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**NAVAL  
POSTGRADUATE  
SCHOOL**

**MONTEREY, CALIFORNIA**

**THESIS**

**PREVENTING TERRORIST BOMBINGS ON UNITED  
STATES SUBWAY SYSTEMS**

by

James Metzger

September 2006

Thesis Advisor:  
Second Reader:

Robert Bach  
Kenneth Blank

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| <b>REPORT DOCUMENTATION PAGE</b>  |   |   | <i>Form Approved OMB No. 0704-0188</i>  |
| Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instruction, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188) Washington DC 20503.   |   |   |   |
| <b>1. AGENCY USE ONLY (Leave blank)</b>   | <b>2. REPORT DATE</b><br>September 2006                         | <b>3. REPORT TYPE AND DATES COVERED</b><br>Master's Thesis  |   |
| <b>4. TITLE AND SUBTITLE</b> Preventing Terrorist Bombings on United States Subway Systems  |   | <b>5. FUNDING NUMBERS</b>   |   |
| <b>6. AUTHOR(S)</b> James Meztger   |   | <b>8. PERFORMING ORGANIZATION REPORT NUMBER</b>   |   |
| <b>7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)</b><br>Naval Postgraduate School<br>Monterey, CA 93943-5000   |   | <b>10. SPONSORING/MONITORING AGENCY REPORT NUMBER</b>   |   |
| <b>9. SPONSORING /MONITORING AGENCY NAME(S) AND ADDRESS(ES)</b><br>N/A  |   | <b>11. SUPPLEMENTARY NOTES</b> The views expressed in this thesis are those of the author and do not reflect the official policy or position of the Department of Defense or the U.S. Government. |   |
| <b>12a. DISTRIBUTION / AVAILABILITY STATEMENT</b><br>Approved for public release; distribution is unlimited   |   | <b>12b. DISTRIBUTION CODE</b>   |   |
| <b>13. ABSTRACT (maximum 200 words)</b><br>In the past three years, major attacks on mass transportation in Moscow, Madrid, London, and Mumbai left hundreds dead, thousands injured and the world searching for answers. Subway systems are not only attractive targets, but evidence persists of a continued terrorist interest in conducting attacks on United States subways and railways. An attack on a subway or rail system in the United States could cause substantial loss of life and could have an adverse impact on public confidence, resulting in massive economic loss.<br>This thesis examines a series of security initiatives that collectively comprise a plan to be used as a template for mass transit systems in the United States that operate a subway to augment security. The core goal of these initiatives identifies ways to increase the probability of early detection to prevent terrorist bombings of all types on United States subway systems. |   |   |   |
| <b>14. SUBJECT TERMS</b> Preventing, Bombings, Mass Transportation  |   | <b>15. NUMBER OF PAGES</b><br>77  |   |
|   |   | <b>16. PRICE CODE</b>   |   |
| <b>17. SECURITY CLASSIFICATION OF REPORT</b><br>Unclassified  | <b>18. SECURITY CLASSIFICATION OF THIS PAGE</b><br>Unclassified | <b>19. SECURITY CLASSIFICATION OF ABSTRACT</b><br>Unclassified  | <b>20. LIMITATION OF ABSTRACT</b><br>UL |

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**Approved for public release; distribution is unlimited**

**PREVENTING TERRORIST BOMBINGS ON UNITED STATES  
SUBWAY SYSTEMS**

James Metzger  
Lieutenant, Southeastern Pennsylvania Transportation Authority Police Department  
B.S., Chestnut Hill College, 2001

Submitted in partial fulfillment of the  
requirements for the degree of

**MASTER OF ARTS IN SECURITY STUDIES  
(HOMELAND SECURITY AND DEFENSE)**

from the

**NAVAL POSTGRADUATE SCHOOL  
September 2006**

Author: James Metzger

Approved by: Robert Bach  
Thesis Advisor

Kenneth Blank  
Co-Advisor

Douglas Porch  
Chairman, Department of National Security Affairs

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## **ABSTRACT**

In the past three years, major attacks on mass transportation in Moscow, Madrid, London, and Mumbai left hundreds dead, thousands injured and the world searching for answers. Subway systems are not only attractive targets, but evidence persists of a continued terrorist interest in conducting attacks on United States subways and railways. An attack on a subway or rail system in the United States could cause substantial loss of life and could have an adverse impact on public confidence, resulting in massive economic loss.

This thesis examines a series of security initiatives that collectively comprise a plan to be used as a template for mass transit systems in the United States that operate a subway to augment security. The core goal of these initiatives identifies ways to increase the probability of early detection to prevent terrorist bombings of all types on United States subway systems.

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## ACKNOWLEDGMENTS

This thesis required many hours of researching, writing, analyzing, editing and formatting. All are important aspects of a thesis. However, this work would not be possible without the support and understanding of the SEPTA Transit Police Department, dedicated professionals of the Special Operations Response Team, my professors, professional peers, friends and family. I am extremely grateful for their help and guidance throughout this endeavor. Much like the subject matter of protecting United States subway systems from terrorism, this thesis was accomplished through the assistance of many individuals, particularly the inspiration and love of:

Joshua Carl Metzger

August 29, 1988 to March 16, 2006

*“Too Fast”*

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## I. INTRODUCTION

Three types of terrorist attacks have occurred globally and will likely impact on the United States in the near future.<sup>1</sup> Considering all three types of terrorism, Southeastern Pennsylvania Transportation Authority (SEPTA) would be most concerned with suicide terrorism or bombings that represent a deliberate lethal attack against the public on buses, trains, and subways. Terrorists seek asymmetric means to penetrate our defenses and exploit the openness of our society to their advantage. This tactic includes targeting mass transit, explicitly designed to be available and open to the public.

Mass transportation has been and remains an attractive target for terrorist activity throughout the world. In the last three years, major attacks in England, Russia, Spain and most recently India onboard subway systems left hundreds dead, thousands injured and the world searching for answers. The problem facing United States mass transit police departments is vast. Between 1989 and July 2006, more than 225 terrorist attacks occurred against surface transportation worldwide. About one-third of all terrorist incidents worldwide target transportation systems.<sup>2</sup> The impact of terrorism on mass transportation is calculated with lives. With this in mind, it is necessary to examine terrorist bombings on surface transportation worldwide to determine how the SEPTA Transit Police Department can reduce the impact of terrorist bombings on the Philadelphia subway system. SEPTA's mass transit system not only represents an attractive target, but research indicates that of nearly 1,000 terrorist incidents of all kinds, attacks on transportation are among the most likely to result in death.<sup>3</sup> SEPTA provides transportation service to approximately 316,000,000 commuters per year.<sup>4</sup> Service

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<sup>1</sup> Bruce Hoffman, "Defending America Against Suicide Terrorism," *Three Years After, Next Steps in the War on Terror*, ed. David Aaron (Santa Monica: Rand, 2005), 21.

<sup>2</sup> Jim Turner, *America at Risk: Closing the Public Transportation Security Gap* (Washington D.C.: Government Printing Office, 2004), 1.

<sup>3</sup> Brian Michael Jenkins, *Terrorism and the Security of Public Transportation* (Washington D.C.: RAND Corporation, 2004), 1.

<sup>4</sup> Southeastern Pennsylvania Transportation Authority, [www.SEPTA.Org](http://www.SEPTA.Org) [Accessed February 30, 2006].

includes 137 bus routes, subway elevated, light rail, trackless trolley and commuter railroad routes. Preventing terrorist incidents and reducing SEPTA's vulnerability to terrorist attack is paramount to providing safe and effective transportation service to the region.

This thesis addresses terrorist attacks that are frequent and smaller in scale on public surface transportation and that are devastating to the psyche of the American public. The success of previous attacks on mass transit throughout the world requires the development of a hybrid plan that incorporates varied initiatives and draws on the community, transit employees, police and the intelligence community to prevent terrorism. Implementing such a plan reduces the probability of bombings on subway systems.

This thesis examines why subway systems need a new plan to deal with terrorist bombings. This new plan must analyze what is wrong with the current security situation on United States subway systems and examine the principles and techniques that will augment security on subway systems. In addition, this thesis looks at the problems inherent in creating the new plan and what the new plan will look like. A thorough evaluation will be launched to develop recommended courses of action for public safety executives charged with securing United States subway systems.

## **A. RESEARCH OBJECTIVES**

This thesis has several objectives. The first objective develops a security strategy for major United States mass transportation providers to prevent terrorist bombings on subway systems. A key step toward achieving this objective involves identifying vulnerabilities of subway systems in the United States.

The second objective examines the psychological underpinnings of suicide terrorism targeting civilian populations. Knowing how an enemy thinks serves a defensive force well in securing crucial areas such as mass transportation. A behavioral matrix that examines a terrorist bomber's behavior and actions, rather than physical

appearance, permits United States mass transit agencies to follow a methodology that is rooted in actions rather than appearances in an effort to defeat terrorism.

A third objective establishes sound patrol tactics and techniques for transit police that focuses on the behavioral aspects of terrorists. Utilizing an innovative procedure of behavioral observation screening system (BOSS), transit police are poised to evaluate behavior as an indicator of terrorist behavior and interdict an act of terror prior to its commission.

Finally, the fourth objective and, perhaps, the most important, involve improvements in the use of intelligence in defeating terrorism. Without reliable, aggressive, and effective intelligence working to identify precursors of a terrorist attack, our society may suffer immense and unsustainable losses. Intelligence collection, analysis, interpretation, and dissemination serve as a prelude to vigorous intervention into possible attacks on mass transit. Human intelligence can be developed by incorporating the customers of a mass transit system, its employees, and its transit police officers. The core goal of these intelligence activities identifies the probability of early detention and prevents terrorist bombings of all types on United States subway systems.

## **B. METHODOLOGY**

The analytical framework for this study draws on previous SEPTA policies and comparative case studies of mass transit systems that have experienced bombings. In addition to comparative case studies, the solutions set forth are compared in a cost benefit analysis. The solutions determine which recommendations can offer both savings and normal crime reduction, as well as what is best for SEPTA. The thesis also focuses on the ability of the public to work with police to reduce terrorism. The thesis examines whether and how incidents such as subway bombings may be prevented by including greater participation to identify potential terrorists and to interdict them prior to their commission.

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## II. SURFACE TRANSPORTATION VULNERABILITIES

Surface transportation remains extremely difficult to secure. Unlike aviation security, confined to a centrally-located and secure access area, surface transportation consists of a multitude of vehicles, facilities and related infrastructures. The SEPTA mass-transit system, for instance, consists of over 2,220 linear miles in Philadelphia, Bucks, Chester, Delaware and Montgomery counties in Pennsylvania, as well as parts of New Jersey and Delaware. SEPTA's assets include, but are not limited to, trains, trolleys, subways, buses, railways lines, streets, stations, depots, control facilities, bridges, and tunnels. This diverse array of systems provides essential support for everyday life and the national economy. SEPTA serves a region that is the midway point of the northeast United States corridor. A successful attack would fracture the system's ability to handle travel between Washington D.C. and New York.

Unfortunately, because surface mass transit is difficult to protect, it receives the least amount of attention in federal oversight and funding. Aviation security receives the highest priority within efforts to secure transportation systems. However, surface transportation systems are, by their nature, much more difficult to secure. Surface transportation systems require openness and accessibility and have thousands of entry points. With respect to surface transit, key assets are distributed over a wide area. Interlocks, power distribution centers, and routes are fixed by way of rail, and service is reliable and dependable for both commuters and terrorists. In order to conduct an attack on surface transit, particularly subway systems, terrorists do not have to employ costly and time-consuming training. They merely pay the transit fare. SEPTA's base fare currently costs less than \$2.00. The National Planning Scenarios, developed to aid federal, state, and local authorities prepare for attacks, recognizes in scenario #12 that an attack on a subway system would devastate the American public. National Planning Scenario #12 outlines suicide bombers onboard a subway station during a sports event and carrying large amounts of people. It assumes that the public transportation line will be closed for one week, with the station closed for three weeks for evidence collection,

decontamination, cleanup, and structural assessment.<sup>5</sup> The economic impact of the attack would cost millions in repairs and lost revenue, and public trust would be shattered.

