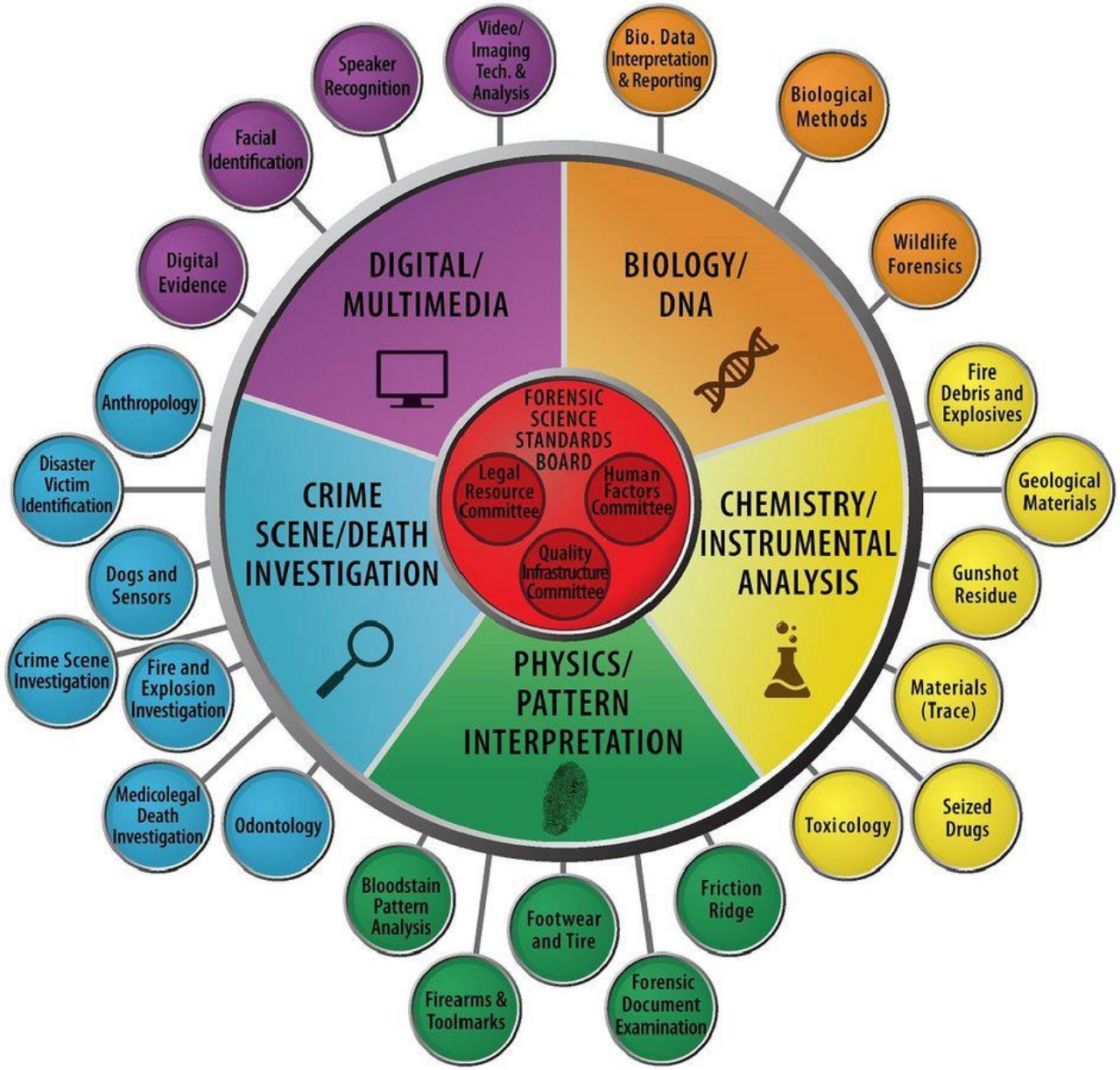
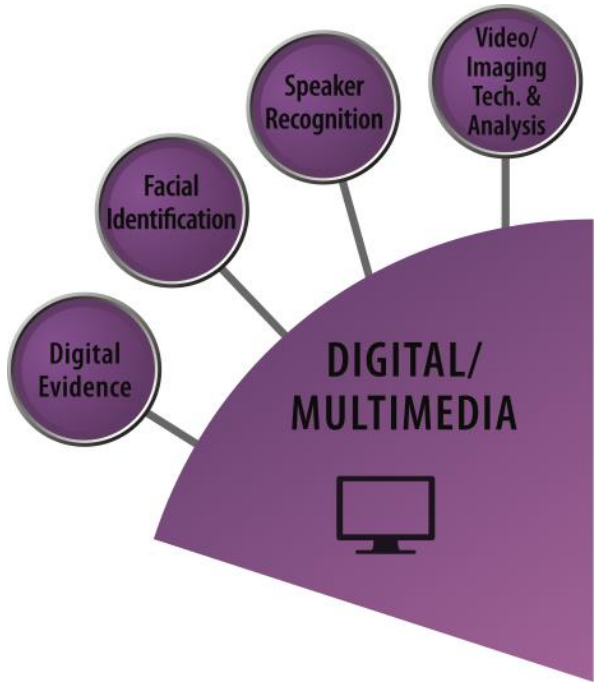
OSAC

