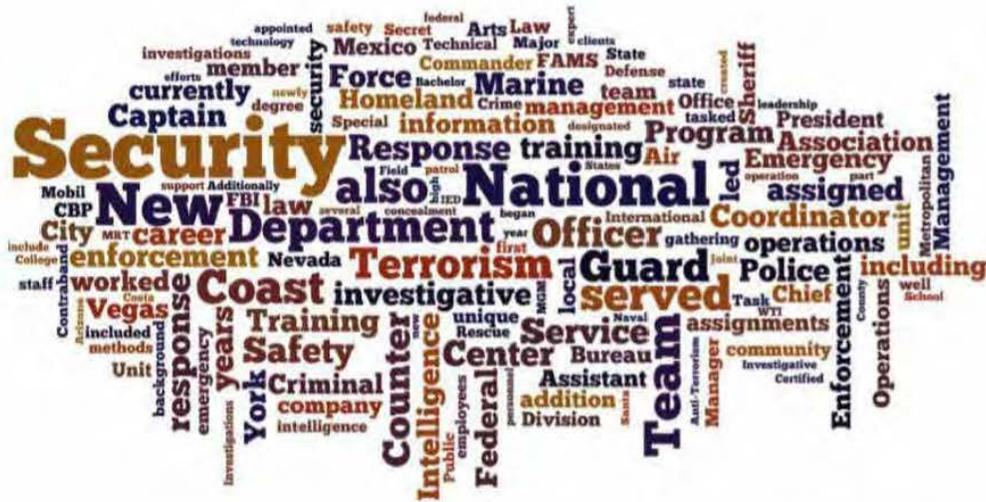


WORKSHOP REPORT: PRACTITIONER-BASED BEHAVIORAL INDICATORS

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WORKSHOP REPORT

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WORKSHOP REPORT

Introduction and Background

The devastation and terror that can be caused by suicide bombings or other person-borne improvised explosive devices (PBIEDs) clarifies the importance of methods to predict and, ostensibly, prevent their occurrence. An important element of a system to predict PBIED incidents is a set of behavioral indicators shared by people carrying explosive devices, but not by innocent individuals. These indicators can be used to deny dangerous persons access to critical or densely populated locations. However, the rarity of PBIED incidents makes their prediction difficult for at least two reasons: (a) the low incident probability implies that overwhelming evidence will be required to determine with a high likelihood that a specific individual has a PBIED, and (b) the rarity of these events means that there will be few cases available to identify indicators and to establish their validity.

To overcome the difficulties in researching PBIED or suicide bombing directly, the Department of Homeland Security (DHS) is interested in exploring the utility of identifying other criminal behavior with similar elements or proxy crimes that could serve as analogs to suicide bombings or other incidents involving PBIEDs. Because some of these criminal activities are more common than suicide bombings, they avoid the problems involved with predicting rare events. However, because the events do not share all of their characteristics with suicide bombings, the indicators for these events would not be expected to be identical to those for suicide bombings. Consequently, research is necessary to identify proxy crimes, determine the indicators that are common across domains, and identify those that are unique to a particular domain.

Toward that end, the DHS contracted with Kiernan Group Holdings, Inc. (KGH) and the Human Resources Research Organization (HumRRO) to bring together a diverse panel of experts to address the following questions: Are other crimes operationally similar enough to suicide bombings to serve as useful analogs to suicide bombings? If so, what are the behavioral indicators that a person is engaging in that crime?

In this report, we provide a brief description of the larger program of research for which this effort was a part and its genesis. We then describe the methodology used to collect the information and the results of those efforts. Finally, we summarize the conclusions of the workshop and offer recommendations for future research and the foreseeable next steps.

Purpose of Workshop

The primary objective of this workshop was to identify proxy crimes to suicide bombing (e.g., smuggling) and describe the behavioral indicators that would be displayed during the operational phase of the crime that could be used to identify a person with hostile intent. A related objective was to begin describing induction strategies that could be used by security

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personnel during interactions with passengers in transit portals. Specifically, what questions (or other non-invasive approaches) can be used to stimulate individuals who are harboring hostile intent without causing panic among other passengers or interrupting travel?

