Introduction to the American Academy of Forensic Sciences Standards Board
Introduction

- Teresa Ambrosius, Secretariat
- Linda Wilson, Technical Coordinator
- Mary McKiel, ANSI and ISO Consultant
Background

- 2009 National Research Council report
- Forensic community need for standardization
- AAFS decides to become a Standards Developing Organization (SDO)
AAFS-Standards Board (ASB)

- Wholly owned subsidiary of AAFS
- Established and staffed – 2015/2016
- Accredited by the American National Standards Institute (ANSI) – 2016
- Partially funded by a grant through the Laura and John Arnold Foundation
- Consists of Consensus Bodies (CB), a Board of Directors, and Staff
ASB Board of Directors

- Appointed by AAFS Board of Directors from AAFS membership
- Directors serve 3 years
- Current Chair: Lucy A. Davis
- Directors include:
  - Jennifer Limoges
  - Greg Berg
  - Lindsey Thomas
  - Linton Mohammed
  - Julie Howe
  - TBD
Active Consensus Bodies

Currently have 12 Active Consensus Bodies:
- Anthropology
- Bloodstain Pattern Analysis
- Disaster Victim Identification
- DNA
- Dogs and Sensors
- Firearms and Toolmarks
- Footwear and Tire
- Forensic Document Examination
- Friction Ridge
- Medicolegal Death Investigation
- Toxicology
- Wildlife Forensics
ASB Consensus Body: Membership

- 7 to 25 members
- Administered by the Secretariat with the Officers (Chair, Vice-Chair, and Secretary) selected directly by the Consensus Body
- Open to all materially interested and affected individuals, companies, and organizations
- Applications reviewed, and members appointed by the Academy Standards Board
- Membership balance and interest categories conform to ANSI Essential Requirements for balance, lack of dominance, due process
ASB CB Selection Process

ASB reviews applications and approves membership based upon:

- Need for active participation by each interest category
- Potential for achieving or maintaining balance and non-dominance
- Applicant’s expressed interest and willingness to participate
- Qualifications of representatives identified by the applicant organization, company, or government agency, and
- Qualifications of members who are considered subject matter experts
ASB Interest Categories

Eight interest categories:

- Academia
- Consumer Groups
- General Interest
- Laboratories and/or Testing Facilities
- Producers
- Subject Matter Experts
- User/Government
- User/Industry
ASB Consensus Body: Functions

• Creating and approving by consensus Forensic Standards, Best Practice Recommendations, and Technical Reports

• Considering comments, views, and objections to ballots and resolving all negative comments received in connection with the development of documents

• Responding to requests for interpretations of Forensic Standards published by the ASB

• Consensus body meetings are open to the public. All meetings are posted on the public calendar which can be found on the Consensus Bodies page of the ASB website.
Working Groups

- Working subsets of CBs
- Work on document or issue assigned by CB
- Develop draft documents to be considered and voted upon by the full CB
- Meetings do not have to be open
- No specific limitation on number of participants
- Participants do not need to be members of the CB
- CB members may participate in Working Groups
- Working Group members are approved by CB and WG Chair
Overall ASB Document Process

- ASB Document Process follows ANSI accredited procedures.
  - New Work Proposal (NWP) submitted to, and approved by consensus body
  - NWP approved by ASB to ensure alignment with overall mission of the organization, then submitted to ANSI
  - Consensus Body (CB) develops document with support of Working Groups (WG)
  - Document given public review
  - Consensus body or working group review all comments
  - If no unresolved negative comments, document forwarded to ANSI for approval as an ANS
  - Document publicly available on ASB website ([www.asbstandardsboard.org](http://www.asbstandardsboard.org))
ASB has a strong collaborative relationship with the Organization of Scientific Area Committees (OSAC) for Forensic Science, so most documents start with a draft developed within OSAC.

Documents may also be created within ASB or submitted from other sources.

The ASB CB is ultimately responsible for the content of the document.
OSAC to ASB

- After SAC (Scientific Area Committee) approves SDO Process Submission form (QIC Form-6), complete SDO New Work Proposal form.

- Provide document to ASB Liaison to go to consensus body and working group.

- Document now property of ASB and will go through SDO process through to publication.

