terms are shared across many Friction Ridge Consensus Body documents. The FRCB's master terminology document, TR 016, has been submitted for public comment. Please comment directly on that document.
38	54	3.8	T	Definition of 'impression': A definition should not have a should, shall or may statement in it.	Remove the last sentence as it is not a definition, or Change the 'may' statement to be an e.g. statement.	Reject. These terms are shared across many Friction Ridge Consensus Body documents. The FRCB's master terminology document, TR 016, has been submitted for public comment. Please comment directly on that document.
39	19	3.9	E	If "data" is being used in a plural sense it should be "The conclusion that the observed data do not provide more support for one proposition over the other."	change "data does not provide" to "data do not provide"	Accept. Given that the terminology document, TR 016, is currently out for public comment, Working Group 013 will make a comment on it suggesting the commentor's proposed change.
40	55	3.9	T	The current definition of inconclusive mentions 'observed data', which allows for some data not to be considered (e.g., I didn't observe that). The definition should be regarding all data.	Change the definition in 3.9 to remove the word 'observed'.	Reject. "Observed data" is a deblaterately chosen fundamental term that cuts across multiple friction ridge documents
41	56	3.9	T	The abbreviation of INC is too vague and could be used for several words (one may conclude that more exemplars are needed and therefore the comparison process is incomplete (INC)). If I were reviewing a case from another agency, I could not tell the courts what the meaning of INC is and therefore it is not a helpful abbreviation. If the definition is stated to show abbreviations used in this document (not for the FR community) then it is only used once in this document and is not necessary in that place and could, and should, be removed.	Remove the abbreviation in the definition and in the visual because it causes more issues than it solves.	Accept. Given that the terminology document, TR 016, is currently out for public comment, Working Group 013 will make a comment on it suggesting the commentor's proposed change.
42	4	3.10.	T	The use of term "inconclusive" to define a non neutral conclusion is misleading.	Change conclusion back to previous language. Support for different source.	Reject. The Consensus Body acknowledges the statistical conflict between "inconclusive" indicating a likelihood ratio close to 1 being and the statement of support indicating a significanatly larger or smaller likelihood ratio. The CB is concerned that "support for . . ." conclusions will be misinterpreted to be stronger than they are intended. The CB was not able to find alternate conclusion labels that address both concerns and command a consensus of the group and feel the current labels will help facilitate the transition to a 5- conclusion scale.
43	57	3.10.	T	The current definition of inconclusive with dissimilarities mentions 'observed data', which allows for some data not to be considered (e.g., I didn't observe that). The definition should be regarding all data.	Remove the word 'observed' in the definition.	Reject. "Observed data" is a deblierately chosen fundamental term that cuts across multiple friction ridge documents
44	58	3.10.	T	"Inconclusive with dissimilarities" is not something that needs to be defined. Inconclusive is already defined. The 'With dissimilarities' part is not a different conclusion (i.e. not a definition), it is a reason for an inconclusive conclusion.	Remove 3.10 as it is unnecessary to include the reason for a conclusion within the definition of the conclusion.	Reject. Definition is useful and provides equivalence with other conclusions
45	59	3.10.	T	It does not appear that the word 'inconclusive' is being used different in this document than the standard meaning and therefore does not need to be defined.	Remove 3.10 as it is unnecessary and adds nothing informative.	Reject. Definition is useful and provides equivalence with other conclusions
46	9	3.10	E	Inconclusive with similarities is an inferior term and incompatible with likelihood ratio terminology for what this is meant to represent (a letter has been included)	Return language to the pre-redlined copy using "Support" statements for qualified conclusions of association/non-associations.	Reject. The Consensus Body acknowledges the statistical conflict between "inconclusive" indicating a likelihood ratio close to 1 being and the statement of support indicating a significanatly larger or smaller likelihood ratio. The CB is concerned that "support for . . ." conclusions will be misinterpreted to be stronger than they are intended. The CB was not able to find alternate conclusion labels that address both concerns and command a consensus of the group and feel the current labels will help facilitate the transition to a 5- conclusion scale.
47	92	3.10	T	In order to maintain language consistency for our conclusion scale (and therefore understandable for the court), we need to use the same language in the source exclusion and inconclusive dissimilarities definitions. Currently one definition uses "substantially stronger support" and the other uses "more support". These could be interpreted as the same conclusion by some individuals when presented as a stand alone definitions, thereby eliminating our attempt at a distinction.	Update to state "...the observed data provide stronger support for the proposition..."	Accept. Given that the terminology document, TR 016, is currently out for public comment, Working Group 013 will make a comment on it suggesting the commentor's proposed change.

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5	#	Section	Type of Comment	Comments	Proposed Resolution	Final Resolution
48	5	3.11	T	The use of term "inconclusive" to define a non neutral conclusion is misleading. Inconclusive with similarities does not mean that both options are equally likely and therefore is not an inconclusive. Using the term inconclusive when the definition of the term is that there is support for same source is misleading with regards to the weight of the evidence. The use of inconclusive in this way is not consistent with other forensic disciplines. Footwear currently divided the Support for same source into three categories, Limited association of class characteristics, Association of class characteristics, and high degree of association. FRS offers similar cut of points when there are different levels of detail (1st 2nd, and 3rd) in agreement and different amounts of detail in agreement.	Change conclusion back to previous language. Support for same source.	Reject. The Consensus Body acknowledges the statistical conflict between "inconclusive" indicating a likelihood ratio close to 1 being and the statement of support indicating a significantly larger or smaller likelihood ratio. The CB is concerned that "support for..." conclusions will be misinterpreted to be stronger than they are intended. The CB was not able to find alternate conclusion labels that address both concerns and command a consensus of the group and feel the current labels will help facilitate the transition to a 5-conclusion scale.
49	10	3.11	E	Inconclusive with dissimilarities is an inferior term and incompatible with likelihood ratio terminology for what this is meant to represent.	Return language to the pre-redlined copy using "Support" statements for qualified conclusions of association/non-associations.	Reject. The Consensus Body acknowledges the statistical conflict between "inconclusive" indicating a likelihood ratio close to 1 being and the statement of support indicating a significantly larger or smaller likelihood ratio. The CB is concerned that "support for..." conclusions will be misinterpreted to be stronger than they are intended. The CB was not able to find alternate conclusion labels that address both concerns and command a consensus of the group and feel the current labels will help facilitate the transition to a 5-conclusion scale.
50	60	3.11	T	The current definition of inconclusive with similarities mentions 'observed data', which allows for some data not to be considered (e.g., I didn't observe that). The definition should be regarding all data.	Remove the word 'observed' in the definition.	Reject. "Observed data" is a debarriered chosen fundamental term that cuts across multiple friction ridge documents
51	61	3.11	T	"Inconclusive with similarities" is not something that needs to be defined. Inconclusive is already defined. The 'With similarities' part is not a different conclusion (i.e., not a definition), it is a reason for an inconclusive conclusion.	Remove 3.11 as it is unnecessary to include the reason for a conclusion within the definition of the conclusion.	Reject. Definition is useful and provides equivalence with other conclusions
52	93	3.11	T	In order to maintain language consistency for our conclusion scale (and therefore understandable for the court), we need to use the same language in the source identification and inconclusive similarities definitions. Currently one definition uses "substantially stronger support" and the other uses "more support". These could be interpreted as the same conclusion by some individuals when presented as a stand alone definitions, thereby eliminating our attempt at a distinction.	Update to state "...the observed data provide stronger support for the proposition..."	Accept. Given that the terminology document, TR 016, is currently out for public comment, Working Group 013 will make a comment on it suggesting the commentor's proposed change.
53	128	3.14	E	The definition adds little to the lay understanding of the word (yes, probability has something to do with chance) and therefore does not help the reader understand the standard.	Delete the section	Reject. The Consensus Body has heard numerous concerns about understanding of the notion of probability and think a definition is helpful.
54	62	3.15	T	The definition for proposition is incorrect, a proposition is not a hypotheses. A hypotheses is something that can be tested and, after testing, may lead to a proposition.	Fix the definition so that it is accurate or refrain from using the term proposition in the document.	Accept. Given that the terminology document, TR 016, is currently out for public comment, Working Group 013 will make a comment on it suggesting changing "hypotheses" to "statements."
55	115	3.15	E	The definition of proposition is confusing as it refers to other words which also use proposition in their definitions.	Clarify this definition.	Accept. Given that the terminology document, TR 016, is currently out for public comment, Working Group 013 will make a comment on it suggesting deleting 2nd sentence.
56	36	3.16	E	For exemplar impression you list "Exemplar impression, exemplar or known, and exemplar prints" as the header for the definition. To make sure the document is uniform, latent impression should be listed up with questioned impression as the header for the definition. Also, the definition states that it is from an unknown source, but in the second line it states it can be from a known source which is contradictory.	Add latent impression to the definition header underneath questioned impression and remove the portion of the definition that comes after the semicolon.	Reject. Please note that comments on a re-circulation are generally accepted only on revised section of a document. Comments made on text not revised from the previous public comment period are generally not accepted.
57	88	3.16	T	A questioned impression cannot be considered questioned if it is coming from a known source. Second portion of definition is unnecessary and repetitive of the first portion.	Delete last portion of the definition: "it can include latent impressions, impressions from an unknown source or a known source."	Reject. Please note that comments on a re-circulation are generally accepted only on revised section of a document. Comments made on text not revised from the previous public comment period are generally not accepted.
58	99	3.17	T	the definition of "proposition" is inaccurate and conflicts with its use in the document. Propositions and hypotheses are different concepts but the definition implies that they are similar and can be used interchangeably. The definition as written conflicts with the work in the friction ridge discipline as we do not deal with states of nature. definition still is not in line with what a proposition is; a proposition is not the same thing as a hypothesis and changing the definition to be used interchangeably goes against the generally accepted distinction within science. A proposition is an indirectly tested relationship stated as a declarative statement derived at through deductive or inductive reasoning and should be stated as such.	reword definition to be in line with how it's used in science and logic and in order to not conflict with document. Proposed wording would be "a conjectural relationship between concepts that is stated in a declarative form. Propositions cannot be tested directly and are instead tested indirectly by examining the relationship between observed data. Propositions are generally arrived at through deductive or inductive reasoning and must be able to be empirically tested through data."	Accept with modification. Given that the terminology document, TR 016, is currently out for public comment, Working Group 013 will make a comment on it suggesting changing "hypotheses" to "statements."
59	100	3.17	T	example given for a proposition conflicts with the stated limitations with Section 5. the note still conflicts with the stated limitations and is problematic even if the intent is only to be informative	remove example from document	Accept. Given that the terminology document, TR 016, is currently out for public comment, Working Group 013 will make a comment on it suggesting the commentor's proposed change.

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5	#	Section	Type of Comment	Comments	Proposed Resolution	Final Resolution
60	78	3.18	T	Source is a person, not a set of exemplar prints. There is incredible confusion within the friction ridge community and within the criminal justice system about what "exclusion" means - agencies around the country are all over the map. I have seen numerous reports indicating exclusion because examiners could not find it; however, exclusion is completely inappropriate given the exemplars they used in the case. This is because many agencies have simply substituted "No identification" (lack of an ID) for "exclusion" and have not changed their actual practices. There needs to be a standardization of source being a person to avoid the confusion and align friction ridge with the other forensic disciplines. If the examiner is unsure of the anatomical region or orientation of the latent print and unsure that all the necessary friction ridge skin of a person has been adequately recorded - the appropriate conclusion is inconclusive with a request for additional exemplar impressions. The examiner must decide, for each questioned impression in a case, if the exemplar prints of the source (person) are adequately recorded to support an exclusion (was not made by this person) decision. This is highly illustrated in the palm black box study by Heidi Eldridge and the lack of skill assigning search parameters, even when the latent could be found in the exemplar palm provided for comparison. Telling examiners that it is ok to "exclude" based on whatever exemplars are provided without emphasizing that they are excluding a PERSON and must ensure that the exemplars have all necessary regions recorded to support the exclusion based on their assigned search parameters is a disservice and provides no guidance or standardization. AFIS candidate lists are not exclusions, nor exclusions of everyone in the database, because the examiner is only presented with one sample of a finger or palm of the subject for comparison. AFIS amounts to a negative screen against a database.	Source - the friction ridge skin of an individual.	Reject. This term is shared across many Friction Ridge Consensus Body documents. The FRCB's master terminology document, TR 016, has been submitted for public comment. Please comment directly on that document.
61	63	3.19	T	There are two titles in 3.19, Source Exclusion and EXC, these are not the same as indicated in note from 4.6. If two titles are desired, they should be 'Source Exclusion' and 'S. EXC'. If an EXC is the same as a Source Exclusion then there is no point in suggesting the term 'Source Exclusion', just use the term 'Exclusion'. If EXC is a replacement for Source Exclusion in the document then in the Annex the replacement would end up saying the word 'source' twice. "... evidence is in support for Source EXC-Source Exclusion".	Remove the abbreviation because it conflicts with other information in the document (abbreviations are not listed for 'inconclusive with dissimilarities' and 'inconclusive with similarities' and it causes more problems than clarifies anything. Then remove the abbreviation from all other areas.	Accept. Given that the terminology document, TR 016, is currently out for public comment, Working Group 013 will make a comment on it suggesting the commentor's proposed change.
62	80	3.19	T	Source exclusion - see comments above under 3.18	Source exclusion - the conclusion that the observed features provide substantially stronger support for the proposition that the questioned impression originated from a different source and not the given person being compared.	Reject. This term is shared across many Friction Ridge Consensus Body documents. The FRCB's master terminology document, TR 016, has been submitted for public comment. Please comment directly on that document.
63	135	3.19		I disagree with the definition of Source Exclusion (Section 3.19) and with the source conclusion category of Source Exclusion (Section 4.2). I hold with the view that an observer can, within a framework of articulated assumptions, hold an opinion that a proposition of common source is disproved by the data. I believe that to hold otherwise denies the basic tenants of the scientific method. As a practitioner, I would be unable to accept this version of Standard 013 for my conclusions as it does not allow for the rejection of the hypothesis of common source. I hold that we should not seek or expect symmetry on the conclusions scale. The opinion of source exclusion does not mirror that of source identification. Most importantly, the sources for uncertainty are quite different. In a conclusion of strong association (i.e. Source Identification) what separates a certainty from substantially strong support is the inability of our cumulative observations of corresponding detail to prove the proposition. (We don't prove that a hypothesis is true by failing to reject it and accumulating data supporting it.) In a conclusion of disassociation (rejecting the proposition of association), any residual uncertainty for absolute rejection of the proposition of common source lies in the validity of the assumptions, the quality of the data, and the rigor of the examination. These sources of uncertainty can be articulated and critically evaluated. After an examination we can reject the proposition of common source, if, based on the observed data, we (1) conclude that the questioned and exemplar impressions are true representations of the friction ridge skin that made them, and (2) find, through exhaustive comparative observations, that no portion of friction ridge skin represented by the exemplar could have made the questioned impression. (We do, in fact, disprove the hypothesis, within the framework of the articulated assumptions.)		Reject. No resolution proposed.
64	37	3.19/4.2	T	The definition as it reads does not account for latent to latent comparisons. It states "originated from a different source than the exemplar impressions compared" but not all comparisons are completed with exemplar impressions. The definition should be along the same lines as source identification in that it should simply state "originated from a different source rather than the same source".	Change the definition to read, "The conclusion that the observed data provide substantially stronger support for the proposition that the questioned impression originated from a different source rather than the same source.	Reject. In most cases, a Source Exclusion cannot be made from a latent-to-latent comparison. In those rare cases in which it can, FSP policy can allow the use of the Source Exclusion conclusion for those cases.
65	20	3.20	E	If "data" is being used in a plural sense it should be "The conclusion that the observed data provide substantially stronger support for the proposition that the two impressions originated from the same source rather than different sources."	Remove "s" from "provides"	Accept. Given that the terminology document, TR 016, is currently out for public comment, Working Group 013 will make a comment on it suggesting the commentor's proposed change.
66	89	3.20	E	Delete "s" at the end of "provides" to be consistent with source exclusion statement and the rest of the document.	Update "provides" to "provide"	Accept. Given that the terminology document, TR 016, is currently out for public comment, Working Group 013 will make a comment on it suggesting the commentor's proposed change.