Subject Matter Experts (SMEs)

KGH recruited a diverse set of subject matter experts (SMEs) who possess practitioner-based experience relevant to the complex problem being addressed, representing the public and private sectors (see Table 1). What the individuals have in common is the fact that they are individually complex (e.g., improvisational theatre and homeland security expertise) and possess earned experience blended with scientific and academic rigor and the confidence to challenge conventional approaches. Their biographies are shown in Appendix A. Their experience ranged from private sector security (e.g., gaming industry), military (Coast Guard, Air Force), federal law enforcement (Customs and Border Protection, Federal Air Marshal Service), local law enforcement (Las Vegas Metropolitan Police Department, Regional Transportation District Transit Police [Denver]), and other government agencies (New Mexico Department of Homeland Security and Emergency Management). In addition to the military and law enforcement expertise, one SME was a performer with a specialty in sleight of hand, pick pocketing, and other confidence crimes, while another had a background in improvisational theater.

Table 1. Summary of Subject Matter Experts' Background Experience and Qualifications

Experience/Expertise	Number of SMEs with Qualification
Advanced Degree	4 ¹
Military	3
Law Enforcement	7
Training in Anti-Terrorism	9
Training in IED/WME Construction, Deployment, & Disposal	2
Training in Organized Crime	2
Training in Emergency/Incident Management	3
Training in Marine Safety	1
Skilled in Sleight-of-Hand	1

Note. Eleven SMEs participated in this workshop

Methodology

Pre-workshop Survey

Prior to the workshop, we sent a survey to the SMEs asking them to describe an incident from their experience in which an individual was trying to deceive them. They were asked to describe what made them suspicious of the individual in question (see Appendix B). We used the responses to that survey to generate a preliminary list of crimes and associated indicators that could be used as a starting point for discussion during the workshop.

¹ One SME is currently completing his Master's Degree in Homeland Security.

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Overview of Workshop Agenda

The workshop agenda is included in Appendix C. Mr. Larry Willis, Program Manager for Suspicious Behavior Detection within the Human Factors/Behavioral Sciences Division of the Science and Technology Directorate at the DHS (DHS S&T), welcomed attendees and reviewed the agenda and meeting objectives. Dr. Kathleen Kiernan, Chief Executive Officer of Kiernan Group Holdings, Inc, provided the background for the workshop and led the group through introductions. Dr. Shonna Waters, Senior Scientist at HumRRO, proceeded with a discussion of behavioral indicators of crime, in general. Using the results of the pre-workshop survey as a starting point, the SMEs described how they identify anomalous behavior. They discussed specific examples from their own experience (e.g., smuggling, pick pocketing, fare evasion) and noted similarities and differences across the crimes. We guided the SMEs through an activity in which we asked them to pretend that they were going to attempt to smuggle something through an airport. They identified the phases of the crime (e.g., preoperational surveillance, dry runs) and began talking about behaviors they would engage in during each phase.

In the next portion of the workshop, we shifted from describing behavioral indicators of crime (fear of detection / deception) in general and moved into identifying other criminal behaviors or proxy crimes. To do so we first discussed the elements of PBIED (e.g., self-destructive, requires planning). The SMEs then generated a list of possible proxy crimes or crimes that shared at least some elements of PBIED. As a group they then agreed on the three best bet proxy crimes or those other criminal behaviors that were most similar to PBIED. They then discussed each proxy crime in turn, identifying as many behavioral indicators as possible.

Ms. Elizabeth Sparano, Engineering Research Psychologist at the US Naval Research Laboratory, facilitated a discussion of the most common ways for men and women to carry PBIEDs and concealed firearms. The final topic was induction strategies. The SMEs suggested possible stimulus questions and techniques that could be used during a brief (approximately 30 seconds) interaction in a transit portal with limited information (a boarding pass and driver's license).

Post-workshop Survey

The post-workshop survey (Appendix D) was intended to collect additional information on induction strategies. We asked SMEs what questions they would ask to help them identify individuals with hostile intent if they had only the person's boarding pass and driver's license. Each respondent provided 3-6 possible questions, recommended tools that could be used to stimulate the traveler, and any other strategies they would recommend during the interaction.

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Results

Behavioral Indicators of Fear of Detection / Deception

Ten SMEs completed the pre-workshop survey. The surveys described incidents of deception covering crimes such as a prison escapee / fugitive, fare evasion, suspected terrorist, gaming cheats, assault and robbery, drug trafficking / smuggling, and fraud / misrepresentation. The list of indicators extracted from the pre-workshop survey was augmented by group discussion during the workshop. Table 2 displays a consolidated list of behavioral indicators. It is important to note that this list collapses across crimes and can thus be viewed as reflecting suspicious behavior in general rather than being indicative of any particular crime.

