



Priority Action Report

Dogs and Sensors

Kenneth G. Furton, Ph.D.

David R. Kontny

February 22, 2016





Subcommittee Leadership

Position	Name	Organization	Term	Email
Chair	Kenneth Furton, Ph.D.	Florida International University	3	furtonk@fiu.edu
Vice Chair	David Kontny	U.S. Department of Justice – Joint Program Office for Countering IEDs	3	david.kontny@ic.fbi.gov
Executive Secretary	Susan Stejskal, Ph.D.	St. Joseph County (Michigan) Sheriff's Department	3	sue.stejskal@gmail.com



Subcommittee Members



#	Name	Organization	Term	Email
1	Terry Anderson	Retired - City of Pasadena (Texas) Police Department and President of National Police Canine Association	2	t_bandit94@hotmail.com
2	Deborah Burnett	Federal Emergency Management Agency Task Force TNTF1 and Fayette County (Tennessee) Sheriff's Department	4	Yappindogs@aol.com
3	Frederick Helpers III	Retired Police Detective for City of Everett (Washington) and Pacific Northwest Police Detection Dog Association	3	helpers@arczip.com
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5	Herbert Nakamura	Retired Honolulu Police Department and Hawaii K-9 Concepts	4	hik9k@yahoo.com
6	Cynthia Otto, D.V.M., Ph.D.	University of Pennsylvania and Executive Director of Penn Vet Working Dog Center	3	cmotto@vet.upenn.edu
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8	Donald Roberts	U.S. Department of Homeland Security Science and Technology	2	don.roberts@HQ.DHS.GOV
9	Suzy Perry	Perry, Sumner County (Tennessee) Emergency Management Agency	2	olddominionsar@hotmail.com
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11	Rex Stockham	U.S. Federal Bureau of Investigation	2	Rex.Stockham@ic.fbi.gov
12	Terry Uetrecht	Retired - Union Pacific Railroad police officer and Secretary of the National Narcotic Detector Dog Association	3	nnddasecretary@yahoo.com
13	Paul Waggoner, Ph.D.,	Auburn University	4	waggolp@auburn.edu
14	Barbara Weakley-Jones, M.D.	Retired State Medical Examiner and Jefferson County (Kentucky) Coroner	3	morguemom@yahoo.com
15	Vacant			
16	Vacant			
17	Vacant			



Discipline Description



The Subcommittee on Dogs and Sensors will focus on standards and guidelines resulting in continual improvement of consistency, performance, and legal acceptance of deployed detection teams. Focus areas will include the optimal integration with other sensors designed to improve overall detection capabilities.



Summary of Standards/Guidelines Priority Actions

Priority	Working Title of Document
HIGH	General Guidelines
HIGH	Terminology
HIGH	Canine Career Field Progression
MEDIUM	Narcotics
MEDIUM	Tracking/Trailing People Based on Last Known Position





Standards/Guidelines Development Priority 1 Document

Document Title: General Canine Guidelines

Scope: To establish consensus-based best practice general guidelines for training, certification, and documentation pertaining to all canine disciplines. Discipline specific guidelines are found within the corresponding subcommittee documents.

Objective/rationale: Ensure consistent application of guidelines for training, assessments, certification and documentation that can be used throughout the specific detector dog disciplines.

Issues/Concerns: None at this Time

Task Group Name: General Canine Guidelines

Task Group Chair Name: David R. Kontny

Task Group Chair Contact Information:

david.kontny@ic.fbi.gov

Date of Last Task Group Meeting: January 28, 2016





Priority 1: General Canine Guidelines

Task Group/Subcommittee Action Plan

Planned Actions	OSAC Process Stage (e.g., SDO 100)	Assignee	Estimated Completion Date
Reformat Existing SWGDOG Guideline to ASB Style Guide	SDO 0	Kontny	March 30, 2016
Coordinate Document Review Through OSAC Committees	SDO 100	Kontny	TBD
Submit Document for SAC approval and SDO Submission	SDO 100	Kontny	TBD
Submit Approved SAC Document to SDO	SDO 100	Kontny	TBD





Standards/Guidelines Development Priority 2 Document

Document Title: Working Canine Terminology

Scope: To provide the industry with a comprehensive terminology list as it pertains to the working canine industry at large to ensure consistency and understanding of terms and the vernacular most commonly used across canine disciplines. This will benefit the forensic science community through consolidation of terms and definitions used for operational reports, testimony, report documentation, certification procedures, and training records documentation.

