

# **SANDIA REPORT**

SAND2004-6221

Unlimited Release

Printed December 2004

## **NorthAm Fest: Fostering a North American Continent Approach to Countering Terrorism**

John Whitley, Judy Moore, Dick Gerdes, Marina Oborotova, Jessica Glicker Turnley

Prepared by Sandia National Laboratories  
Albuquerque, New Mexico 87185 and Livermore, California 94550

Sandia is a multiprogram laboratory operated by Sandia Corporation, a Lockheed Martin Company, for the United States Department of Energy's National Nuclear Security Administration under Contract DE-AC04-94AL85000.

Approved for public release; further dissemination unlimited.



**Sandia National Laboratories**

Issued by Sandia National Laboratories, operated for the United States Department of Energy by Sandia Corporation.

**NOTICE:** This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government, nor any agency thereof, nor any of their employees, nor any of their contractors, subcontractors, or their employees, make any warranty, express or implied, or assume any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represent that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government, any agency thereof, or any of their contractors or subcontractors. The views and opinions expressed herein do not necessarily state or reflect those of the United States Government, any agency thereof, or any of their contractors.

Printed in the United States of America. This report has been reproduced directly from the best available copy.

Available to DOE and DOE contractors from  
U.S. Department of Energy  
Office of Scientific and Technical Information  
P.O. Box 62  
Oak Ridge, TN 37831

Telephone: (865)576-8401  
Facsimile: (865)576-5728  
E-Mail: [reports@adonis.osti.gov](mailto:reports@adonis.osti.gov)  
Online ordering: <http://www.osti.gov/bridge>

Available to the public from  
U.S. Department of Commerce  
National Technical Information Service  
5285 Port Royal Rd  
Springfield, VA 22161

Telephone: (800)553-6847  
Facsimile: (703)605-6900  
E-Mail: [orders@ntis.fedworld.gov](mailto:orders@ntis.fedworld.gov)  
Online order: <http://www.ntis.gov/help/ordermethods.asp?loc=7-4-0#online>



**NorthAm Fest:  
Fostering a North American Continent  
Approach to Countering Terrorism**



**Report of the Workshop**

September 14-16, 2004  
University of Texas at El Paso (UTEP)  
El Paso, Texas U.S.A

John Whitley, Sandia National Laboratories<sup>1</sup>  
Judy Moore, Sandia National Laboratories<sup>2</sup>  
Dick Gerdes, North American Institute  
Marina Oborotova, Center for International Studies  
Jessica Glick Turnley, Galisteo Consulting Group, Inc.

---

<sup>1</sup> jbwhitl@sandia.gov

<sup>2</sup> jhmoore@sandia.gov

# Executive Summary

On September 14-16, 2004, the Advanced Concepts Group of Sandia National Laboratories in conjunction with the University of Texas at El Paso and the North American Institute hosted a workshop (fest) designed to explore the concept of a North American continental approach to countering terrorism. The fest began with the basic premise that the successful defense of North America against the threat of terrorism will require close collaboration among the North American allies – Canada, Mexico and the U.S. - as well as a powerful set of information collection and analysis tools and deterrence strategies. The NorthAm Fest recast the notion of 'homeland defense' as a tri-national effort to protect the North American continent against an evolving threat that respects no borders. This is a report of the event summarizing the ideas explored.

The fest examined the uniqueness of dealing with terrorism from a tri-national North American viewpoint, the role and possible features of joint security systems, concepts for ideal continental security systems for North America, and the challenges and opportunities for such systems to become reality. The following issues were identified as most important for the advancement of this concept.

- The three countries share a set of core values - democracy, prosperity and security - which form the basis for joint interactions and allow for the development of a culture of cooperation without affecting the sovereignty of the members.
- The creation of a continental defensive strategy will require a set of strategic guidelines and that smart secure borders play a pivotal role.
- Joint security systems will need to operate from a set of complementary but not identical policies and procedures.
- There is a value in joint task forces for response and shared information systems for the prevention of attacks.
- The private sector must play a critical role in cross-border interactions.

Finally, participants envisioned a "Tri-National Security Laboratory" to develop and test new counter-terrorism technologies and processes.

The fest was an important first step in developing a tri-national approach to continental security and very different approaches to countering terrorism were explored. Participants came to the conclusion that continental security would be easier to achieve if the focus were on broader security issues, such as transnational crime, with terrorism being only a part of the focus. A series of fledgling relationships were begun between individuals and organizations through which actions can occur. A first commitment is the publication by a set of participants representing the three countries of a joint paper outlining the elements of a Continental Security approach.