Table 2. Indicators of Fear of Detection/Deception (from Pre-workshop Surveys and Discussion)

(b)(3):49 U.S.C. § 114(r)



Elements of Person-Borne IED

The discussion of elements of PBIED began with an emphasis on how difficult it is to make generalizations about that type of crime. Although there really is no profile of a suicide

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bomber (i.e., they can be male or female, adults or children, rich or poor, intelligent or mentally unstable, and so on), there are certain elements of the crime that are core:

- Self-destructive
- Involves planning
- Requires equipment (i.e., a device)
- Expressive in nature (i.e., the goal is to commit violence)
- Crime occurs in a public, crowded area (frequently in a secured area)
- The offender conceals their intent prior to the act
- Escape is unnecessary
- Often a group-supported crime
- Often a secondary trigger or handler
- May involve multiple individuals or teams

Although the workshop participants were able to derive the above list of common elements, some key elements were noted to vary (e.g., by country or organization). One factor likely to have a significant impact on the expression of behavioral indicators was whether the PBIED had a specific target (e.g., a bridge, the President) or if the target was nonspecific. Individuals who have a specific target are more likely to wait until the target is available (the "patient adversary"); thus, if something (e.g., law enforcement) causes the target to be inaccessible, the suicide bomber will abort the operational phase and wait until the probability of success is higher. In contrast, some suicide bombers do not have a specific target. The goal is simply to inflict as much harm or have the greatest impact possible. For those individuals, once they are in the operational phase, it is unlikely that they will deviate. Instead, when faced with a barrier they are likely to select an alternate target, even if it will not inflict as much harm as the original target.

Another factor likely to impact behavior is the degree of sophistication of the attacker and/or terrorist group. Some terrorist groups have extensive resources and spend years planning an attack. The amount and sophistication of the training also varies greatly; some suicide bombers have undergone years of training prior to the event. (b)(3);49 U.S.C. § 114(r)

(b)(3);49 U.S.C. § 114(r)

Although suicide bombings are generally expressive in nature, specific motives of the attacker vary, including religious, political, revenge, martyrdom, and money for family. Furthermore, although a large number of PBIEDs are recruited by terrorist organizations; terrorist groups are also increasing their use of innocents in suicide bombings. Perhaps as a result, these groups are also including additional safeguards in their procedures to ensure the suicide bomber completes the mission and detonates the IED. For example, there is often a secondary trigger or handler. PBIEDs that are perceived to be at risk for not carrying out the mission might also be drugged to calm their nerves. These variations make the identification of PBIEDs more difficult. Throughout the discussion SMEs emphasized the adaptability of the

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adversary. They intentionally change their tactics, techniques, and procedures (TTPs) in an attempt to stay a step ahead of law enforcement.

Other Criminal Behavior

After identifying the elements of PBIED, the attendees generated an extensive list of other crimes that might serve as useful proxies. In this stage there were no real restrictions – the crimes simply had to have at least one element in common with PBIED. In addition to considering common elements to PBIED, the SMEs also considered whether the crime was an enabling crime. For example, a suicide bomber might also have to smuggle explosives through security and provide fraudulent documentation. In total, the list included 17 crimes: active shooters (e.g., school or workplace), shoplifting and pick pocketing, organized theft, trafficking / smuggling of drugs, trafficking of counterfeit items, card and slot cheating (involving devices), trespassing, armed robbery, ATM skimming, suicide by cop, serial rape or murder, fraudulent documentation, carrying concealed weapons, credit fraud, and dead dropping (i.e., exchanging information). The SMEs then came to consensus regarding which of those 17 crimes were likely to serve as the best proxies for PBIED. Because one motivation for the identification of proxy crimes was to alleviate the low base rate issue associated with PBIED, the SMEs also considered the base rate of the crime and the availability of video surveillance. The group selected three best bet proxy crimes: smuggling, commercial armed robbery, and active shooter.

- *Smuggling* is an enabling crime in that suicide bombers often have to smuggle the device through security. Like suicide bombing, it requires planning and carrying something that the perpetrator does not want to have discovered. It can be an individual or a group supported crime. It can involve recruitment or the use of innocents.
- *Commercial armed robbery* can be rogue or orchestrated by teams. Although the act is not inherently self-destructive, the perpetrator must, to some extent, accept the risk of death. The crime is often executed when there is a crowd and the thief typically has to pass through security. Planning and surveillance are required, and the offender usually conceals the intent and the weapon prior to the act.
- *Active shooter* is a violent crime (homicide). It involves planning and surveillance and can involve multiple people. The crime requires tools – guns most often but some have also used IEDs. The perpetrator selects a location and time in which he can inflict a great deal of harm. Like PBIED, the perpetrator conceals his intent and weapon(s) until he has committed to engaging in the act. In some cases, the event ends with the shooter committing suicide or enticing law enforcement officials to kill the shooter (“suicide by cop”). It may be that those incidences of active shooters in which the event ends in the death of the shooter might be most similar to PBIED.