Fully protecting surface transportation is impossible; however, the recognition that a certain amount of uncertainty and risk is unavoidable should not be cause for resignation. By learning from past attacks and collecting intelligence on future threats, we can apply security measures that reduce the likelihood of a successful terrorist attack. For example, the London Underground, Madrid, and Mumbai train bombings demonstrate that attacks on subway systems include multiple attacks in close proximity of time and geographic location to cripple a region's transportation system and to influence the civilian population.

#### **A. FUNDING FOR SURFACE TRANSPORTATION SECURITY**

Aviation security remains virtually the sole focus of Transportation Security Administration (TSA) spending. Ninety percent of the President's FY2006 budget request for TSA (\$4.98 billion out of \$5.56 billion) is allocated for civil aviation programs, to the detriment of other transportation security priorities. In addition, aviation security workers account for 97 percent of TSA's total workforce.<sup>6</sup> The FY2006 budget request for homeland security-related spending provides almost 65 percent of total federal transportation security funds for aviation, just over 23 percent for maritime security, about 11 percent for multi-modal applications and only 1.4 percent for surface transportation.

Due to TSA's disproportionate funding of aviation security, surface transportation providers are fighting a difficult battle when it comes to securing transportation assets in the United States, especially given the scope and scale of mass transit and the small amount of funds with which to protect it. The recent attacks on mass transit (Moscow, Madrid, London, and Mumbai) and historical examinations of terrorist attacks are

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<sup>5</sup> United States Department of Homeland Security. Homeland Security Council, *National Planning Scenarios: Created for Use in National, Federal, State and Local, Homeland Security Preparedness Activities* (April 2005)Version 20.1.

<sup>6</sup> *FY2006 TSA Budget Request* (Washington, D.C.: Transportation Security Administration) [http://www.dhs.gov/dhspublic/interapp/press\\_release/press\\_release\\_0613.xml](http://www.dhs.gov/dhspublic/interapp/press_release/press_release_0613.xml) [Accessed June 10, 2006].

contrary to the Department of Homeland Security's threat-based models of protection. The establishment of Homeland Security emerged from the tragedy of September 11 and the threats to aviation.

An April 2004 survey of mass transit systems by the American Public Transportation Association reported a shortfall of \$6 billion in security-related funding needs. This shortfall included \$5.2 billion in capital investments and \$800 million per year for personnel and other security-related expenses. The same survey highlighted a number of areas for which federal funding was "very important" including security, personnel, training, communications, and monitoring equipment and weapons of mass destruction (WMD) detection devices.<sup>7</sup>

## **B. FEDERAL FUNDING PRIORITIES**

The nation's mass transit subway systems need to address security. The Department of Homeland Security pumps resources into aviation, while land transportation flounders for direction and resources. This thesis addresses shortcomings in the current manner in which homeland security addresses the nation's mass transit providers, and it promotes a sound strategy consistent with the freedoms and rights shared by all Americans.

Since September 11, 2001, the United States public transit industry spent more than \$2 billion on security measures, but the federal government only allocated \$386 million towards transit security. In contrast, the aviation industry received more than \$20 billion for aviation security during the same period.<sup>8</sup>

DHS established funding priorities designed to augment transit security. The DHS Secretary prioritized the research and development of "next-generation" detection

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<sup>7</sup> American Public Transportation Association, *Survey of United States Transit System Security Needs and Funding Priorities, Summary of Findings* (April 2004), 4-5.

<sup>8</sup> American Public Transportation Association. "Senate Should Increase Transit Security Funding This Week," *News Release*, July 10, 2006, [www.apta.com](http://www.apta.com) [Accessed July 10, 2006].

equipment for explosives, chemical, biological and nuclear weapons.<sup>9</sup> However, DHS provides no guidance on what types of detector technology to purchase or how to develop a matrix for reducing a threat by implementing specific security measures. The Department of Homeland Security Secretary Michael Chertoff argues that security cannot be pursued “at any price” but must be consistent with “Americans’ freedom, prosperity, mobility and individual privacy.”<sup>10</sup> If so much security is added into a transit system that it becomes “dysfunctional” in its basic purpose of moving a large number of people rapidly and inexpensively, “we have lost the war.”<sup>11</sup> Disturbingly, Secretary Chertoff also told the Associated Press that a transit attack “may kill 30 people” and does not “pose catastrophic consequences” to the United States.<sup>12</sup> Chertoff’s statements run contrary to data on recent deaths from subway bombings in Madrid, London, and Mumbai, India, where 444 died. These bombings averaged 148 deaths per incident. Consistent with al Qaeda’s strategic objectives, an attack on a major metropolitan transit hub—such as SEPTA’s Suburban Station that transports over 40,000 people during a normal Monday to Friday morning rush hour—would devastate. Suburban Station also houses over a dozen restaurants and other businesses and serves as the “basement level” for the major high-rise buildings in Philadelphia. An attack on mass transit in this location poses a catastrophic consequence to the region and the national psyche.

### **C. INTERNATIONAL SITUATION ON SUBWAY BOMBINGS**

Since September 11, the United States has focused on large-scale terrorist attacks, with or without weapons of mass destruction. However, we must also acknowledge the disruptive potential of relatively small-scale incidents. A small-scale attack, such as the ones in London on July 7 and July 21, 2005, paralyzes a city and causes major disruption. During the first bombing incidents on July 7 in London, total disruption to mass transit

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9 Federico Cura, “Transit Industry Prepares for Anniversary of Sept. 11 With Increased Security,” *Passenger Transport*, vol. 86 (September 9, 2002): 28.

10 “America Still Unprepared-America Still in Danger,” *Report of an Independent Task Force Sponsored by the Council on Foreign Relations*, Gary Hart and Warren B. Rudman, co-chairs, Stephen E. Flynn, project director (2002).

11 “Mr. Chertoff’s Challenge,” *Washington Post* editorial, July 14, 2005, A-24.

12 “One Person’s Catastrophe,” *New York Times* editorial, July 16, 2005, 14.

lasted over 24 hours. Subsequent false alarms of additional bombings and suspicious packages led to an average of ten closures (of stations or lines) per day during the following week. Portions of the Underground transit system were not open until the first week in August.<sup>13</sup> A similar situation developed during the second set of attacks on July 21 when the entire mass-transit system shut down. The attacks also caused a degree of panic among some political leaders. Because of these attacks, the United States and other countries immediately increased security on subway and bus systems, though the chance that terrorists would attack using similar tactics across countries was minimal. Should similar events occur in the United States, we will no doubt duplicate the reactions of the United Kingdom. Transit agencies will move to augment security forces, deploy officers in tactical equipment, increase presence of canine patrols, and, in some jurisdictions, check suspicious bags and passengers.

This author examined past terrorist incidents, policies and procedures that other countries have experienced on mass transit. These policy recommendations serve as a template for securing the Southeastern Pennsylvania Transportation Authority and other major surface transportation providers. The recent bombings in London and the Israeli experience with terrorism received particular attention. Comparing democratic societies affected by terrorism on mass transit will enable United States law-enforcement officials to draw a best practices methodology for securing interests. SEPTA must develop a model to prevent terrorist bombings that accounts for United States laws, intelligence gathering and dissemination of potential precursor activity to terrorism.

Whether in London, Madrid, the United States, or elsewhere, the general public most clearly feels the impact of subway attacks. The ability to thwart terrorist attacks requires an expanded and more effective way to use and incorporate intelligence gathered from those same individual passengers and stakeholders in mass transit. In the chapters to follow, this thesis examines ways in which the community, employees, police, and specialized police tactics can develop and put forth an effective strategy for preventing terrorist bombings on United States subway systems. First, however, we must understand

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<sup>13</sup> Michael Bowron, (Assistant Commissioner, City of London Police), interview by author, November 15, 2005.

the psychology of terrorism and, in particular, suicide terrorism as it affects surface transportation throughout the world. The psychological dimensions of terrorist attacks are critical to understanding how they are organized and implemented and the consequences of the damages on the public.

### III. PSYCHOLOGICAL MINDSET OF THE TERRORIST

#### A. SUICIDE TERRORISM

Secular and religious groups alike utilize suicide terrorism as an effective tactic to promote their agendas. Terrorists employ suicide-bombing tactics to attack mass transit throughout the world, particularly the attacks in Madrid and in London. This chapter focuses on suicide terrorism, and on what can be done to eliminate the tactic from potential terrorist scenarios. Obtaining background information on the psychological aspects of suicide terror is critical for SEPTA police to interdict suicide terrorism at its root. Early interdiction of pre-incident indicators is crucial to the success of preventing terrorist attacks on United States mass transit systems. Pre-incident indicators are the focus of a subsequent chapter and include a system entitled Behavioral Observation Screening System (BOSS). BOSS uses behavior of pre-incident activity in an effort to disrupt a potential attack in its earliest stages. While this chapter works to recognize the behavior of terrorists and provides a mechanism for interdicting terrorist activity, this thesis is limited to open source information and does not take into account top-secret tactics of pre-incident indicators of terrorism.

Whatever the reasons for suicide terrorism, secular or religious, the globalization of commerce, travel and information transfer, which puts economic disparity and ideological competition in sharp relief, certainly plays a role in the increase of suicide terrorism.<sup>14</sup> Jean Twenge, a psychology professor from San Diego State University, compiled data from 1.3 million respondents spanning six decades. The findings indicate that young Americans are more narcissistic and self-centered than their parents and individuals in the baby boom generation.<sup>15</sup> This outlook appears in stark contrast to the views of Muslim society that set family and tribal needs far above that of the individual.

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<sup>14</sup> Jean Twenge, *Generation Me: Why Today's Young Americans Are More Confident, Assertive, Entitled—and More Miserable than Ever Before* (Toronto: Simon and Schuster, 2006), 36.

<sup>15</sup> *Ibid*, 22.

With that in mind, the focus should be on how American or western society can better understand the roots of a terrorist mindset in order to develop policies to manage the risk of suicide terrorism.<sup>16</sup>

An analysis of terrorist behaviors is necessary to understand the appropriate methodology for screening terrorists in United States subway systems. The current method to randomly select individuals at random subway stations is ineffective. Current screening models are based on United States tactics for dealing with drunk driving, which seek to screen for an impaired driver at a pre-determined point. This tactic is not even successful in stopping a drunk driver, since the impaired individual is already behind the wheel when stopped by police. Screening and subway security are connected. Screening is too often wrongly based on profiles and characteristics. However, subway screening should be based on behavior and evidence. One problem with profile-based screening is the wrong assumptions about the motivations and characteristics of terrorists. Mass transit providers want to adopt a better understanding of the motivations for terrorism to lead to different and more effective types of screening.

### **1. Suicide Terrorism — Psychological Defect or Altruism**

Understanding the motivations and factors that drive terrorists is crucial to develop effective strategies and tactics to screen out potential terrorists. Many suicide terrorists have motivations fundamentally different from those that drive the prevailing type of suicide, and would more than likely not commit suicide without these underlying altruistic motivations. Over 100 years ago, Emile Durkheim defined the phenomenon of suicide as comprising four categories: altruistic, egoistic, anomic, and fatalistic.<sup>17</sup> Madsen indicates that research of the Japanese Kamikaze point out that these individuals were not suicidal, but rather viewed self-sacrifice as the ultimate weapon against a powerful enemy.<sup>18</sup> In the past 30 years, society has awakened to the reasons behind suicide terrorism. Previously, research focused on mental defects or psychological

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<sup>16</sup> Jeff Victoroff, "The Mind of the Terrorist: A review and critique of psychological approaches," *Journal of Conflict Resolution*, vol. 49, no. 1 (February 2005): 3.

