

Deadline for Comments: 5/11/2020

ASB Standard 062: Standard for Topography Comparison Software for Toolmark Analysis, First Edition

Note: a specific Proposed Resolution must accompany each comment or it cannot be considered.

#	Section	Type of Comment (E-)	Comments	Proposed Resolution	Final Resolutions
	2	E	ASB Staff Note: the intention is to publish ASB Stds 061, 062, and 063 at the same time.		
1			<p>My "No" vote is based on the following concerns regarding the revisions to Standard 62:</p> <ul style="list-style-type: none"> 4.2.2.2: Replacing the word "match" with the words "comparison" and "numeric" was a necessary intervention given the history of the term "match" and its understood meaning by jurors. But that intervention does not go far enough. If Category 0 software does not produce ranks that are statistically validated they simply should not be reported at all. Juror misunderstanding and awe at forensic science does not simply disappear when experts use better-couched language, and informing jurors of the rank produced by a system risks confusion. The section should be further amended to preclude testimony about category 0 systems entirely, potentially reading: "Testimony regarding rankings developed by category 0 software is not generally accepted by the field of firearms examination and is inappropriate" If case circumstances (course of investigation) require discussion of a database it should stop at that and not continue into a description of rankings. 		Reject: The edits made to this document during round 01 of public comments are sufficient to address this concern. The comment confuses the different concepts of ranking of items with establishing a numeric statistical confidence.
1			<ul style="list-style-type: none"> 4.2.3.3: Similar to my above comment to 4.2.2.2, changing the words "match" and "very high" to comparison and "one may describe the frequency of seeing that score in their experience" are admirable interventions but they do not go far enough. Unless a software system is statistically validated analysts should not be testifying at all to results generated by that system. It is especially problematic to allow examiners to leave statistics behind and revert back to dangerous and misleading statements about their "experience." As William Tobin has pointed out in another related setting using experience can be highly misleading: "suppose that exactly 100 pairs of firearms out of an estimated 100,000 guns in a Texas town share indistinguishable gun barrel markings. If each of 100 firearms experts examined 10 pairs of guns from the town's gun population every day for 10 years (n=3,650,000 gun pairs), there is about a 93% chance that none of the indistinguishable pairs will have come under examination. That is, despite 1,000 "collective years" of forensic science experience (100 experts multiplied by 10 years), the failure to find even a single pair of guns with indistinguishable markings would offer little basis for drawing conclusions about whether gun barrel markings, even in this single town, are unique." Imagine an examiner who has only used a category 1 software system on two occasions. They would, under this standard, be perfectly able to say that they have never seen a score of this magnitude in all their years as an examiner. That statement would be meaningless and highly misleading yet the standard would allow it. Ultimately the frequency that an individual examiner has seen a score is meaningless and thus should not be permitted, much less sanctioned, as appropriate testimony. 		Reject: The paragraph is clear that no statistical confidence has been established for any results of category one software. The comment confuses the different concepts of numeric score of items with establishing a numeric statistical confidence.
1			<ul style="list-style-type: none"> 4.3.1: Merely having an undergraduate science degree in no way necessarily qualifies an individual to run a large scale validation study of software and this standard should not pretend that it does. Individuals in charge of validation (especially because under this standard they will be working solo) should be required to have education or training on software validation as well as generally method validation. There should also be a requirement that they have been published in a peer-reviewed journal conducting some type of appropriate experiment. These are qualifications that might actually show that an individual is appropriately positioned to actually design and run a study. A n undergraduate degree does not accomplish that. 		Reject: The WG feels that the edits made to this document during round 01 of comments address this concern.
1			<ul style="list-style-type: none"> 4.3.3.1: Merely saying that samples should reflect a range is patently insufficient. A study designer could simply select different calibers, or different manufacturers with no concern as to manufacturing method, previously identified instances of subclass characteristics etc...By this point folks are well aware of the types of samples that pose challenges for firearms examiners. The validation of these systems should require them to work on those samples. Creating a non-exhaustive list will not inhibit labs and developers from going further but would ensure minimum standards. Therefore this section should require that samples include the full range of discovered subclass marks (from bullets and cartridge cases), as well as samples from evolving manufacturing methods (broached rifling, polygonal rifling, electrochemical rifling, stamping, metal injection molding, and cnc, etc...) 		Reject: The WG feels that the edits made to this document during round 01 of comments address this concern. The paragraph states the strength of the study is a function of the size and scope of the study design, "The larger and more inclusive the validation set the stronger the validation result. Studies shall be sufficiently large to determine statistical performance to an appropriate degree of certainty."

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2			<p>I appreciate efforts that have been made to resolve previous comments and agree with the sentiment that admirable progress has been made on replacing the "match" language in this document. However, I also agree with Richard's comments on this document, many of which are in a similar vein to concerns I have voiced in the past.</p> <p>I continue to be concerned that testimony is not required to include the limitations of the software (see 4.2.2.2 and 4.2.3.3, both of which require the examiner to make certain statements about limitations only "if asked about the significance..."). The concern that "this document is not intended to guide the attorneys about their questions" misses the point. An attorney should not have to ask a particular question to elicit the limitations. Testimony about the limitations of the ranking/scoring statements should be affirmatively offered as part-and-parcel of any testimony about the rank/score.</p>		<p>Reject: Per ASB instructions with a recirculation, comments on a recirculation are only accepted on revised text within the document, comments made to text not revised from the original public comment period will not be accepted. This specific comment is not on the redlined words/sentences of this document, therefore not open for comment. This item may be addressed in the future versions of the document.</p>