Although these best bet proxy crimes do not share all elements of crime with PBIED, there is some significant overlap with key elements. The SMEs agreed that these common elements were sufficient for exploring those crimes as ways to augment the research on PBIEDs.

Summary of Behavioral Indicators of Other Criminal Behavior

A summary of the behavioral indicators described for each of the best bet proxy crimes, as well as the SME generated list of indicators of PBIED is presented in Table 3. These lists can serve as the starting point for a number of analyses. For example, the indicators in Table 3 are described in

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terms of the SPOT indicators and broken down into categories. This comparison can be used to support the validation of the SPOT indicators in that these SMEs can be seen as an independent data source that reached consensus on a subset of those behaviors based on their own (diverse) experiences. Furthermore, an examination of the patterns among the various crimes can be used to further a theory regarding which behaviors cluster together and are somewhat universal in terms of being indicative of hostile intent, deception, and concealment (e.g., (b)(3):49 U.S.C. § 114(r) was cited for all crimes with the exception of the active shooters).

A review of Table 3 highlights a number of things about the potential utility of these crimes as analogs to suicide bombing. For example, few behavioral indicators were provided for an active shooter. That finding might simply reflect a more limited familiarity with that type of crime within this group of SMEs, or it might suggest that something about that type of crime makes behavioral indicators more difficult to ascertain. Similarly, few indicators within the verbal/communicative behavior category were described for commercial armed robbery or active shooter. This deficit might reflect a systematic difference between those crimes and PBIED. Because the locations are not necessarily controlled areas, those perpetrators might be less likely to interact with security personnel who could describe those kinds of indicators. These patterns could be used to identify differential utility of the other various proxy crimes depending on the situation. For example, if security personnel were monitoring a queue from a distance, commercial armed robbery might provide the most useful proxy. During an interaction, smuggling might provide greater utility.

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Table 3. Comparison of behavioral indicators of other criminal behavior to SPOT and PBIED indicators.

Indicators	SPOT	PBIED	Other Criminal Behavior		
			Smuggling	Armed Robbery ²	Active Shooter ³
Behavioral Indicators					
(b)(3):49 U.S.C. § 114(r)					

² Results are tentative because there was less expertise at the workshop in Armed Robbery.

³ Results are tentative because there was less expertise at the workshop around Active Shooters.

⁴ This was also described as a (b)(3):49 U.S.C. § 114(r).

Table 3. (Continued)

Indicators	SPOT	PBIED	Other Criminal Behavior		
			Smuggling	Armed Robbery	Active Shooter
(b)(3):49 U.S.C. § 114(r)					

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Table 3. (Continued)

Indicators	SPOT	PBIED	Smuggling	Other Criminal Behavior	
				Armed Robbery	Active Shooter
(b)(3):49 U.S.C. § 114(r)					

Table 3. (Continued)

Indicators	SPOT	PBIED	Smuggling	Other Criminal Behavior	
				Armed Robbery	Active Shooter
(b)(3):49 U.S.C. § 114(r)					

Common Concealment Locations

The SMEs generated a list of places a suicide bomber would conceal an IED (Table 4). When probed to identify the five most common places, the SMEs did not achieve consensus, but generally agreed upon (b)(3):49 U.S.C. § 114(r)

(b)(3):49 U.S.C. § 114(r)
(b)(3):49 U.S.C. § 114(r) In a separate effort for DHS, HumRRO is coding transcripts from interviews with eye witnesses of PBIEDs from Israel, Sri Lanka, and the U.S. Military. Although a systematic analysis of those transcripts is still ongoing, current information (based on Israeli interviews) suggests that (b) most common concealment locations (b)(3):49 U.S.C. § 114(r)
(b)(3):49 U.S.C. § 114(r)

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Table 4. PBIED concealment locations

Location	Gender
(b)(3):49 U.S.C. § 114(r)	

The SMEs also generated a list of the most common locations to carry a concealed weapon, by gender, as shown in Table 5.