<sup>17</sup> Antoon A. Leenaars, "Altruistic Suicide: From Sainthood to Terrorism," *Archives of Suicide Research* 8, no. 1 (2004): 89.

<sup>18</sup> Julian Madsen, "Suicide Terrorism: Rationalizing the Irrational," *Strategic Insights III*, no. 8 (August 2004): 77.

disorders as the base cause of suicide terrorism. A 2001 Central Intelligence Agency (CIA) report, “on the psychology and sociology of terrorism stated that these people are perfectly sane.”<sup>19</sup> While many scholars have produced research that show that suicide terrorists are not mentally deficient or psychopathic, debate continues over what motivates an individual to become a suicide terrorist. Therefore, we must find a reason why individuals and terrorist groups support suicide terrorism.

In an examination of Chechen suicide terrorists, Oleg Nechiporenko, head of the Russian National Anti-Crime and Anti-Terrorism Fund concluded, “Chechens live in such a violent and tense environment that many become obsessed with getting revenge on Russian troops and those who support them, even at the cost of their own lives.”<sup>20</sup> While revenge seems to be a rational explanation for suicide terrorism, for the actual bomber, other schools of thought exist. For instance, one view emphasizes the perceived lack of alternatives. The bombers perceive they have no place else to go and nothing else to do except to become a suicide terrorist to prevent their family from experiencing additional trauma in society. Abu Tawahina, executive director of the Gaza Community Health Program, believes suicide terrorism is an outgrowth of Palestinian normal life where “the whole population is lacking a feeling of security. They are not safe at home; school...work...or anywhere.”<sup>21</sup> Hence, individuals turn to suicide terrorism to improve their family and friends’ lot in life in an altruistic suicide as previously described by Durkheim.

Suicide terrorism grows out of a necessity based on few prospects in life, especially those entrenched in poverty or of a unique group dynamic, and that promotes the self-sacrifice for greater good of the whole. A review of past incidents shows the groups that commit suicide terrorism missions are both hard-core Islamic extremists and secular groups promoting a political agenda. Research conducted by Scott Atran strengthens this point. The specific ways in which suicide bombers are recruited reflect

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<sup>19</sup> Josie Glausiusz, “The Surprise of Suicide Terrorism,” *Discover* 33, vol. 24, no. 10 (October 2003): 46.

<sup>20</sup> Nabi Abdullaev, “Russian Suicide Bombings,” *Cdi Russia Weekly*, 265, [www.cdi.org/russia/265-10.cfm](http://www.cdi.org/russia/265-10.cfm). [Accessed July 16, 2003].

<sup>21</sup> Abu Tawahina, “Psychology Around the World: Two Tales of Woe,” *Monitor on Psychology* 33, no. 9 (October 2002): 28.

the social forces that influence or motivate suicide terrorism. They capitalize on the popularity of martyrs among the young that romanticizes sacrifice for the cause. They ingrain suicide terrorism as a cultural value into societies. Statements made by spiritual leaders throughout the radical Muslim community declare, “He who commits martyrdom sacrifices himself for the sake of his religion and his nation. The Mujahed is full of hope.”<sup>22</sup> Since terrorists who use suicide-bombing tactics, favored in mass transit bombings, possess various motivations and backgrounds—male and female, religious and secular, political and ideological—screening tactics that utilize behavior rather than cultural and ethnic differences are preferred.

## **2. Suicide Terrorism — Who Delivers?**

Research into suicide terrorism biographies indicates that terrorists can be college educated or uneducated, married or single, male or female or socially isolated or integrated. Their age ranges from 15 to as old as 52. Regarding the actual perpetrators of suicide attacks, the number of female suicide bombers has increased in recent years. In particular, the LTTE’s, Chechen “Black Widows” and female suicide terrorists increasingly participate in Islamic Extremist Terrorism. Daniel Wei covers the utility of women in conducting suicide missions. He notes, “About 30-40% of LTTE’s overall suicide missions are conducted by women with great success.”<sup>23</sup> Chechen Black Widow Suicide Terrorist (female) groups are responsible for killing individuals at rock concerts, a Moscow theater, and the subway, dispelling the stereotype that only males commit suicide terrorism. Hence, the physical profiling of suicide terrorists is not applicable. Females who look non-Arab and have no religious cause commit suicide missions are joined by the young man, 19-25 years of age, who comes from a devout Muslim family. “He would be unmarried and the middle child of a large family... [he] would have lived in refugee camps, especially in Gaza, and may have had a father or brother killed in the Intifada.”<sup>24</sup> Based on research, the most effective method for conducting screening uses behavioral indicators and pre-incident indicators to disrupt an attack at its earliest stages.

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<sup>22</sup> Sheikh Yussuf Al-Qaradhawi, *Al-Ahram Al-Arabi* (Cairo) February 3, 2001.

<sup>23</sup> Daniel Tan Kuan Wei, “The Fatal Attraction of Suicide Terrorism,” *Journal of the Singapore Armed Forces*, vol. 29, no. 4 (October-December 2003): 5.

<sup>24</sup> Harvey Gordon, “The ‘Suicide’ Bomber: Is it a Psychiatric Phenomenon?” *Psychiatric Bulletin* 8 (2002): 285.

### **3. Suicide Terrorism: The Success of an Attack**

Many points of view exist about why suicide terrorism remains so successful and produces such heavy casualties. “From 1980 to 2001, suicide attacks worldwide reportedly represented only three percent of all terrorist attacks but accounted for 48 percent of total deaths due to terrorism.”<sup>25</sup> Intensive media coverage of the daily results of suicide terrorism in Iraq ensures that the American people understand that suicide terrorism is a tactic that is being widely deployed. Tactical advantage “guarantees that the attack will be carried out at the most appropriate time and place with regards to the circumstances at the target location.”<sup>26</sup> Cost effectiveness reflects bombs that are cheap to make and deploy. “A willing young man...nails, gunpowder, a light switch and a short cable, mercury, acetone...the most expensive item is the transportation to the Israeli town. The total cost is about \$150 dollars.”<sup>27</sup> James Brekenridge and Phillip Zimbardo point out that acts of terrorism create a disproportionate fear due to the underlying psychology that overvalues emotional, negative threats or risks.<sup>28</sup> Societies see attacks in the media, and the repetition of the attack wears on the psyche. In the public’s mind, we are more susceptible to an attack than we actually may be. Success of a suicide attack directly relates to the point that martyrdom is often a cultural norm of radical Islamic society. The media contributes by replaying and reliving a terrorist event. Although we may know why suicide terrorism works, the question often left unanswered in research examines the ways and means to stop suicide terrorism from encroaching on our soil.

### **4. Terrorist Behavior**

All too often Islamic extremists (terrorists) are portrayed as unpredictable, irrational, bloodthirsty individuals determined to kill infidels no matter what the cost. This stereotype is often perpetuated by the media and becomes the focus of the attack. In reality, terrorism reflects a calculated effort by a group with particular political, social, or religious goals. Law enforcement gains insight to prevent terrorist behavior by observing

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<sup>25</sup> Julian Madsen, “Suicide Terrorism: Rationalizing the Irrational.”

<sup>26</sup> Daniel Tan Kuan Wei, “The Fatal Attraction of Suicide Terrorism.”

<sup>27</sup> Scott Atran, “Genesis of Suicide Terrorism,” *Science*, vol. 299, no. 5612 (March 7, 2003): 1537.

<sup>28</sup> James N. Brekenridge and Phillip G. Zimbardo, “The Strategy of Terrorism and the Psychology of Mass Mediated Fear,” *Naval Postgraduate School, CHDS, Model Course NS4133*, <http://www.chds.us> [Accessed June 3, 2006].

human behavior and group dynamics, including stress, excitement, and social isolation. Much as a Las Vegas card player develops various “tells,” indicators to deception are present when suicide terrorists are dispatched. While no single profile for terrorists exists, some traits are common to many terrorists groups. We must exploit these traits to our advantage to protect the mass-transit system in the United States. The next three subsections dispel stereotypes and support the view that behavioral profiling represents a more reliable indicator of terrorist activity than physical characteristics and perceptions.

**a. Socio-economic Status**

The media and cinema frequently portray terrorists as low economic standing, poorly-educated individuals, much like American gang members. Marc Sageman, a senior Fellow at the Foreign Policy Research Institute and former CIA case officer in Afghanistan, conducted a study of 400 Islamic terrorists. He discovered that 75 percent come from the upper or middle class and 90 percent come from caring, intact, functional families.<sup>29</sup> This research proved true for the majority of the September 11, 2001, terrorists, as well as Osama Bin Laden.

**b. Gender**

Terrorism is not a male dominated field. LTTE and Chechen Black Widows demonstrate that terrorism is an equal opportunity event. Some exceptions exist, particularly with respect to Islamic religious zealots who subjugate women and preclude their participation in terrorist events and society as a whole. Al Qaeda does not support the use of female terrorist activity. However, the Tamil Tigers use young children of both genders to carry out terrorist attacks on unsuspecting targets.<sup>30</sup>

**c. Appearance**

For decades, criminologists attempted to categorize a criminal's appearance. Alphonse Bertillion, a French law enforcement officer and biometrics researcher, created anthropometry, an identification system based on physical measurements. Bertillion's methods failed, as do today's attempts to categorize terrorists

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<sup>29</sup> Marc Sageman, *Understanding Terror Networks* (Philadelphia: University of Pennsylvania, 2004), 3.

<sup>30</sup> Yoram Schweitzer, “Suicide Terrorism: Development and Characteristics” (lecture, International Conference on Countering Suicide Terrorism, ICT, Herzeliya, Israel, February 21, 2000), <http://www.ict.org.il/articles/articleDet.cfm?articleid=112> [Accessed June 4, 2005].

by appearance. Terrorists are racially diverse. In a group such as al Qaeda, which span the entire Arabian Peninsula and Northern Africa, the “profiling appearance” is not a viable solution. As a result, prevention efforts must emphasize the behavior of a terrorist and not stereotype appearance.

## **5. Summary**

In this chapter, I examined the psychological underpinnings of terrorist activity. As has been discovered there is no one psychological profile, model or reason why individuals use suicide terrorism to accomplish an objective. More importantly, there is no physical attribute that makes someone a terrorist, nor can all individuals be classified as a terrorist based on race or ethnicity. In the next chapter, I will examine an alternative approach to identifying terrorists— one not using appearances— rather based on behavior that can be implemented and become an effective method to combat terrorist bombings.

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## **IV. CURRENT POLICING RESPONSE TO SUICIDE TERRORISM**

We cannot explain why suicide terrorism has not been used as a method of attack in the United States (except for 9/11). However, local forces are always stronger than those coming in from the outside. Local forces need to exhibit determination to fight terrorism and need to assist external forces in fighting within their own jurisdiction. The SEPTA Transit Police Department needs to establish methods and procedures to prevent and respond to active suicide terrorist events before the global tactic is used on United States soil. The behavioral observation screening system (BOSS) represents a preemptive strategy to train police officers. Law enforcement must assume the new role of “security official.” The security official must respond to threat assessments, often using less reliable information than traditionally used by police to justify arrest or detention under the Fourth Amendment. This new paradigm involves police taking an innovative approach to law enforcement. Police and employees must act proactively to develop intelligence on threats, seek out suspicious persons and take action, rather than wait for a crime. They must deny access to secure areas based on behavior and screen for an individual or groups intent on attack.