Organization of Scientific Area Committees for Forensic Science

Video/Imaging Technology and Analysis (VITAL) Subcommittee

Julie Carnes, Chair


DIGITAL/ MULTIMEDIA
BIOLOGY/ DNA
CHEMISTRY/ INSTRUMENTAL ANALYSIS
PHYSICS/ PATTERN INTERPRETATION
CRIME SCENE/DEATH INVESTIGATION
FORENSIC SCIENCE STANDARDS BOARD
Legal Resource Committee
Human Factors Committee
Quality Infrastructure Committee
Video/ Imaging Tech. & Analysis
Bio. Data Interpretation & Reporting
Biological Methods
Wildlife Forensics
Fire Debris and Explosives
Geological Materials
Gunshot Residue
Materials (Trace)
Seized Drugs
Toxicology
Friction Ridge
Forensic Document Examination
Footwear and Tire
Bloodstain Pattern Analysis
Firearms & Toolmarks
Odontology
Medicolegal Death Investigation
Fire and Explosion Investigation
Crime Scene Investigation
Dogs and Sensors
Disaster Victim Identification
Anthropology
Digital Evidence
Facial Identification
Speaker Recognition



Video/Imaging Technology and Analysis (VITAL)

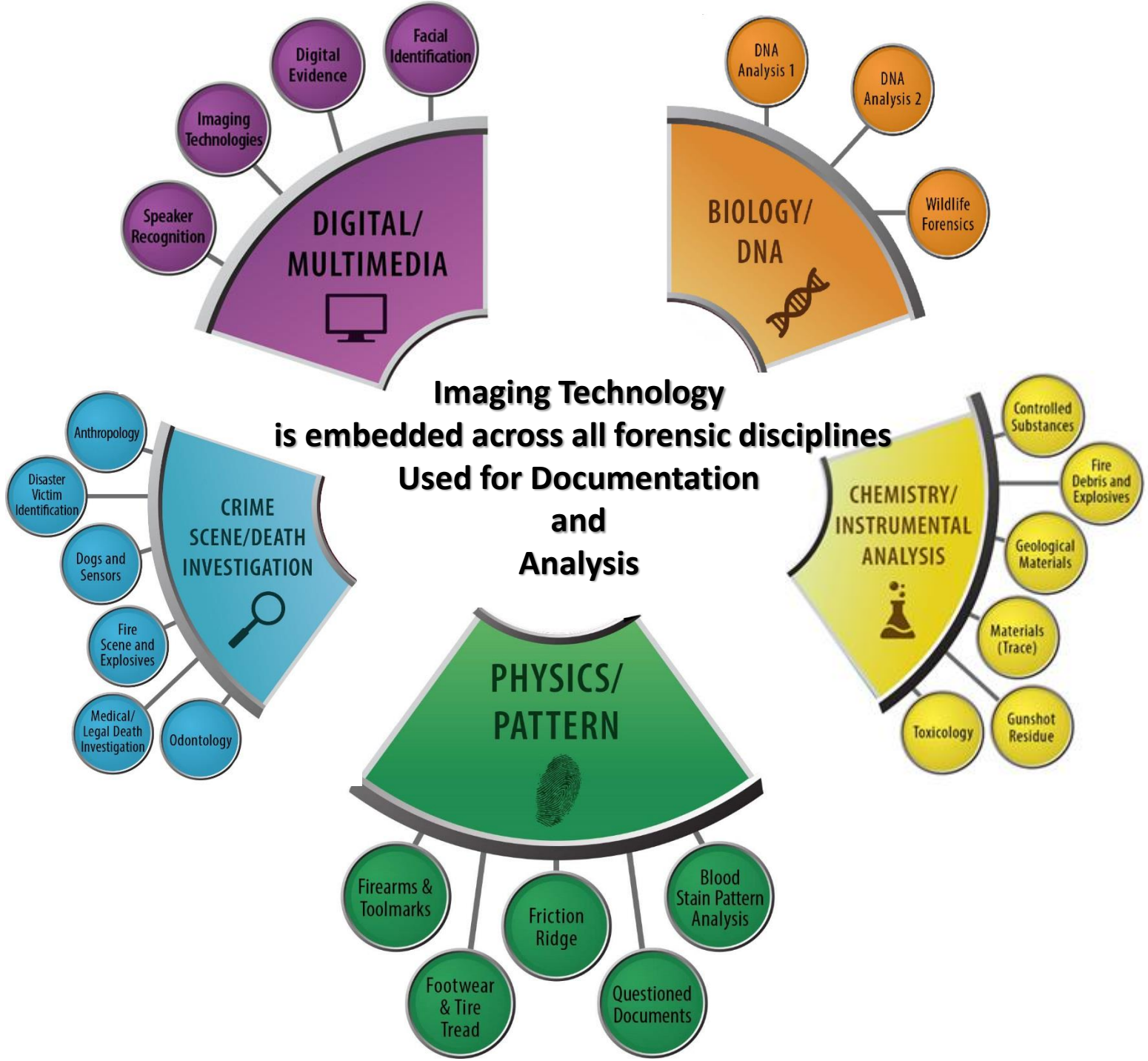
Focuses on standards and guidelines related to the application of methods and technologies to analyze information related to forensic imagery from a variety of systems.

This encompasses aspects of capture, storage, processing, archiving, quality assurance and training.

Task Groups:

Image Analysis
Photography
Video Analysis

First Name	Last Name	Role	Organization	Task Group	Term End
Mike	Baker	Member	Sacramento Police Department	Video Analysis	2020
Brian	Brill	Member	Private Sector	Image Analysis	2019
