

## SWGDOG SC1g – Terminology

For Public Comment 1/14/09 – 3/14/09

<b>Term</b>	<b>Meaning</b>	<b>Annotation</b>
<b>“Marking short”</b>	Operational usage: A dog’s tendency to search for a thrown item at a distance that is short or less than the distance it was thrown.	
<b>Accreditation</b>	The process by which an organization (or, in some cases, an individual or team) is formally recognized by an accreditation body as competent and able to plan, manage and operationally conduct their actions safely, effectively and efficiently. This is an ongoing process.	See Accreditation Body.
<b>Accreditation body</b>	An organization responsible for management and implementation of the system defined above to set standards within the relevant field.	
<b>Accredited</b>	The designation given to those who meet the set standards by the appropriate accreditation body, once an organization establishes an accreditation body that sets standards consistent with the definition of accreditation, above.	
<b>Aggressive/Active/Positive Response</b>	Operational usage: A type of response that the dog displays/indicates in a manner that disturbs the environment (i.e. scratch, bark, bite, dig) after the dog has alerted to the target odor.	
<b>Area search</b>	The act of using a dog to search a designated area for a target odor.	
<b>Backup Handler Dog / Second Handler Dog / Multi Handler Dog / Pooled Dog</b>	A dog that is trained and certified with more than one handler.	This is not a best practice for most disciplines but can be acceptable in some limited circumstances.
<b>Behavior</b>	Any measurable response of a dog.	See Stimulus control.
<b>Behavior Modification</b>	The application of the principles of conditioning to primarily change abnormal, undesirable, or maladaptive behavior patterns. The	See DRI and DRO.

	focus is on the behavior itself, not on analytical or dynamic analysis of underlying conflicts or other root causes. When trainers say they are using “behavior mod” techniques, it usually means “principles of conditioning”, primarily involving classical and operant conditioning.	
<b>Best practices</b>	A system of processes, checks and testing that will deliver an outcome that has fewer problems and fewer unforeseen complications, and that combines the attributes of the most efficient and most effective ways of accomplishing a task based on proven and provable methods.	Best practices require documentation and must be distributed before they can be used, cited, and improved upon, thus encouraging continuous improvement. There are 5 components of any “best practice”, regardless of field: <ol style="list-style-type: none"> <li>1. best skills,</li> <li>2. best processes,</li> <li>3. best solutions,</li> <li>4. identifying and provisioning of appropriate resources, and</li> <li>5. continuous improvement.</li> </ol>
<b>Bond</b>	Positive relationship, rapport between dogs or a human(s) and a dog.	
<b>Bridge or bridging stimulus</b>	A stimulus that fills the gap between a correct response and a delayed primary reinforcer and is intended to function as a secondary reinforcer that reduces the otherwise weakening of the primary reinforcement due to the delay. The classic stimulus used as a ‘bridge’ is a clicker.	Functionally, the bridge is used to specifically reinforce a behavior performed at a distance where it is impossible to provide a primary reinforcement at the correct time. If used correctly, the bridge reinforces at the exact instant when an animal successfully completes a desired behavior, or the exact time when an ongoing behavior should be stopped. There should be no variations on the bridge’s form, duration, or intensity. The bridge should be frequently paired with the

		<p>primary reinforcer in order to maintain its value.</p> <p>Also see Conditioned reinforcer.</p>
<b>Conditioned Response</b>	<p>Scientific usage: See classical conditioning (CR). In classical conditioning, it is the response produced by pairing a conditioned stimulus with an unconditioned stimulus.</p>	
<b>Conditioned Stimulus</b>	<p>Scientific usage: See classical conditioning (CS). In classical conditioning a previously neutral stimulus now produces the conditioned response after it is repeatedly paired with an unconditioned stimulus.</p>	
<b>Counter-conditioning (CC)</b>	<p>A behavior modification technique by which an incompatible response is substituted for a previously conditioned response, with the intent of extinguishing the original response.</p>	<p>For example, a dog barks and lunges whenever he sees a stranger. In this case, this is an undesirable behavior. He is then taught that when he sees a stranger he should now lie down with his neck extended, a behavior incompatible with his former behavior. When he exhibits this behavior that is incompatible with barking and lunging he is rewarded. CC often is used with desensitization (DS).</p>
<b>Cross-trained Dog</b>	<p>A dog that is trained to react differently to different scent detection applications.</p>	<p>This is not the same as a dual-purpose dog, however it has historically been referred to as one in law enforcement.</p> <p>Ex. Cross-trained dogs may have different responses to different target odors. A dog detecting a live person may bark whereas the same dog detecting human remains may sit.</p>
<b>Cuing the dog</b>	<p>Operational usage: A verbal or physical action (done consciously or</p>	<p>It is important to note that we deliberately cue a dog to</p>