Objective/rationale: Ensure consistent application of terminology that can be used throughout the specific detector dog disciplines.

Issues/Concerns: None at this Time

Task Group Name: Canine Terminology

Task Group Chair Name: Craig Schultz

Task Group Chair Contact Information:

craig.schultz@ic.fbi.gov

Date of Last Task Group Meeting: January 28, 2016





Priority 2: Working Canine Terminology

Task Group/Subcommittee Action Plan

Planned Actions	OSAC Process Stage (e.g., SDO 100)	Assignee	Estimated Completion Date
Reformat Existing SWGDOG Guideline to ASB Style Guide	SDO 0	Schultz	March 30, 2016
Coordinate Document Review Through OSAC Committees	SDO 100	Schultz	TBD
Submit Document for SAC approval and SDO Submission	SDO 100	Schultz	TBD
Submit Approved SAC Document to SDO	SDO 100	Schultz	TBD





Standards/Guidelines Development Priority 3 Document

Document Title: Canine Career Field Progression

Scope: Provide recommended best practice guidelines for career progression system to ensure proper training and experience within canine organizations.

Objective/rationale: Ensure consistent application of canine career field progression to include, handlers, trainers, certifying officials, supervisors, and executive management that can be used throughout the specific detector dog disciplines.

Issues/Concerns: None at this Time

Task Group Name: Canine Career Field Progression

Task Group Chair Name: John Pearce

Task Group Chair Contact Information:

pearcejohn@aol.com

Date of Last Task Group Meeting: January 28, 2016





Priority 3: Canine Career Field Progression Task Group/Subcommittee Action Plan

Planned Actions	OSAC Process Stage (e.g., SDO 100)	Assignee	Estimated Completion Date
Reformat Existing SWGDOG Guideline to ASB Style Guide	SDO 0	Pearce	March 30, 2016
Coordinate Document Review Through OSAC Committees	SDO 100	Pearce	TBD
Submit Document for SAC approval and SDO Submission	SDO 100	Pearce	TBD
Submit Approved SAC Document to SDO	SDO 100	Pearce	TBD
Reformat Existing SWGDOG Guideline to ASB Style Guide	SDO 0	Pearce	March 16, 2016





Standards/Guidelines Development Priority 4 Document

Document Title: Canine Narcotics Detection

Scope: To provide recommended guidelines for training, certification and documentation pertaining to narcotic detector canines.

Objective/rationale: Ensure consistent application of guidelines for training, assessments, certification and documentation that can be used within the canine narcotics discipline.

Issues/Concerns: None at this Time

Task Group Name: Canine Narcotic Detection

Task Group Chair Name: Terry Anderson

Task Group Chair Contact Information:

t_bandit94@hotmail.com

Date of Last Task Group Meeting: January 28, 2016





Priority 4: Canine Narcotic Detection

Task Group/Subcommittee Action Plan

Planned Actions	OSAC Process Stage (e.g., SDO 100)	Assignee	Estimated Completion Date
Reformat Existing SWGDOG Guideline to ASB Style Guide	SDO 0	Anderson	March 30, 2016
Coordinate Document Review Through OSAC Committees	SDO 100	Anderson	TBD
Submit Document for SAC approval and SDO Submission	SDO 100	Anderson	TBD
Submit Approved SAC Document to SDO	SDO 100	Anderson	TBD





Standards/Guidelines Development Priority 5 Document

Document Title: Tracking/Trailing People Based on Last Known Position

Scope: Provide recommended best practice guidelines for training, certifications and documentation pertaining to tracking/trailing people based on last known. Tracking or trailing people based on their last known position is the area of canine scent detection that utilizes a canine team to search for and follow a specific person's track or trail after the canine has been started on the person's last known position or a scented article associated with that person.