Table 5. Firearm concealment locations

Male	Female
(b)(3):49 U.S.C. § 114(r)	

Induction Strategies

Throughout the workshop, the SMEs frequently noted suspicious behaviors that would become identifiable during an interaction with a law enforcement officer (LEO) or in response to a change in the environment. As a result, DHS was interested in capturing strategies for inducing suspicious behavior that could be used at transit portals to help identify individuals with hostile intent. Because a limited amount of time was devoted to the topic during Workshop II, eight SMEs completed surveys after the workshop to provide their suggestions regarding induction strategies. These suggestions can be categorized into questions, tools, and broader strategies.

The SMEs generally agreed that open-ended questions would be more effective than close-ended (e.g., yes/no) questions. They provided a number of additional strategies specific to questioning. For example, they suggested that the order of the questions might be important; (b)(3):49 U.S.C. § 114(r)

(b)(3):49 U.S.C. § 114(r)

A few strategies dealt more with LEO behavior after the question was asked; for example, they noted (b)(3):49 U.S.C. § 114(r)

(b)(3):49 U.S.C. § 114(r)

(b)(3):49 U.S.C. § 114(r)

Table 6 lists the suggested questions gathered through the workshop discussion and the completed surveys. Asterisks indicate that the question was suggested by more than one SME.

Table 6. Suggested questions for use in identifying hostile intent

(b)(3):49 U.S.C. § 114(r)

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(b)(3):49 U.S.C. § 114(r)

A number of physical tools were suggested to augment the questioning process in an effort to elicit hostile intent (Table 7). These tools range from signage in the screening area to tools carried by the LEO during questions. In many cases these tools do not have to be used, they simply need to give the impression that they are being used. For example, once suggestion was that

(b)(3):49 U.S.C. § 114(r)

(b)(3):49 U.S.C. § 114(r)

Table 7. Suggested tools to use in identifying hostile intent

(b)(3):49 U.S.C. § 114(r)

The SMEs also suggested additional resources that could be provided to screeners to aid them in identifying behavioral indicators. For example, SMEs suggested that there be

(b)(3):49

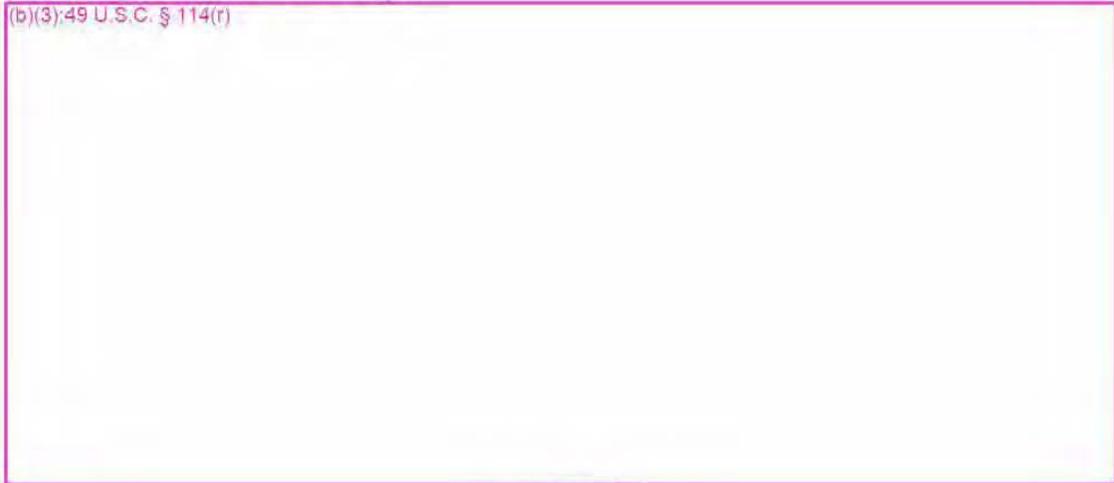
(b)(3):49 U.S.C. § 114(r)

Some general strategies were offered for induction, as seen in Table 8. SMEs suggested that all TSA personnel should be vetted and then trained in the employment of all counter-surveillance and counter-interrogation techniques employed by individuals and organizations with hostile intent toward the United States. Furthermore, they suggested extending some kind of training to all transit personnel (i.e., not only TSA employees), such as baggage handlers,

parking enforcement officers, and airline representatives. Training all transit portal personnel empowers them with the responsibility for security, and creates multiple 'trip wires' for individuals with hostile intent.