Melody	Buba	Member	FBI	Video Analysis	2019
Julie	Carnes	Member	Target	Video Analysis	2020
Wendy	Dinova-Wimmer	Member	Adobe	Image Analysis	2021
Marla	Englander-Carroll	Member	Private Sector	Video Analysis	2022
Catalin	Grigoras	Affiliate	University of Colorado	Video Analysis	2020
Paul	Hartzell	Affiliate	Hennepin County Attorneys Office	Video Analysis	n/a
Jim (Kenneth)	Hoerricks	Member	Amped Software, Inc.	Video Analysis	2020
Christopher	Iber	Member	FBI	Image Analysis	2018
Carl	Kriigel	Affiliate	Defense Forensic Science Center	Image Analysis	n/a
Douglas	Lacey	Affiliate	BEK TEK LLC	Video Analysis	n/a
Christina	Malone	Member	Defense Forensic Science Center	Image Analysis	2020
Keith	Mancini	Member	Westcherster County Forensic Lab	Photography	2018
Aaron	Matson	Member	Wisconsin State Crime Lab	Photography	2020
Kimberly	Meline	Member	FBI	Image Analysis	2018
Ruth	Philips	Affiliate	Metropolitan Police Service	Video Analysis	n/a
Margaret	Pinson	Affiliate	US Departement of Commerce	Video Analysis	n/a
Matthew	Steiner	Affiliate	New York Police Department	Photography	n/a
Dorothy	Stout	Affiliate	Resolution Video, Inc.	Video Analysis	n/a
Rand	Swartz	Member	District IV Medical Examiner	Photography	2022
Andrew	Taravella	Affiliate	Houston Police	Photography	n/a
Alice	Thomas	Affiliate	US Secret Service	Video Analysis	n/a
William	Trenkle	Member	US Departement of Agriculture	Image Analysis	2019
John	Twomey	Member	US Secret Service	Photography	2020
Jesus	Valenzuela	Member	Seattle Police Department	Video Analysis	2020
Robert	Young	Member	City of Mesa	Photography	2020