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5	#	Section	Type of Comment	Comments	Proposed Resolution	Final Resolution
67	64	3.20.	T	<p>There are two titles in 3.20, Source Identification and ID, these are not the same as indicated in note from 4.6. If two titles are desired, they should be Source Identification and SID.</p> <p>There is no need to state a term AND give an abbreviation for the term. By trying to add too much information, the document conflicts with itself. If it is a replacement in the document for Source Identification, then, when replacing it, there would be many places that say the word 'source' twice, "Source-ID Source Identification".</p> <p>If an ID is the same as a Source Identification then there is no point in suggesting the term 'Source Identification', just use the term 'Identification' (but the note in 4.6 indicates they are not the same thing so this definition conflicts with the note in 4.6).</p>	Remove the abbreviation throughout the document because it conflicts with other information in the document and causes more issues than it solves.	Accept. Given that the terminology document, TR 016, is currently out for public comment, Working Group 013 will make a comment on it suggesting the commentor's proposed change.
68	130	Section 4	T	While the definition of "source identification" in this proposal makes clear that this is not an absolute identification, the longstanding practice in the field of using "identification" as an absolute identification, the lay understanding of "source identification" as an absolute identification, and the continuing practice by some in the field of expressing identification as an absolute identification argues for making the title fit the definition more closely.	The category should be retitled to fit the definition and avoid the use of identification. A possibility would be "Strong Support of Common Source".	Reject. The CB has considered comments like this in the past and voted to keep the term "source identification." Please see previous comment resolutions.
69	21	4.1	E	Change 'it' to 'that or which' "...because it is an interpretation of observed data made by the examiner, (it) is inherently subjective."	Change it to that or which	Accept
70	22	4.1	E	Remove and only from "...shall only select one of these conclusions, (and only) as written..."	remove "and only", redundant	Reject. Redundancy is intentional for clarity.
71	38	4.1	E	The first line is repetitive. The portion "when reaching a conclusion" can be removed. Also, it should read "may be reached" versus "selected".	Have the first line read, "This document defines the five conclusions that may be reached by examiners after comparing friction ridge impressions".	Accept with modification. Section edited, repetition eliminated and "selected" replaced with "reached."
72	65	4.1	T	<p>Section 4.1 states, "Similarities generally provide support for the proposition that two impressions originated from the same source". This is not true even in a general sense. Many delta areas share a 'general likeness' in features, but this does not provide support for the proposition. I think the intended word is 'inclusive' which is very different than 'provides support'.</p> <p>A method that uses the term 'provides support' for any inclusive data is promoting overstatements with a bias towards looking for 'confirming' information.</p>	<p>Remove the last two sentences of the first paragraph of section 4.1, as the information is inaccurate, misleading, and shows practitioners are biased towards Source ID's:</p> <p>"Similarities generally provide support for the proposition that two impressions originated from the same source, while dissimilarities generally provide support for the proposition that two impressions originated from different sources."</p>	Accept with modification. Sentence deleted and section edited.
73	81	4.1	E	Replace "dissimilarities" with "differences"		Reject. No rationale given.
74	101	4.1	T	no general statement provided for when an examination cannot be completed due to lack of exemplars. issue still remains that incomplete does not mean the same thing as inconclusive; incomplete is the lack of a comparison being completed while inconclusive is a complete comparison but support for a conclusion is lacking. For clarity, incomplete should be removed from the umbrella of inconclusive and be addressed separately or completely removed from document if it is outside the scope of the document	include a general statement regarding incomplete examinations. Wording should say something like: If there is evidence to support that the area being examined in an unknown friction ridge impression is not recorded in the known exemplars or from an area of friction ridge skin that has no submitted exemplar for comparison, for example a foot impression, no conclusion shall be reached. The examination will be listed as Incomplete with a request that additional exemplars be submitted for comparison	Reject with modification. Section 4.4 has been edited to make clearer that "Inconclusive" included what are called "Incomplete" examinations.
75	109	4.1	E	The last sentence of paragraph 2 is a run on and has 2 independent clauses separated by only a comma which is grammatically incorrect.	Add a period after the statement "not as a fact" and have the statement starting with "because it is..." be a separate sentence.	Accept with modification. Sentence edited.
76	129	4.1	E	"Probability" does not need to be modified, and it's not clear what is meant by "relative" here.	The sentence should instead read: "An examiner considers the probability of the data (the observed similarities and dissimilarities) under the hypothesis that the two impressions originated from the same area of skin and compares it to the probability under the hypothesis that they originated from a different area of skin." This formulation also avoids the ambiguity in "source."	Accept with modification. Sentence edited.
77	117	4.1 (Figure 1)	T	The note here states that the figure is not to scale, however that statement needs clarification.	Need to state that the size of the boxes is not correlated to the relative magnitude of the frequency of these conclusions.	Reject. The commenter has correctly interpreted the statement, and we think other readers will too.
78	6	Figure 1	T	Using inconclusive to describe conclusions that are not neutral is misleading.	Use version of graph with Support for Different/Same source.	Reject. The Consensus Body acknowledges the statistical conflict between "inconclusive" indicating a likelihood ratio close to 1 being and the statement of support indicating a significantly larger or smaller likelihood ratio. The CB is concerned that "support for . . ." conclusions will be misinterpreted to be stronger than they are intended. The CB was not able to find alternate conclusion labels that address both concerns and command a consensus of the group and feel the current labels will help facilitate the transition to a 5-conclusion scale.
79	66	4.1 Figure	T	It appears there are 5 conclusions, but there are really 9 if the blue boxes are broken down (4.3 and 4.5 state the use of these conclusion shall be broken down further). Or, there may be 3 conclusions (SID, Inconclusive and SEXC). The additional information is the reason for the conclusion, not a separate conclusion. Source ID needs to be broken down as well, the strength for SID is actually more valuable information for the courts than the strength of an inconclusive (to assess the risk of error).	Add to the figure that the range of weak, moderate or strong for source identifications is also required.	Reject. The Consensus Body agrees with the point, but does not feel the discipline is ready to offer guidance on subdivisions of this conclusion with sufficient precision and clarity.

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5	#	Section	Type of Comment	Comments	Proposed Resolution	Final Resolution
80	16	4.2	E & T	As written the conclusion is very confusing and redundant.	Recommend it be rewritten and clarified as follow: Source exclusion is the conclusion that there is a strong disagreement present that the examiner would not expect to see that level of disagreement in an impression from the same source.	Reject. While the Consensus Body acknowledges an element of redundancy, it feels there is value in the proposition framework used in the first sentence.
81	23	4.2	E	"exemplar impressions compared"	Change to: "exemplar impression to which it is compared"	Accept
82	67	4.2	T	If disagreement leads to a source exclusion then there is no need for 4.2 to look for 'strong disagreement'.	Remove the adjective of Strong in 4.2 or change 'strong disagreement' to be 'sufficient dissimilarities, per FSP policy'.	Reject. Weak disagreement does not warrant a Source Exclusion conclusion
83	82	4.2	T	Update definition of exclusion and description	Source exclusion is the conclusion that the observed features provide substantially stronger support for the proposition that the questioned impression originated from a different source and not the given person being compared. The following conditions must be met in order to render an exclusion: 1) the existence of the observed differences between the questioned print and the exemplar prints are attributed to the impressions originating from different sources, rather than differences in appearance from the same source; 2) any observed similarities, if present, are highly likely coincidental rather than due to originating from the same source; 3) all appropriate search parameters (anatomical regions and orientations) have been applied to the comparison; 4) the exemplar prints of the individual being compared contain all necessary regions of the skin to support the conclusion that another person made the questioned impression.	Reject. The CB finds the proposed language too detailed for the Standard for Conclusions. Some of the proposed language is out of scope of this standard and falls within the scope of the Standard for Examination.
84	119	4.2	T	This section describes source exclusion as "substantially stronger support" and then later that there is "strong disagreement". First, I believe that the phrase "extremely strong support" is a more accurate, easier to remember, and easier to explain concept than "substantially stronger support". Second, there is an internal inconsistency in this section between "substantially stronger" and "strong". While this is a minor point when looking at this section by itself, it becomes a problem when comparing this section to 4.3. The Inconclusive with Dissimilarities section defines the degrees of support "may range from weak to moderate to strong". Using the same term (strong) in both the Exclusion and IWD sections will result in significant confusion.	A - Revert to "extremely strong support" instead of "substantially stronger support". B - Ensure that the "strong" term is always qualified in section 4.2 as "extremely strong" or "substantially stronger". Do not let "strong" exist without the higher qualification in this section since "strong" is already used in section 4.3.	Accept B with modification. The Consensus Body previously rejected the phrase "extremely strong." "Strong" has been eliminated from all sections except 4.2 and 4.6. With regard to the internal consistency within section 4.2, we find no inconsistency because "substantially strong" refers to a comparison, whereas "strong" refers to a measure in isolation.
85	68	4.2 and 4.6 verbiage (compared to 5b and 5e)	T	It seems contradictory to say certain words cannot be used because they have no standardized meaning or measurement (e.g., degree of certainty in section 5), while other words/phrases are being promoted that are more persuasive yet also have no standardized meaning or measurement. For example, section 5 says not to use phrases like 'reasonable degree of scientific certainty' or 'practical certainty' because these terms have no standard meaning. However, section 4.2 and 4.6 use phrases such as, 'substantially stronger support' which also has no standard measurement or meaning. The terms 'substantial' and 'stronger' are more persuasive than the words 'reasonable' or 'practical'. Are the words 'substantial' and 'strong' only being allowed and recommended because they have not been called out by a prestigious group yet?	Remove and refrain from using persuasive words that have no measurement or standardized meaning (otherwise known as gobbledygook). Change the phrase of 'substantially stronger support' to a statement that can be substantiated to be true or false, or change the word 'conclusion' to 'opinion' throughout the document to clarify that results are simply opinions.	Reject. Section 5 no longer says "degree of certainty" is prohibited because of a lack of standardized measurement
86	24	4.3	E	Add comma after present, ", and a lack of correspondence present (,) such that..."	add comma	Accept
87	25	4.3	E	Add comma after strong, "from weak to moderate to strong (,) or similar descriptors of the degree of support."	add comma	Accept
88	83	4.3	T	Needs to be updated for consistency with exclusion definition - consider change to "Inconclusive with differences"	Inconclusive with differences is the conclusion that the observed features provide more support for the proposition that the questioned impression originated from a different source and not the given person being compared; however, there is insufficient support for source exclusion. One of the following conditions must be met in order to render this conclusion: 1) any observed similarities, if present, are more likely to be coincidental rather than due to same source and observed differences are significant and more probable if the questioned impression was made by a different source or 2) the questioned impression or the comparison of a given individual does not meet an agency's criteria for issuing an exclusion conclusion. The degree of support may range from weak to moderate to strong or similar descriptors of the degree of support. Any use of this conclusion shall include a statement of the degree of support and the factors limiting a stronger conclusion.	Reject. The CB finds the proposed language too detailed for the Standard for Conclusions. Some of the proposed language is out of scope of this standard and falls with the scope of the Standard for Examination.
89	90	4.3	T	In order to maintain language consistency for our conclusion scale (and therefore understandable for the court), we need to use the same language in the source exclusion and inconclusive dissimilarities statements. Currently one statement uses "substantially stronger support" and the other uses "more support". These could be interpreted as the same conclusion by some individuals when presented as a stand alone statements, thereby eliminating our attempt at a distinction.	Update to state "...the observed data provide stronger support for the proposition..."	Reject. The consensus body has chosen to keep the word "strong" in the two extreme categories (4.3 and 4.6) and the term is not used in the other categories, only "weak" and "moderate" are used in the other categories, to avoid confusion.