	unconsciously) by anyone, and/or any environmental stimulus that causes a detector dog to change its actions to respond to an area or item whether target odor is present or not.	initially train it.  Also called “keying the dog”
<b>Deprivation</b>	Operational usage: The restriction of access to something desired by the dog such as food, social companions, or toys.	
<b>Desensitization (DS)</b>	A behavior modification technique that decreases a response or the reactivity or sensitivity to a stimulus.	For example, a dog barks and lunges whenever he sees a stranger. In this case this is an undesirable response. The dog is then exposed to strangers at a distance at which he does not react and is rewarded for not reacting. Gradually, the distance between the dog and the stranger decreases, always at a pace that ensures the dog does not react, and he is continually rewarded for not reacting. Reactions are ignored. The end point is reached when the dog no longer reacts to strangers by lunging and barking at them. DS is often used with counter-conditioning (CC).  This may involve elements of active and passive desensitization.
<b>Differential Reinforcement</b>	This is a training and behavior modification technique where only one response to a particular stimulus is rewarded. All other responses are not reinforced.	For trainers, “differential reinforcement” usually refers to the technique of establishing discriminations and establishing stimulus control.
<b>Discrimination</b>	The ability to recognize differences between two or more stimuli.  Operational usage: The ability to recognize differences between two or more odors.	In training, “discrimination” refers to a procedure of differential reinforcement which results in the dog being reinforced for responding only when a specific stimulus is presented.

		Ex. The dog will recognize trained odors and differentiate them from all others.
<b>Distractor</b>	Non-target stimuli placed within a search area. These can include: toys, food, animal odor, etc.	
<b>Disturbed area</b>	Operational usage: A change in the normal scent picture of the area.	
<b>Double blind/Double blind testing</b>	<p>Scientific usage: This condition occurs when neither the experimenter/handler, nor the observer/evaluator, knows which treatments / manipulations are given to which subjects.</p> <p>Operational usage: See SC2 document. In the evaluation of a dog neither the assessor nor the handler knows the location of the target odor or whether target odor is present (e.g., a blank / null search).</p>	<p>This means that neither party knows what outcome is expected. A double blind evaluation is the most powerful of the designs to remove bias (like cuing) on both sides, and it is one of the best techniques known to minimize false positives and false negatives, but it requires careful thought and, sometimes, a coded design.</p> <p>Operational examples include the following:</p> <ol style="list-style-type: none"> <li>1. True deployment situation: Every time a team deploys the team is participating in a double blind trial: They do not know if they will find a target odor or not. If no target odor is found, it is equivalent to a blank search. In addition, if there is target odor present, the handler does not know where it is, and no one who evaluates the team's performance has that knowledge. In fact, the handler calls the dispatcher and reports the outcome of the evaluation that they conducted in response to a suspicious situation.</li> <li>2. Operational environment</li> </ol>

		<p>situation: The supervising officer leaves a car in a parking lot that has had target odor placed in it. He or she calls to report a suspicious situation and asks the dispatcher to request that a canine team investigate the car. The canine team arrives, performs the search and calls the dispatcher to report the findings. This is a double blind “operational” experiment: neither the handler nor the assessor (e.g., the dispatcher) knows the location of the target odor, or whether any was present.</p> <p>3. Training example: The assessor sets up a course (indoors or out) that has distracters and, or target odor. The assessor leaves. The following 3 examples show ways the team’s findings can be reported in a double blind manner:</p> <ul style="list-style-type: none"><li>a. The assessor leaves and the performance of the team is videotaped. The video is watched later – by the assessor or someone else – to see how well the team’s performance maps onto the reality of the course.</li><li>b. The assessor leaves the course and someone else not involved in setting the course evaluates the team’s</li></ul>
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		<p>performance.</p> <p>c. The assessor leaves the course with instructions that the handler place a tag / flag / cone at every location where the dog alerted. The handler and dog then leave the course, and either the assessor or someone else notes whether the presence of the tags or flags match the pattern of target odor on the course.</p> <p>The goal of using the best practice of these types of double blind assessments is to enhance the performance and reliability of the detection team. If done properly a double blind assessment is inarguable, and it is the only assessment that replicates the real world in which the team is expected to operate.</p> <p>Please note: Teams experiencing deficiencies should not undergo double blind training until basic deficiencies are resolved.</p>
<b>Dual-purpose Dog</b>	A dog trained in two disciplines.	<p>Ex. A dog trained for patrol and detection work.</p> <p>Combining narcotics and explosives detection in the same dog is not an acceptable practice and should not be done.</p>
<b>Fixed Interval Schedule of Reinforcement</b>	A schedule of reinforcement in which dogs are rewarded for a correct response that occurs after a fixed period of time.	<p>Ex. Setting up a training exercise in which the dog has to search an area and is rewarded every 5 minutes for</p>