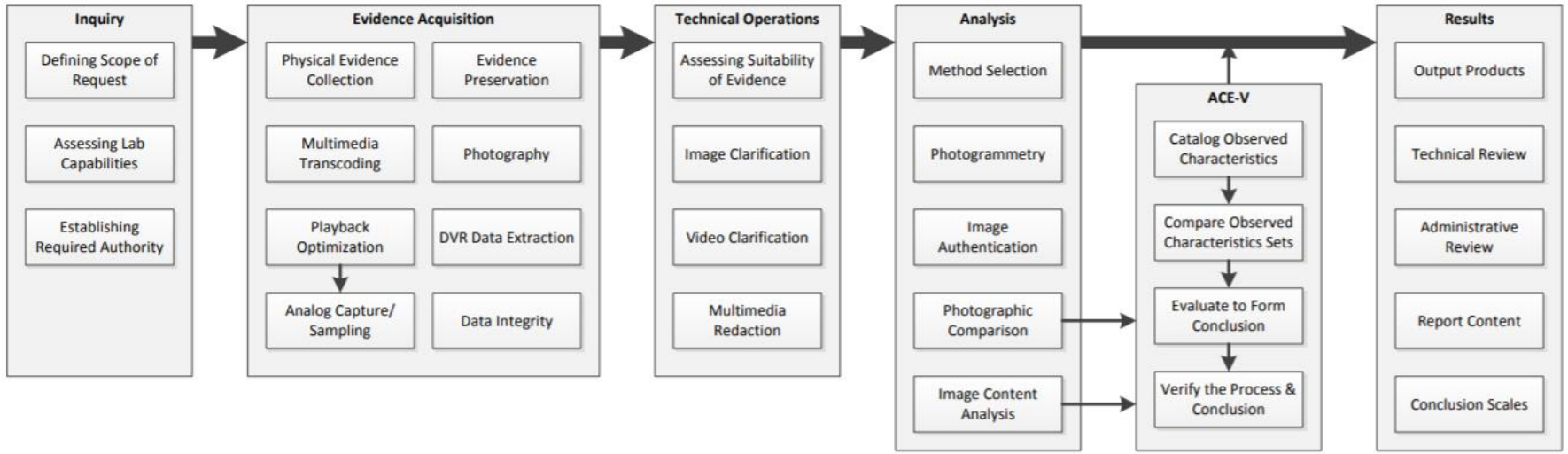

Digital Evidence
Facial Identification
Imaging Technologies
Speaker Recognition
DIGITAL/ MULTIMEDIA
DNA Analysis 1
DNA Analysis 2
Wildlife Forensics
BIOLOGY/ DNA
Imaging Technology
is embedded across all forensic disciplines
Used for Documentation
and
Analysis
Anthropology
Disaster Victim Identification
Dogs and Sensors
Fire Scene and Explosives
Medical/ Legal Death Investigation
Odontology
CRIME SCENE/DEATH INVESTIGATION
Controlled Substances
Fire Debris and Explosives
Geological Materials
Materials (Trace)
Gunshot Residue
Toxicology
CHEMISTRY/ INSTRUMENTAL ANALYSIS
PHYSICS/ PATTERN
Firearms & Toolmarks
Friction Ridge
Blood Stain Pattern Analysis
Footwear & Tire Tread
Questioned Documents