	A	D	E	F	G	H
5	#	Section	Type of Comment	Comments	Proposed Resolution	Final Resolution
90	120	4.3	T	While this document maintains the OSAC proposed 5-conclusion scale, using the term "Inconclusive" in 3 of the 5 conclusions will only continue confusion within the field and confusion with forensic customers. I have firsthand experience presenting the term "Inconclusive with Similarities" at a Daubert hearing. It was extremely difficult for the judge and attorneys to understand the difference between IWS and regular inconclusive. At the time (~2013), there was not another good option available to the field. The Support for Same Source and Support for Different Source wording clearly separates these conclusions from the regular Inconclusive conclusion and clearly describes the separation between these and the full Exclusion or ID conclusions. Specifically, Exclusion has extremely strong support for the different source proposition, while SDS only has moderate or weak support for different source. Returning to the OSAC proposed terminology will also better align the friction ridge discipline with other forensic fields that have expanded conclusion scales.	Replace "Inconclusive with Dissimilarities" with "Support for Different Sources".	Reject. The Consensus Body acknowledges the statistical conflict between "inconclusive" indicating a likelihood ratio close to 1 being and the statement of support indicating a significantly larger or smaller likelihood ratio. The CB is concerned that "support for . . ." conclusions will be misinterpreted to be stronger than they are intended. The CB was not able to find alternate conclusion labels that address both concerns and command a consensus of the group and feel the current labels will help facilitate the transition to a 5-conclusion scale.
91	26	4.4	E	If "data" is being used in a plural sense it should be "Inconclusive is the conclusion that the observed data do not provide more support for one proposition over the other."	change "data does not provide" to "data do not provide"	Accept
92	39	4.4	T	The inconclusive conclusion should be retitled "Incomplete". The two new inconclusive conclusions (inconclusive with dissimilarities and inconclusive with similarities) cover the scenarios when a comparison can be done and features are observed. If you use the term incomplete, the incomplete conclusion would be for those scenarios where a comparison cannot be completed (Ex. low quality knowns or not correct exemplars - plantar vs. palmar). It is referenced as incomplete in the examples in Annex A, but they technically do not mean the same thing. Incomplete would be more appropriate.	Change the inconclusive conclusion to incomplete and add a definition in section 3.	Reject with modification. The "inconclusive" conclusion is not intended to refer only to incomplete examinations. It also refers to cases in which the evidence offers equal support for the two hypotheses. Section 4.4 has been edited to make clearer that it includes incomplete examinations.
93	102	4.4	T	need an additional statement that no additional exemplars from a compared exemplar will lead to a different conclusion to be consistent with an Incomplete examination. issue still remains that incomplete does not mean the same thing as inconclusive; incomplete is the lack of a comparison being completed while inconclusive is a complete comparison but support for a conclusion is lacking. For clarity, incomplete should be removed from the umbrella of inconclusive and be addressed separately or completely removed from document if it is outside the scope of the document. This statement is still useful for an inconclusive.	add the statement "No additional exemplars submitted for the source compared would lead to a different conclusion."	Reject with modification. The "inconclusive" conclusion is intended to include incomplete examinations. Section 4.4 has been edited to make clearer that it includes incomplete examinations.
94	27	4.5	E	Add 'the' to, "...if the impressions have (the) same sources.	Add "the"	Accept
95	28	4.5	E	Add comma after the same sources, "the same sources (,) than different sources."	Add comma after same sources	Reject. We think without the comma is clearer.
96	28	4.5	E	Add comma after to strong, "from weak to moderate to strong (,) or similar descriptors of the degree of support."	add comma	Accept
97	84	4.5	T	Needs to be updated with the manner in which examiners weigh similarities and differences	Inconclusive with similarities is the conclusion that the observed features provide more support for the proposition that the impressions originated from the same source rather than different sources; however, there is insufficient support for source identification. To render this decision, the examiner must opine that the observed similarities are more likely to be due to the impressions coming from the same source rather than coincidental and that any observed differences, if present, are more likely due to distortion rather than the impressions originating from different sources. The degree of support may range from weak to moderate to strong or similar descriptors of the degree of support. Any use of this conclusion shall include a statement of the degree of support and the factors limiting a stronger conclusion.	Reject. The CB finds the proposed language too detailed for the Standard for Conclusions. Some of the proposed language is out of scope of this standard and falls with the scope of the Standard for Examination.
98	91	4.50	T	In order to maintain language consistency for our conclusion scale (and therefore understandable for the court), we need to use the same language in the source identification and inconclusive similarities statements. Currently one statement uses "substantially stronger support" and the other uses "more support". These could be interpreted as the same conclusion by some individuals when presented as a stand alone statements, thereby eliminating our attempt at a distinction.	Update to state "...the observed data provide stronger support for the proposition..."	Reject. The consensus body has chosen to keep the word "strong" in the two extreme categories (4.3 and 4.6) and the term is not used in the other categories, only "weak" and "moderate" are used in the other categories, to avoid confusion.
99	121	4.5	T	While this document maintains the OSAC proposed 5-conclusion scale, using the term "Inconclusive" in 3 of the 5 conclusions will only continue confusion within the field and confusion with forensic customers. I have firsthand experience presenting the term "Inconclusive with Similarities" at a Daubert hearing. It was extremely difficult for the judge and attorneys to understand the difference between IWS and regular inconclusive. At the time (~2013), there was not another good option available to the field. The Support for Same Source and Support for Different Source wording clearly separates these conclusions from the regular Inconclusive conclusion and clearly describes the separation between these and the full Exclusion or ID conclusions. Specifically, Identification has extremely strong support for the same source proposition, while SSS only has moderate or weak support for different source. Returning to the OSAC proposed terminology will also better align the friction ridge discipline with other forensic fields that have expanded conclusion scales.	Replace "Inconclusive with Similarities" with "Support for Same Source".	Reject. The Consensus Body acknowledges the statistical conflict between "inconclusive" indicating a likelihood ratio close to 1 being and the statement of support indicating a significantly larger or smaller likelihood ratio. The CB is concerned that "support for . . ." conclusions will be misinterpreted to be stronger than they are intended. The CB was not able to find alternate conclusion labels that address both concerns and command a consensus of the group and feel the current labels will help facilitate the transition to a 5-conclusion scale.
100	11	4.6	E	It is unclear if "substantially stronger" is meant to be an ordinal modifier on the strength of support. You have weak, moderate, strong support under Inconclusive with FIS. Is "substantially stronger" greater than "strong support"? Is this your version of "extremely strong support" as found in the OSAC doc? If so, why not leave it as "extremely strong support" and be clear that this is a higher level of support (a higher category) than "strong support".	Replace "substantially stronger" with "extremely strong support" and be clear in figure 1 that this is a higher magnitude of support.	Reject. The Consensus Body previously rejected the phrase "extremely strong." "Strong" has been eliminated from all sections except 4.2 and 4.6. With regard to the internal consistency within section 4.6, we find no inconsistency because "sustantially strong" refers to a comparison, whereas "strong" refers to a measure in isolation.

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5	#	Section	Type of Comment	Comments	Proposed Resolution	Final Resolution
101	17	4.6	E & T	As written the conclusion is very confusing and redundant.	Recommend it be rewritten and clarified as follows: Source identification is the conclusion that there is strong correspondence present that the examiner would not expect to see the same arrangement of features repeated in an impression from another source.	Reject. While the Consensus Body acknowledges an element of redundancy, it feels there is value in the proposition framework used in the first sentence.
102	30	4.6	E	Period after "source" is not consistent with similar sentence in 4.2	Remove period after "source".	Accept
103	69	4.6	T		Add the same statement that is in 4.3.and 4.5 to source identification: "Any use of this conclusion shall include a statement of the degree of support (weak, moderate or strong)."	Reject. The Consensus Body agreeswith the point, but does not feel the discipline is ready to offer guidance on subdivisions of this conclusion with sufficient precision and clarity.
104	85	4.6	T	Needs to be updated with the manner in which examiners weigh similarities and differences	Source identification is the conclusion that the observed features provide substantially stronger support for the proposition that the questioned impression originated from the given person being compared rather than a different source. To render this decision, the examiner must opine that the observed similarities are strong enough that the examiner would not expect to find a similar set of features repeated in the population under consideration and any observed differences, if present, can be attributed to distortion. Note: Source identification does not correspond to the meaning of identification historically in the discipline; that two impressions were made by or originated from the same source or imply individualization to the exclusion of all others.	Reject. The CB finds the proposed language too detailed for the Standard for Conclusions. Some of the proposed language is out of scope of this standard and falls with the scope of the Standard for Examination.
105	103	4.6	T	Note is not consistent with the definition within the document as Source Identification is being used the same way it has been historically been used no matter how worded. the ASB did not address this comment. The basis of the disagreement needs to be stated. Simply saying you disagree with no reasoning indicates you are only interested in putting forth dogma regardless of whether or not there is a sound basis for it and is disrespectful to the community taking their time to offer assistance on these documents.	remove NOTE from Section 4.6	Reject. The Note is necessary because FSP and stakeholders which have overstated the weight of the identification conclusion in the past (as, e.g., absolute and conclusive).
106	104	4.6	T	not all Identifications are the same and it should be stated as such in Section 4.6 for clarity. there are still degrees of "substantially" stronger IDs. A 150 point ID with no distortion is very different from a 20 point ID with distortion. There is no distinction given on what constitutes a "substantially" strong ID versus other IDs. Use of adjectives with no criteria or definition will lead to inconsistencies in how this document is used which defeats the purpose of proposing "standard" documents	include a sentence at the end of Section 4.6 that states: The degree of support may range from limited (complex) to strong (basic) or similar descriptors.	Reject. The Consensus Body agreeswith the point, but does not feel the discipline is ready to offer guidance on subdivisions of this conclusion with sufficient precision and clarity.
107	122	4.6	T	This section describes source identification as "substantially stronger support" and then later that there is "strong correspondence". First, I believe that the phrase "extremely strong support" is a more accurate, easier to remember, and easier to explain concept than "substantially stronger support". Second, there is an internal inconsistency in this section between "substantially stronger" and "strong". While this is a minor point when looking at this section by itself, it becomes a problem when comparing this section to 4.5. The Inconclusive with Simiarities section defines the degrees of support "may range from weak to moderate to strong". Using the same term (strong) in both the Identification and IWS sections will result in significant confusion.	A - Revert to "extremely strong support" instead of "substantially stronger support". B - Ensure that the "strong" term is always qualified in section 4.6 as "extremely strong" or "substantially stronger". Do not let "strong" exist without the higher qualification in this section since "strong" is already used in section 4.5.	Accept B with modification. The Consensus Body previously rejected the phrase "extremely strong." "Strong" has been eliminated from all sections execpt 4.2 and 4.6. With regard to the internal consistency within section 4.6, we find no inconsistency because "sustantially strong" refers to a comparison, whereas "strong" refers to a measure in isolation.
108	12	4.6 examples, p.10	E	Your examples consistently are inconsistent with the use of modifiers. This is meant to be an ordinal scale with increasing magnitude of strength of LR. In your 3 examples for SOURCE ID, you have "substantial correspondence", "overwhelming correspondence", whereas 4.2 source exclusion doesn't use this language but instead has a posterior probability "it is highly unlikely that the impression could have been left by the source";	Have a clear scale of magnitude (see Cook, Evett, et al. 2000 using a verbal scale and these qualified modifiers should be consistent throughout document. ID = there was extremely strong support for the proposition that LP and K1 are from the same source; Strong support for same source = there was strong support for the proposition that LP and K1 are from the same source, etc.	Reject with modification. The Consensus Body acknowledges the statistical conflict between "inconclusive" indicating a likelihood ratio close to 1 being and the statement of support indicating a significantatly larger or smaller likelihood ratio. The CB is concerned that "support for . . ." conclusions will be misinterpreted to be stronger than they are intended. The CB was not able to find alternate conclusion labels that address both concerns and command a consensus of the group and feel the current labels will help facilitate the transition to a 5-conclusion scale. However, the posterior probability in the first example for section 4.2 in the Annex has been corrected, and the consistency of qualified modifiers throughout the document has been attended to.

	A	D	E	F	G	H
5	#	Section	Type of Comment	Comments	Proposed Resolution	Final Resolution
109	70	5- title of section 5	T	The title of 'Limitations' does not indicate the recommendations stated below the word 'Limitations'. Limitations are associated with a method, i.e., what are the limitations of the method. The items listed are not limitations, they are requirements for articulation.	<p>Reword 5a-5f to be stated as limitations of the method. For instance, they could be restated as limitation by saying:</p> <p>a) Conclusions are not absolute facts. b) Confidence in the conclusion does not represent accuracy. c) Conclusions are not infallible and do not have a zero or measurable error rate. d) Past performance is not a measure of accuracy for a current comparison. e) Statements of certainty are not appropriate since certainty is currently unmeasurable. f) Uniqueness is not proven and is not justification for any conclusion.</p> <p>Additionally, it would be more professional to relist like items together (a and c; b and e; and then d and then f). a) and c) are both about conclusions, b and e are both about confidence and certainty.</p>	Accept with modification. Title changed to "Prohibitions" and items reordered. The section was originally framed as limitations of the method. However, the Consensus Body decided the section really concerns prohibitions on statements made in the course of rendering conclusions, not limitations of the method. Friction ridge examiners are required to address limitations of the method by the Standard for Reporting Results.
110	131	Section 5	T	he scale. But having appropriately prohibited language suggesting a zero or negligible error rate, and language prohibiting an ident	<p>Change section 5's title to Prohibitions. Provide further guidance for examiners with respect to error rates and the absence of an empirical basis on which to estimate how many other people might have a finger (palm, foot) with a corresponding set of ridge features.</p> <p>Add a section addressing the limitations of the proposed conclusion categories, including that the proposed categories, and in particular the categories of "some support for", have not been validated (e.g., empirically tested for repeatability, reproducibility and accuracy on case-like samples).</p>	Accept with modification. Title changed to "Prohibitions". Limitations of method are out of scope of the document. Friction ridge examiners are required to address limitations of the method by the Standard for Reporting Results.
111	71	5	T	An obvious limitation is that that there are no requirements for when to use each conclusion, requirements are either per FSP or the belief of the practitioner.	<p>Add the limitation that states, g) Conclusions are inherently subjective as they are the opinions of the examiner.</p> <p>This is listed in 4.1 but is such an important concept that it is valuable to have it in both sections.</p>	Reject with modification. The title of the section has been changed to Prohibitions. It is now a list of porhibitions, not a list of limitations.
112	105	5	T	the fourth bullet is not always an option when testifying and should be reworded	reword to say: An examiner shall not cite the number of friction ridge comparisons performed in their career as a measure for the accuracy of a conclusion offered in the case at hand in an examination report.	Reject. While it may not always be posible to avoid citing the number of comparisons, it should always be possible to avoid citing it as a measure of accuracy.
113	106	5	T	No qualification or limitation related to an Investigative Lead generated from an AFIS search	add the following under Section 5: If an investigative lead is being reported out on an Inconclusive AFIS candidate, it shall be noted on the report that the investigative lead does not assert or imply an Identification to the reported candidate. the assumption that it "should" be evident is irrelevant and ignores what happens in real casework; it is not always evident to those reading reports that "inconclusive" does not imply "identification" and needs to be clarified in a report as a quality assurance measure to mitigate the risk of an inconclusive result from an AFIS search having overstated weight when investigating/arresting/prosecuting an individual	Reject. This is out of scope of this document and may be covered by the documents Best Practices for ABIS or the Standard for Reporting Results.
114	7	5 f	E	The first part of the sentence is overly restrictive. The concept of the uniqueness of skin is very well supported as is the concept of biological uniqueness. The science behind pattern fomation and genetic noise sports the theory that the skin itself is unique.	Limit the restriction to the second half of the sentence that the concept of the uniqueness of FRS alone is not sufficient to justify a conclusion.	Reject. The supposed proof of uniqueness is a complicated question that depends heavily on how the supposedly "proven" uniqueness is defined. The CB disagree with the blanket statement that "uniqueness is proven" without further specification. The CB is also unconvinced of its relevance to offering friction ridge conclusions.