Table 8. Other induction strategies

(b)(3);49 U.S.C. § 114(r)



Conclusions

Summary of Workshop Outcomes

This workshop provided an opportunity to bring together a rich set of experiences to address some of the challenges inherent in confronting the threat of suicide bombing. Because it is difficult to find a single person or even set of people who are experts in all criminal behavior, the workshop provided a forum for these experts to supplement one another's operational experience to more completely answer some of the questions at hand. In addition, the diversity of their expertise necessitated that assumptions be challenged and concepts be described in richer detail. A key outcome of the workshop was that we obtained agreement from the workshop participants on a list of behavioral indicators of fear of detection and deception. They also generated a list of other criminal behavior that could be used as possible proxy crimes and were able to reach consensus on the three most promising crimes to supplement PBIED research. Furthermore, there will likely be outcomes of this workshop for years to come.

Recommendations

The results of this workshop represent an excellent first step toward the identification of fruitful proxy crimes and their associated behavioral indicators. At this point, however, these results should be seen as tentative. The SMEs were working within time constraints to generate these lists and the process was based on holistic judgment rather than a systematic process for

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evaluating the similarities between the proxy crimes and PBIED. In addition, there was not necessarily an equivalent amount of expertise for each of the other criminal behaviors (the three proxy crimes). Although a number of the workshop participants were experts in and had witnessed smuggling, the same was not necessarily true for active shooters and commercial armed robbery. Thus, any differences in the number of behavioral indicators across the proxy crimes could be due to systematic differences in the TTPs associated with those crimes, or they could reflect the boundaries of expertise or time spent discussing each. Once DHS has identified the types of crime they would like to use as proxies, additional research should be conducted focusing on expertise with those particular crimes. In addition, this research might benefit from the identification of a framework for comparing other crimes to PBIED in a systematic way. For example, the elements of PBIED could be used to quantify the degree of overlap between it and other crimes. Alternatively, a cognitive interview (as well as a literature review or review of video footage) could be used to identify behavioral indicators of each crime across various stages (e.g., when the perpetrator does not know law enforcement is present, when he knows law enforcement is present but is not a target, when he knows he is under surveillance, and when he is interacting with a law enforcement officer). Regardless of which framework is adopted, a standardized approach to investigating the proxy crimes would offer some assurance that differences are real as opposed to reflective of methodological inconsistencies.

We also recommend that DHS continue to identify moderators of the behavioral indicators (e.g., extent of training, nature of target) and focus on the co-occurrence of indicators. That information could be used to cluster the indicators in a way that would make the indicator list more useful in an operational environment. In addition, a recurring theme during the workshop was that many of the behavioral indicators present as a change in behavior or a reaction to something in the environment. This suggests that additional research on induction strategies might be fruitful in determining how to maximize the information obtained during interactions with security personnel.

Finally, although the goals of this workshop were fairly targeted, a wealth of information on a variety of topics was shared during the course of the workshop. Some of that information was out of the scope of the current research effort; however, not capturing that information in some way might be a missed opportunity. For example, the SMEs in this workshop emphasized the importance of varying security TTPs to better combat our highly adaptable adversaries. They also discussed drawbacks associated with rotational assignments and shift / location changes. Specifically, they suggested that those staffing approaches adversely affect our ability to establish and understand baseline behavior and thus makes it difficult to recognize aberrant behavior when it exists. They expressed some concern over the cognitive load required to use a checklist in an operational environment and stressed the importance of automating the recognition of suspicious behavior. The workshop attendees also highlighted the potential benefit of further analyzing situational factors associated with various crimes and additional focus / analysis of handlers and teams. Although the notes from this workshop (Appendix E) have been content analyzed for behavioral indicators, they could be content analyzed for additional purposes in future studies.

Next Steps

The SMEs suggested a number of sources of videos for proxy crimes. DHS will conduct a video collection to evaluate their utility in the validation of behavioral indicators of PBIED. For example, the SMEs suggested that DHS request video surveillance of the following incidents:

- New York, New York Casino shooting (Steven Zegrean, 2007)
- Tuscon, Arizona shooting (Jared Lee Loughner, 2011)
- Discovery Building (James Lee, 2010)
- Norway shooting (Anders Behring Breivik, 2011)
- Virginia Tech shooting (Seung-Hui Cho, 2007)
- Bellagio Casino armed robbery (Anthony Carleo, 2010)
- Las Vegas Albertons shooting (Zane Floyd, 1999)
- Columbine shooting (Dylan Klebold and Eric Harris, 1999)
- Mumbai attacks (e.g., Ajmal Kasab, 2008)

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Appendix A

Subject Matter Expert (SME) Listing

Kyle Edwards

Mark Kaminsky

Gail Kulisch

Noel Malony

Mike McClary

Raymond Pardo

Eric Petty

Andrew Phelps

Apollo Robbins

Timothy Shalhoob

Alan Tompkins

Appendix B

Pre-workshop Survey

Pre-Workshop Questionnaire

Purpose

The purpose of this workshop is to benefit from the expertise of individuals such as yourselves that successfully identify people harboring hostile intentions. Our focus is on behavioral indicators or those cues to deception that one observes when engaging the public.