### **A. NEW YORK POLICE DEPARTMENT OPERATIONS**

If transit police agencies continue to use old methods where resources are devoted to the vast majority of passengers who are low risk, consideration will not be given to high-risk passengers. The issue of terrorist bombings will not be resolved. The current method used by the New York Police Department to randomly screen passengers on the New York Subway have not been proven effective. The core argument of conducting searches on mass transit in the United States reflects the Fourth Amendment, and unreasonable search and seizure. The Fourth Amendment of the United States Constitution states, “The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated, and no

Warrants shall issue, but upon probable cause, supported by Oath or affirmation, and particularly describing the place to be searched, and the persons or things to be seized.”<sup>31</sup>

## **B. FOURTH AMENDMENT CONSIDERATIONS**

The Fourth Amendment has undergone great transformation since its inception by the Founding Fathers. Early cases held that the Fourth Amendment was applicable only when a search was undertaken for criminal investigatory purposes.<sup>32</sup> Until recently, the Supreme Court employed a reasonableness test for such searches without requiring either a warrant or probable cause in the absence of a warrant.<sup>33</sup> The ability of transportation officials to conduct random searches was affected by a 1967 court decision in which the Court held in two cases that administrative inspections to detect building code violations must be undertaken pursuant to warrant if the occupant objects.<sup>34</sup> "We may agree that a routine inspection of the physical condition of private property is a less hostile intrusion than the typical police officer's search for the fruits and instrumentalities of crime. Nevertheless, we cannot agree that the Fourth Amendment interests at stake in these inspection cases are merely 'peripheral.' It is surely anomalous to say that the individual and his private property are fully protected by the Fourth Amendment only when the individual is suspected of criminal behavior."<sup>35</sup>

Certain administrative inspections utilized to enforce regulatory schemes with regard to such items as alcohol and firearms are, however, exempt from the Fourth Amendment warrant requirement, and may be authorized simply by statute.<sup>36</sup> The position of the Authority initiating subway searches would also likely argue that it meets a "special need" for preventing terrorism. Special needs are exceptions allowed by the courts for citizens to exercise various privileges under the law. Examples allowed by the

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<sup>31</sup> *The U.S. Constitution*, <http://www.usconstitution.net/const.htm> [Accessed April 2004].

<sup>32</sup> Strouse, 23 Fed. Cas. 261 (No. 13,548) (D. Nev. 1871); Meador, 16 Fed. Cas. 1294, 1299 (No. 9375) (N.D. Ga. 1869).

<sup>33</sup> *Abel v. U.S.*, 362 U.S. 217 (1960); *Frank v. Maryland*, 359 U.S. 360 (1959); *Oklahoma Press Pub. Co. v. Walling*, 327 U.S. 186 (1946).

<sup>34</sup> *Camara v. Municipal Court*, 387 U.S. 523 (1967); *See v. City of Seattle*, 387 U.S. 541 (1967).

<sup>35</sup> *Ibid.*

<sup>36</sup> *Colonnade Catering Corp. v. U.S.*, 397 U.S. 72 (1970); *U.S. v. Biswell*, 406 U.S. 311 (1972).

courts include random testing of student athletes or participants in extracurricular activities to deter drug use; drug and alcohol tests for railway employees to encourage safety; car stops at borders to intercept illegal immigrants; and sobriety checkpoints to remove drunken drivers from the roads. With respect to automobiles, the holdings are mixed. Random stops of automobiles to check drivers' licenses, vehicle registrations, and safety conditions were condemned as too intrusive. The degree to which random stops advances the legitimate governmental interests involved did not outweigh the individual's legitimate expectations of privacy.<sup>37</sup> While federal courts generally require that police demonstrate some kind of suspicion in order to perform a search, they grant some exceptions for searches that meet a specific need of the government. The argument against random baggage searches claims that police are looking for a needle in a haystack. By law, the searches would have to include every subway stop at random and random stops of individuals. Strict enforcement means randomly searching potentially millions of commuters. This practice is not a crime prevention tool; it is merely a way for law enforcement to appear tough on terrorism.

### **C. WHAT IS NOT WORKING**

An examination of the anti-search side repeats an argument dating back to colonial times and a quote by Benjamin Franklin. “They that can give up essential liberty to obtain a little temporary safety deserve neither liberty nor safety.” According to many anti-search supporters, freedoms surrendered to police in random searches do not reduce terrorism. According to the New York Civil Liberties Union, random searches are unreasonable searches and seizures. In addition, observers speculate that random searches have no meaningful value in preventing terrorists from planting explosive devices onto the system. Furthermore, arguments against random searches point to police engaging in what are seen as futile attempts to secure mass transit, since the odds of stopping a bomber are extremely remote based on how the current system operates.

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<sup>37</sup> Delaware v. Prouse, 440 U.S. 649 (1979).

Although random baggage searches have been upheld in court, they are contrary to societal norms, current screening is random, or it is ineffectively based on profiles and physical attributes of an individual.

#### **D. SUMMARY**

In Chapter IV, I examined why there is a need to change the way in which United States transit agencies screen for terrorist indicators. The heart of the reason to change is the Fourth Amendment, concerning unreasonable search and seizure. The American commuter has entrusted mass transit police agencies with their safety while on subway systems. Randomly searching bags has not detected a terrorist bomb, but it has eroded the trust between the police and citizens.

The next chapter focuses on implementing a potential solution of being strong on preventing terrorism and building a greater partnership with the community. Behavioral Observation Screening System is a way to prevent terrorist acts by focusing on a potential terrorist's behavior, in both the planning stage of an attack and the operational period of an attack.

## V. POTENTIAL SOLUTIONS: BEHAVIOR OBSERVATION SCREENING SYSTEM

Using BOSS behavior analysis, document analysis, and interview techniques, opportunities exist to detect the terrorist or other person with hostile intent without regard to the presence of a weapon and without regard to the nature of the activities being carried out. BOSS represents a low-cost procedure using regular police/security patrols to detect persons who are high-risk through observation of behavior and mannerisms and simple, non-custodial, non-threatening interviews of the public. BOSS employs concepts adapted to the legal, political, social, financial and resource limitations of the United States that have made El Al (Israeli Airline) the most secure in the world. The Washington Post describes these concepts as “the world’s most sophisticated screening system.”<sup>38</sup> BOSS takes into account concepts utilized in Israeli and US aviation security, such as the Computer - Assisted Passenger Prescreening II program, Behavioral Awareness Security Screening, and transforms the principles into an acceptable model for surface mass transportation. BOSS does not use racial or ethnic appearance as a factor of suspicion. It relies on behavioral, document and statement analysis for determination of risk, as opposed to a pre-determined “profile” of what a terrorist looks and sounds like. BOSS contains many positive attributes for law enforcement and for the public.

Behavior Oriented Screening System (BOSS) incorporates a method of interactions between police and the public, based on voluntary encounters. BOSS attempts to determine whether increased suspicion or reasonable suspicion exists that an individual is involved in planning or carrying out a terrorist act based upon behavior; non-racial appearance; conduct in response to law enforcement presence and questioning; and circumstances surrounding the presence of the individual at a specific location.

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<sup>38</sup> “Man Refused Entry May Have Been 9/11 Plotter,” *The Washington Post*, sec. A, January 21, 2004, A02.

## A. THE LAW AND BOSS

BOSS works on the premise of increased suspicion. Increased suspicion is more than a hunch, but less than the reasonable suspicion required to detain a person for criminal investigation. Facts that would warrant a reasonable person to believe that an individual is attempting to conceal intent or criminal activity fall into the category of increased suspicion. BOSS permits and encourages law enforcement to have greater interaction with the public. Officers conduct an interview and ask questions designed to confirm or dispel increased suspicion based on the officers' preliminary observations of the person and examination of identification documents. BOSS is not an interrogation but a voluntary and cordial conversation with the person. Officers using BOSS must consider their obligation to enforce the law within the constitution and laws of the United States, the State of Pennsylvania and SEPTA Transit Police Department Directives.

The judiciary decided several cases that permit United States law enforcement to initiate BOSS. The case of *U.S. v. Mendenhall*<sup>39</sup> test for Fourth Amendment Seizures, for instance, defines a seizure as follows: a person is seized only if in view of all the circumstances surrounding the incident, a reasonable person would have believed that he was not free to leave. In the case of *Florida v. Royer*<sup>40</sup>, the United States Supreme Court rules, "Law enforcement officers do not violate the Fourth Amendment by merely approaching an individual on the street or in another public place, by asking him if he is willing to answer some questions, (or) by putting questions to him if the person is willing to listen."

In *Florida v. Bostick*,<sup>41</sup> the United States Supreme Court agrees the police practice of boarding buses and asking passengers for permission to search luggage without individualized suspicion is not a seizure. Police do not affect a seizure merely by asking questions unless the circumstances of the encounter are sufficiently intimidating that a reasonable person would believe he is not free to walk away. The request to

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<sup>39</sup> *U.S. v. Mendenhall*, 446 U.S. 544 (1980), <http://supreme.justia.com/us/446/544/case.html> [Accessed September 1, 2006].

<sup>40</sup> *U.S. v. Royer*, 460 U.S. 491 (1983), <http://supreme.justia.com/us/460/491/case.html> [Accessed September 1, 2006].

<sup>41</sup> *U.S. v. Bostick*, 501 U.S. 429 (1991), <http://supreme.justia.com/us/501/429/case.html> [Accessed September 1, 2006].

examine identification during a voluntary encounter will not make the encounter a seizure provided the request is not made in an intimidating or coercive manner.

**B. WHY THE NEED FOR BOSS**

According to the FBI, Al-Qaeda and allied organizations are operating in 40 American states, awaiting orders for terror attacks. Since the FBI is confident that terrorist cells are on United States soil, we must develop a method to interdict the terrorist attack before it is carried out. BOSS gives law enforcement the ability to recognize terrorist behaviors. BOSS uses simple behavioral indicators that allow police to engage an individual who is in the planning stages of an attack. Factors taken into consideration include:

|                                      |                                |
|--------------------------------------|--------------------------------|
| Immediately flees area when observed | Inquires about security        |
| Takes notes                          | Revisits same location         |
| Takes photos                         | Weak cover story if questioned |
|                                      | Works in groups of 2 or 3      |

Table 1 lists pre-incident indicators and what behaviors law enforcement needs to recognize. However, in order to identify possible terrorist activity, behaviors that represent an immediate danger or threat to security are displayed in Table 2. In addition to the indicators of pre-operational exercises, there are also immediately recognizable behavior signs. Israeli intelligence into the actions of suicide bombers shows that bombers exhibit the following behavioral factors that trained officers can sense and thus serve as immediate indicators:

Table 2. Behavioral Factors

|  |                                      |
|--|--------------------------------------|
| Bulky or inappropriate clothing for season | Excessive use of cologne             |
| Exposed wires                              | In a trance-like state               |
| Non-responsive to authoritative commands   | Pale face from recently shaved beard |
| Shaved body hair                           | Thousand yard stare                  |

**C. BEHAVIORAL OBSERVATION SCREENING SYSTEM TECHNIQUES**

The techniques of BOSS are easily broken down into key components of observational surveillance. The BOSS process encompasses two steps: an initial scan and non-confrontational discussion. The initial scan of persons involves an effort to discover unusual appearance or behavior that may indicate a high-risk person. Officers familiar with the environment must detect what is unusual or suspicious. A good police officer on the street knows the places on the beat, the people on the beat, the things people do on the beat and the times they do them. The initial assessment of potential illegal/terrorist activity assumes that a person engaged in deception or in an act in which the person fears discovery will suffer mental stress, fear or anxiety manifested through involuntary physical and physiological reactions that serve to dissipate the stress, fear or anxiety. A person on a terrorist mission may present an appearance that is inconsistent with other passengers using the station or may carry articles or baggage inconsistent with the nature of the facility. A person engaged in surveillance or pre-attack planning may exhibit actions inconsistent with actual passengers and engage in specific actions related to intelligence gathering.