		continued searching.
<b>Fixed Ratio Schedule of Reinforcement</b>	A schedule of reinforcement in which the dog is rewarded after a set number of unrewarded correct responses.	Ex. 1:1 response/reward ratio, when training a new behavior the dog is rewarded each time the behavior is performed correctly. One correct response gets one reward.  1:2 response/reward ratio, when a behavior has been learned by the dog the trainer requires that the dog perform the task correctly two times before receiving a primary reward. Two correct responses earn the dog one reward.
<b>Fixed Reinforcement</b>	See Intermittent Reinforcement.	
<b>Inadvertent reinforcement</b>	Reinforcement delivered despite the appropriateness of any response on the part of the subject.	<i>Inadvertent reinforcement / reward</i> is a much more common phenomenon with pet dogs. If clients are growled at they often try to 'bribe' the dog to stop growling with a treat. The dog learns to use the growl to get the treat. This is a classic example of inadvertently rewarding the wrong behavior, not of accidental reinforcement.
<b>Incremental Learning</b>	See Approximation.	
<b>Instrumental conditioning</b>	See Classical conditioning.	
<b>Inter-Stimulus Interval (ISI)</b>	Scientific usage: In classical conditioning, the time elapsed between the conditioned stimulus and the unconditioned stimulus. In habituation, the time between exposures to a stimulus.	Ex. The interval between the request and the response.
<b>Interval Schedule of Reinforcement</b>	A schedule in which reinforcement is delivered on the basis of the amount of time before a response can be reinforced.	See variable interval.
<b>Keying the dog</b>	(Operational usage) A verbal or physical action by the handler which causes a detector dog to change its	See Cuing.

	actions or responds to an area or item whether target odor is present or not.	
<b>Latency</b>	The duration of time between the discriminative stimulus (SD) being presented and a response being elicited.	Ex. The amount of time between the dog finding the target odor and giving the response.
<b>Latent Learning</b>	Learning that takes place casually, and does not manifest in overt behavior at that time, but may become evident at a later stage.	Ex. The dog that unintentionally learns additional behaviors from exposure to inadvertent reward associations.  Hides placed too often in similar areas will lead to an association with either the area or the area and the target odor.
<b>Learning Plateau</b>	A period in which early progress in learning appears to have stopped and improvement is at a standstill. The plateau is followed by a new period of progress.	
<b>Least Reinforcing Scenario (LRS)</b>	A specific reduction technique based on differential reinforcement of other behavior (DRO).	
<b>Magnitude of Reinforcement</b>	The size, strength, or duration of a reward following a behavior.	
<b>Masking odors</b>	An odor intentionally designed to mask, disguise, or conceal the target odor.	
<b>Matching-to-Sample (MTS)</b>	A procedure in which the choice of a stimulus that matches a sample stimulus is followed by the delivery of a reinforcer.	Ex: This is the process that is involved in scent identification line-ups where the sample odor is matched with the target odor.
<b>Minimum standard</b>	The lowest acceptable criteria that define or establish uniform specifications or characteristics for products or services.	
<b>Motivation</b>	Operational usage: Mindset and physical behaviors associated with interest, willingness, and keenness to work.	
<b>Multi-purpose Dog</b>	A dog trained in more than two disciplines.	Historically this has been referred to as “dual purpose” dog in law enforcement.