Objective/rationale: The primary goal is for the canine to detect and follow the track or trail to the exclusion of all other tracks or trails, leading to a specific person, location, and/or article associated with that person. This is done within the canine team's mission-specific environment. A secondary goal of this task may be to locate articles left by this specific person along the track or trail.

Issues/Concerns: None at this Time

Task Group Name: Tracking/Trailing People Based on Last Known Position

Task Group Chair Name: Sara (Suzy) Perry

Task Group Chair Contact Information:

olddominionsar@hotmail.com

Date of Last Task Group Meeting: January 28, 2016



Task Group/Subcommittee Action Plan

Planned Actions	OSAC Process Stage (e.g., SDO 100)	Assignee	Estimated Completion Date
Reformat Existing SWGDOG Guideline to ASB Style Guide	SDO 0	Perry	March 30, 2016
Coordinate Document Review Through OSAC Committees	SDO 100	Perry	TBD
Submit Document for SAC approval and SDO Submission	SDO 100	Perry	TBD
Submit Approved SAC Document to SDO	SDO 100	Perry	TBD





Summary of Standards/Guidelines Priority Actions

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HIGH	General Guidelines
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HIGH	Canine Career Field Progression
MEDIUM	Narcotics
MEDIUM	Tracking/Trailing People Based on Last Known Position





Standards/Guidelines Reviewed For Technical Merit

Title	Developing Organization	Status*	OSAC Process Stage (e.g., RA 100)
General Guidelines	SWGDOG	Evaluation	
Terminology	SWGDOG	Evaluation	
Canine Career Field Progression	SWGDOG	Evaluation	
Narcotics	SWGDOG	Evaluation	
Tracking/Trailing People Based on Last Known Position	SWGDOG	Evaluation	



Research Gaps Identified (Priorities)

- Identification of odorant chemicals present in and above targets (particularly human remains, explosives and drugs) including novel applications (chemical, microbes, etc.).
- Development of methods for monitoring levels of contamination of aids. Identify when training aids are contaminated, how long it takes to dissipate the contamination odor off the pure odor training aid.
- Development of reliable surrogate continuation aids (particularly for drugs, explosives and human remains). These must provide controlled delivery of chemicals to allow for an assessment of threshold variance, but not to be used for certification purposes. (canine and possibly equipment calibration). This also pertains to emerging threats.
- Comparison of detectors: Critical comparisons of capabilities of certified detector dogs and electronic noses to reliably detect target odors in the presence of interfering (distractor) odors; Quantifying cost effectiveness of canine search teams over human searchers (with and without using instruments); Comparison of standoff capabilities of canines and instrumentation; Listing of complementary instrumentation for application with canines; Comparison of dogs to other biological detection entities.



Research Gaps Identified (Additional Considerations)

- Evaluation of optimal storage and handling practices (including containers) to prevent cross-contamination of training aids.
- Evaluation of dissipation of odorant(s) after removal of targets. How soon can you reuse an area – time for dissipation/ decomposition of residual odors?
- Develop a scientifically valid odor list for testing detector dogs (particularly explosives).
- Research on the effectiveness of training aids. Does extensive experience with the training aid help or hinder the later detection of the real odor?
- Physical and physiological function of the dog as related to performance.
Identifying genetic markers associated with success.
- Conduct critical evaluations of the limitation of human scent dogs (aged trails, versus fresh trails, no scent article, large contamination)
- REST/RASCO (RASCARGO)/MEDDS/Alternative Remote Sampling, etc. (Remote Explosive Scent Tracing).
Need independent scientific evaluations of the capabilities and limitations of the REST systems
- Use of bio-physiological sensors for detecting and correlating changes in dog physiology and behavior in the presence of specific environmental cues for the purpose of supporting canine training and operation.
- Devices used for the collection of scent in canine operational environments.





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