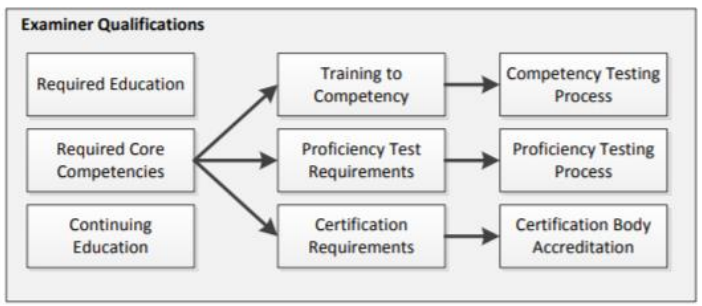
Roadmap

Title
Standard Guide for Training Guidelines for Video Analysis, Image Analysis, and Photography
Data Acquisition from Digital CCTV Systems Video Recording Systems
Video Retrieval Canvassing & Crowdsourcing of Third-Party Video
Guidelines for Video Analysis
Standard Guide for Processing Digital Video Files
Standard Guide for Frame Timing Analysis of H.264 Video in ISO Base Media File Formats
Video and Audio Redaction for Legal & Public Disclosure
Standard for Conclusions in Image and Video Analysis
Guidelines for the Forensic Use of Photogrammetry
Standard Guide for Image Authentication
Standard Guide for Latent Print Evidence Imaging Resolution Incorporation of all exisiting documents into an all-encompassing standard guide
Crime Scene Photography
Standard Guidelines for Autopsy Photography
Standard Gudelines for Laboratory Photography
Guideline for Image Management
Discipline-Specific Resolution Needs
Equipment Recommendations and Considerations Document
Practical Considerations for Submission and Presentation of Multimedia Evidence in Court
Application of Image Science to Forensic Disciplines