To assist us in the workshop, we are asking you to take a moment to remember an incident in your career in which you successfully identified an individual who was trying to deceive you during the course of your job duties. Please use this incident to answer the following questions:

First, please briefly describe the incident.

1. What was it about the situation that suggested something was going on? How did you identify the person of interest?
2. What behaviors did you observe? As you arrived? As you spoke with the person?
3. What factors impacted your observations?

Appendix C
Workshop Agenda

AGENDA

Workshop

November 1, 2011
08:00 – 17:30

Meeting called by the Department of Homeland Security, in collaboration with Naval Research Laboratory

08:00 – 08:30	Background and Purpose <i>Larry Willis</i>
08:30 – 09:00	Introductions <i>Kathleen Kiernan</i>
09:00 – 10:00	Videos Misdirection, Concealment, Deceit <i>Kathleen Kiernan</i>
10:00 – 12:00	Discussion of Indicators Survey Results Similarities and Differences <i>Kathleen Kiernan & Shonna Waters</i>
12:00 – 13:00	Lunch
13:00 – 15:00	Discussion of Indicators Survey Results Similarities and Differences <i>Kathleen Kiernan & Shonna Waters</i>
15:00 – 15:30	Demonstration of Diversion <i>Apollo Robbins</i>
15:30 – 17:30	Discussion of Indicators Survey Results Similarities and Differences <i>Kathleen Kiernan & Shonna Waters</i>

November 2, 2011

08:00 – 17:30

08:00 – 09:00

Review of Indicators from Day 1

Kathleen Kiernan & Shonna Waters

09:00 – 12:00

Discussion of Proxy Crimes*

Types of Crime and Similarities with Suicide Terrorism

Factors that Impact the Indicators

Kathleen Kiernan & Shonna Waters

12:00 – 13:00

Lunch

13:00 – 15:30

Discussion of Proxy Crimes

Types of Crime and Similarities with Suicide Terrorism

Factors that Impact the Indicators

Kathleen Kiernan & Shonna Waters

15:30 – 17:00

Summary and Outcomes

Discussion of Workshop Conclusions

Kathleen Kiernan & Shonna Waters

17:00 – 17:30

Closing Remarks

Larry Willis

* By proxy crime, we mean a crime that has elements similar enough to suicide terrorism to be useful in identifying common behavioral indicators.

Additional Instructions:

Appendix D

Post-workshop Survey

Post-Workshop Questionnaire

Purpose

Our goal for the workshop was to bring together experts from a variety of backgrounds to discuss methods of identifying individuals that harbor hostile intentions. Your expertise has enabled us to successfully focus on behavioral indicators of deception and concealment. Thank you again for taking the time to be a part of this event and help us to gain a greater understanding of the methods our adversaries use and the behaviors that could identify them as suspicious.

One topic we discussed during the workshop was how to increase the fear level of a suspicious person to determine if he will display additional behavioral indicators of deception and concealment. Specifically, if you had only the person's boarding pass and driver's license, what questions would you ask to help you identify hostile intent?

Questions

1. Please list 3-6 questions you would ask, if given only the person's driver's license and boarding pass, to identify hostile intent.
 2. What tools, if any, would you recommend using during questioning, keeping in mind that the governing principle is to stimulate rather than inflame?
 3. What other strategies (such as the order in which the questions are asked) would you use during the interaction?
-

Appendix E

Workshop Notes

Workshop notes are not available for public release – participation was non-attributable.

draft



May 31, 2013

TSA SME Panel Project

Updated Literature Review on
Pre-Incident Indicators of Suicide Attack

Contract #: HSTS04-12-Q-CT9911

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EXECUTIVE SUMMARY

Overview

AIR conducted a literature review on pre-incident indicators of suicide attack in 2010 (Mullaney, Matheson, & Costigan, 2009; Mullaney, Matheson, & Costigan, 2010). The purpose of the current effort is to update this literature review as the first step in a comprehensive indicator optimization task. This work will inform the refinement of the Screening of Passengers by Observation Techniques (SPOT) Referral Report, the behavioral screening instrument at the core of the SPOT Program.