- After document is published, it is the responsibility of the OSAC working group to fill out and submit OSAC Registry Approval Packet.
Academy Standards Board (ASB) Document Preparation Process

Proposed New Work Submitted by Existing ASB Consensus Group

- Submission to ASB
  - Consensus Body Review
  - Secretariat Review
  - Work approved by ASB Board
- Notification to ANSI of Start of a Project
- Consensus Body Develops Document (Reviews Existing Document for Possible Revision)
- Secretariat Review Of Process And Submission For Public Notification
- Public Notification and Comments Period Concurrent with Committee Balloting

Any Comments Received?
- YES
  - Ballot Passed?
    - YES
      - Process Ends without Approval of Document
    - NO
      - Secretariat and ASB Final Review Of Documentation; Submits to ANSI
- NO
  - Any Comments Received?
    - YES
      - Ballot Passed?
        - YES
          - Approved As ANS
          - NO
          - Process Ends without Approval of Document
        - NO
          - Process Ends without Approval of Document
    - NO
      - Process Ends without Approval of Document

Consensus Body reviews and responds to comments
- Document Revision Needed?
  - YES
    - Consensus Body Revises / Reviews Document to address comments
    - Consensus Body Passes Revision?
      - YES
        - Approved As ANS
        - NO
          - Process Ends without Approval of Document
      - NO
        - Process Ends without Approval of Document
  - NO
    - Process Ends without Approval of Document

Available for OSAC Consideration
Available On The Open Market for Free
Types of Documents

- **Standard (Std)**
  Document, established by consensus and approved by a recognized body, that provides, for common and repeated use, rules, requirements, guidelines, or characteristics for activities or their results, aimed at the achievement of the optimum degree of order in a given context.

- **Best Practice Recommendation (BPR)**
  A best practice is a method or technique that has been generally accepted as superior to any alternatives because it produces results that are superior to those achieved by other means or because it has become a commonly preferred way of doing things, e.g., a preferred way of complying with legal or ethical requirements. ASB BPRs are developed with the same consensus process as ASB Standards.

- **Technical Report (TR)**
  A TR differs from a standard in that it does not set requirements; it is an explanatory or informational document. A TR may be used to describe the scientific and operational underpinnings of a standard, or to explore industry areas that are still undergoing research, or be a terms and definitions document.
ASB New Work Proposal

• Requires ASB board approval prior to Consensus Body work

• Reviewed by the CB, and the ASB, then submitted to ANSI for publication in *Standards Action* for 30 day notification of proposed action

• If no objections or changes, ASB work commences

• Form is available on the [Documents and Forms section of the ASB website](#).
Candidates for ISO/IEC JTC-1 participation must review the ANSI Essential Requirements: Due process requirements for American National Standards.

**Project Initiation Notification (PINS)**

At the initiation of a project to develop or revise an American National Standard, notification shall be transmitted to ANSI using the Project Initiation Notification System (PINS) form, or its equivalent, for announcement in Standards Action. Comments received in connection with a PINS announcement shall be handled in accordance with these procedures.

A statement shall be submitted and published as part of the PINS announcement that shall include:

(a) an explanation of the need for the project, including, if it is the case, a statement of intent to submit the standard for consideration as an ISO, IEC or ISO/IEC JTC-1 standard; and

(b) identification of the stakeholders (e.g., telecom, consumer, medical, environmental, etc.) likely to be directly impacted by the standard.

If the response to sub-section (b) changes substantively as the standard is developed, a revised PINS shall be submitted and published.
What is ANSI?

- As the voice of the U.S. standards and conformity assessment system, the American National Standards Institute (ANSI) empowers its members and constituents to strengthen the U.S. marketplace position in the global economy while helping to assure the safety and health of consumers and the protection of the environment.

- The Institute oversees the creation, promulgation and use of thousands of norms and guidelines that directly impact businesses in nearly every sector: from acoustical devices to construction equipment, from dairy and livestock production to energy distribution, and many more. ANSI is also actively engaged in accreditation - assessing the competence of organizations determining conformance to standards.

- Mission—To enhance both the global competitiveness of U.S. business and the U.S. quality of life by promoting and facilitating voluntary consensus standards and conformity assessment systems, and safeguarding their integrity.

- Founded—October 19, 1918
What is ANSI?

- ANSI facilitates the development of American National Standards (ANS) by accrediting the procedures of standards developing organizations (SDOs). Accreditation by ANSI signifies that the procedures used by the standards body in connection with the development of American National Standards meet the Institute’s essential requirements for openness, balance, consensus and due process.

- The National Technology Transfer and Advancement Act (NTTAA) of 1995 (Public Law 104-113) and its implementation directive, Office of Management and Budget Circular A-119, direct federal agencies to utilize voluntary consensus standards where feasible and to participate as appropriate in voluntary consensus standards development activities. Standards developed in accordance with ANSI’s accreditation requirements satisfy obligations incumbent on federal agencies to use or adopt voluntary consensus standards.

- In order to maintain ANSI accreditation, standards developers are required to consistently adhere to a set of requirements or procedures that govern the consensus development process. These requirements are set forth in a document known as the ANSI Essential Requirements: Due process requirements for American National Standards (www.ansi.org/essentialrequirements).

