Standardization of Fingerprint Terms

Michele Triplett, Forensic Operations Manager
King County Regional AFIS, Seattle, WA
michele.triplett@kingcounty.gov

Abstract

The Fingerprint Dictionary began in 2002 as my personal study notes for latent print certification. Fingerprint practitioners found these notes useful and subsequently Kasey Wertheim and Steve Everist assisted in making them available to others. The fingerprint community soon began suggesting additional entries be included and the short list quickly became an extensive resource. Compiling information has been educational and gratifying, but it has also presented many challenges.

Culture

The biggest challenge in standardizing terminology for the fingerprint discipline is with the changing ideologies within the law enforcement community. The shift is unnoticeable to many practitioners due to limited contact with other experts. Attending conferences and training classes gives practitioners a glimpse into the views of others but this may not be enough interaction to notice the changes taking place or the impact of these changes.

Historically practitioners were hired by law enforcement to evaluate forensic evidence to assist in the prosecution of a case. Evolution of the legal system has emphasized the need for defense attorneys to have equal access to forensic analysis and this has changed the direction of forensic practitioners. Many now believe forensic experts should be evaluating data in a more objective manner without trying to assist the prosecution. The past and present goals sound similar, since both groups are evaluating evidence, however there is a significant difference. Prosecution witnesses may feel a personal attachment to each case and feel defensive when others question their results and methods used. A truly impartial witness would be more open to recognizing deficiencies in methods and concepts since they feel no personal attachment to the outcome.

Different Uses of Words

Differing goals affect terminology because practitioners in these groups are using the same words to convey information but interpreting those words differently, which results in miscommunication. The ACE-V method (Analysis, Comparison, Evaluation and Verification) is a primary example. A method is defined as a *specific* procedure for performing a task. Prosecution witnesses may say ACE-V is the method all practitioners use to arrive at conclusions. A more objective witness may feel ACE-V is too vague to officially be labeled 'a method' since specifics are not stated. ACE-V does not state what features can or must be used (incipient ridges, scars, creases?), does not state a tolerance level for a latent print to be considered 'of value', nor does it state a tolerance level for each conclusion (identification or exclusion).

The word verification can also be somewhat confusing. The ACE-V method uses *verification* to indicate the phase where a second practitioner conducts an analytical examination, yet computerized fingerprint technology uses *verification* to signify the initial practitioner conducting an analytical examination of the computer search results.

The words used to communicate conclusions are used differently as well. *Identification* and *individualization* may be used synonymously, as the Scientific Working Group for Friction Ridge Analysis, Study and Technology (SWGFAST) suggests, or may have different meanings, such as *individualization* being based on physically excluding all other sources and *identification* being based on the confidence of the examiner that no other source deposited the latent print (MN 2008, Jeremy Hull case). Other agencies use the word *match* or *consistent* as conclusions of a comparison. While these words imply there is a correspondence between evidence and a known sample, some suggest the amount of correspondence is not conveyed with this terminology. Imagine a blood expert testifying that blood found at a scene is *consistent* with a suspect. It may sound highly likely this suspect was at the scene since the blood at the scene and the suspect's blood are consistent. However, it is possible *consistent* simply means both blood types are type B. Since many people have type B blood, the fact that consistency exists is actually inconsequential. In logic, this is known as a fallacy of omission.

Many agencies use inconclusive as another possible conclusion. Agency A may use the term inconclusive to indicate better known prints are needed in order to complete an examination. Agency B may use this term to indicate they were unable to identify or exclude a person either because they could not locate a consistent area in the known print or because they did locate consistency but not a sufficient amount to identify the impression. The term inconclusive is therefore being used as both pending and final conclusions.

The definition of an error is unclear. Prosecution witnesses only consider erroneous identifications as errors since they feel this is the only type of error the courts are concerned with. Non-prosecution witnesses feel correct conclusions arrived at using faulty data or logic are errors as well.

Another example can be seen with the definition of *opinion*. Since testimony is legally considered *opinion evidence*, some witnesses may feel it is permissible to give their personal opinions in reports and testimony. Others think anyone testifying to scientific evidence should only interpret the meaning of the evidence within the limits of the science and refrain from stating personal beliefs, since science puts value in data over beliefs.

Other words that are used with different meanings include words like reliable, valid, accurate and certain. Some witnesses use these words synonymously while others use these words in accordance with their more formal definitions.

Conclusion
Fingerprint evidence is strong evidence. The challenge the discipline currently faces is to accurately articulate thoughts. A slight difference in wording can complicate or confuse the message being conveyed resulting in misleading information. Consistent use of terminology within the discipline would strengthen arguments and credibility. The words one chooses to use must be carefully considered in order to convey accurate information.