	A	D	E	F	G	H
5	#	Section	Type of Comment	Comments	Proposed Resolution	Final Resolution
115	13	5a	T	<p>The identification of a latent print to its sole source has been demonstrated, accepted, and embraced by the courts of the world for over one hundred years and has extensive legal and scientific precedence.</p> <p>The ability to accurately identify friction skin evidence to its sole source is proven and demonstrated every hour of every day. No human endeavor is or can be error free, but this should not be confused with or diminish the proven ability to identify prints to their sole source.</p> <p>By limiting the examiner to “not assert that two impressions were made by the same source” is requiring that the actual conclusion and the purpose of the examination should not be shared with the trier of fact. The role of the expert witness “...is to assist the trier of fact to understand the evidence...” FRE702. The expert witness provides expert opinion evidence that a lay person is not capable of forming. It is up to the trier of fact (jury) to accept or reject the opinion, see any typical expert witness jury instructions.</p> <p>“—there is tremendous variability among prints made by different fingers. This variability clearly provides a scientific basis for using fingerprints to distinguish individuals. AAAS, Forensic Science Assessments: A Quality and Gap Analysis- Latent Fingerprint Examination, P.18, September 2017.</p> <p>Even, the 2009 NAS report, Strengthening Forensic Science in the United States: A Path Forward, states that: “Because of the amount of detail available in friction ridges, it seems plausible that a careful comparison of two impressions can accurately discern whether or not they had a common source.” Page 142. Nowhere in the report does it suggest that we should abandon the use of sole source identifications.</p> <p>The Evaluation of Forensic DNA Evidence 1996 Committee on DNA Forensic Science: An Update, stated that DNA evidence will soon be reported as a unique identification as fingerprints are now. “We can confidently predict that, in the not-distant future, persons as closely related as brothers will be routinely distinguished, and DNA profiles will be as fully accepted as fingerprints now are. But that time has not yet arrived, and the winds of controversy have not been stilled. Hence this report”, Preface of the report.</p>	Remove from section 5a: assert that two impressions were made by the same source	Reject. Please note that comments on a re-circulation are generally accepted only on revised section of a document. Comments made on text not revised from the previous public comment period are generally not accepted.
116	Continued from cell above			<p>This has now happened, the first sole source testimony for DNA was admitted into evidence and upheld at the appellate court level. People v. Cua (2010), Cal.App.4th [No. A123756. First Dist., Div. Five. Jan. 3, 2011.].</p> <p>The report went on to state: “The history of fingerprints offers some instructive parallels with DNA typing (Stigler 1995). Francis Galton, the first to put fingerprinting on a sound basis, did an analysis 100 years ago that is remarkably modern in its approach”. Page 56, NAS DNA report1996.</p> <p>Just as with DNA evidence today, fingerprint identifications were first supported by a statistical analysis during the early 1900’s, for example: “There were twenty-two points of similarity, which leaves no doubt that the two impressions were made by the same finger. Worked out in figures, the possibility of that being made by any other finger in ‘2384 billion chances to one”, The Star, New Zealand, 28 November 1906. That went away as more research and data was amassed that supports the fact that all areas of friction ridge skin are unique. History is now repeating itself with DNA analysis.</p> <p>DNA, just like friction ridge skin is unique to each individual. Biological uniqueness is not proven or disproven by statistics. There is overwhelming evidence that supports the uniqueness of friction ridge skin and more importantly there is no evidence to prove it is not unique.</p> <p>To borrow from the FBI response dated September 20, 2016 to the discredited and rejected PCAST report, what you are proposing in this document ---“Ignores important differences between forensic science disciplines, conflating fundamental differences between class-level and identification-level evidence leading to troubling generalized conclusions”. In this case by using statistical analysis to challenge biological uniqueness that has a demonstrated one hundred plus year track record of success in identifying individuals and solving crime is very disturbing at best.</p> <p>“Those who fail to learn from history are doomed to repeat it.” Sir Winston Churchill.</p>		

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5	#	Section	Type of Comment	Comments	Proposed Resolution	Final Resolution
117	14	5f	T	<p>5f is not supported by science. There is overwhelming scientific and empirical data that supports the uniqueness of fingerprint evidence. The statement that the uniqueness of friction skin has not been proven, ignores the scientific evidence and has been argued and rejected by the courts of the world.</p> <p>The ability to identify areas of friction ridge to their sole source has been proven possible by the scientific research into the formation of friction ridge skin. This research is included in the broad field of forensic anthropology. We now have an extensive track record of success in the identification of friction ridge skin using this knowledge.</p> <p>In 1788, Doctor J.C.A Mayer, a Professor of Human Anatomy first acknowledged the uniqueness of friction ridge skin, "the arrangements of skin ridges are never duplicated in two persons". This statement has been verified by all who have studied it since. Mayer, J.C.A., Anatomical Copper-plates with Appropriate Explanations, (1788), Germany.</p> <p>The natural law of nature, biological variation (uniqueness), has complete scientific support in the natural sciences and has never been falsified. The proven uniqueness of all areas of friction ridge skin is being ignored and undermined by those in different fields. As noted by one of your own committee members and published in a peer review journal. "the uniqueness and permanence of friction ridges throughout postnatal life, – has been unanimously supported by all biological and anatomical researchers." Swofford, Henry, The Ontogeny of the Friction Ridge: A Unified Explanation of Epidermal Ridge Development with Descriptive Detail of Individuality, pp.682-695, 58 (6) 2008, Journal of Forensic Identification, International Association for Identification.</p> <p>Biologists, medical doctors, and professors of human anatomy who have studied the formation of friction ridge skin all agree that all areas of friction skin are unique. In the last one hundred years, much of that research has been published in the American Journal of Physical Anthropology. There is even a class of biologists who study the science of human biological variation (uniqueness) known as biological anthropology.</p>	Remove Section 5f	Reject. The supposed proof of uniqueness is a complicated question that depends heavily on how the supposedly "proven" uniqueness is defined. The CB disagree with the blanket statement that "uniqueness is proven" without further specification. The CB is also unconvinced of its relevance to offering friction ridge conclusions.
118		Continued from cell above		<p>The late eminent Professor of Zoology and Philosopher of Biology Ernst Mayr PhD of Harvard University states: "In the uniqueness of biological entities and phenomena lies one of the major differences between biology and the physical sciences. Physicists and chemists often have genuine difficulty in understanding the biologist's stress on the unique. The variation from individual to individual within the population is the reality of nature, whereas the mean value (the "type") is only a statistical abstraction. Biopopulations differ fundamentally from classes of inanimate objects not only in their propensity for variation but also in their internal cohesion and their spatio-temporal restriction. There is nothing in inanimate nature that corresponds to biopopulations, and this perhaps explains why philosophers whose background is in mathematics or physics seem to have such a difficult time understanding this concept" Mayr, Ernst, Toward a New Philosophy of Biology, p.15, (1988), Harvard University Press.</p> <p>Doctors Cummins and Midlo, of Tulane University Medical School opened the chapter of their text titled: "The Individuality of the Fingerprint", with the statement; "The complex of ridge details in a single fingerprint, or even part of one, is not duplicated in any other finger" Their extensive published peer reviewed research has never been falsified, only verified. Cummins, H & Midlo, C., Fingerprints Palms, and Soles: An Introduction to Dermatoglyphics, pp.147-155, (1943) Dover Press, New York.</p> <p>The second half of 5f, "the examiner shall not—that the concept of the uniqueness of friction ridge skin alone is sufficient to justify a conclusion" is very confusing. Of course, uniqueness alone does not justify any conclusion, but it is the prerequisite that provides the ability to make an identification to a sole source. Conclusions are the result of a comparison examination. The ability to make positive identifications and exclusions has been proven and successfully done for over 100 years.</p>		
119	72	Annex	T	Since the annex is examples of how a person 'might' use the document, others 'might' use it another way. If some 'might' use it another way, then it is not a 'standard', it is a proposal with out any requirements. This makes the annex not helpful.	Remove the annex or give examples of how a person 'shall' use the document (not 'might' use the document).	Reject. The commenter is correct that an informative Annex does not include requirements. However, the ASB Manual does permit informative Annexes. We regret that the commenter does not find this one useful. Previous comments requested examples, which argues for the usefulness of this informative Annex.
120	133	Annex	E	The examples for conclusions stated in 4.2-4.5 indicate situations in which the examiner must determine "inconclusive" (because no matter what else is observed, there is not enough to exclude or conclude a "source id"). In such instances, "would conclude," is the proper phrasing because no option other than inconclusive [with similarities/dissimilarities] is appropriate. Wrt to "source ID," however, the examiner need not (and sometimes should not) conclude "source ID" just because the example factors are present. So the examples for 4.6 should not state the determination as a necessary outcome.	Change "would conclude" to "might conclude" in all examples for 4.6 ("Source ID")	Accept with modification. The examples in the Annex are attempting to state conditions under which it would be appropriate to render the conclusion. "Would" has been changed to "could" throughout the Annex.
121	77	Annex - use of level 1,2,3 detail	T	The definitions removed the use of 'levels of detail', yet they are used in the Annex. The examples use terms not explained in the document.	Explain the examples by using the words and definitions in the document, or define what these levels of details are.	Accept. Removed references to levels.
122	86	Annex A	E	Needs to be harmonized with updated language if the above is adopted in part or whole.		Reject. No resolution proposed.
123	97	Annex A	T	The first two examples given for Inconclusive are incomplete examinations. This leads two 2 different definitions for Inconclusive which makes the document confusing and unclear. issue still remains that incomplete does not mean the same thing as inconclusive; incomplete is the lack of a comparison being completed while inconclusive is a complete comparison but support for a conclusion is lacking. For clarity, incomplete should be removed from the umbrella of inconclusive and be addressed separately or completely removed from document if it is outside the scope of the document	Examples of Inconclusive should be specific to actual examinations performed to be in line with definition for a conclusion. The first two examples should be removed.	Reject with modification. The "inconclusive" conclusion is intended to include incomplete examinations. Section 4.4 has been edited to make clearer that it includes incomplete examinations.

	A	D	E	F	G	H
5	#	Section	Type of Comment	Comments	Proposed Resolution	Final Resolution
124	98	Annex A	T	The third example given for SSS is an incomplete example. issue still remains that incomplete does not mean the same thing as inconclusive; incomplete is the lack of a comparison being completed while inconclusive is a complete comparison but support for a conclusion is lacking. For clarity, incomplete should be removed from the umbrella of inconclusive and be addressed separately or completely removed from document if it is outside the scope of the document	The third example should be removed	Reject with modification. The "inconclusive" conclusion is intended to include incomplete examinations. Section 4.4 has been edited to make clearer that it includes incomplete examinations.
125	107	Annex A	T	use of the words "substantial", "strong", "weak", and "overwhelming" are vague and misleading in the examples given. While the intent may not be to have these used in reports, having them included in examples with no definition on how they're being used will lead to inconsistencies in how this document is used which conflicts with treating this document as a "standard". These adjectives have no meaning and are not needed. Document would be strengthened by removing unnecessary adjectives that will be inconsistently interpreted	remove use of the terms "substantial", "strong", "weak", and "overwhelming" from examples	Accept with modification. Most uses of these adjectives have been removed. The remaining uses are clear and necessary for the examples to help clarify the requirements.
126	108	Annex A	T	2 ridge endings isn't even "weak" support; 2 ridge endings tells you nothing about a comparison; it is misleading and extremely problematic to include this example as it overstates the level of support. The clarified example of a rod in the core is even worse to include as it is even more common among individuals. As stated by others, support with similarities implies a maybe bias in the comparison that will have prejudicial affects on citizens and needs to be removed. If including this as an example, there are examiners who will do this in real casework using this document as support for why they made that decision. It will have dire consequences on communities.	remove this example from the document	Reject with modification. The Consensus Body wants to provide an example of extremely weak support. "Would" has been changed to "could" throughout the Annex.
127	110	Annex A	T	Because there is no methodology document related to criteria for reaching a conclusion, the examples provided will potentially be used in the community as criteria for what conclusions are reached. Therefore, the examples are problematic, not informative only, and should be removed from the document.	remove Annex A and consider adding examples back one a methodology/criteria document for reaching conclusions is published	Reject with modification. The examples in the Annex are attempting to state conditions under which it would be appropriate to render the conclusion. "Would" has been changed to "could" throughout the Annex.
128	123	Annex A	T	This Annex contains numerous inconsistencies with sections 4.2, 4.3, 4.5, and 4.6. See specific examples below.	Align terms between Annex and sections 4.2, 4.3, 4.5, and 4.6.	Accept
129	33	Annex A 4.5, (4th Paragraph)	E	Comma needed after "however".	insert necessary comma	Accept
130	124	Annex A - Exclusion	T	The Annex describes "substantial disagreement" for both examples. However, Section 4.2 uses the phrases "substantially stronger support" and "strong disagreement".	Align Annex with Section 4.2 terms	Accept with modification. The term "substantial" has been removed. However, the examples in the Annex are made to provide further illustration and do not need to repeat the language in 4.2.
131	127	Annex A - Exclusion	T	The Annex describes "substantial correspondence observed" for all three examples. However, Section 4.6 uses the phrases "substantially stronger support" and "strong correspondence".	Align Annex with Section 4.6 terms	Accept
132	125	Annex A - IWD	T	The Annex describes "strong evidence in support of different source" for both examples. While this is consistent with Section 4.3, it is also consistent or very similar to the language of 4.2 ("strong disagreement present").	Distinguish the "strong" term in Exclusion and IWD so as not to cause confusion.	Accept with modification. "Strong" has been removed from the Annex sections for both Exclusion and IWD.
133	126	Annex A - IWS	T	The Annex describes "strong evidence in support" (of same source) for three examples. While this is consistent with Section 4.5, it is also consistent or very similar to the language of 4.6 ("strong correspondence present").	Distinguish the "strong" term in Identification and IWS so as not to cause confusion.	Accept with modification. "Strong" has been removed from the Annex sections for both Exclusion and IWD.
134	31	Annex A 4.3 (1st Paragraph)	E	"they would not support a conclusion of Source Exclusion and would therefore conclude only Inconclusive with Dissimilarities.	Remove the word "only" to reflect consistency with same phrase in examples of Inconclusive with Similarities	Accept
135	32	Annex A 4.4 (1st Paragraph)	E	Mentions the "side and tip middle finger" when there is no mention of it anywhere else.	Change "from the side and tip of the right middle finger" to "from the suspected area"	Accept
136	1	Annex A Inconclusive with Dissimilarities (section 4.3) Example 1	T	"Because the examiner was not confident in the existence of these features in the impression, they would not support a conclusion of Source Exclusion and would therefore conclude only Inconclusive with Dissimilarities." In this example, the examiner is using features for comparison that are low quality and the examiner is not even confident in their existence but it is considered "strong evidence in support for different source" when they are not located. Why would features in which the examiner is not even confident that they exist be considered evidence of strong support? This example also sounds like the 3rd example under inconclusive so you have very similar situations with different results - ambiguous.	Choose a better example where there was some strong evidence of dissimilarity but not enough to support an exclusion	Reject. We recognize the point, but we cannot improve the example, and no better example has been suggested.
137	2	Annex A Inconclusive with Dissimilarities (section 4.3) Example 2	T	"Because the examiner was not confident that they had searched in the correct area or because their FSP's exclusion policy did not allow for exclusions without a focal point, they would not support a conclusion of Source Exclusion and therefore would conclude only Inconclusive with Dissimilarities." In this example, there is no anchor point and the examiner is unsure if they even searched the correct area, and the FSP policy does not allow for source exclusion but you are going to say that this is "strong evidence in support for different source?" This does not sound like strong evidence at all. It sounds like a possible type II error, which the community has issues with.	Move example to inconclusive and add an explanation that it lacked an anchor point, the examiner is unsure if they searched the correct area and was it not located. There is no strong support in either direction.	Reject. This would not be an inconclusive for some FSPs because the data do not equally support same source and different source. As stated in A.1, the examples will be different for different FSPs.
138	3	Annex A Inconclusive with Similarities (section 4.5) Example 5	T	This is an example of a latent print with low discriminability and low quantity being searched in a large database. Correspondence was observed but the quantity (6) and the low discriminability (delta and under core) is an example of weak evidence in support and should not even qualify as a "preliminary hit" in our system. Why would you consider this "strong evidence" if there low quantity of features with low discriminability? It probably should not have been searched in a database, and a name should not be associated with it if similar correspondence may be observed in a different source.	Change the example or determine that this is weak evidence in support. The name should not be reported in a case with such weak evidence.	Reject. This would not be an inconclusive for some FSPs because the data do not equally support same source and different source. As stated in A.1, the examples will be different for different FSPs.
139	76	Annex examples for 4.2	T	4.2 says to use source exclusion when there is strong disagreement but the annex uses an example stating there is substantial disagreement. By the definition of disagreement, neither the words strong or substantial are needed.	Remove adjectives prior to any use of the word 'disagreement' because by the documents own definition, disagreement is already a measurement of dissimilarity.	Accept