Table 3. Possible Signs of Suspicious Activity

|  |  |
|--|--|
| Appears to be in disguise  | Appears to be in a trance  |
| Cold penetrating stare   | Exaggerated emotions or behaviors inappropriate to the location such as crying or excessive laughter to self |
| Exaggerated yawning  | Excessive fidgeting, clock watching, head turning  |
| Improper attire  | Increased breathing  |
| Person appears to maintain covert ties with others               | Person avoids area uniformed officers who are patrolling   |
| Person avoids eye contact with uniformed officers                | Person displays an exceptional interest in security personnel, equipment, or procedures                      |
| Repeatedly pats upper body                                       | Repetitively touches face  |
| Rigid posture with minimal body movement and arms close to sides | Rubs or wrings hands   |
| Trembles   | Unusual nervousness or fear  |
| Unusual perspiration   | Wide-open eyes; “flashbulb eyes”   |

An officer observing any of these factors can proceed with a non-confrontational discussion with the individual. Non-confrontational discussion is the second step in the process of BOSS. A trained SEPTA Police Officer should know what questions to ask prior to approaching the individual for non-confrontational discussion. The purpose of the conversation is to dispel the officer’s increased suspicion. The conversation must ask open-ended questions that seek to alleviate the officer’s reasons for the increased suspicion. For example, should the individual be wearing improper attire for the weather, the officer may simply ask, “Hello, where did you get that type of coat?” This tactic puts the potential terrorist on the defensive, since the officer’s actions are lawful and seek direct information. Non-confrontational discussion with the individual targets increased suspicion, as well as the purpose of the individual’s destination or reason for travel on

SEPTA. Since SEPTA provides transportation services to the entire southeast region of Pennsylvania, as well as New Jersey and Delaware, the public’s purpose for riding SEPTA is to travel to a particular place or event. Focusing questions on the purpose of the trip allows officers to conduct non-custodial conversations with the public and to employ the principles of BOSS. The simple act of asking open-ended questions provides an officer with non-verbal body language clues that may indicate deception on the part of the individual. They can include:

Table 4. Non-Verbal Indicators of Deception

|   |                                      |
|---|--------------------------------------|
| Accelerated heart rate                                  | Adam’s apple jump                    |
| Ambiguous or evasive response                           | Delayed response                     |
| Facial flushing   | Fast eye blink rate                  |
| Gazes down, avoids eye contact (depending on ethnicity) | Gestures do not match verbal message |
| Repeats back question                                   | Stutters or stammers                 |
| Sweats  | Clears throat                        |
| Voice becomes higher in pitch                           | Yawns                                |

The non-confrontational conversation should dispel or confirm an officer’s suspicion and can lead to several outcomes. The first outcome dispels increased suspicion and the individual is released. In the second outcome, the individual is evasive and the conversation evolves into a Terry stop. The term Terry stop originates from United States case law in Terry v. Ohio. The court ruled police could stop an individual in a high crime area to ascertain the individual’s purpose for being in the area. In the third scenario, increased suspicion evolves into probable cause to believe that a crime has been committed or is about to be committed, and the individual is subject to further police action and potential arrest.

Behavioral Observation Screening System can function as a valuable tool for SEPTA Transit Police since it operates on an individual's behavior and actions, not on racial profiling. Success is evident in the case of Richard Reid, the convicted "shoe bomber." On December 22, 2001, Reid attempted to ignite an IED in his sneakers on American Airlines Flight 63 flying from Paris to Miami. The day before, ICTS security officials at the American Airlines ticket counter identified Reid by a "profile" at Charles de Gaulle airport. He was subsequently denied boarding for several factors. He had no luggage on his person, he purchased the ticket with cash, he had no verifiable address (destination), and his travel plans were vague. Although Reid was permitted to board a later flight, his actions and behavior on the first attempt were thwarted. BOSS, in conjunction with increased intelligence, assists SEPTA Transit Police Officers to protect the subway system from potential bombings and routine crime.

The ability of trained law enforcement professionals to act on behavioral indicators can augment security in the United States subway systems. However, we must undertake a more fundamental approach that involves more individuals than just transit police in order to influence the safety of United States subway systems. Substantial gains in security on United States subway systems mandate augmenting and maximizing our intelligence potential.

#### **D. SUMMARY**

Now that BOSS has been explained, and a screening procedure based on the behavior of a terrorist is available to law enforcement. The next step is for mass transit agencies to utilize BOSS and the leads, and intelligence derived from BOSS to the advantage of the mass transportation community. The following chapter will look at how mass transit agencies that use BOSS can effectively share intelligence and pre—incident indicators of the terrorist to make mass transit safer.

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## VI. ESTABLISHING A NORTHEAST TRANSIT CORRIDOR INTEGRATED INFORMATION SYSTEM

### A. INTELLIGENCE PROBLEMS AND BACKGROUND

Transit intelligence needs to reconstruct boundaries of poor cooperation and stove piping of intelligence by combining information sharing on multiple fronts. Major terrorist attacks on subway systems abroad have been on the rise. Russia, Spain, and England experienced devastating attacks on subway systems. While all of the attacks were the work of Islamic fundamentalists fighting for different goals, the incidents reveal common ground and pre-incident indicators. Terrorists conduct probes of the mass-transit systems to determine the vulnerabilities of each system. Their probes include video recording, photography and passenger counts at platforms and on trains, which requires loitering in mass transit systems for an extended period.<sup>42</sup> The FBI's Joint Terrorism Task Force and their *Infraguard* Program are currently available for information sharing on subway systems. In *Infraguard*, critical infrastructure holders, mostly chemical and petroleum manufactures, share information on security and how to better protect their assets. The JTTF does not focus on issues that are specific to mass transit, nor do they regularly take into account pre-incident indicators involved in mass transit. The Bureau's *Infraguard* program looks at pre-incident indicators; however, the program encourages strategic and long-term analysis of intelligence. *Infraguard* only accepts information from transportation officials that is fed via a secure network to the FBI. *Infraguard* analysts cull the information and only post, what the FBI believes is critical for securing the mass transit sector. This solution only accounts for a small portion of information, and the time from tip to posting can last weeks.

Mass transit agencies rely on intelligence developed by analysts who are not cognizant of mass-transit needs or diversity on a macro level. By continuing this course of action, transit agencies do not retain a vested interest in developing intelligence or in how consumers of the intelligence supports the decision-making process as it relates to securing a mass-transit system.

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<sup>42</sup> Anthony DeToma and Vincent DeMarino, "Lessons Learned from Recent International Terrorist Attacks in London and Madrid," *Total Security* (2005): 1.

An alternative to accomplish the strategic goal of good intelligence collection and analysis is for mass-transit agencies to develop intelligence for each individual transit agency that is utilized only within that particular agency. However, this option does not permit a broader analysis of current trends across the northeast region of the United States. Thus, an agency will be vulnerable since they are only analyzing the intelligence focused on their system. This option employs only reports derived from the mass transit agency. The intelligence development or consumption does not incorporate public or stakeholder input.

The need to develop and share information and intelligence between mass transit agencies in the United States has significantly escalated in the past two years. The Southeastern Pennsylvania Transit Police Department needs to spearhead efforts to establish information-sharing by the top transit agencies in the United States. They must particularly focus on systems within the northeast megalopolis, which includes Washington, D.C., Philadelphia, New Jersey, New York City, and Boston. United States mass-transit agencies must collaborate to develop a means to identify vital information including an exchange of intelligence for actionable outcomes.

## **B. THE SOLUTION: NETCII**

One potential solution involves a Northeast Transit Corridor Integrated Information (NETCII). The mass-transit intelligence community must focus on human intelligence (HUMINT) gathering accumulated through police reports, transportation employees, and passengers of transportation systems. This intelligence should be disseminated through basic tenets of the National Criminal Intelligence Sharing Plan (NCISP).

The scope of how NETCII should be organized follows the guidelines of the NCISP. Under NCISP, law enforcement agencies, regardless of size, adopts the minimum standards for intelligence-led policing and the utilization and/or management of an intelligence function. Law enforcement seeks ways to enhance intelligence sharing efforts and fosters information-sharing by participating in task forces and state, regional and federal information-sharing initiatives. The scope and nature of developing NETCII

develops a method to enhance intelligence and provides police management with a strategy to face the challenges associated with policing subway systems. Promoting a safe and effective transit environment consists of a regional concept that leverages the strengths of local transit police and aggregates the information, which allows law enforcement to connect the dots before an attack is of great significance.

The goal of NETCII develops and implements methodologies that provide transit systems (who service the majority of commuters in the Northeast corridor) a way to disseminate information to appropriate entities. This method includes having the ability to communicate pre-incident indicators to all transit police in real time. It is accomplished by database accessibility via computer to all transit police. An important component of NETCII is the mobilization efforts to combine intelligence input from various sources that includes the customers of mass transit, the neighborhoods the transit serves and oversight groups. With cooperation and input from the community, NETCII promotes a policy of openness when communicating with the public and all interested parties regarding the criminal intelligence process. However, communication remains open only as long as it does not affect the security and integrity of the process. This plan is designed to strengthen homeland security and foster intelligence-led policing. In order to mobilize the public for accomplishing the goals of NETCII, appropriate outreach materials should be prepared and utilized by law-enforcement agency officials. They must publicize and promote the concepts of standards-based intelligence sharing and intelligence-led policing, as contained within the National Criminal Intelligence Sharing Plan, to their agency personnel and the communities they serve. All agencies, organizations, and programs with a stake in sharing transportation criminal and pre-incident indicators intelligence should actively recruit agencies with local, state, tribal, regional, and federal law enforcement and intelligence systems to connect to the nationwide sensitive but unclassified communications capability. Without dissemination of the information collected, another stovepipe is created, a situation, which is already too prevalent within the IC. The design of NETCII eliminates stovepipes and involves the public so that actionable intelligence can be gathered and disseminated to participating agencies. The various agencies, organizations, and programs are encouraged to leverage the nationwide sensitive but unclassified communications capability, thereby expanding

collaboration and information. Utilizing open databases that are not classified frees the exchange of ideas and eliminates the clutter of reading copious intelligence briefs that are unrelated to the mission of mass transit. This accessibility prevents the extensive information overload that reduces intelligence analysis and dissemination efficiency. Results will include increased actionable intelligence and a greater understanding of situational awareness for the mass transit community.

### **1. Pre-incident Indicators**

Transportation systems utilizing effective intelligence operations enable commanders at all levels to apply their forces wisely, efficiently and effectively to combat terrorism.<sup>43</sup> Due to the close proximity of transportation service providers in the northeast corridor of the United States, providers must share information on who is engaging in behavior that may be of concern and potential trends and/or pre-incident indicators of an attack associated with these behaviors. Some of the indicators include:

- The theft or loss of badges, credentials, ID cards, government/military/emergency vehicles, uniforms or the discovery of false IDs. Attempts to scout out seven hospitals in the United States in March and April of 2005 involved fake credentials and ID cards.
- Photographing, sketching or surveillance of buildings and facilities
- Trespassing near key facilities or in supposedly secure areas, particularly by multiple persons
- The presence of uncommon or abandoned vehicles, packages or containers
- Observing people who are searching trash containers or placing unusual items in them (particularly around transit systems or the lobbies of crowded buildings, but also around the private residences of important people).<sup>44</sup>

A vital and shared security function for a mass transit agency is the collection of security information. A strong data collection process coupled with intelligence sharing enables agencies to use resources more effectively by targeting high-profile events,

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<sup>43</sup> Joint Chiefs of Staff, *Doctrine for Intelligence Support to Joint Operations* (Washington D.C.: Government Printing Office, 2000), vii.

<sup>44</sup> John Thompson, *Waiting for the Kaboom: Indicators to Watch For* (Toronto: privately printed, 2005), 2, <http://www.the.mckenzieinstitute.com/> [Accessed September 8, 2005].

identifying trends in potential pre-incident indicators and designing and testing countermeasures to combat potential attacks on mass transit.