<b>Neutral Stimulus or Cue</b>	Any stimulus that has no effect on behavior before conditioning.	Ex. Pavlov's dogs had no reaction to a bell prior to the conditioning with food. The bell was a neutral stimulus.
<b>Odor Signature</b>	Scientific usage: the profile of the odor.	See Odor.
<b>Odorant</b>	Scientific usage: Molecules that are properties of the external world objectively defined in terms of their physical and chemical characteristics and capable of being transposed by particular nervous systems into odors.	
<b>Point-to-point</b>	Operational usage: An open area search method in which the canine team moves in a straight line from one designated location (point) to another.	
<b>Praise off</b>	Operational usage: Physically removing the dog, after he has shown a response, from the area or item without causing any physical discomfort to the dog, while verbally praising the dog.	It is important to note that this can be done incorrectly. The head of the dog or the dog must be physically removed from the target odor prior to the physical/verbal praise beginning (must be done in a positive manner) or the dog will become aggressive/active to the target odor.
<b>Pre-Aversive Stimulus</b>	A stimulus which has been conditioned through generalization as a predecessor to an aversive stimulus.	Ex: An invisible/electronic fence has a perimeter that if crossed activates a sound coming from the dog's collar. If the dog continues the dog will be shocked.
<b>Precursor Stimulus</b>	A stimulus which indicates that the presentation of another stimulus is imminent.	A preparatory command given to dog prior to the command of execution which informs the dog another stimulus is to follow. For example: You call the dog's name prior to any command.
<b>Pre-scenting</b>	A sample target odor that is presented to the dog prior to deployment. The dog's objective is to match the pre-scented odor to the target odor.	Operational use: This is commonly used in tracking/trailing and/or scent discrimination line ups.

<b>Primary Reinforcement</b>	A reinforcing event that does not depend on learning to achieve its reinforcing properties.	Ex. The use of anything that the dog needs to survive such as food and water is a reinforcer.
<b>Primary Reinforcer</b>	An unconditioned reinforcer. Anything of intrinsic value to the particular individual.	Ex. Anything the dog needs to survive such as food and water.
<b>Probable Cause</b>	Probable cause exists when the facts and circumstances known to the officer would warrant a prudent man to believe a crime had been committed and the accused had committed it or that the evidence will be found in the place to be searched.	
<b>Proficiency assessment(s)</b>	An evaluation during training; a tool to assess team ability.	
<b>Prompt</b>	A previously learned association that stimulates the initiation of a response. Instructions, gestures, physical guidance and modeling cues serve as prompts.	See also Cuing and Keying.
<b>Proof off/Proofing</b>	A training technique to ensure that the dog ignores all odors except the target odors.	Ex. The dog is not rewarded for and is discouraged from reacting to things such as, packaging materials that are associated with the target odor.  See Extinction training.
<b>Quartering</b>	Operational usage: A systematic search of an area in a series of point-to-point patterns.	
<b>Refusal</b>	A lack of response, or a declination to accept instruction or direction.	
<b>Reinforcement Contingency</b>	Scientific usage: The relationship between the reinforcement and the exact properties of the performance which it follows.  This is a term about learning and maintaining a behavior.	Ex. In training, the dog is asked to look at the location of the target odor and sit. The dog is only rewarded when it sits not crouches. Sitting is the response that is rewarded.
<b>Reinforcement Training</b>	Operational usage: Training conducted within an operational work environment designed to maintain (or increase) a dog at peak performance during a search.	Ex. A training aid positioned during a search that when found ensures the dog is working.

		See also Training.
<b>Reinforcement/Reward Schedules</b>	The rule denoting the number of responses, the interval of time, and the duration of the response that will be reinforced.	See Intermittent and Variable Reinforcement/Reward.
<b>Remote Training</b>	Training to work at a distance from the handler. A training situation in which an attempt is made to remove the human element from the picture.	
<b>Repression of Behavior</b>	Operational usage: The failure of an operant behavior caused by previous aversive consequences.	
<b>Satiation</b>	When a reinforcer loses its effectiveness as a result of being overused.	
<b>Scent Article</b>	An item that has been exposed to the target odor which is used to put the dog on task.	
<b>Scent Discrimination</b>	The ability to differentiate one odor from another.	
<b>Scent Pad</b>	A collection of target odor whether it's on an object, on material, or in an area (i.e., on the ground).	
<b>Selective Reinforcement</b>	A training technique to tighten a specifically trained behavior.	Ex. The dog's trained response is to sit. The dog is selectively rewarded only for the time it is sitting and not exhibiting other behaviors.
<b>Sensitive period</b>	That period of development during which the dogs are first able to learn from relevant stimuli. Absence of exposure to these stimuli during the relevant period increases the risk of the dog developing a problem associated with the intended period.	Sensitive periods are defined within a species with respect to learning about (1) other animals of the same species, (2) animals of other species, and (3) novel environments. They are related to, but not identical to 'socialization' and the phrase "socialization period" is often carelessly used to mean sensitive period. There is now a good body of evidence suggesting that if animals are allowed to be exposed to a variety of other animals, stimuli and environments at their own pace that they may enhance

