OSAC Update: Improving Communication in a Learning Organization

A Letter from the NIST Director of Special Programs & Chair of OSAC's Forensic Science Standards Board
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In February of 2014, NIST partnered with the Department of Justice (DOJ) to establish a new effort to facilitate the development of documentary standards for the forensic sciences. Prompted in part by the 2009 National Academies of Science report, *Strengthening Forensic Science in the United States—A Path Forward*, the goal of this effort was to enable the development of science-based standards via an open, consensus-based process. This was the first effort to coordinate the development of forensic science standards across multiple disciplines and to engage a broader community of stakeholders to help ensure the technical quality that lies at the foundation of forensic science.

This effort was unprecedented, and ideas from NIST, DOJ, scientific working groups, accreditation bodies, and forensic science societies all contributed to the design of the Organization of Scientific Area Committees for Forensic Science (OSAC). After recruiting volunteers and making initial appointments, OSAC established governance documents and processes, built a shared online platform for moving documents through those processes, and launched initial meetings and training sessions. With those first steps behind us, we thought that we were ready to undertake the real work of this new organization. But we soon learned to our surprise that we would have to improve the process.

NIST Statement on ASTM E2329-14: How did we get there and what have we learned?

In January of 2016, *ASTM E2329-14 Standard Practice for Identification of Seized Drugs* became the first document to complete the OSAC Registry approval process. All parties tried to adhere to that process, yet the unexpected result was that NIST subsequently expressed concern about that standard and asked the standard developer to review it. Neither NIST nor the OSAC Forensic Science Standards Board (FSSB) had expected that this type of subsequent action by NIST would be part of the process.

In April of 2016, members of the FSSB conducted a critical and highly illuminating root-cause analysis of the events at various steps in the OSAC registry approval process to better determine how and where the breakdown occurred. They identified several junctures where the process did not perform as anticipated. Their analysis concluded that one root cause was ineffective communication. They also realized that a single modification to the process was not the answer; rather, many changes would be necessary. Some of the changes implemented in response include:

- Revision of the technical merit worksheet and the development of guidance on assessing whether a standard is clear and scientifically-sound
- Documentation of dissenting opinions and comments through every stage of the process, including how those comments were resolved
- Addition of Resource Committee representatives to the FSSB and the Scientific Area Committees to obtain input earlier in the process and provide greater balance
- Facilitation (internal or external) of dialogue when necessary to resolve disagreement
- Institution of annual OSAC Leadership Strategy Sessions to discuss problems and solutions

Some of these changes are based on best practices that NIST's Standards Coordination Office has identified in other consensus-driven standards development processes. These changes were discussed,

developed by the Quality Infrastructure Committee, and then adopted by the FSSB and implemented through the OSAC Scientific Area Committees and subcommittees.

Looking at the additional standards that have been placed on the OSAC Registry since that first standard, we believe that the OSAC Registry Approval Process has now been improved.

The revised process: ensuring all voices are heard and all concerns are documented

Does this revised process mean that every document that has completed all the steps required for placement on the OSAC Registry should be subject to subsequent review by NIST? No. Such a requirement would position NIST in a gate-keeper role—a role that NIST neither seeks nor desires.

Does this revised process mean that if subject matter experts from NIST find technical or process issues with a standard, whether OSAC-approved or not, that they should refrain from submitting public comments? No. Such a constraint would run contrary to NIST's commitment to open scientific dialogue and fair practices. Putting such a constraint on NIST technical staff would also signal, incorrectly, that differences of opinion are not allowed. What it does mean is that the process works best if subject matter experts, independent of their employer, directly engage in the standards development process and the OSAC Registry approval process to make their technical comments part of the public record.

Does this revised process mean that if an individual NIST scientist makes a public comment as to why a standard should not be approved for placement on the OSAC Registry, then the FSSB cannot approve it? No. Such a requirement would suggest, incorrectly, that the FSSB does not have the final authority for approval. The FSSB will review all the accompanying worksheets, including the technical merit worksheet, and the comments and comment resolutions received throughout the process. The FSSB will then discuss any outstanding issues, and reach its decision by vote.

Moving forward: NIST and the FSSB are committed to continuous improvement

NIST and the FSSB both realize that as OSAC grows and matures, there will be ongoing opportunities to improve the organization and the effectiveness of communication. Activities like the OSAC Leadership Strategy Session (OLSS) provide a valuable venue for assessing how well things are working and identify needed changes. Among the many lessons that we learned at the OLSS meeting this past September was that the lessons from ASTM E2329-14 had not been broadly communicated to the OSAC membership. This update is intended to communicate the lessons learned and steps taken to mitigate similar issues in the future. The FSSB and NIST leadership share a common goal of an effective OSAC process that elevates technically sound, consensus-based standards to the OSAC Registry.

Respectfully Submitted,

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