## **2. The Need for a Northeast Corridor Transit Intelligence Integration (NETCII)**

The need for NETCII is evident. The FBI warns of potential attacks on soft targets in intelligence bulletins #51, 76, 88, 110, and 144. Soft targets encompass areas where people congregate as well as United States mass-transit agencies. In fact, senior al-Qaeda detainees indicate that their organization continues to be interested in striking mass-transit agencies in the United States since they perceive such attacks will cause fear within the public and affect the economy. The Texas Transportation Institute supports this view in its Urban Mobility Study. Without mass transit, the region of southeastern Pennsylvania faces local traffic delays that would increase by at least one-third, costing residents an additional \$614 million dollars in lost time and fuel.<sup>45</sup> As recently as May 23, 2006, the *Pottstown Mercury* reported a plot by Pakistani immigrant Shahawar Matin Siraj to blow up the Herald Square New York Subway station on the eve of the 2004 Republican National Convention.<sup>46</sup> On Friday, July 7, 2006, the anniversary of the London Underground attacks, the Department of Homeland Security advised that a man remained in custody in Jordan for plotting to blow up the Port Authority of New York and New Jersey commuter tunnel, flooding Manhattan.

## **3. Data collection**

Data collection is based on the requirements of an agency using the intelligence.<sup>47</sup> By transit agencies developing their own storage and formatting intelligence, they can dictate the utility of the data collection effort. The arrangement of data within files largely determines the types of analysis performed and the utility of the collected data for deployment, decision-making, case clearance, and the design of effective countermeasures. NETCII should focus on intelligence that enters the transit system in three ways: (1) reports from transit police patrol activity (2) reports from transit

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<sup>45</sup> Katie Turnbull, ed., "Urban Mobility Study," *Philadelphia Metropolitan Area Study*, vol. 41 (2000): 8.

<sup>46</sup> "NYC Subway Terror Plot Revealed," *Pottstown Mercury* (Pottstown, PA), May 23, 2006, 2.

<sup>47</sup> Mark M. Lowenthal, *Intelligence: From Secrets to Policy* (Washington D.C.: CQ Press, 2003), 45.

employees and (3) reports from public (transit passengers/transit customers, transportation stakeholders, and crime victims).

During patrol, transit police may observe criminal activity and cite or arrest offenders, assist passengers and maintain order on the system. During these activities, transit police may issue citations or warnings; complete incident reports for contact with suspicious individuals or pedestrian investigations; perform other activities to track suspicious actions or persons; and complete patrol logs. When issuing citations or warnings, or engaging in other patrol activities, transit police call dispatch to ensure that each case or citation is assigned a case number. Furthermore, police notify police dispatch in the event of suspicious activities.

Transit employees may also report suspicious activities or other occurrences either to the civilian in the control center (directs movement of trains), who will notify transit police dispatch, or directly to transit police dispatch. In either case, a transit police officer is assigned to investigate the call.

Transit employees may be asked to complete an incident form, sometimes referred to as an “unusual occurrence report.” Transit passengers or the victims of crime may also report criminal activity to the control center, customer service or the transit police dispatch. In the event of such an occurrence, a transit police officer investigates the report, processes the crime, and reassures the victim. The vast majority of security information reported on a transit system by a dedicated police force passes through transit police dispatch.

To capture information on actual incidents, transit police dispatchers initiate a “daily control log” (DCL) for all incidents. The DCL, controlled by a standard computer-aided dispatch system, assigns a case number to each call for service to ensure that the call can be tracked from its initial report up through case disposition, in the event a legal case should develop. Transit police dispatchers track call-ins from municipal patrol officers, as well as assistance provided to transit passengers and employees. Transit police dispatchers also perform warrant searches, notifications, and specific requests for information from local police. In each case, a record of this activity is preserved in the form of the recorded phone call, dispatch log and in the 24-Hour Reports prepared for

both management and data collection and analysis purposes. Transit police dispatchers maintain records on the number of bomb threats received at the transit agency and file completed bomb threat management checklists or other documentation on the incident. In response to a call for service, transit police officers investigate the incident and prepare an incident report and, if necessary, an investigative report. These forms describe the incident, including such key information as the type of incident, time, list of witnesses, actions of perpetrator and victim and any contributing factors. While investigating, officers collect incident evidence and establish a chain of custody for managing and storing evidence.

Once the incident is reported, agencies cull it for collective analysis to determine the value of intelligence to individual agencies. To perform intelligence analysis, transit police and civilian analysts review dispatch records, Incident and Supplemental Report Forms, Disposition/Arrest Forms and information provided by transit operations personnel. Depending upon the level of cooperation with local police, transit crime analysts' access information concerning criminal occurrences near and on transit property that may not have been reported to the agency, but shared through common reporting and established relationships such as the Joint Terrorism Task Force, the U.S. Attorney, or the Anti-terrorism Advisory Council.

Utilizing and incorporating the customers of mass transit to provide immediate and real time intelligence to an operation resides at the heart of augmenting transit intelligence. SEPTA moves over one million people per day in the greater Philadelphia area. An additional one million sets of properly trained eyes and ears can forward pre-incident indicators to the agencies that need operational intelligence. Proper training and a reporting apparatus that provides reward-based tips for commuters represents the critical element in developing such massive mobilization. In the spirit of cooperation, the United States mass-transit agencies must adopt methodologies that allow for information-sharing without restriction that can benefit the safety of the Nation. Intelligence-sharing, instituted at a grassroots level, provides security to mass-transit systems. One example of how intelligence can be supported and delivered to police and security forces is established in *Project Griffin*.

The United Kingdom, more specifically the London Metropolitan Police, attributes their success in responding to the 7/7/05 and 7/21/05 transit attacks by constantly drilling and preparing for terrorism related attacks.<sup>48</sup> The City of London Police has developed *Project Griffin*<sup>49</sup> to train security officers from major city organizations, Westminster and Canary Wharf. Participants train in various disciplines so that staff members are better equipped to assist the police in the event of a major incident. First, security officers attend a training day provided by the City of London Police special branch, and Metropolitan Police explosive officers give presentations. This training involves input on the current terrorist threat and an overview of the differing threat from other non-terrorist groups. The training also covers the following key areas:

- Emergency services command and control
- Conflict and resolution
- Hostile reconnaissance
- Terrorist planning
- Cordons and associated powers

Second, training includes a bridge call facility for security managers, which consists of a conference call with information from the City of London Police Intelligence Bureau. Using the bridge call facility, City Police update security officers about:

- Current threat
- Recent and current crime trends
- Forthcoming events

A pilot scheme featuring five, one-day courses was introduced in summer 2004, and more than 500 security officers were trained and presented with a *Project Griffin* certificate. Each trained security officer receives a high-visibility fluorescent tabard, supplied and funded by the Corporation of London, the local authority for the city.

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<sup>48</sup> Michael Bowron, interview by author.

<sup>49</sup> "Project Griffin," City of London Police, <http://www.cityoflondon.police.uk/countering-terrorism/terrorism-griffin.html> [Accessed April 20, 2006].

Officers use the tabards when employed on *Project Griffin* duties; they also have space for an individual agency logo. The success of *Project Griffin* depends upon effective partnerships. The training program is designed in conjunction with other emergency services, the main security industry bodies, and banking organizations. It is supported by the security industry, city businesses, and the Corporation of London. *Project Griffin's* goals support cooperation, collaboration, and development of individuals who have a greater propensity to identify and notify police in the event of a terrorist attack.

The United States can emulate the cooperation of *Project Griffin*. They can develop an intelligence-sharing capability that enlists the eyes and ears of millions of commuters and thousands of transit employees who focus on pre-incident indicators in an effort to thwart terror campaigns on the United States subway systems. This goal is discussed in the section on developing a robust intelligence sharing in the SEPTA system.

Another example of how intelligence can work to the benefit of the SEPTA system can be found in the Israeli utilization of human intelligence. The goal of the Israeli intelligence family is to gather information for operations and legal actions; identify potential threats from organizations or individuals; pinpoint sources and methods of financing; identify organizational infrastructures; and create threat analyses. Emphasis on real-time information-sharing between agencies accomplishes their mission. Intelligence is geared toward actionable intelligence with a major reliance on human intelligence (HUMINT).<sup>50</sup>

The Israeli public plays an important part in preventing terrorism. Israeli citizens face the possibility of terrorist acts on a daily basis. The average Israeli is more aware than citizens in the United States of suspicious individuals, packages, and actions that put them at risk. Because of increased vigilance and awareness, ordinary citizens foil more than 80% of attempted terrorist attacks in Israel, including timed devices left at target sites.<sup>51</sup> Israeli intelligence forces focus on stopping terrorist activity prior to target

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<sup>50</sup> Nadav Morag, "Homeland Security In Israel" (lecture, Naval Post Graduate School, Monterey, CA, February 3, 2006).

<sup>51</sup> Jennifer Barrett, "How Safe are America's Skies?" *Newsweek Online*, February 13, 2002, [http://www.newsbank.com/022202\\_barrett\\_enronlesNBENT060ENTNB/HTMLNBENT062ENTNB](http://www.newsbank.com/022202_barrett_enronlesNBENT060ENTNB/HTMLNBENT062ENTNB) [Accessed March 8, 2006].

acquisition by disrupting plots to commit a bombing in the planning stages, financing stages or bomb-building stages. This tactic has proved effective in reducing suicide bombings.<sup>52</sup> Undercover units of the IDF and Mossad assassinate terrorist leaders and bomb makers and stop bombings in early stages.<sup>53</sup>

While intelligence and citizen involvement play an important role in reducing terrorist success in Israel, the defense tactic of depth, or concentric rings of security, cannot be overlooked. This concept uses police and security officials placed at strategic areas funneling to a single target area. Israeli authorities define three levels or rings of security. They include: (1) non-target area (2) pre-target area and (3) target area.<sup>54</sup> Defense in depth tactics, coupled with behavioral characteristics of bombers, allows Israeli security forces to thwart an attack prior to the target area, which in this case would be a crowded subway platform.

Israel's ability to focus on and adjust to terrorist tactics is unparalleled. While Israel and the United Kingdom demonstrate relative success in combating terror, this thesis focuses on preventing terrorist bombings in the United States. As a result, a parallel needs to be drawn between what the United Kingdom and Israel do within their respective government limitations, and what the United States can do within our civil rights and liberties and Constitutional limits.

The examples of *Project Griffin* and the intelligence sharing of the Israelis are examined and developed into an effective strategy that SEPTA and all United States mass-transit providers can utilize. The strategy emphasizes including the public in terrorism awareness, and it provides an effective means to communicate their observations to authorities.

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<sup>52</sup> Aaron Richmond (Former Captain Israeli Security Forces-Jerusalem) interview by author, February, 2006.

<sup>53</sup> Jonathan B. Tucker, "Strategies for Countering Terrorism: Lessons from the Israeli Experience," *Homeland Security* (March 2003): 7.

<sup>54</sup> David W. Brannan, Bruce Hoffman, Eric Herren, and Robert Matthiessen, *Preparing for Suicide Terrorism* (Santa Monica: RAND Corporation, 2004), 25.

Another successful grassroots campaign is the FBI collaboration with the Philadelphia Police and District Attorney's Office to start "Step Up, Speak Up,"<sup>55</sup> which provides a hotline and a resource guide for reporting violent crime in the region. This program is considered a success in reducing witness intimidation. Integrating the public into a campaign to reduce terrorism and providing constructive feedback and incentives to participate could result in an intelligence mechanism like no other in the United States.