	A	D	E	F	G	H
5	#	Section	Type of Comment	Comments	Proposed Resolution	Final Resolution
140	75	Annex vs. 4.1/4.2, 5b/5e	T	<p>Section 4, section 5 and the Annex give different information.</p> <p>Section 4.1 says conclusions are based on knowledge, training and experience.</p> <p>Section 4.2 says conclusions are based on what one would expect to see or not see.</p> <p>The Annex uses confidence as a decision threshold.</p>	<p>If conclusions are dependent on confidence levels or expectations then add this to 4.1, second paragraph, first sentence.</p> <p>If conclusions are based on knowledge, training and experience (and not confidence or expectations), then reword the examples in the Annex to indicate knowledge is use, instead of confidence.</p>	<p>Reject. The use of "confidence" in Section 5 refers to its use in a Conclusion in a misleading way that implies that confidence vouches for accuracy, whereas in the Annex it refers to the examiner's thought process that need not be reported in a conclusion.</p>
				<p>5b and 5e seems to minimize 'confidence' as a reliable means of determining accuracy</p> <p>The Scope conflicts with the Annex.</p> <p>The scope says the conclusions are conclusions <u>following</u> a comparison.</p> <p>Yet, the annex examples use the conclusion of 'inconclusive' when a comparison may not have been performed. The annex states 'nothing to compare' which shows that examples are not in conformance with the scope.</p>	<p>Decide on the direction of the standard and make sure the entire document is in line with the desired direction. Otherwise people can pick and chose how to interpret the standard, and the parts they wish to follow. Either remove the Annex or change the examples to be in line with the scope.</p>	<p>Accept</p>
142	132	Bibliography	T	<p>Deleting a bibliography of just two uncited reports is understandable but consider a bibliography that includes the many reports and articles that have grappled with the issue addressed in this proposed standard -- an understandable and scientifically defensible conclusion/opinion scale.</p>	<p>Some titles that should be considered as part of a bibliography for a document addressing conclusions and incorporating likelihood ratios are: <i>American Statistical Association, "Position on Statistical Statements for Forensic Evidence," Presented under the guidance of the ASA Forensic Science Advisory Committee, January 2, 2019</i>; <i>PCAST, "Forensic Science in Criminal Courts"; American Association for the Advancement of Science, "Forensic Science Assessments: A Quality and Gap Analysis-Latent Fingerprint Examination," (2017)</i>; <i>Defense Forensic Science Center, Information Paper, Subject: Use of the Term Identification in Latent Print Technical Reports, (Nov. 3, 2015)</i>; <i>Working Group on Human Factors in Latent Print Analysis, "Latent Print Examination and Human Factors: Improving the Practice through a Systems Approach," National Institute of Justice (2012)</i>, <i>Steven P. Lund & Hari Iyer, "Likelihood Ratio as Weight of Forensic Evidence: A Closer Look," 122(27) J. Research of Nat'l Ist. Standards & Tech., (2017)</i>; <i>Simone Gittelson et al., "A response to "Likelihood ratios as weight of evidence: A closer look", 299 For. Sci. Int'l; John Buckleton & James Curran, "A discussion of the merits of random man not excluded and likelihood ratios," 2 For. Sci. Int'l Genetics 343 (2008)</i>; <i>Jonathan J. Koehler, "Proving the Case: The Science of DNA: On Conveying the Probative Value of DNA Evidence: Frequencies, Likelihood Ratios, & Error Rates," 67 U. Colo. L. Rev. 859, (1996)</i>; <i>Kristy A. Martire et al., "The Psychology of Interpreting Expert Evaluative Opinions," 45 Australian J. F. Sci. 305 (2013)</i>; <i>Kristy A. Martire et al., "The Expression and Interpretation of Uncertain Forensic Evidence: Verbal Equivalence, Evidence Strength, and the Weak Evidence Effect," 37 L. & Human Behav. 197 (2013)</i>; <i>Swaminathan et al., "Four model variants within a continuous forensic DNA mixture interpretation framework: Effects on evidential inference & reporting," 13(11) PLoS ONE (2018)</i></p>	<p>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.</p>

Public Comments Deadline: July 11, 2022
ASB Std 013, Standard for Friction Ridge Examination Conclusions

#	Section	Type of Comment (Editorial, Technical, etc.)	Comments	Proposed Resolution	Final Resolution
6	all	T	We realize that changes were made in response to some comments on the last round, but the fundamental problem of calling a statement of strong support for the same-source hypothesis an "identification" remains. Several LTG members believe that the terminology in the standard remains confusing or inappropriate, but we realize this is a recirculation.		Reject. This proposal has been considered by the Consensus Body on previous drafts and rejected.
31	3.2 and 3.3	T	Conformity / non-conformity are terms of art that are not defined in this document		Reject. Dictionary definition is intended.
32	3.3	T	Is a disagreement one dissimilarity or more than one dissimilarity? This definition is not clear.		Reject. We believe the definition of "disagreement" makes clear that it can be either one or more than one.
33	3.8	T	The word "reproduction" ought to be changed. The common use of this word refers to something that is fabricated or copied.		Reject. Dictionary definition does not contain fabrication.
34	3.9	T	What scenario is this describing? This sounds like a print of "no value."		No resolution proposed. An impression may have high value and yet offer equal support for both propositions.
35	3.16	T	In the definition of questioned, it says unknown or known source. If it's known, then why is it questioned?		No resolution proposed. The inclusion of "known" is to account for scenarios in which two known impressions are compared.
11	3.19	T	<p>I disagree with the definition of Source Exclusion (Section 3.19) and with the source conclusion category of Source Exclusion (Section 4.2). I hold with the view that an observer can, within a framework of articulated assumptions, hold an opinion that a proposition of common source is disproved by the data. I believe that to hold otherwise denies the basic tenants of the scientific method. As a practitioner, I would be unable to accept this standard for my conclusions as it does not allow for the rejection of the hypothesis of common source.</p> <p>I hold that we should not seek or expect symmetry on the conclusions scale. The opinion of source exclusion does not mirror that of source identification. Most importantly, the sources for uncertainty are quite different. In a conclusion of strong association (i.e. Source Identification) what separates a certainty from substantially strong support is the inability of our cumulative observations of corresponding detail to prove the proposition. (We don't prove that a hypothesis is true by failing to reject it and accumulating data supporting it.)</p> <p>In a conclusion of disassociation (rejecting the proposition of association), any residual uncertainty for absolute rejection of the proposition of common source lies in the validity of the assumptions, the quality of the data, and the rigor of the examination. These sources of uncertainty can be articulated and critically evaluated. After an examination we can reject the proposition of common source, if, based on the observed data, we (1) conclude that the questioned and exemplar impressions are true representations of the friction ridge skin that made them, and (2) find, through exhaustive comparative observations, that no portion of friction ridge skin represented by the exemplar could have made the questioned impression. (We do, in fact, disprove the hypothesis within the framework of the articulated assumptions).</p>	<p>Replace entire test to the section to:</p> <p>The conclusion that the friction ridge pattern detail present in the questioned impression could not have originated from the skin whose ridge patterns are represented in the exemplar impressions.</p>	Accept with Modification. Definition from updated Section 4.2 was used.
9	4.1	E	The NOTE under Figure 1 says: Figure not to scale. This note is unnecessary and potentially confusing given that no "scale" is provided	Delete the NOTE under Figure 1. If the authors of the document believe more explanation is needed, they could say in the text at the end of Section 4.1 that (a) Figure 1 represents possible source conclusions arrayed from most supportive of the different -source proposition (on the left) to most most supportive of the same source proposition (on the right), and (b) that the size of the boxes representing the possible conclusions is not intended to reflect relative frequency or number.	Reject: The phrase "not to scale" does not require a scale. See https://english.stackexchange.com/questions/159821/what-do-people-mean-or-think-they-mean-by-not-to-scale
17	4.1	T	This states "shall assess the similarities and dissimilarities in the observed data and consider their probability under each of the two following two propositions: the two impressions originated from the same source or from different sources." Is 'their probability' referring to the examiners subjective probability, or is 'their probability' referring to the probability of same source or different source?	Clarify what 'their' is referring to, the examiner or the propositions.	Accept. Change "their probability" to "the probability of both"
18	4.1	T	This states "shall assess the similarities and dissimilarities in the observed data and consider their probability under each of the two following two propositions: the two impressions originated from the same source or from different sources." There is no means by which to determine the probability and therefore this requirement is forcing examiners to understate or overstate information, and not indicating it to the courts.	Clearly state that any measure is highly subjective and may not accurately represent the data.	Reject. Subjectivity is implied by the word "opinion."
36	4.1	T	"which is inherently subjective" is unnecessary language. This is not appropriate commentary in a Standard document. The Standard should focus on definitions of conclusions and remove any additional commentary. This type of commentary is relevant in admissibility litigation, not in this Standard document.	Remove "which is inherently subjective."	Accept. Subjectivity is implied by the word "opinion."

12	4.1	T	<p>I disagree with the definition of Source Exclusion (Section 3.19) and with the source conclusion category of Source Exclusion (Section 4.2). I hold with the view that an observer can, within a framework of articulated assumptions, hold an opinion that a proposition of common source is disproved by the data. I believe that to hold otherwise denies the basic tenants of the scientific method.</p> <p>As a practitioner, I would be unable to accept this standard for my conclusions as it does not allow for the rejection of the hypothesis of common source.</p> <p>I hold that we should not seek or expect symmetry on the conclusions scale. The opinion of source exclusion does not mirror that of source identification. Most importantly, the sources for uncertainty are quite different. In a conclusion of strong association (i.e. Source Identification) what separates a certainty from substantially strong support is the inability of our cumulative observations of corresponding detail to prove the proposition. (We don't prove that a hypothesis is true by failing to reject it and accumulating data supporting it.)</p> <p>In a conclusion of disassociation (rejecting the proposition of association), any residual uncertainty for absolute rejection of the proposition of common source lies in the validity of the assumptions, the quality of the data, and the rigor of the examination. These sources of uncertainty can be articulated and critically evaluated. After an examination we can reject the proposition of common source, if, based on the observed data, we (1) conclude that the questioned and exemplar impressions are true representations of the friction ridge skin that made them, and (2) find, through exhaustive comparative observations, that no portion of friction ridge skin represented by the exemplar could have made the questioned impression. (We do, in fact, disprove the hypothesis, within the framework of the articulated assumptions).</p>	<p>Add the following to the end of the first paragraph: Additionally, the nature of the dissimilarities (and the reliability of the impressions to represent the details of the skin from which they were made) can be sufficient exclude the possibility that the friction ridge skin producing one impression could have produced the other impression.</p>	<p>Reject. Based on discussions during CB meetings, it has been determined that the modifications to section 4.2 are sufficient to cover this comments.</p>
13	4.2	T	<p>I disagree with the definition of Source Exclusion (Section 3.19) and with the source conclusion category of Source Exclusion (Section 4.2). I hold with the view that an observer can, within a framework of articulated assumptions, hold an opinion that a proposition of common source is disproved by the data. I believe that to hold otherwise denies the basic tenants of the scientific method.</p> <p>As a practitioner, I would be unable to accept this standard for my conclusions as it does not allow for the rejection of the hypothesis of common source.</p> <p>I hold that we should not seek or expect symmetry on the conclusions scale. The opinion of source exclusion does not mirror that of source identification. Most importantly, the sources for uncertainty are quite different. In a conclusion of strong association (i.e. Source Identification) what separates a certainty from substantially strong support is the inability of our cumulative observations of corresponding detail to prove the proposition. (We don't prove that a hypothesis is true by failing to reject it and accumulating data supporting it.)</p> <p>In a conclusion of disassociation (rejecting the proposition of association), any residual uncertainty for absolute rejection of the proposition of common source lies in the validity of the assumptions, the quality of the data, and the rigor of the examination. These sources of uncertainty can be articulated and critically evaluated. After an examination we can reject the proposition of common source, if, based on the observed data, we (1) conclude that the questioned and exemplar impressions are true representations of the friction ridge skin that made them, and (2) find, through exhaustive comparative observations, that no portion of friction ridge skin represented by the exemplar could have made the questioned impression. (We do, in fact, disprove the hypothesis, within the framework of the articulated assumptions).</p>	<p>Replace the body of the text in this entire section (but keeping the Note): Source exclusion is the conclusion that the friction ridge pattern detail present in the questioned impression could not have originated from the skin whose ridge patterns are represented in the exemplar impressions. This conclusion is based on observed data from which the examiner (1) concludes that the questioned and exemplar impressions are true representations of the friction ridge skin that made them, and (2) finds, through exhaustive comparative observations, that no portion of friction ridge skin represented by the exemplar could have made the questioned impression. This finding disproves the hypothesis of common origin.</p>	<p>Accept with Modification. Based on discussions during CB meetings, the section was revised to be in line with the comment, to read: "Source exclusion is the conclusion that two friction ridge impressions did not originate from the same source. After a comparison of all relevant areas, the observed data are incompatible with the proposition that the two impressions originated from the same source. (See Annex A, Section Source Exclusion)." For clarification, the note was removed.</p>
45	4.2 and 4.6	E/T	<p>4.2 rejected "extremely strong" and kept "substantially stronger" while 4.6 switched from "substantially stronger" to "extremely strong" even though the final resolution said it was rejecting "extremely strong".</p>	<p>Document should be consistent in wording - use either "extremely strong" or "substantially stronger" in both 4.2 and 4.6. If the CB has in fact rejected the phrase "extremely strong" as their final resolution comment suggests, then 4.6 needs to revert back to "substantially stronger".</p>	<p>Accept.</p>
19	4.2-4.6	T	<p>There is no criteria for conclusions. Weak, strong, extremely strong are highly subjective and therefore not a criteria. If FSP's come up with their own criteria then this standard does not standardize anything, it only gives the appearance of standardization.</p>	<p>Develop a criteria before stating that only certain conclusions can be arrived at. And State a criteria for measurements like weak, moderate, strong, stronger, extremely strong.</p>	<p>Reject. Criteria will be addressed in BPR 165, BPR 166, and STD 015 and the criteria will be determined by the FSP.</p>
1	4.3	T	<p>The standard mandates the use of a statement regarding the degree of support yet does not give objective guidance or a definitive scale on how to apply an inherently subjective qualification of the degree of support for the conclusion. Further, the required degree of support statement does not add value for the end customer who receives the report, nor does it add value to the process of adjudication.</p>	<p>Remove this requirement, or at the very least make it optional.</p>	<p>Reject. The Consensus Body regrets that the scale is subjective but does not feel the discipline is ready to offer guidance on subdivisions of this conclusion with sufficient precision and clarity.</p>
20	4.3 and 4.5	T	<p>The word strong was taken out of the graphic for inconclusive but the word "stronger" remains in the description under 4.3. If you can't determine what is strong, then you can't determine what is stronger.</p>	<p>Either remove 'strong' in both the graphic and the wording, or keep the word in both places.</p>	<p>Reject. Ordinary English meaning of the word "stronger" is intended.</p>
37	4.3 and 4.5		<p>The definition of weak, moderate, strong vary from examiner to examiner and lab to lab based on experience and other variables.</p>	<p>Remove the final sentence from 4.3 and 4.5 that include weak, moderate as well as from sliding scale.</p>	<p>Reject. It is up to the FSP to define, explain, and support any descriptors that they use.</p>
2	4.5	T	<p>The standard mandates the use of a statement regarding the degree of support yet does not give objective guidance or a definitive scale on how to apply an inherently subjective qualification of the degree of support for the conclusion. Further, the required degree of support statement does not add value for the end customer who receives the report, nor does it add value to the process of adjudication.</p>	<p>Remove this requirement, or at the very least make it optional.</p>	<p>Reject. The Consensus Body regrets that the scale is subjective but does not feel the discipline is ready to offer guidance on subdivisions of this conclusion with sufficient precision and clarity.</p>
21	4.6 Comment 11, line 100	T	<p>Comment 11, line 100 says rejected, but the proposed resolution was changed.</p>	<p>The resolution box is incorrect, correct the resolution.</p>	<p>Reject with modification. Proposed resolution was accepted in error. "extremely" has been changed to "substantially."</p>
7	4.6	T	<p>The definition of "source identification" has moved from "substantially stronger support for identification" to "extremely strong support," but juries will still view the phrase "source identification" as a statement that there is one identifiable source of the print. The fact that the document then says you cannot say 100% or "infallible" and the like will be lost on lay juries. The addition to the note for that opinion, we believe, makes clear that what is being proposed is wordsmithing that will ultimately still be confusing to jurors and would be solved if the term "source identification" were eliminated.</p>	<p>Eliminate "source identification" as a valid term.</p>	<p>Reject. This proposal has been considered by the Consensus Body on previous drafts and rejected.</p>