## Table of Contents

Introduction .....	6
The NorthAm Fest Process.....	6
Unique Issues of Terrorism from a Tri-National North American Approach.....	7
Canadian View: .....	7
Mexican View: .....	7
U.S. View:.....	8
Preservation of culture .....	8
Commercial Interests .....	8
Continental Defense .....	9
The Terrorist View.....	9
Role and Possible Features of Joint Security Systems.....	10
Detection and Interdiction .....	10
Defensive Posture.....	11
Policies.....	12
Enhancing communications & maintaining commerce .....	13
Ideal Continental Security Systems for North America .....	13
Canada Team .....	14
Mexico Team.....	14
United States Team .....	16
Joint Team .....	16
Challenges and Opportunities .....	17
Economic Challenges .....	17
Policy Challenges .....	17
Existing R&D and Available Products.....	18
Existing Tri- or Bi-National Efforts.....	18
Technical Gaps .....	19
Summary .....	20
List of Participants .....	22
Agenda.....	23

## Introduction

Since the events of September 11, 2001, the United States has pursued an aggressive campaign to “take the fight” to the terrorist in combination with extensive efforts to bolster its homeland defenses. In the context of these efforts, the U.S. borders with its nearest neighbors have been the focus of much concern and turmoil with little effort to explore security in a broader view. With this in mind, a workshop to explore the unique aspects of security systems required for the development of a joint Canada, Mexico and U.S. approach to the threat of terrorism in North America was held. The premise of this workshop was that the successful defense of North America against the threat of terrorism will require close collaboration among the North American allies – Canada, Mexico and the U.S. - as well as a powerful set of information collection and analysis tools and deterrence strategies. On September 14-16, 2004, the Advanced Concepts Group of Sandia National Laboratories organized and hosted, in conjunction with the University of Texas at El Paso and the North American Institute, a fest designed to explore the concept of a North American continental approach to countering terrorism. The NorthAm Fest recast the notion of 'homeland defense' as a tri-national effort to protect the North American continent against an evolving threat that respects no borders. Countering terrorism in this context will involve the joint development of enabling systems, technologies and procedures leading to effective continental preventive, defensive and interdiction measures. The belief is that the U.S. cannot succeed on its own, and has much to gain from close collaboration with its neighbors in this area, particularly the lessons learned by Mexico in the management of its southern borders and by Canada in its formal management of dual language and culture issues. This workshop explored this continental approach to the problem with the goal of developing some new concepts for joint defensive and deterrence actions that could be taken by these countries.

### ***The NorthAm Fest Process***

This “Fest” consisted of two days of intense brainstorming and cataloging of ideas on an off-the-record, non-attribution basis. The 30 participants represented a mix of organizations from the three countries including the military, state and national law enforcement, border patrol, academics, think tanks, research laboratories, private businesses, and consultants. The workshop opened with a panel consisting of one participant from each of the three represented countries addressing the approach to countering terrorism from his nation’s perspective, with the remainder of the time spent sharing ideas through the small group brainstorm sessions. The brainstorming sessions sequenced through the following five topical sessions:

- What are the unique issues of terrorism from a tri-national North American approach?
- What would be the role of joint security systems and what are the required/desired components/dimensions of such systems?
- What would be an ideal system solution for countering terrorism against the North American Continent?
- What will be the challenges and opportunities for these systems to become operational?
- Development of a roadmap – recommendations and actions

The process used was a combination of written brainstorming and small group sessions followed by large group discussions. The written brainstorms were carried out on large pieces of poster paper placed on the wall with the session subtopic identified at each station. Participants were given about 45 minutes to move about the room and enter their ideas and react to the ideas of



**Figure 1. Large group written brainstorm**

others. At the end of this time, a facilitator took the poster papers capturing the ideas of the larger group and worked with the subgroup to:

- organize by creating categories and grouping ideas;
- refine by editing, condensing, and clarifying;
- add new ideas, expand, and enumerate;
- synthesize by combining diverse concepts into a coherent whole; and finally
- create an outline report for the plenary session.

Each group then selected a person to present the plenary report.

## **Unique Issues of Terrorism from a Tri-National North American Approach**

We began with a panel representing views from the three nations about terrorism.

### **Canadian View:**

We heard that there is widespread Canadian concern with the U.S. efforts towards homeland security and divergent Canadian views of security policy. After 9/11, security rose in Canada's agenda, then public opinion shifted away from it towards domestic issues.