The goals of the updated literature review are threefold:

1. Determine the current state of knowledge about observable indicators of suicide attackers just prior to detonation (pre-incident indicators).
2. Explore the extent to which indicators in the SPOT Referral Report are associated with suicide attackers as reported in the existing literature.
3. Gather information to support concrete, operational definitions of identified pre-incident indicators and indicator-specific exemplars.

The literature search conducted in 2009 resulted in the identification of 157 documents that included behavioral descriptions of suicide attackers prior to detonation. The majority of these data came not from empirical research studies but from applied sources such as brochures, manuals, or training documents from law enforcement, government, and so on; blogs, often written by news reporters or security experts; websites; and articles, mostly from news sources about specific suicide attacks. Most documents contained multiple pre-incident indicators, and some were published as lists in and of themselves. From these, AIR extracted a total of 1218 descriptions of attacker behavior. These data were then mapped to suspicious indicators on the SPOT Referral Report—the behavioral screening instrument used by Behavior Detection Officers (BDOs)—to determine the extent to which this open-source information on attacker behavior was reflected in the screening instrument. More specifically, the data gathered were categorized using the items that make up Section 2 (Observation and Behavior Analysis), Section 4 (Signs of Deception), and the suicide bomber indicative cluster behaviors of the SPOT Referral Report, as well as some additional categories not covered by SPOT.

For the updated literature review, AIR developed a conceptual framework of indicators of suicide attack, which guided the reanalysis of the data originally collected and analyzed for the aforementioned literature review. This framework allowed the sorting of the raw data into three primary components based on type: (1) indicators that directly suggest the presence of an

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explosive device, (2) indicators related to the attacker's *operational tradecraft*, or intentional or planned actions or strategies, and (3) indicators that suggest the attacker's reaction to the circumstances (unplanned, unintended, and/or undesirable behaviors).

Key Findings

The literature search on specific pre-incident indicators of suicide attackers resulted in the identification of indicators related to most of the items from the SPOT Referral Report, as well as some additional indicators that were not directly mapped to SPOT categories. Findings include the following:

- The most commonly identified indicators in the literature were coded into the following categories. (b)(3) 49 U.S.C. § 114(r) coded categories reflect items found in Section 2 (Observation and Behavior Analysis) of the SPOT Referral Report: (b)(3):49 U.S.C. § 114(r) (b)(3):49 U.S.C. § 114(r). Additionally, (b)(3):49 U.S.C. § 114(r) coded categories reflect items on the suicide bomber indicative cluster behaviors list: (b)(3):49 U.S.C. § 114(r)
- The literature contained indicators that mapped to (b)(3):49 items associated with Section 2 of the SPOT Referral Report.
- The literature contained indicators that mapped to (b)(3):49 SPOT Section 4 items (Signs of Deception).
- Many of the SPOT Referral Report items for which no indicators were found in the literature (b)(3):49 U.S.C. § 114(r) (b)(3):49 U.S.C. § 114(r)
- Indicators were found in the literature (b) suicide bomber indicative cluster behaviors.
- Of the 251 coded line items associated with non-SPOT categories, (b)(3):49 were coded into the following (b)(3) categories: (b)(3):49 U.S.C. § 114(r) (b)(3):49 U.S.C. § 114(r)

In addition to these findings, the reanalysis independent of SPOT resulted in the development of 80 category labels to organize the behavioral descriptions in conceptual groups; each represents a single, unitary construct. Based on staff expertise in suicide attack indicators gained since the previous literature review, we created a framework (b) main components by which to sort these 80 categories:



While specific to suicide attacks, these findings serve as an initial step in AIR's efforts to optimize the suspicious indicator list. The overlap between the raw data from the literature review and the items on the SPOT Referral Report support the scientific foundation of the SPOT Referral Report items. These findings also reflect the inclusion of best practices and scientific research from which the suspicious indicators were initially developed. Moreover, these searches were conducted in 2009 and again in 2013, several years after the development of the indicator list. Despite the passage of time, it appears that the SPOT Program remains on target with the indicators it uses, because neither of these searches uncovered many more behaviors than those already included on the SPOT Referral Report.

Last, these findings lend strong support to the content validity of the SPOT Program and demonstrate the value of many SPOT items as potential identifiers of suicide attackers. As AIR's work in support of the Behavior Detection and Analysis (BDA) Program continues, we will further examine these and other relevant data as well as elicit input from experts. Findings will ultimately inform recommendations on the refinement of the indicator set and training content, and will also further SPOT Program standardization and strengthen BDO performance goals.

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