		<p>their own abilities to ‘learn to learn’. Unlike socialization periods, sensitive periods include exposure to non-animate objects.</p> <p>For dogs, the sensitive period of learning to respond to other dogs starts at about 3 week of age and this is the dog’s main focus until about 5 weeks of age. The sensitive period during which dogs begin to response to humans and other species – and recognize and treat them as different from dogs – starts at about 5weeks and is a main focus through about 8-10 weeks of age. Dogs only begin to recognize environments as something different and available to be broadly explored starting between 6-8 weeks, and this continues at a rapid rate somewhere between 12-20 weeks of age. These periods are related to the development of fears in some puppies. If they are not exposed they may develop a fear associated with the missed stimulus. If something bad or scary happens, they may have a profound response because this is the period where they are first learning that not all individuals and environments are safe. The first time dogs recognize danger or threats occurs at about 8-9 weeks of age.</p>
<p><b>Shaping</b></p>	<p>The process of selectively rewarding responses that approximate the desired behavior to an increasingly greater degree. This is one method for teaching a new behavior and can</p>	

	be used as a method of modifying additional behaviors.	
<b>Signature Odor</b>	See Target Odor.	
<b>Single/Sole-purpose Dog</b>	A dog trained in only one discipline.	
<b>Socialization</b>	The exposure of dogs to other dogs and animals of their and different species during the “sensitive period” when they are best able to begin to learn about such stimuli.	
<b>Spontaneous Recovery</b>	The tendency of a conditioned response that has undergone extinction to occur again after a rest period.	
<b>Standard</b>	An established or widely recognized model of authority or excellence as a reference point against which other things can be evaluated or the ideal in terms of which something can be judged.	
<b>Stimulus Control</b>	A behavior is under “stimulus control” when it occurs only when the signal is given.	<p>There are four rules for determining if you have control over a behavior</p> <ol style="list-style-type: none"> <li>1. If the behavior occurs when the signal is given.</li> <li>2. If the behavior does not occur when the signal is not given.</li> <li>3. If no other behavior occurs in response to that signal</li> <li>4. If the behavior does not occur in response to any other signal (Proofing)</li> </ol>
<b>Tactile Reinforcement</b>	Any reward perceptible by touch.	
<b>Taggant</b>	Nitro compounds which vaporize rapidly and are added to enhance the detection of plastic explosives by instrumental analysis	
<b>Time-Out</b>	A non-reinforcement training strategy whereby a training session is temporarily paused and attention is removed from the dog for a short period of time in order to elicit	

	desirable behavior when the session is restarted.	
<b>Trainability</b>	Operational usage: A 'character trait' which is both psychological or cognitive, and physical. It includes spontaneous attempts to perform the desired behaviors and the amount of learning about those behaviors of which the animal is capable.	
<b>Training</b>	Goal oriented task designed to teach, fix, expand, improve, and maintain detection capabilities.	See also Reinforcement Training.
<b>Training time</b>	The amount of time necessary to keep a detection dog at peak proficiency. The amount of time necessary will vary from team to team.	
<b>Variable Reinforcement</b>	See Intermittent reinforcement.	
<b>Variable-Interval Schedule of Reinforcement</b>	A reward schedule in operant conditioning in which the dog is rewarded after a period of time that varies from one reinforcement period to the next; there is variable time after one reinforcer / reward before the next reinforcer / reward becomes available.	Ex. The dog is rewarded randomly for maintaining the sit position.
<b>Variable-Ratio Schedule of Reinforcement</b>	A reward schedule in which the dog is rewarded after a number of non-rewarded responses; the number varies from reinforcement to reinforcement. A reward schedule in which the reward occurs irregularly after a number of responses.	Ex. The dog is rewarded with primary reward after the 5 <sup>th</sup> correct response, the 3 <sup>rd</sup> , 10 <sup>th</sup> , 7 <sup>th</sup> etcetera. The dog never knows when the reward will occur. The reward occurs randomly for correct responses.