OSAC VITAL Subcommittee

Process Map



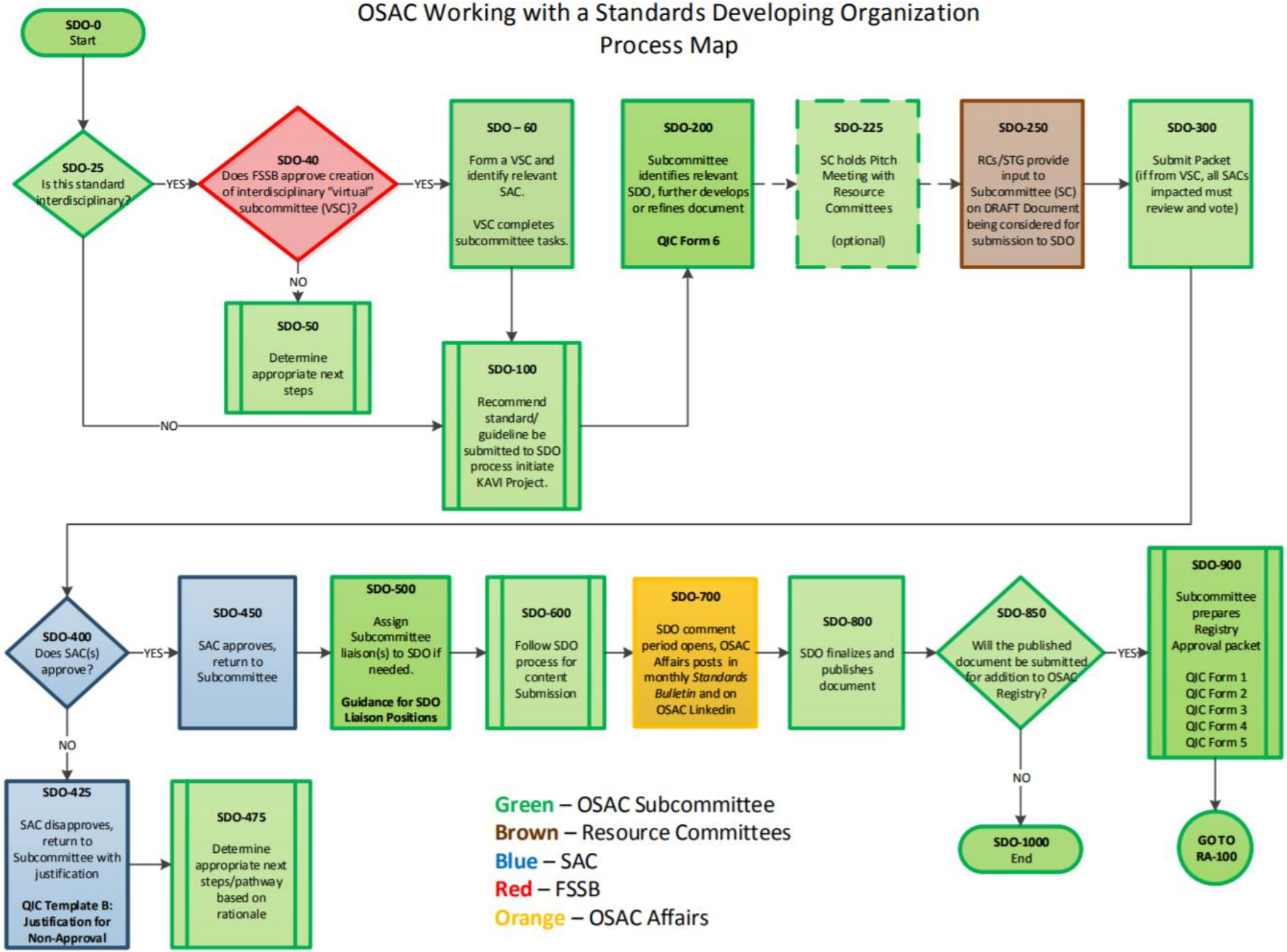


DATE	PAGE
2019-07-25	1 OF 2

Standards in Progress – Under Development

- Standard Guide for Photogrammetry
- Standard Guide for Source and Content Authentication
- Standard Guide for Forensic Video Analysis
- Standard Guide for Autopsy Photography
- Standard Guide for Laboratory (Controlled Environment) Photography

OSAC Working with a Standards Developing Organization Process Map



Standard Guide for Photogrammetry

Key Components:

- Multiple methodologies for photogrammetric examinations
- Recommendations for performing photogrammetric examinations
- Evidentiary value of photogrammetric examinations, common questions asked, and reporting

Current Status:

- Addressing feedback
- Revision in progress

Standard Guide for Source & Content Authentication

Key Components:

- Provenance of the image
- Metadata Analysis
- Photo Response Non-Uniformity (PRNU)
- Detection of Manipulation
- Detection of Image Creation
- Detection of Staging
- Continuity Issues
- Image Processing

Current Status:

- Draft complete and revising

Standard Guide for Forensic Video Analysis

Key Components:

- Quality Assurance
- Categories of Forensic Video Analysis
- Processing
- Analysis
- Results
- Reports

Current Status:

- Currently being reviewed by Resource Committees

Standards in Progress – at SDO

- Standard Training Guidelines for Video Analysis, Image Analysis, and Photography (WK66417)
- Standard Guide for Latent Print Evidence Imaging Resolution (WK66357)
- The Standard Practice for Data Retrieval from Digital CCTV Systems (WK61709)
- Standard Guide for Crime Scene Photography (30 Days?)