- Due process is the key to ensuring that ANSs are developed in an environment that is equitable, accessible and responsive to the requirements of various stakeholders. The open and fair ANS process ensures that all interested and affected parties have an opportunity to participate in a standard’s development. It also serves and protects the public interest since standards developers accredited by ANSI must meet the Institute’s essential requirements and other due process safeguards.
Why American National Standards?

- All ASB Standards and Best Practice Recommendations are put through the ANSI process to become American National Standards.
- Provides for due process based on openness, balance and consensus.
- All interested and affected parties can participate.
- Recognized world-wide.
- Protects the public interest.
- Often adopted into regulations.
ANS Key Steps

Can be accessed and downloaded from ANSI at:

https://www.ansi.org/standards_activities/domestic_programs/anskeysteps
Public Comment

• Essential part of the standards development process

• Documents and comment template are available on the ASB website.

• 45 day period for public comment

• Every comment reviewed and resolutions are made public.
  • If significant changes are made to the document, it goes back out for public comment on the changes only
  • If comment is unresolved, the objector is advised of the appeals process.
The purpose is to ensure consistency in format, and to maximize usability of the documents.

Developed to provide guidance for preparing documents that will be published by the Academy Standards Board (ASB) and submitted to the American National Standards Institute (ANSI).

PDF can be downloaded from the Documents & Forms site.

Each standard (S), technical report (TR) and best practice recommendation (BPR) prepared for approval by consensus bodies of the ASB shall conform to this manual.
Key Elements from the ASB Manual

- General guidance for document organization
  - Cover Page
  - Title Page
  - Foreword
  - Table of Contents
  - Scope (Section 1)
  - Normative References (Section 2)
  - Terms and Definitions (Section 3)
  - Requirements (Section 4)
  - Conformance (Section 5) (optional)
  - Annexes
    - Supplemental information
    - Last Annex – Bibliography (non-normative documents)
Additional ASB Manual Elements

- General writing tips
- Formatting and organization of Figures and Tables
- Normative References vs. Bibliography
- Expression of Provisions (shall, should, may, can)
- Patents and Copyrights
- Numbers, Units of Measurement, and Equations
- Sample Format for an ASB Document
Conformance

- CB determines if the document is intended for conformity assessment
- Conformance section (usually Section 5) states whether the document is or is not intended for conformity assessment
- The Conformance section may only identify the types of assessments that may be performed to validate conformance to the standard, but cannot address who performs such assessments
- The ASB adheres to the functional approach to conformity assessment (Principal 3 of ISO/IEC 17007)
Patent and Copyright Guidelines

- **What:** The ASB is required by the ANSI accreditation to adopt Copyright and Patent policies in all Standards, Technical Reports, and Best Practice Recommendations.

- **When:** When a document is being developed, the working group must be aware of any copyright and patent infringement.

- **Roles:** The working group shall notify the Secretariat of any copyright or patent issues that need to be resolved, if they cannot be resolved, the content of the document must be revised to comply with the copyright and patent procedures.

- **Impact:** Participants shall not provide any documents, data, or information if the use of such material by the ASB in a document would infringe upon the rights of any third parties in the information including, but not limited to, copyrights, patents, trade secrets, trademarks, publicity, and privacy. Participants shall notify ASB staff if a participant determines that any information that is contained in a final or draft document would violate the rights of third parties if published by the ASB.
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Patent Policy

- **Patents:** The ASB complies with the Patent Policy in the ANSI Essential Requirements-2016. The subsequent information is modified from this document to refer specifically to the ASB.

- **Inclusion of Patents in American National Standards:** There is no objection in principle to drafting an American National Standard (ANS) in terms that include the use of an essential patent claim (one whose use would be required for compliance with that standard) if it is considered that technical reasons justify this approach.

- **Responsibility for identifying patents:** Neither the ASB nor ANSI is responsible for identifying patents for which a license may be required by an American National Standard or for conducting inquiries into the legal validity or scope of those patents that are brought to their attention.

- **Additional information on ASB Copyright and Patent Policies available on Workspace** ([15-Copyright_Patent_Guidelines.pdf](#))
International Standards

- **ISO – The International Organization for Standardization** is one of the major international standards developing bodies. ISO standards, technical reports, guidance, best practices and other documents are adopted by governments, industries and organizations world-wide.

- ISO membership is composed of the national standards bodies of countries around the world. ANSI is the U.S. national standards body and is this country’s member to ISO.

- ISO documents are developed through Technical Committees (TCs) composed of volunteers from member bodies.