10	General or Section 6	T	Section 5 specifies prohibitions on what an examiner may say about the probative value or accuracy of latent print examination. Why is there no comparable section that specifies affirmatively what examiners should say on this topic? The AAAS report on Latent Fingerprint Analysis makes a number of helpful suggestions regarding affirmative statements that examiners should make in reports and testimony. Without such information it will be impossible for the average person to gain a clear sense of the probative value of these opinions.	There should be a Section 6 that specifies, or at least gives examples, of statements examiners can make in reports and testimony about the accuracy of their discipline. Examiners should be required to make some affirmative statement concerning what, if anything, is known about how consistently (reliably) examiners can assign print comparisons to the five reporting categories. In other words, how often do examiners agree or disagree with each other (or themselves) about assignment of cases across these reporting categories. There should also be an affirmative statement about what, if anything, is known about how often print comparisons known to involve same and different source prints are classified in each reporting category.	Reject. Out of scope of the document. Would be more appropriately addressed on cross examination.
25	4.6 and 5.1	T	"When one of the five conclusions is reached, the examiner shall not: a) assert that two impressions were made by the same source..."	The conclusion of Source Identification that is being recommended does exactly what you are saying not to do, Source Identification does assert that two impressions were made by the same source, even if that is not what is intended. This is not only how the courts will view the conclusion, but examiners are viewing it this way as well due to the wording 'Source Identification'. If you do not intend for that to be how the conclusion is viewed then the conclusion should be changed to 'Support for Source Identification'.	Reject. Please refer to sections 3.20 and 4.6 which state our definition of "source identification." This proposal has been considered by the Consensus Body on previous drafts and rejected.
3	4.6 and 5.a	T	Source Identification is defined as, "the conclusion that the observed data provide extremely strong support for the proposition that two impressions originated from the same source rather than different sources."...[i.e. latent and known finger print compare, as is the purpose/reason for the analysis]	Prohibition 5.a. is in conflict and in error with the whole objective for the analysis in the first place and 4.6. Prohibition 5.a. I would suggest needs to be deleted.	Reject. Please refer to sections 3.20 and 4.6 which state our definition of "source identification." This proposal has been considered by the Consensus Body on previous drafts and rejected.
22	4.6 comment 69, line 103	T	The resolution says the CB agrees that Source ID's and source exclusions need to have the degree of support, but the CB does not want to require it.	Since the CB agrees that a statement saying the degree of support is necessary for Source ID's and Exclusions but doesn't want to require it, then they should add a should statement (not omit an idea that everyone agrees with). Add "Any use of this conclusion should include a statement of the degree of support (weak, moderate or strong)."	Reject. The Consensus Body did not say it "does not want to require it." The CB said it "does not feel the discipline is ready to offer guidance on subdivisions of this conclusion with sufficient precision and clarity. The CB does not support differentiating source identification or source exclusions. Since the definition of Source Identification says "substantially stronger support" modifying this adjective like "weak" or "moderate" will be confusing.
23	4.6 comment 85, line 104	T	The resolution says criteria for conclusions is out of scope and should be in Standard for examination document. Therefore, this document is not useful within itself and if the criteria is in another document, then the conclusions should also be moved to that document.	Due to the CB recognizing that another document is stating the important aspect needed for this document, then either move the information in this document to the Standard for examination document, or add that document as a normative reference.	Reject. The fact that other useful information for the discipline is in another document does not require the incorporation of this document into that other document. STD cannot be added as a normative reference at this time because it is not published (see ASB Manual, F.1).
24	4.6, comment 104, line 106	T	The resolution says: Reject. The Consensus Body agrees with the point, but does not feel the discipline is ready to offer guidance on subdivisions of this conclusion with sufficient precision and clarity.	If the goal is to raise the bar, and to make improvements, then the CB should add elements that they recognize are needed.	Reject. The CB does not feel it could do a good job at what is being asked at this time.
38	4.6	T	The NOTE is unnecessary. The definition of Source Identification speaks for itself. Section 5 "Prohibitions" cover all aspects of appropriate limitations. Inclusion of the language "Source identification is not identification to a single source" at the end of the note is confusing, and contradicts the Source Identification definition. As a courtroom advocate, I'm confident that these extraneous comments/notes will confuse the prosecutor, defense attorney, judge, and jury.	Remove the entire Note in Section 4.6	Accept. Covered by Section 5(a).
44	4.6 Note		This is my first opportunity to comment on STD 13 since joining the Friction Ridge Consensus Body. Here is my explanation for why I am voting "no". Based on my comments below, I do not believe that FSPs will adopt Standard 13 Standard for Friction Ridge Examination Conclusions. 1) The Section 4.6 NOTE is unnecessary. The definition of Source Identification speaks for itself. Section 5 "Prohibitions" cover all aspects of appropriate limitations. Inclusion of the language "Source identification is not identification to a single source" at the end of the note is confusing, and seems to contradict the Source Identification definition. As a courtroom advocate, I'm confident that these extraneous comments/notes will confuse the prosecutor, defense attorney, judge, and jury. 2) 5(a) is a compound statement. There are two clauses within 5(a). The first portion "assert that two impressions were made by the same source" is unnecessary. See comments in 1. The second clause "imply an individualization to the exclusion of all other sources" is acceptable. I suggest using the limitation language from the DOJ ULTR. The DOJ language is clear and provides appropriate guardrails for conclusions and testimony. 3) I'm concerned that the parenthetical examples within 6.2 will lead to fixed/rigid definitions. In other words, in 6.2 A6 it lists "sixteen ridge endings and an enclosure." In court, if there were fourteen ridge endings and an enclosure, defense will argue that it doesn't satisfy the example listed in STD 13. In 6.2 A6 it says "such as five ridge endings with 30 pore structures and ridge edge shapes." Again, listing specific numbers of data points in these examples will dilute the conclusions/opinions that the examiner provides. Also, listing specific numbers of data points will cause confusion to the jury when the case evidence does not rise to the listed example. 4) In 4.1, "which is inherently subjective" is unnecessary commentary. This Standard should focus on its scope which is to provide Source Conclusion language. As a result of the above-listed issues, this Standard will weaken the value of friction ridge analysis and confuse jurors. I do not believe laboratories will widely adopt this Standard unless the above issues are resolved.		Accept. Covered by Section 5(a).

46			<p>I am voting no because I agree 100 percent with all the points Ray makes in his comment. The goal of this document should be to make every possible conclusion that an examiner can reach scientifically stronger based on advancements in the discipline (and also more clearly understood by end users where possible). The prohibitions section (5.0) already addresses the historical concerns of absolute source attribution, zero error rate, certainty expressions, vouching for one's own opinion based on personal experience, etc. The note in 4.6 and the language noted by Ray from Section 5 are unnecessary and confusing.</p> <p>I fully support the discipline as a whole continually striving to improve the manner in which examiners articulate and explain their opinions to ensure that what examiners are saying is scientifically sound. But the discipline need not and should not cave to outside pressure to water down the confidence with which LP examiners express one of the five possible conclusions (source identification), unless of course as a discipline you feel that science no longer supports the analysis that you do and the conclusions you reach. As a lay person/prosecutor who has been putting on FR evidence for a long time, that's how the note in 4.6 and the phrases identified by Ray in 5.0 read to me... like the discipline is agreeing with the narrative that FR analysis as a whole is scientifically questionable, at least when the end result is a conclusion of source identification. I think source identification should be defined as it is in 4.6 without the note and that the limitations to that conclusion (and the other conclusions as well) should be outlined in section 5 in a manner consistent with Ray's comments.</p>		Accept. Covered by Section 5(a).
39	5(a)	T	The first half of 5a is confusing as it relates to the definition of Source Identification and same source. Including this language eviscerates the entire foundation of friction ridge analysis. The second half of 5a as it relates to individualization is acceptable.	The Prohibitions will be much clearer if they follow the DOJ ULTRs. For example, the "examiner shall not use the terms 'individualize' or 'individualization' when describing a source conclusion or assert that two friction ridge skin impressions originated from the same source to the exclusion of all other sources"	Reject with modification: 5a) not revised. 5d) modified to include: with "absolute" or "100% certainty"
4			But then under 5.a "Prohibitions" "the examiner shall not...a/ "assert that two impressions were made by the same source-or imply an individualization to the exclusion of all other sources". This prohibition would cancel out the mandate under "source identification".		Reject with modification: 5a) not revised. 5d) modified to include: with "absolute" or "100% certainty"
5			Prohibition 5.a. is in conflict and in error with the whole objective for the analysis in the first place and 4.6. Prohibition 5.a. I would suggest needs to be deleted.		Reject with modification: 5a) not revised. 5d) modified to include: with "absolute" or "100% certainty"
40	5(e)	T	The entire friction ridge discipline relies on the premise that friction ridge skin is unique. If friction ridge skin is not unique to a person, then it cannot be used for a source identification NOR a source exclusion. Including this language eviscerates the entire discipline.		Accept. Language restricted to use of uniqueness as sole support for conclusion.
26	5.1 e	T	<p>Prohibition: "cite the number of friction ridge comparisons performed in their career as a measure for the accuracy of a conclusion offered in the case at hand;"</p> <p>If an examiner cites the number of comparisons, it is not up to them if the jury assumes that is a measure of accuracy. I have read hundreds of transcripts and none of them cite the number as a measure of accuracy, they just cite the number and it is viewed as a measure of accuracy. This prohibition does nothing to stop this from occurring.</p>	Change to, examiners should not track, state or estimate the number of comparisons they have performed over their career.	Reject. Prohibiting examiners from stating the number of comparisons they have done would be unreasonable. This section is intended to prohibit THE EXAMINER from connecting the number of performed comparisons to accuracy. Jurors or attorneys making that connection is outside the scope of the document.
29	Annex	T	<p>The standard says, "shall assess the similarities and dissimilarities in the observed data and consider their probability under each of the two following two propositions:"</p> <p>The examples jump to correspondence, and do not show how similarities and dissimilarities are considered.</p>	Add to the examples how similarities and dissimilarities are considered in order to determine correspondence.	Accept.
14	A.2.1	T	<p>I disagree with the definition of Source Exclusion (Section 3.19) and with the source conclusion category of Source Exclusion (Section 4.2). I hold with the view that an observer can, within a framework of articulated assumptions, hold an opinion that a proposition of common source is disproved by the data. I believe that to hold otherwise denies the basic tenants of the scientific method.</p> <p>As a practitioner, I would be unable to accept this standard for my conclusions as it does not allow for the rejection of the hypothesis of common source.</p> <p>I hold that we should not seek or expect symmetry on the conclusions scale. The opinion of source exclusion does not mirror that of source identification. Most importantly, the sources for uncertainty are quite different. In a conclusion of strong association (i.e. Source Identification) what separates a certainty from substantially strong support is the inability of our cumulative observations of corresponding detail to prove the proposition. (We don't prove that a hypothesis is true by failing to reject it and accumulating data supporting it.)</p> <p>In a conclusion of disassociation (rejecting the proposition of association), any residual uncertainty for absolute rejection of the proposition of common source lies in the validity of the assumptions, the quality of the data, and the rigor of the examination. These sources of uncertainty can be articulated and critically evaluated. After an examination we can reject the proposition of common source, if, based on the observed data, we (1) conclude that the questioned and exemplar impressions are true representations of the friction ridge skin that made them, and (2) find, through exhaustive comparative observations, that no portion of friction ridge skin represented by the exemplar could have made the questioned impression. (We do, in fact, disprove the hypothesis, within the framework of the articulated assumptions).</p>	<p>Following the second sentence, replace the remaining text with: Based on the on observed data the examiner (1) concludes that the questioned and exemplar impressions are true representations of the friction ridge skin that made them, and (2) finds, through exhaustive comparative observations, that no portion of friction ridge skin represented by the exemplar could have made the questioned impression. The examiner could therefore conclude that the questioned impression could not have originated from the skin whose ridge patterns are represented in the exemplar impressions.</p> <p>(i.e., Disagreement observed with high clarity level 1 detail, Source exclusion.)</p>	Accept with modification. Section edited to reflect proposed resolution but remain consistent with the rest of the Annex.