The greatest outreach for public input should be vested in individuals who are considered stakeholders in transit security. In Philadelphia, valuable stakeholders such as the Building Office Managers Association (BOMA) have the ability to reach out to all of the high-rise office-building tenants in the region and push information down to the individual commuter level, as well as serve as a conduit from which information can flow back to SEPTA. BOMA is particularly valuable since the majority of its employees and tenants use SEPTA. In addition, many high-rise buildings in Center City are attached to or are adjacent to SEPTA infrastructure. Associations such as the Delaware Valley Association of Rail Passenger (DVARP) complement BOMA's efforts. Membership in DVARP includes concerned citizens who work to improve the quality of mass transit. SEPTA and DVARP work together to establish a reporting mechanism that feeds information to SEPTA and the region but also returns information to the commuter. A significant number of DVARP's members falls into the category of railroad hobbyist. Railroad hobbyists typically spend their free time videotaping and recording trains as they traverse the United States. Incorporating rail hobbyists into the intelligence-sharing process permits SEPTA and the region to pre-clear a hobbyist before one of them videotapes or records train information. This strategy reduces nuisance calls and permits law enforcement to leverage local expertise that would help identify pre-incident indicators of terrorist activity.

#### **4. NETCII Concept in Action**

For NETCII to move forward, individual agency analysts must prepare monthly reports summarizing activity on their system for submission to the Northeast Transit Corridor Information Integration database. In the best-case scenario, incident

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<sup>55</sup> Federal Bureau of Investigation, "Step Up, Speak Up," *Witness Cooperation Campaign Launched in Philadelphia*, <http://www.fbi.gov/page2/feb06/stepup020106.htm> [Accessed June 5, 2006].

information is immediately entered into NETCII as it occurs. These incidents may include a transit employee loss or theft of their identification, a stolen bus, or an attempt to steal one. Directly afterward, officers from all participating agencies can view the current operational picture for the transit community at large. Analysts prepare reports evaluating the results of special programs or deployment strategies in conjunction with high profile incidents used to address special problems associated with transit.

For individual transit agencies, the goals of NETCII intelligence collection are categorized as follows:

- The collection and organization of intelligence to alert transit police of potential pre-incident indicators or commonalities on respective systems.
- The provision of a decision-making aid for the deployment of transit police and security work force.
- The organization of information to improve and test the effectiveness of counterterrorism countermeasures.
- The presentation of intelligence to strengthen the position of the police or security department within the mass transit system.
- The communication of intelligence to police commanders in order to influence passenger perceptions of system security (deployment strategy).

Transit police, security personnel and police management must identify three critical components of actionable intelligence, including the number and type of incidents occurring on the system, as well as the location and time of these incidents. Finally, they must gather information on the underlying conditions surrounding the occurrence of these incidents.

Intelligence analysts can collect data from the following readily available sources:

- Dispatch logs
- Operator reports
- Incident report forms

While none of these sources presents a complete picture by itself, in combination they enable the agency to obtain an accurate assessment of the crimes occurring on the system, as well as valuable information to improve both the deployment of police or

security personnel and the design of terrorism countermeasures. The Northeast Corridor Transit Intelligence Integration can gather valuable intelligence from existing sources that enable intelligence sharing for managers in their decision-making process to prevent and deter terrorist activity on United States mass-transit assets.

## **5. Impact**

The impact of a computer database such as NETCII dramatically increases situational awareness within the entire mass-transit community of the Northeast United States. Supplemental information that improves the crime analysis processes but is non-essential to a basic information system includes:

- The impact of the incident on transit service
- Information concerning other "quality of life" violations that may have been committed by the perpetrator of a serious incident prior to the incident
- The attention/treatment of the patrons involved in the incident (victims and witnesses)

The amount of information recorded in a NETCII dispatch log varies from system to system. In most cases, however, effective monitoring of the dispatch log enables NETCII personnel relying on municipal police to establish an accurate assessment of serious incidents. The dispatch log is particularly useful for NETCII police and security departments, as they must organize operations and record-keeping efforts in accordance with the NETCII dispatch system.

For transit properties passing through several police jurisdictions, the dispatch log also provides a record of NETCII interaction with these municipal police agencies. This information can be summarized in weekly or monthly reports that supplement the NETCII understanding of security problems. It should be noted, however, that the dispatch log is not a comprehensive source for transit crime information. While it identifies incidents, it offers no description of the incident or of the underlying circumstances that contributed to it. Furthermore, the dispatch log does not identify "quality of life" issues, which discourage ridership. Finally, the dispatch log does not provide data in sufficient detail to design countermeasures or to test their effectiveness.

For many transit providers, however, the dispatch log provides a valuable and preliminary assessment of NETCII crime.

Since NETCII passengers, operators, conductors, or station personnel are often the only representatives of the NETCII present when a security incident occurs, they provide considerable information concerning the level of crime experienced by the system. NETCII operators report security information in a variety of ways, including:

- The ability to share information across the entire NETCII is critical to achieving success of the system. As a result, using informal means to discuss crime (i.e. weekly or monthly meetings, newsletters, union coordinators and support services or joint-committees) within the NETCII and implementing formal means to document incidents witnessed or experienced by the public and operators will place a positive outlook on NETCII and encourage greater cooperation.
- NETCII requires operators to file formal reports and establishes incentive programs encouraging the public and operators to provide information on suspicious activities or crime matters.
- Should a passenger provide critical information as deemed by the NETCII, a transit provider could opt to reward the tipster with a weekly or monthly pass. Such an incentive encourages greater vigilance, bolsters a positive image of the transit provider, and gives the rider ownership of the system.

Developing educational programs for the transit customer, stakeholder, and the public remains vital to giving individuals a stake in aiding in homeland security that affects rail transportation.

Development of the Northeast Transit Corridor Integrated Information system provides all mass transit carriers with an operational awareness of the entire region. The grass roots movement is already in place. Transit systems need to tap into their passengers for their expertise in situational awareness on the rails. Only after the community, employees, and transit providers work together will greater strides in effective intelligence be made.

## **C. SUMMARY**

Identifying a terrorist in the pre-operational stages of an attack is important. However, if the agency that identifies a potential attack does nothing with the intelligence

the gains are not that great. The establishment of NETCII allows mass transit agencies in the northeastern portion of the United States to effectively share intelligence so that all transit properties benefit from the efforts of counter terrorism program such as BOSS. Next, I will examine how transit properties can take BOSS and NETCII and implement the programs thus bolstering security, preventing crime, and thwarting terrorism.

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## **VII. IMPLEMENTING PREVENTIVE MEASURES ON MASS TRANSIT**

Effective prevention against terrorism requires the ability to provide an integrated information system that provides near real-time input to an alert database. Transit police look at pre-operational indicators as they relate to transit in the entire Northeast Corridor of the United States. The Northeast Transit Corridor Integrated Information (NETCII) allows real-time input from a massive mobilization of the public, employees, and transit police to generate and deposit intelligence into a workable database for transportation officials.

The United States National Strategy for Homeland Security has identified six critical mission areas:

- Intelligence and Early Warning
- Border and Transportation Security
- Domestic Counterterrorism
- Protecting Critical Infrastructure & Key Assets
- Defending Against Catastrophic Threats
- Emergency Preparedness and Response

All six of the National Strategies critical missions are directly impacted by implementing BOSS and NETCII. Terrorists conduct pre-operational planning. Their own operations provide opportunities to thwart attacks by using BOSS and NETCII. Integrating the customers of mass transit, employees, and the police creates an information network that garners public support.

BOSS and NETCII improve intelligence and early warning by focusing not just the police but the entire transit community on looking for and reporting pre-incident indicators of terrorist activity. Border and transportation issues are clearly addressed by implementation of BOSS and NETCII. Philadelphia is an international port with mass transit services directly to the airport and to the seaport. Proper intelligence collection and dissemination will not only make for safer transportation, but also safer international

borders. The category of domestic counterterrorism falls within the scope of BOSS and NETCII in that no federal agency knows local security better than a local agency. The SEPTA Transit Police Department, its employees and its daily commuters know what is normal and what is not normal. BOSS and NETCII place counterterrorism into the hands of the local responders and stakeholders. This strategy bodes well for augmenting security since everyone at a local level will have a hand in security. BOSS and NETCII also protect critical infrastructure. Transportation is identified as a tier II critical infrastructure. An attack on mass transit would be devastating to the regional economy and national psyche. However, giving passengers a stake in security increases security, not just for counterterrorism, but for all crimes. An organization or region that shares intelligence prevents the tragedy of the commons, and works together to guard against catastrophic threats. We have seen in past attacks multiple bombings on mass transit. Sharing pre-incident indicators aligns all mass transit in the fight on terror. Broad implementation of BOSS and NETCII increases SEPTA's and the entire region's ability to prepare and to respond to terrorism. Chapter VI discussed how the Israeli government uses their citizens effectively to combat terror by preparing them and giving the individual citizen a mission to report irregular events. BOSS and NETCI serve as a tangible way to rapidly collect, analyze and disseminate information into actionable intelligence. The result is a safer transit environment that maintains the freedoms of American society, while reducing the potential for terrorist bombings on subway systems.

#### **A. ANALYSIS**

Transportation systems utilizing effective intelligence operations enable commanders at all levels to apply their forces wisely, efficiently and effectively to combat terrorism.<sup>56</sup> Implementing the information-sharing plan opens new lines of business. Transportation managers and security officials work hand-in-hand to identify potential problems and attempt to resolve issues on a regional basis. The strengths of integrated information sharing include greater buy-in, attention to issues and reduction of stovepipes in transit-based intelligence and eliminating the weak link in terrorism prevention. All too often, a terrorist alert concerning mass transit is put out, and an

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<sup>56</sup> Joint Chiefs of Staff, *Doctrine for Intelligence Support to Joint Operations*.

agency increases police or security presence and implements strong operational plans to thwart an attack. Conversely, just down the line, another transit property does little or nothing to augment security. A tragedy of the commons<sup>57</sup> results in that the weak link does nothing and becomes the target, but all United States mass-transit suffers decreased ridership. The airline industry provides a clear example of this reality, because they are just returning to pre 9/11 attack ridership.<sup>58</sup> Another benefit is that the integrated intelligence works on behavior with no adverse impact on the rights and freedoms of Americans.

A strong data-collection process coupled with intelligence sharing enables agencies to use resources more effectively. They target high-profile events, identify trends in potential pre-incident indicators and design, and test countermeasures to combat potential attacks on mass transit. Data collection results directly from the requirements of an agency using the intelligence.<sup>59</sup> Transit agencies that develop their own storage and formatting of intelligence dictate the utility of the data collection effort. Transit agencies, working in concert to produce and consume intelligence, remove the barrier between policy makers and the intelligence community and enhance provision of intelligence for real world situations.<sup>60</sup>

Integrated Information for the Northeast Corridor decreases time spent waiting for vital information and allows transit agencies to move more expeditiously toward the operations phase. A marked increase in operational efficiency will result, since leads that appear trivial on the surface or reports of suspicious behavior are often dismissed because labor is not available to investigate. However, combining the forces of the entire Northeast Corridor multiplies the effectiveness, i.e., there is economy of scale and the cost of conducting intelligence operations in a vacuum is decreased. Greater customer

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<sup>57</sup> Stephen Flynn, *America the Vulnerable: How Our Government Is Failing to Protect Us from Terrorism* (New York: Harper Collins, 2004), 54.

<sup>58</sup> Ken Notis, "Airline Travel Since 9/11," *United States Department of Transportation Bureau of Transportation Statistics*, (2005), [http://www.bts.gov/publications/issue\\_briefs/number\\_13/html/entire.html](http://www.bts.gov/publications/issue_briefs/number_13/html/entire.html) [Accessed June 3, 2006].

<sup>59</sup> Mark M. Lowenthal, *Intelligence From Secrets to Policy*.