- The U.S. participates in the work of ISO through ANSI accredited Technical Advisory Groups (TAGs). A TAG is formed for each ISO TC where there is sufficient U.S. interest.
ASB and ISO Forensic Standards

- ISO Technical Committee 272 develops international standards for forensic sciences.
- ASB participates in the ANSI U.S. TAG for ISO TC 272, providing language and comments on documents progressing from working drafts to committee drafts to the final drafts that are balloted across all ISO members.
- To date, ISO TC 272 has completed the following documents:
  - ISO 18385: Minimizing the risk of human DNA contamination in products used to collect, store, and analyze biologic material for forensic purposes – Requirements (prior to ASB involvement)
ISO Work in Progress

- ASB solicits comments from ASB Consensus Bodies and provides that input as part of U.S. TAG comments to the TC 272 process and negotiations.

- The following documents are currently under development in TC 272.
  - 20964 Specification for consumables used in forensic process – requirements for product manufacturing and kit assembly
  - 21043-3 Examination and Analysis
  - 21043-4 Interpretation
  - 21043-5 Reporting
ASB Collaboration and Balloting Site

- ASB Workspace is hosted by HigherLogic® (previously called Kavi®)
- Consensus Bodies and Working Groups post and collaborate on documents, post meeting agendas and minutes, schedule meetings, and vote on ballots
- Managed by ASB staff
- Consensus bodies and working groups are required to use the site for document collaboration
- Site in the process of moving from old Kavi platform to new HigherLogic platform. Additional training webinars to be announced soon.
Current Status of ASB

- Over 100 New Work Proposals submitted
- Over 30 posted for public comment
- 2 Technical Reports Published:
    This technical document provides the standardization of terms and definitions used in the detection dog community. The use of standardized terminology in the detection dog community promotes consistency across jurisdictions and relieves the judicial system of conflicting terms and definitions.
    A list of recommended terms and definitions for bloodstain pattern analysis is presented. These terms and definitions address basic bloodstain pattern types and related concepts.
Current Status of ASB (con’t)

• Standards Published:

  • ANSI/ASB Best Practice Recommendation 007, Postmortem Impression Submission Strategy for Comprehensive Searches of Essential Automated Fingerprint Identification System Databases, First Edition, 2018
  The purpose of this document is to provide guidance to medical examiners, coroners and investigators regarding the submission of recorded postmortem impressions for comprehensive searches of essential automated fingerprint identification system databases. While a number of factors affect the successful search of a fingerprint through an automated fingerprint system, one of the most important factors is ensuring the fingerprint is searched through appropriate antemortem fingerprint databases.

  • ANSI/ASB Best Practice Recommendation 010, Forensic Anthropology in Disaster Victim Identification: Best Practice Recommendations for the Medicolegal Authority, First Edition, 2018
  This document provides guidelines and best practices relevant to the role of forensic anthropology in a DVI operation. Anthropological methods, techniques and principles are typically employed in five primary capacities: 1) during the Preparedness phase of a DVI operation, 2) the Search and Recovery and preservation of remains from a mass fatality incident, 3) at the Triage Station during the initial sorting of material gathered from the field and determination of what human tissue enters the morgue, 4) at the Anthropology Station collecting quality postmortem data from each morgue sample, and 5) as a member of the ID Reconciliation Team, focused on ensuring valid and reliable positive identifications from human tissues. Focus in this document will be primarily on the Triage Station and the Anthropology Station. In the absence of specific guidelines, the principle, spirit, and intent of these guidelines should be met.
Current Status of ASB (con’t)

Standards Published:

  This standard defines the minimum requirements for establishing measurement traceability in forensic toxicology laboratories.

  This standard sets forth the requirements for the design and evaluation of internal validation studies for mixed DNA samples and the development of appropriate interpretation protocols for mixtures based on the validation studies performed. This standard includes a requirement that the laboratory verify and document that the mixture interpretation protocols developed from the completed validation studies generate reliable and consistent interpretations and conclusions for the types of mixed DNA samples typically encountered by the laboratory. This standard applies to any type of DNA testing technology and methodology used, including but not limited to, STR testing, DNA sequencing, SNP testing, haplotype testing, traditional and rapid protocols, etc., where mixtures of DNA may be encountered, analyzed and interpreted.

- **ANSI/ASB Best Practice Recommendation 037, Guidelines for Opinions and Testimony in Forensic Toxicology, First Edition, 2019**
  This document delineates guidelines for best practices in forensic toxicology opinions and testimony. Specifically, it is intended for the subdisciplines of human performance toxicology (e.g., driving-under-the-influence of alcohol or drugs and drug-facilitated crimes), postmortem forensic toxicology, non-regulated employment drug testing, court-ordered toxicology (e.g., probation and parole, drug courts, child services), and general forensic toxicology (e.g., non-lethal poisonings or intoxications).
Questions?

Send any additional questions to:

asb@aafs.org

Updated ASB website:

www.asbstandardsboard.org

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