15	A.2.2	T	<p>I disagree with the definition of Source Exclusion (Section 3.19) and with the source conclusion category of Source Exclusion (Section 4.2). I hold with the view that an observer can, within a framework of articulated assumptions, hold an opinion that a proposition of common source is disproved by the data. I believe that to hold otherwise denies the basic tenants of the scientific method.</p> <p>As a practitioner, I would be unable to accept this standard for my conclusions as it does not allow for the rejection of the hypothesis of common source.</p> <p>I hold that we should not seek or expect symmetry on the conclusions scale. The opinion of source exclusion does not mirror that of source identification. Most importantly, the sources for uncertainty are quite different. In a conclusion of strong association (i.e. Source Identification) what separates a certainty from substantially strong support is the inability of our cumulative observations of corresponding detail to prove the proposition. (We don't prove that a hypothesis is true by failing to reject it and accumulating data supporting it.)</p> <p>In a conclusion of disassociation (rejecting the proposition of association), any residual uncertainty for absolute rejection of the proposition of common source lies in the validity of the assumptions, the quality of the data, and the rigor of the examination. These sources of uncertainty can be articulated and critically evaluated. After an examination we can reject the proposition of common source, if, based on the observed data, we (1) conclude that the questioned and exemplar impressions are true representations of the friction ridge skin that made them, and (2) find, through exhaustive comparative observations, that no portion of friction ridge skin represented by the exemplar could have made the questioned impression. (We do, in fact, disprove the hypothesis, within the framework of the articulated assumptions).</p>	<p>Following the second sentence, replace the remaining text with: The examiner can then conclude that, subject to the assumption of the assigned orientation and anatomical source, that the questioned impression could not have originated from the skin whose ridge patterns are represented in the exemplar impressions.</p> <p>(i.e., Disagreement observed, Source exclusion contingent on explicit assumptions.)</p> <p>Alternatively, the examiner could continue the examination, considering and testing all possible orientations and anatomical sources represented in the exemplars. Failing to find the corresponding anchor point, with clear and distinct features above the core, the examiner could therefore conclude that the questioned impression could not have originated from the skin whose ridge patterns are represented in the exemplar impressions.</p> <p>(i.e., Disagreement observed, Source exclusion.)</p>	<p>Accept with modification. Section edited to reflect proposed resolution but remain consistent with the rest of the Annex.</p>
16			<p>I disagree with the definition of Source Exclusion (Section 3.19) and with the source conclusion category of Source Exclusion (Section 4.2). My proposed resolutions extend into Sections 4.1, A.2.1 and A.2.2</p> <p>I hold with the view that an observer can, within a framework of articulated assumptions, hold an opinion that a proposition of common source is disproved by the data. I believe that to hold otherwise denies the basic tenants of the scientific method.</p> <p>As a practitioner, I would be unable to accept this standard for my conclusions as it does not allow for the rejection of the hypothesis of common source.</p> <p>I hold that we should not seek or expect symmetry on the conclusions scale. The opinion of source exclusion does not mirror that of source identification. Most importantly, the sources for uncertainty are quite different. In a conclusion of strong association (i.e. Source Identification) what separates a certainty from substantially strong support is the inability of our cumulative observations of corresponding detail to prove the proposition. (We don't prove that a hypothesis is true by failing to reject it and accumulating data supporting it.)</p> <p>In a conclusion of disassociation (rejecting the proposition of association), any residual uncertainty for absolute rejection of the proposition of common source lies in the validity of the assumptions, the quality of the data, and the rigor of the examination. These sources of uncertainty can be articulated and critically evaluated. After an examination we can reject the proposition of common source, if, based on the observed data, we (1) conclude that the questioned and exemplar impressions are true representations of the friction ridge skin that made them, and (2) find, through exhaustive comparative observations, that no portion of friction ridge skin represented by the exemplar could have made the questioned impression. (We do, in fact, disprove the hypothesis, within the framework of the articulated assumptions).</p>		<p>Accept with Modification. Based on discussions during CB meetings, the section was revised to be in line with the comment, to read: "Source exclusion is the conclusion that two friction ridge impressions did not originate from the same source. After a comparison of all relevant areas,, the observed data are incompatible with the proposition that the two impressions originated from the same source. (See Annex A, Section Source Exclusion)."</p> <p>For clarification, the note was removed.</p>
30	A2	T	<p>The erroneous exclusion rate has been determined to be much higher than thought. These examples do not help reduce erroneous exclusions, in fact they promote them by telling examiners that they can trust in their confidence instead of stating when examiners can be confident.</p>	<p>Conclusions should not rely on confidence. As humans, we are often confident even when incorrect. Examiners should not be encouraged to rely on confidence, they should rely on validated methods. This document should not be implemented as it gives a false impression of standardization and promotes unscientific principles.</p>	<p>Reject. The document is intended to provide standards for methods currently in use, whether they are considered validated or scientific, or not.</p>
30	A2	T	<p>The erroneous exclusion rate has been determined to be much higher than thought. These examples do not help reduce erroneous exclusions, in fact they promote them by telling examiners that they can trust in their confidence instead of stating when examiners can be confident.</p>	<p>Conclusions should not rely on confidence. As humans, we are often confident even when incorrect. Examiners should not be encouraged to rely on confidence, they should rely on validated methods. This document should not be implemented as it gives a false impression of standardization and promotes unscientific principles.</p>	<p>Reject. The document is intended to provide standards for methods currently in use, whether they are considered validated or scientific, or not.</p>
41	6 A.4.1	T	<p>If the print is incomplete, wouldn't it be considered not of value?</p>		<p>Reject. The distinction between "no value" and "inconclusive" differs across FSPs and we consider it a matter of FSP policy</p>
42	6 A.5.5	T	<p>The example using AFIS does not make sense. Why is an AFIS lead a red flag? How is an AFIS lead worse than a case detective asking the examiner to do a direct comparison from a suspect to the latents? It seems like AFIS has less of a chance of bias than the latter example.</p>		<p>Reject. One-to-many comparisons have a greater risk of false match than one-to-one comparisons.</p>
43	A 6.2	T	<p>Addition of specific numbers to describe a source identification will put into question any source identification opinion that does not reach the example threshold.</p>	<p>Remove all numbers in all examples</p>	<p>Reject with modification. Language added to section A.1 to make clear that these examples are not thresholds.</p>
28	A6.1 and A6.3	T	<p>Why does 6.3 have a big red ball and 6.1 have a bunch of small red balls? Is ten points in a hypothenar stronger than 16 points in a tip?</p>	<p>Explain the visual representation.</p>	<p>Accept.</p>

8	Bibliography	T	Elimination of the bibliography is not acceptable. The LTG-member comments on the previous draft suggested a list of references on reporting support-based conclusions. If ASB is purporting to produce science-based standards, they should refer to the scientific literature that underlies them. This one needs such a bibliography lest it be seen as ipse dixit.	Some titles that should be considered as part of a bibliography for a document addressing conclusions and incorporating likelihood ratios are: <i>American Statistical Association, "Position on Statistical Statements for Forensic Evidence," Presented under the guidance of the ASA Forensic Science Advisory Committee, January 2, 2019; PCAST, "Forensic Science in Criminal Courts"; American Association for the Advancement of Science, "Forensic Science Assessments: A Quality and Gap Analysis-Latent Fingerprint Examination," (2017); Defense Forensic Science Center, Information Paper, Subject: Use of the Term Identification in Latent Print Technical Reports, (Nov. 3, 2015); Working Group on Human Factors in Latent Print Analysis, "Latent Print Examination and Human Factors: Improving the Practice through a Systems Approach," National Institute of Justice (2012); Steven P. Lund & Hari Iyer, "Likelihood Ratio as Weight of Forensic Evidence: A Closer Look," 122(27) J. Research of Nat'l Ist. Standards & Tech., (2017); Simone Gittelson et al., "A response to "Likelihood ratios as weight of evidence: A closer look"," 299 For. Sci. Int'l; John Buckleton & James Curran, "A discussion of the merits of random man not excluded and likelihood ratios," 2 For. Sci. Int'l Genetics 343 (2008); Jonathan J. Koehler, "Proving the Case: The Science of DNA: On Conveying the Probative Value of DNA Evidence: Frequencies, Likelihood Ratios, & Error Rates," 67 U. Colo. L. Rev. 859, (1996); Kristy A. Martire et al., "The Psychology of Interpreting Expert Evaluative Opinions," 45 Australian J. F. Sci. 305 (2013); Kristy A. Martire et al., "The Expression and Interpretation of Uncertain Forensic Evidence: Verbal Equivalence, Evidence Strength, and the Weak Evidence Effect," 37 L. & Human Behav. 197 (2013); Swaminathan et al., "Four model variants within a continuous forensic DNA mixture interpretation framework: Effects on evidential inference & reporting," 13(11) PLoS ONE (2018)</i>	Reject. Please note that comments on a re-circulation are generally accepted only on revised section of a document. Comments made on text not revised from the previous public comment period are generally not accepted. 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.
27	Comment 72, line 119	T	Reject. The commenter is correct that an informative Annex does not include requirements. However, the ASB Manual does permit informative Annexes. We regret that the commenter does not find this one useful. Previous comments requested examples, which argues for the usefulness of this informative Annex.	Previous comments also requested validated criteria for conclusions. The CB seems to be picking the low hanging fruit (going with the easy comments and ignoring the more useful comments and solutions). Remove the examples until validated criteria is	Reject. The Consensus Body believes the Annex is helpful and its helpfulness is not negated by the fact that the CB is unable to provide validated criteria at this time.
47			I do not believe that the three Inconclusive conclusions can be clearly and easily conveyed to laypeople and attorneys, thus will not be adopted by FSPs. Stating "Inconclusive with Similarities" and "Inconclusive with Dissimilarities" is loaded language that will imply findings that do not accurately represent the actual conclusion of the comparison.		Reject. The CB has found that the reasons for inconclusive conclusions can be, and have been, clearly conveyed to laypeople and attorneys

Deadline of Submission of Comments: 12-Jun-23
Document Number: ANSI/ASB Std 013
Document Title: Standard for Friction Ridge Examination Conclusions

#	Section	Type of Comment (E-Editorial, T-Technical)	Comments	Proposed Resolution	Final Resolution
12	all	T	We realize that changes were made in response to some comments on the last 2 rounds, but the fundamental problem of calling a statement of strong support for the same-source hypothesis an "identification" remains. Several LTG members believe that the terminology in the standard remains confusing or inappropriate, but we realize this is a second recirculation.		Reject. Consensus is to use term "source identification."
5	3.13	E	Explanations for the observations, data and calculations.	Add comma after data	Accept. Suggestion was forwarded to editor TR016.
1	3.17	T	"...or a known source" is contradictory to the rest of the definition for questioned impression	remove "or a known source" at the end of the definition	Reject. Please note that comments on a re-circulation are generally accepted only on revised section of a document. Comments made on text not revised from the previous public comment period are generally not accepted. In some cases, such as ten-print to ten-print comparisons, questioned impressions may be from a known source.
23	3.20/4.2	T	The reworded statements for Source Exclusion appearing in sections 3.20 and 4.2 are in conflict with the following requirements documented in section 4.1:- "A conclusion shall be expressed as an opinion, not as a fact, because it is an interpretation of observed data made by the examiner" - "In reaching a conclusion, an examiner shall assess the similarities and dissimilarities in the observed data and consider the probability of both under each of the two following propositions: the two impressions originated from the same source or from different sources."Both source exclusion statements are clearly expressed as fact (i.e. "that two friction ridge impressions did not originate from the same source"). If presented to a trier of fact as is, there is every expectation that the trier of fact would interpret these to be statements of fact (which is also in conflict with a number of prohibitions as listed under Section 5). Section 4.2 further discusses source exclusion only in terms of the rejection of one proposition rather than the "probability of both under each" as is required under Section 4.1. RECOMMENDATION: Both statements of Source Exclusion (3.20 & 4.3) must either be reverted to the previous verbiage (which is accurate and not in conflict with the document requirements) or be explicitly amended to no longer suggest that source exclusion is a statement of fact and that the probability of both propositions is considered.		Reject with modification. "Fact" deleted from section 4.1. Conclusions are defined as opinions in section 3.2.
16	3.5	E	The period should be within the ending quotation mark of "disagreement" rather than outside of it.	Move period between the t and ending quotation mark: "disagreement."	Accept. This change has already been made in TR016, and STD 013 has been edited to reflect that change.
3	3.7	E	"moulded prints"	change to molded prints (american english vs UK english)	Accept. Suggestion was forwarded to editor TR016.
4	3.7	E	Note Examples may include, but are not limited to, inked tenprints, inked palm prints, Livescan prints, powder and lift prints, casted/moulded prints, or photographs of friction ridge skin.	Insert colon after "Note"	Reject. This is ASB style. See ASB Manual (2021), section F.4.2.
13	4.1	T	4.1: The redlined version eliminates language indicating that conclusions reached by friction ridge examiners are "inherently subjective." This language should not have been removed from the Standard. An overwhelming body of research indicates that each step of the friction ridge examination process, up to and including conclusions, is subjective and often not repeatable or reproducible. Different examiners select different features when the analyze prints, employ different subjective thresholds for sufficiency, and utilize the category of inconclusive differently. It is simply not credible to argue that conclusions drawn by friction ridge examiners are not subjective, and thus this standard should revert to acknowledging as much.	bring back removed language	Reject. The term "interpretation" implies subjectivity.

6	4.3, 4.4, and 4.5	T	4.3, 4.4, and 4.5 conclusions are too arbitrary with the possibilities for reaching an inconclusive decision and need to be reconciled. Essentially there are five inconclusive conclusions an examiner can reach, with the inclusion of moderate and weak support. The conclusions are already subjective and adding more conclusions will make subjectivity greater. Examiners will be tasked with determining the frequency of limited corresponding minutiae (with similarities or dissimilarities) in two impressions and what distinguishes each type of inconclusive from one another. Without adequate research to support these stand alone inconclusive conclusions, there will be greater subjectivity in examiner conclusions, as well as low reproducibility and repeatability of conclusions.	Remove Inconclusive with Similarities, keep Inconclusive (based on the standard and limited corresponding minutiae), and keep Inconclusive with Similarities based only on example A.3.2 (i.e., examiner was not confident that they had searched in the correct area). Example A.3.1 describes a scenario that could be classified as NO Value. Examples A.5.1, A.5.2, A.5.3, A.5.4, and A.5.5 can be categorized as Inconclusive with equal support for both same source and different source propositions. There is no research to distinguish the amount and type of information needed between reaching an Inconclusive conclusion, Inconclusive with similarities (moderate) conclusion, and Inconclusive with similarities (weak) conclusion. Until then, the proposition should be equal.	Reject. Please note that comments on a re-circulation are generally accepted only on revised section of a document. Comments made on text not revised from the previous public comment period are generally not accepted.
14	4.6	T	The definition of "source identification" has moved from "substantially stronger support for identification" to "extremely strong support," but juries will still view the phrase "source identification" as a statement that there is one identifiable source of the print. The fact that the document then says you cannot say 100% or "infallible" and the like will be lost on lay juries. The addition to the note for that opinion, we believe, makes clear that what is being proposed is wordsmithing that will ultimately still be confusing to jurors and would be solved if the term "source identification" were eliminated.	Eliminate "source identification" as a valid term.	Reject. Consensus is to use term "source identification."
24	4.6	T	4.6 How is 'substantially stronger' measured, as opposed to stronger support? Using personal thresholds, as in 4.5 which states 'the examiner believes...' is a clear indication of pseudoscience, which has led to past errors. Statements such as this do not improve current practices. It seems that a new process is being promoted as a standard when it has not been tested or validated. It appears that testing is being done on human subjects (actual cases). When lives and liberties are at stake, testing should be done prior to implementation. ndation: This could be a recommendation. It should not be labeled as a standard until it has been tested.		Reject. Unfortunately the discipline cannot do any better than qualitative measurements of the strength of support at this time.
22	4.6	E	Since we define "agreement" to mean overall conformity. I believe it should be added to section 4.6 "Source Identification". There is strong correspondence present such that the examiner would not expect to see the same arrangement of features repeated in an impression from another source, "resulting in agreement and overall conformity" (See Annex A, Section Source Identification). Suggest adding the "resulting in agreement and overall conformity" to end of last sentence.		Reject. Proposed language would be repetitive of "strong correspondence."