<sup>60</sup> Mark M. Lowenthal, *Tribal Towns: Intelligence Consumers, Intelligence Producers* ed. Mames J. Wirtz Loch K. Johnson, *Strategic Intelligence, Windows into a Secret World* (Los Angeles: Roxbury, 2004), 234.

appreciation and relations ensues. Since the campaign is designed as a mobilization of the public to “see something, say something,” public participation is vital for success. Currently, many Americans feel all they can do is wait for the next attack. By implementing integrated information, the public can take ownership and provide vital intelligence to responsible parties in mass transit.

While mobilizing the transit workforce remains a valid and necessary step in accomplishing the strategic goal, a more comprehensive option jointly mobilizes the work force and the ridership of the mass-transit community. NETCII supports an option that entails a mobilization of the entire transit community. The need to implement an innovative program is obvious. More eyes and ears monitoring the system reduce crime in general while providing the community with a viable and actionable part to play in securing the homeland.

The goal reduces the probability of a terrorist bombing on the SEPTA Transit System by combining the efforts of the Authority’s employees, all of whom have a stake in protecting the system. Another end added benefit would be the overall reduction of serious crime in SEPTA.

The recommended solution to the quandary of mass-transit security develops the Northeast Transit Corridor Integrated Information (NETCII) and trains transit police in BOSS. By combining intelligence resources from the major transit providers, administrators develop counterterrorism practices and recognize the overall trends in transit as it affects counterterrorism operations. Utilizing established reporting methods by transit police, employee special reports, and customer reports supports an exchange of information, which is a proven method. Therefore, a collection system for the intelligence already exists. Sharing and analyzing intelligence strengthens transportation infrastructure by permitting a focused examination of the activity coupled with an in-depth understanding of transit operations.

A mobilization and outreach to stakeholders is crucial for accomplishing the mission at hand. Mobilization of the public can take place on several fronts. The

Delaware Valley Association of Rail Passengers works in conjunction with SEPTA to provide rider awareness tips and advocates on behalf of the public to make mass transit more accessible.

Working with organizations such as DVARP, SEPTA can prove that police have effectively reduced crime from 1991 to 2004 by over 93 percent. This statistic is significant since SEPTA moves over one million passengers per day. Many passengers embark and disembark at the same station on a daily basis; they are aware of their surroundings and can serve as additional eyes and ears for the mass-transit provider. SEPTA can support a link from their homepage that gives a one half-hour tutorial on passenger safety and awareness. Additionally, if permissible, employers that use transit check and DVARP could support a similar link that gives passengers an awareness of their surroundings and a means to report incidents to SEPTA Police. SEPTA can further disseminate information to the public through educational brochures that are handed out when a customer purchases a transpass or tokens at authorized sales locations. As a result, information is given directly to individuals that have invested in the transit system, since they have made a commitment to ride it.

## **B. RECOMMENDATIONS**

An examination into what SEPTA considers a critical success factor is found in its mission statement, "...to provide safe, reliable, and on time service to the residents of Southeastern Pennsylvania." Without being able to provide safe and reliable service, SEPTA would not be in business. SEPTA has a reputation for being on time and reinforce this reputation by giving customers a 10-minute guarantee. If a customer is not delivered to their desired destination within ten minutes of the scheduled time and SEPTA is at fault (mechanical breakdown, signal problem, overhead wire problem, etc.), SEPTA reimburses the cost of the trip. This practice represents a strength of SEPTA. SEPTA retains a distinctive core competency in that they are the only transit provider in Southeastern Pennsylvania. Without SEPTA, many businesses and commerce in the region would falter. The focus of this benchmarking includes developing a continuous process for evaluating the information gained by the Northeast Transit Corridor Integrated Information Center, and how the information is pushed to other agencies on

pre-operational indicators and crime patterns. The ability to evaluate crucial information and provide operational intelligence that promotes a safe and reliable transit environment remains crucial to the success of NTCII. The exchange of information permits officers to make better decisions on the street as it affects the safety of passengers. What was once seen as an isolated incident in Philadelphia of a male videotaping the transit system could now be passed to an officer in Washington D.C. who has observed the same male engaging in the same activity in or near the same vicinity or at different vicinities. Because of this exchange, the proverbial “dots” could be connected prior to an incident and a terrorist attack thwarted during pre-operational stages.

The primary goal of the police departments for major mass transit properties is strengthened intelligence sharing, more flexible patrol initiatives, and a change in transit-policing mindset. United States mass-transit police departments prevent the use of terrorist bombings on trains and platforms by taking decisive and proactive measures. The top mass-transit agencies service one million passengers or more by both bus and rail on a daily basis. These top transit agencies retain dedicated law-enforcement professionals who can be utilized to reduce the potential of suicide terrorists or incidents of bombings on their respective properties. Transit police departments and the entire transit community need to embrace the use of community involvement and education in reducing terrorism. Employee involvement and awareness must be augmented to reduce the likelihood of terrorist incidents on mass-transit, since typically there are more transportation officials and passengers than police. The Southeastern Pennsylvania Transportation Authority seeks to implement the Northeast Transportation Corridor Intelligence Initiative (NETCII), an initiative that looks to generate a massive public mobilization for reporting pre-incident indicators associated with terrorist activity and reporting other, possibly criminal incidents to the entire northeast transit corridor.

In the northeast transit corridor, transportation providers are inextricably linked to each another. On May 26, 2006, the entire transit service from Boston to Washington D.C. was halted due to a power failure. The same scenario would be true of a terrorist bombing in the corridor.

Community policing represents the foundation of most metropolitan police departments for the past 20 years. Using community policing as a backbone, mass transit police agencies can implement NETCII and recruit passengers to serve as eyes and ears of the department. In order to garner public support and participation, SEPTA will turn to one of its sternest critics in the Delaware Valley Rail Passenger Association. DVRPA consists of community leaders, business owners, and passengers who advocate on behalf of the passenger to SEPTA. DVRPA advocates on behalf of passengers for seat size and scheduling, always in an adversarial manner with SEPTA. The goal is to have a leader in the area, as well as a dissenter in many ways, to collaborate with SEPTA and to develop an intelligence stream that will benefit all participants.

Every major transit system dispatches a transit employee aboard a train or in a station to serve as additional eyes and ears for the police. Training transportation employees in pre-incident indicators can be accomplished during mandatory yearly training for these employees. The training focuses on behavioral indicators that employees may observe while engaging in normal duties.

Developing BOSS as the standard patrol protocol is supported by the fact that visible security patrols are proven as an effective deterrent to terrorist attack. For example, on August 31, 2004, officials in Moscow reported that a female suicide bomber had observed law enforcement checking documents and individuals at the entrance to the station. This action “scared” the bomber and she retreated into the crowd and blew herself up prior to getting on the train.<sup>61</sup> Developing greater intelligence and training officers to be more proactive reduces the likelihood of terrorist bombings. However, the training needs to become an innate component to patrol procedures and specific policies must be developed to support a “hunter” approach to homeland security rather than a “fisherman” mind-set.<sup>62</sup> This mindset can be accomplished by utilizing BOSS to SEPTA’s benefit. Officers must actively seek out potential terrorist activity and act promptly on their instincts to reduce the threat. In Israel, this method of providing

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<sup>61</sup> Peter Baker, "Suicide Bombing Kills 10 Outside Moscow Subway," *Washington Post*, sec. Foreign Services, September, 1 2004, 10.

<sup>62</sup> Bruce Hoffman, "Defending America Against Suicide Terrorism."

awareness to community, employees, and law enforcement reduces the success of suicide terrorists reaching their targeted objective.

The driving force behind the plan is collection and timely reporting of pre-incident indicators and anomalies on mass transit, as well as the patrol awareness of individual officers and commuters. It is incumbent that reports received by public and transit employees are entered into a database that is accessible by all police units in the field. To accomplish this, the Joint Regional Information Exchange System (JRIES), developed by DHS, should push information to units in the field and augment the operational picture in mass transit. These initiatives will no doubt be challenged by new technology that claims to be able to counter terrorist bombings. However, the proposed initiatives focus on the use of people, our most valuable resource, to take a stake in our security. By using individuals who have the ability to adapt to situations, security is augmented in places where technology does not exist. On August 27, 2005, in Dagestan, Russia, perpetrators placed an explosive device on the subway tracks and derailed a train. With proper training, engineers know what to look for and help avoid such incidents. Another anticipated challenge to the initiatives is community support. Passengers on mass transit have a stake in their security. The public, however, cannot be expected to assist in identifying possible terrorist activity and potential hazardous devices unless we provide effective communication means for them to do so. When a call is relayed to police, the call must elicit a rapid and visible response from police.<sup>63</sup> This commitment expands on our ongoing community-policing strategy and fosters greater public trust in mass transit.

The development of community involvement, employee involvement, and police response is not just a response to terrorism. The proposed initiatives serve a dual purpose. First, the crime rate drops because of the initiatives. Second, ridership flourishes because we are providing a safe and secure environment for individuals to commute. The success of NETCII takes into account the public perception that the entire

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<sup>63</sup> Brian Jenkins, *Keeping America's Mass Transportation System Safe: Are the Laws Adequate?* (Washington, D.C.: Rand, 2004), 3.

transit authority is engaged in security and is genuinely concerned about providing a safe and effective environment. The facts set forth within this thesis support safe and secure transit in all facets.

The effort to reduce the threat and impact of terrorism bombings on subway systems in the United States requires the development of a unique plan that brings together police, transportation employees, and the public. Implementing intelligence-led policing techniques expands the ability of all transit agencies located in the northeast corridor to reduce crime and improve quality of life issues within their jurisdiction. It helps to identify pre-incident terrorist activity and to provide homeland security to surface transportation. Increasing relationships between transit police, transit employees, and transit commuters related to homeland security issues increases the possibility that suspicious actions or conditions will be reported.

Intelligence is a complex process through which agencies collect process, analyze, disseminate, and plan their respective operations.<sup>64</sup> Training police officers, transit employees, and commuters who have a stake in transit security remains a paramount goal. By incorporating BOSS and awareness training to all aspects of transportation security, the goal of a safer subway system can be realized. The development of NETCII streamlines and provides actionable intelligence for administrators who have a stake in securing mass transit. Implementing NETCII eliminates stovepipes, as they currently exist in the intelligence community for mass transit. NETCII provides timely and accurate intelligence that previous intelligence sources were unable to provide and reduces the likelihood of terrorist incidents on United States mass transportation.

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<sup>64</sup> Mark M. Lowenthal, *Intelligence: From Secrets to Policy*, 50.

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## VIII. CONCLUSION

This thesis started out to examine how United States Mass Transit Agencies could prevent terrorist bombings on subway systems. In the course of the analysis, it concluded that surface transportation is one of the most attractive soft targets for terrorist bombings. The examples of deadly terrorist bombings on surface transportation abound from all over the world. Another conclusion is that currently there is not enough funding for surface transportation security from the Department of Homeland Security, in order to prevent bombings on surface transportation, particularly subway systems. While presented with the problem of bombings and lack of funding the analysis, the thesis also concluded that any endeavor in securing mass transit must take into account the freedoms of Americans and the difficulties that arise in trying to maintain an open and accessible mass transit system in the face of global terrorism.

In the end, I suggested how two new approaches - BOSS and NETCII - could be effectively implemented to develop greater operational intelligence on terrorist behaviors, and information sharing. BOSS, an innovative training program that focuses on training police officers in behavioral actions of terrorists in pre-operational as well as operational stages of an attack, and the NETCII that takes human driven intelligence derived from BOSS and shares the information with all transit properties on the Northeast corridor.

These new approaches will increase the security of mass transit subway systems. Implementing BOSS and NETCII will not violate individual's rights, it will fight terror by engaging the community, help fight against the fear that incidents create, and share intelligence on a broader scale than is currently possible. This thesis has looked a mounting problem in the world of mass transit and put forth two program initiatives that provide clear and effective alternatives to the ways in which U.S. security forces, including transit police departments, are currently trying to prevent terrorist bombings on United States subway systems.

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