ASTM INTERNATIONAL

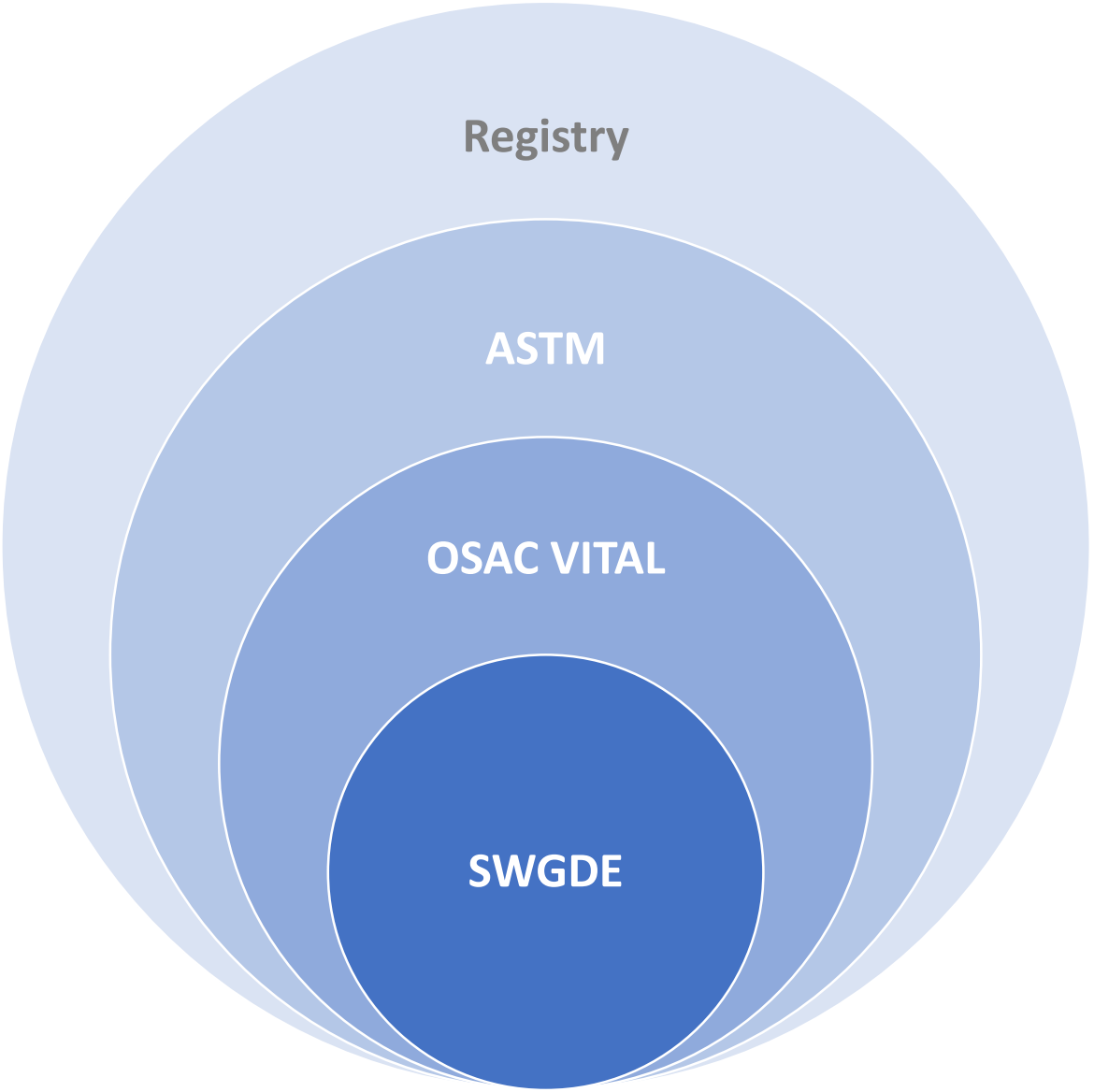
www.astm.org

Registry Process

In Progress:

- ASTM E2825-18 Standard Guide for Forensic Digital Image Processing

Partnerships



Research Needs

<u>Video/Imaging Technology and Analysis:</u>

- Determination of the Size of the Smallest Detail Required for Tire and or Shoe Comparisons
- Factors Affecting Image Quality When Extracting a Still from Video
- Software Validation Repository
- Vehicle Comparison Study

Get Involved:

- Apply to join OSAC
  - https://www.nist.gov
  - Designate VITAL
- Apply to join ASTM

THE ORGANIZATION OF SCIENTIFIC AREA COMMITTEES FOR FORENSIC SCIENCE

- OSAC Newsroom +
- Organizational Structure
- Registry +
- Implementation Plan
- Standards Approval Process +
- Charter, Bylaws and Terms of Reference
- Lexicon
- Research and Development Needs
- Catalog of External Standards and Guidelines
- Access to Standards
- Standards and Documents: Category Descriptions
- Apply to Join OSAC ←
- Interdisciplinary Activities

OSAC Standards Bulletin, August 2019 Now Available

Read the Summer Edition of the OSAC Newsletter!

In Case You Missed It - Check Out the Video and Presentations from OSAC's June Public Update & Discussions Meeting

The Organization of Scientific Area Committees (OSAC) for Forensic Science works to strengthen the nation's use of forensic science by facilitating the development of technically sound forensic science standards and by promoting the adoption of those standards by the forensic science community.

These standards are written documents that define minimum requirements, best practices, standard protocols, and other guidance to help ensure that the results of forensic analysis are reliable and reproducible.

OSAC is administered by the National Institute of Standards and Technology (NIST), but the great majority of its more than 550 members are from other government agencies, academic institutions, and the private sector. These members have expertise in twenty-five specific forensic disciplines, as well as general expertise in scientific research, measurement science, statistics, law, and policy.

OSAC members work together to develop and evaluate forensic science standards via a transparent, consensus-based process that allows for participation and comment by all stakeholders.

What kind of standards does OSAC work on? Here's a recent example: Standard for Sampling Seized Drugs Approved for OSAC Registry.

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Thank you

https://www.nist.gov/topics/organization-scientific-area-committees-forensic-science