2	5a	E	<p>This limitation rejects all the scientific evidence, the proven track record of successfully establishing sole source identifications, and the ability to report the true results of the examination.</p> <p>There is no scientific evidence to suggest that a latent print examiner cannot identify a latent print to its sole source. It is just the opposite. There is extensive biological research that demonstrates that all areas of friction ridge skin are unique. There is a demonstrated ability to identify latent prints to their sole source that has taken place for more than one hundred years. Putting it plainly, that horse left the barn many years ago.</p> <p>The identification of a latent print to its sole source has been demonstrated, accepted, and embraced by the courts of the world. There is extensive legal precedence because the ability has been demonstrated.</p> <p>The ability to accurately identify friction skin evidence to its sole source is proven and demonstrated every hour of every day. No human endeavor is or can be error free, but this should not be confused with or diminish the proven ability to identify prints to their sole source.</p> <p>Today, there are more than a dozen studies that also demonstrates that the identification of a latent print to its sole source is done with extreme accuracy, more so than most human endeavors.</p> <p>By limiting the examiner to “not assert that two impressions were made by the same source” is requiring that the actual conclusion and the purpose of the examination should not be shared with the trier of fact. It also goes against the science and the proven ability to do so. The role of the expert witness “...is to assist the trier of fact to understand the evidence...” FRE702. The expert witness provides expert opinion evidence that a lay person is not capable of forming. It is up to the trier of fact (jury) to accept or reject the opinion, see any typical expert witness jury instructions.</p> <p>“—there is tremendous variability among prints made by different fingers. This variability clearly provides a scientific basis for using fingerprints to distinguish individuals. AAAS, Forensic Science Assessments: A Quality and Gap Analysis- Latent Fingerprint Examination, P.18, September 2017.</p>		<p>Reject. The uniqueness of friction ridge skin, legal acceptance, high accuracy, and high variability do not justify sole source identifications.</p>
2 (cont.)	5a	E	<p>Even, the 2009 NAS report, Strengthening Forensic Science in the United States: A Path Forward, states that: “Because of the amount of detail available in friction ridges, it seems plausible that a careful comparison of two impressions can accurately discern whether or not they had a common source.” Page 142. Nowhere in the report does it suggest that we should abandon the use of sole source identifications. The only recommendation from the report concerning friction ridge identification is the expanded use of the discipline, Recommendation 12.</p> <p>The Evaluation of Forensic DNA Evidence 1996 Committee on DNA Forensic Science: An Update, stated that DNA evidence will soon be reported as a unique identification as fingerprints are now. “We can confidently predict that, in the not-distant future, persons as closely related as brothers will be routinely distinguished, and DNA profiles will be as fully accepted as fingerprints now are. But that time has not yet arrived, and the winds of controversy have not been stilled. Hence this report”, Preface of the report.</p> <p>This has now happened, the first sole source testimony for DNA was admitted into evidence and upheld at the appellate court level. People v. Cua (2010), Cal.App.4th [No. A123756. First Dist., Div. Five. Jan. 3, 2011.].</p> <p>The report went on to state: “The history of fingerprints offers some instructive parallels with DNA typing (Stigler 1995). Francis Galton, the first to put fingerprinting on a sound basis, did an analysis 100 years ago that is remarkably modern in its approach”. Page 56, NAS DNA report 1996.</p> <p>Just as with DNA evidence today, fingerprint identifications were first supported by a statistical analysis during the early 1900’s, for example: “There were twenty-two points of similarity, which leaves no doubt that the two impressions were made by the same finger. Worked out in figures, the possibility of that being made by any other finger in ‘2384 billion chances to one’, The Star, New Zealand, 28 November 1906. That went away as more research and data was amassed that supports the fact that all areas of friction ridge skin are unique. History is now repeating itself with DNA analysis.</p> <p>DNA, just like friction ridge skin is unique to each individual. Biological uniqueness is not proven or disproven by statistics. There is overwhelming evidence that supports the uniqueness of friction ridge skin and more importantly there is no evidence to prove it is not unique.</p> <p>To borrow from the FBI response dated September 20, 2016 to the discredited and rejected PCAST report, what you are proposing in this document ----“Ignores important differences between forensic science disciplines, conflating fundamental differences between class-level and identification-level evidence leading to troubling generalized conclusions”. In this case by using statistical analysis to challenge biological uniqueness that has a demonstrated one hundred plus year track record of success in identifying individuals and solving crime is very disturbing at best.</p>	Remove: assert that two impressions were made by the same source	<p>Reject. The uniqueness of friction ridge skin does not justify sole source identifications.</p>

7	5 (d)	E	Update after comma where it states: with "absolute" does not follow the format of the examples' list.	Remove the word "with" after comma or state it as "with absolute" since you are providing a list of example phrases to avoid.	Accept. "with" deleted
8	A.3.1	T	The example states there are ambiguous features in a low clarity area of the questioned print and it is the only target group available that was not present in the corresponding area of the exemplars. However, because the examiner was not confident in the existence of these features in the questioned impression, they would not support a conclusion of Source Exclusion and could therefore conclude Inconclusive with Dissimilarities. This is confusing. To state there is a "target group" indicates the examiner has determined there are minutiae present in the questioned print. Therefore, "ambiguous features" would mean that it is unclear as to the type of minutiae. If the features (minutiae) were not present in the corresponding area of the exemplars then the print could be excluded. If the examiner was not confident in the existence of these features (minutiae) in the questioned print, then accordingly this should have been determined in the Analysis stage of ACE-V and deemed as No Value, at which point the examination would have stopped. To be in the Comparison/Evaluation phase and then say you are not confident in the existence of the features in the first place should mean to re-analyze the print and deem No Value, not Inconclusive with Dissimilarities.	Remove or update the example to define inconclusive with dissimilarities.	Reject. "Ambiguous features" does not only mean that it is unclear as to the type of minutiae. The criteria for no value questioned impressions can be determined by each FSP policy. But some FSPs would proceed with comparison in this situation.
17	A.4.3	E	Misleading commas around "and the evidence against; the subject of the sentence includes the evidence in support as well as the evidence against.	Remove the commas to read: "...the evidence in support and the evidence against are both weak and equally balanced."	Reject. Language is grammatical as is.
18	A.5.1	E	Need additional wording to make a complete sentence. What comes after the semicolon in the 1st sentence must be a complete sentence ("however, insufficient to support a Source Identification.").	Add "the similarities" and "are" to complete the sentence: "however, the similarities are insufficient to support a Source Identification."	Accept
19	A.5.2	E	Need additional wording to make a complete sentence. What comes after the semicolon in the 1st sentence must be a complete sentence ("however, insufficient to support a Source Identification.").	Add "the similarities" and "are" to complete the sentence: "however, the similarities are insufficient to support a Source Identification."	Accept
9	A5.2	E	"i.e. Insufficient for a source identification"	Capitalize Source Identification	Accept
10	A5.3	E	"i.e. Insufficient for a source identification"	Capitalize Source Identification	Accept
20	A.5.3	E	Need additional wording to make a complete sentence. What comes after the semicolon in the 1st sentence must be a complete sentence ("however, insufficient to support a Source Identification.").	Add "the similarities" and "are" to complete the sentence: "however, the similarities are insufficient to support a Source Identification."	Accept
21	A.6.2	E	Incorrect verb placement of "was" in the first sentence: "Consider a situation in which was an accumulation of similarities observed...."	Reorder the placement of "was" to read: "Consider a situation in which an accumulation of similarities was observed...." OR retain the stricken "there" to read: "Consider a situation in which there was an accumulation of similarities observed...."	Accept
11	A6.2	E	"Consider a situation in which was an accumulation"	Revise to, "Consider a situation in which there was an accumulation"	Accept with modification. Sentence edited.
15	Bibliography	T	Elimination of the bibliography is not acceptable. The LTG-member comments on the previous draft suggested a list of references on reporting support-based conclusions. If ASB is purporting to produce science-based standards, they should refer to the scientific literature that underlies them. This one needs such a bibliography lest it be seen as ipse dixit.	Some titles that should be considered as part of a bibliography for a document addressing conclusions and incorporating likelihood ratios are: American Statistical Association, "Position on Statistical Statements for Forensic Evidence," Presented under the guidance of the ASA Forensic Science Advisory Committee, January 2, 2019; PCAST, "Forensic Science in Criminal Courts"; American Association for the Advancement of Science, "Forensic Science Assessments: A Quality and Gap Analysis-Latent Fingerprint Examination," (2017); Defense Forensic Science Center, Information Paper, Subject: Use of the Term Identification in Latent Print Technical Reports, (Nov. 3, 2015); Working Group on Human Factors in Latent Print Analysis, "Latent Print Examination and Human Factors: Improving the Practice through a Systems Approach," National Institute of Justice (2012), Steven P. Lund & Hari Iyer, "Likelihood Ratio as Weight of Forensic Evidence: A Closer Look," 122(27) J. Research of Nat'l Ist. Standards & Tech., (2017); Simone Gittelson et al., "A response to "Likelihood ratios as weight of evidence: A closer look", 299 For. Sci. Int'l; John Buckleton & James Curran, "A discussion of the merits of random man not excluded and likelihood ratios," 2 For. Sci. Int'l Genetics 343 (2008); Jonathan J. Koehler, "Proving the Case: The Science of DNA: On Conveying the Probative Value of DNA Evidence: Frequencies, Likelihood Ratios, & Error Rates," 67 U. Colo. L. Rev. 859, (1996); Kristy A. Martire et al., "The Psychology of Interpreting Expert Evaluative Opinions," 45 Australian J. F. Sci. 305 (2013); Kristy A. Martire et al., "The Expression and Interpretation of Uncertain Forensic Evidence: Verbal Equivalence, Evidence Strength, and the Weak Evidence Effect," 37 L. & Human Behav. 197 (2013); Swaminathan et al., "Four model variants within a continuous forensic DNA mixture interpretation framework: Effects on evidential inference & reporting," 13(11) PLOS ONE (2018)**	Reject. Please note that comments on a re-circulation are generally accepted only on revised section of a document. 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.

Deadline of Submission of Comments: 20-Oct-23

Document Number: ANSI/ASB Std 013

Document Title: Standard for Friction Ridge Examination Conclusions

#	Section	Type of Comment (E-Editorial, T-Technical)	Comments	Proposed Resolution	Final Resolution
1	4.1	T	4.1: This and the last redlined version eliminates language indicating that conclusions reached by friction ridge examiners are “inherently subjective.” This language should not have been removed from the Standard. An overwhelming body of research indicates that each step of the friction ridge examination process, up to and including conclusions, is subjective and often not repeatable or reproducible. Different examiners select different features when the analyze prints, employ different subjective thresholds for sufficiency, and utilize the category of inconclusive differently. It is simply not credible to argue that conclusions drawn by friction ridge examiners are not subjective, and thus this standard should revert to acknowledging as much.	bring back removed language	Reject. As we stated when this comment was made in the last round, we think the term "interpretation" implies subjectivity. We don't think it is necessary for this document to state that friction ridge conclusions are subjective.
2	4.2	T	One LTG member writes: Are there any circumstances where “additional” information or more advanced digital or actual processing might provide other information that might prompt a conclusion that would be not be exclusionary? Or is that always going to be captured by shifting into the next “INC” category on the chart. Understanding our limited knowledge, it seems like it is a “definitive” answer on this end (exc) and just making sure that is a level of confidence that can be reached with *some* consistency — depending on quality of item examined, etc. We saw in the appendix that this language was present: "no distortion or interpretation issues were noted" in one example but not in the second (which I do see why the two examples are different but..). I certainly do understand there is uncertainty in everything. And, it is not necessarily an apples to apples comparison but I can't help but to have my mind go to DNA and allele drop out and/or amplification (failure to) at certain loci depending on NOC could result in an exclusion by some labs or experts that might not be an exclusion by another lab or expert b/c of the “lack of completeness” of the information impacting this. Or, perhaps the “prohibitions” portion is intended to address the “uncertainty” for this category as well?	Address such circumstances, if relevant?	Reject. Please note that comments on a re-circulation are generally accepted only on revised section of a document. Comments made on text not revised from the previous public comment period are generally not accepted.
3	4.3 & 4.5	Ballot comment	In actual practice, 4.3 and 4.5 would be fraught with potential problems by allowing experts to put a thumb ever so slightly on one side of the scale or the other on the basis of an unquantifiable probability. The challenge faced by jurors in interpreting such testimony has been mentioned by others. And would it be long before a 4.5 report would show up as probable cause on an arrest warrant?		Reject. Please note that comments on a re-circulation are generally accepted only on revised section of a document. Comments made on text not revised from the previous public comment period are generally not accepted.
4	all; 4.6	T	We realize that changes were made in response to some comments on the last 3 rounds, but the fundamental problem of calling a statement of strong support for the same-source hypothesis an “identification” remains. Several LTG members believe that the terminology in the standard remains confusing or inappropriate, but we realize this is a third recirculation.		Reject. Please note that comments on a re-circulation are generally accepted only on revised section of a document. Comments made on text not revised from the previous public comment period are generally not accepted.
5	4.6	T	The definition of "source identification" has moved from “substantially stronger support for identification” to “extremely strong support” back to "substantially stronger support." It's not clear why it was moved back, but either way, juries will still view the phrase "source identification" as a statement that there is one identifiable source of the print. The fact that the document then says in Section 5 you cannot say 100% or “infallible” and the like will be lost on lay juries. The addition to the note for that opinion, we believe, makes clear that what is being proposed is wordsmithing that will ultimately still be confusing to jurors and would be solved if the term “source identification” were eliminated.	Eliminate "source identification" as a valid term.	Reject. Please note that comments on a re-circulation are generally accepted only on revised section of a document. Comments made on text not revised from the previous public comment period are generally not accepted.

6	Bibliography	T	Several LTG members continue to believe elimination of the bibliography is not acceptable. The LTG member comments on the previous draft suggested a list of references on reporting support-based conclusions. If ASB is purporting to produce science-based standards, they should refer to the scientific literature that underlies them. This one needs such a bibliography lest it be seen as ipse dixit.	Some titles that should be considered as part of a bibliography for a document addressing conclusions and incorporating likelihood ratios are: Christophe Champod, Chris J. Lennard, Pierre A. Margot, & Milutin Stoilovic, Fingerprints and Other Ridge Skin Impressions (2d ed. 2016). For remarks on the book, see http://for-sci-law.blogspot.com/2017/08/the-mask-is-down-fingerprints-and-other.html ; American Statistical Association, "Position on Statistical Statements for Forensic Evidence," Presented under the guidance of the ASA Forensic Science Advisory Committee, January 2, 2019; American Association for the Advancement of Science, "Forensic Science Assessments: A Quality and Gap Analysis-Latent Fingerprint Examination," (2017); Defense Forensic Science Center, Information Paper, Subject: Use of the Term Identification in Latent Print Technical Reports, (Nov. 3, 2015).	Reject. Please note that comments on a re-circulation are generally accepted only on revised section of a document. Comments made on text not revised from the previous public comment period are generally not accepted.
7		Ballot comment	I disagree with the "factual" statement of the exclusion decision. I recognize that I hold a minority opinion in this matter, I have been given ample opportunity to present my objections to the current language, and I accept that the consensus body has chosen otherwise.		No resolution proposed.
8		Ballot comment	Squishy language, substantially stronger cannot be measured. Comment resolution for comment 24 states: "Reject. Unfortunately the discipline cannot do any better than qualitative measurements of the strength of support at this time." I disagree, it can be done and is being done. A document on how this can be done was submitted to the ASB, stating how measurements can be quantified on a verbal scale (similar to how broken bones are labeled as hairline vs compound fractures). All that needs to be done is to define the parameters for each conclusion. The submission was rejected for consideration based on the NWP form (the method itself was never looked at or considered).		No resolution proposed. This comment concerns a comment adjudication.
9		Ballot comment	My comments are similar to last year's vote. The Section 4.3 and 4.5 conclusions allow for too much variability from examiner to examiner and laboratory to laboratory. From my experience, a 3-point scale leads to less confusion for the factfinder. The prohibition language in Section 5 is too restrictive; to me, the DOJ ULTR prohibitions are sufficient.		Reject. Please note that comments on a re-circulation are generally accepted only on revised section of a document. Comments made on text not revised from the previous public comment period are generally not accepted.