There is a perception in Canada that many in the U.S. regard Canada as a safe haven for terrorists. As a result, steps have been taken to tighten border security along the US/Canadian border. However, there has never been a full audit to look at how Homeland Security has impacted Canadian sovereignty, Canadian border operations, commerce, and NAFTA. NAFTA had created incipient economic relationship between the three countries, but security is now overriding that with so much focus on new regulations and authority. It appears that there are no longer negotiations between Canada and the U.S. on homeland security. The current U.S. administration seems to view homeland security as its defining agenda and its approach is to set rules and expect compliance.

### **Mexican View:**

The biggest challenge to Mexico for combating terrorism is maintaining its fledgling democracy as there is always a temptation to use non-democratic responses to acts of terrorism. The world watches the U.S. as an example of democracy and how it is practiced, and U.S. actions tend to set an example for the rest of the world. In Mexico, which is in the midst of transition to a democracy, the emphasis on terrorism brings criticism from people about efficacy – e.g., high crime rate means people may be willing to put aside human rights for safety and order. Terrorism might also derail trade economic liberalization. The challenges are to differentiate between legal and illegal flows of goods and people and to create a “smart” border.

The war in Iraq has created diplomatic friction between U.S. and Mexico. People in Mexico don't like the idea of collaborating militarily with U.S. for historical reasons, although intelligence collaboration provokes less nationalistic response in Mexico. The main threat to Mexico doesn't seem to be an attack in Mexico but an attack on the U.S. through Mexico. If this occurs, Mexico's fear is that U.S. society will be furious and expatriate Mexicans living in the U.S. could become a target for public rage. There also is a fear that such a scenario would provoke near-complete or complete closure of the borders with Mexico, badly damaging the Mexican economy.

The traditional framework for dealing with security doesn't work anymore; deterrence through threatening punishment isn't going to work – prevention is the key. Intelligence and collaboration are the keys to developing a continental response to terrorism.

## **U.S. View:**

All nations operate on the principle of self interest and these three nations have differences but are inextricably linked through immigration, culture, and now terror. The 9/11 Commission report says that these threats are defined by fault lines within our society and that the challenges are transnational. If the enemy was once states, it's now a "state of mind" – Islamic terrorism. That's not to say that we have an enemy that is Islam, but an enemy that is a perversion of Islam. The U.S. has been accused of "my way or the highway." Al Qaeda has said that U.S. is the head of the snake but the U.S. believes that Mexico and Canada might be part of the snake too because Mexicans and Canadians have many of the same beliefs such as diversity, inclusion and tolerance.

The U.S. is struggling with these realities and attempting to develop a response. New relationships are being formed among the different agencies within the U.S. but terrorism exercises continue to expose problems with sharing information across bureaucratic lines in U.S. agencies. This problem exists throughout all three countries. The common theme will be how to interact across bureaucratic lines and with Mexico and Canada as well. There is room for expanding continental cooperation. We are all the targets and we need to come up with ideas that support intercontinental security for all three countries.

To set the stage for the development of ideas for trilateral security systems for countering terrorism, the following views were collected from the participants through written brainstorms with refinements from small group discussions.

### ***Preservation of culture***

Though we have many cultural differences, we recognized some shared values on this continent such as tolerance, mutual respect, and an appreciation of a diversity of views. There is a danger that we will forget these in our responses to the extreme events of terrorism. It was also noted that Mexico and Canada do not have the same profound sense of being threatened by terrorism as seems prevalent in the U.S.



Since this seems to be a "Global War of Ideas", a continental approach might be an advantage in developing an "us" versus "them" approach to extremism that might enable the moderate voices within Islam to counter terrorism. This would be another example of possible multi-lateral actions.

### ***Commercial Interests***

The integration of commercial interests in our three countries could be viewed as a vulnerability by terrorists. In a sense we are a single economy with Canada and Mexico as the first and second trading partners to U.S. in terms of value traded.



Keeping legitimate commerce flowing, even in times of crisis, is critical and requires consistent implementation of policies. Communication and the sharing of data among agencies and countries seem to be critical in countering terrorism on our continent. It may push terrorists to other

crossings but for commerce the port of entry is critical.

Engaging the commercial sector entities as “partners” in countering the risks of terrorism seems the best approach. Technology could be used to help “move the border” – checking for “bad” items and people at other geographic points besides the border, such as warehouses and factories where commercial goods are stored, packed, and loaded for transport. It is important to consider seaports, airports and rail yards – not just the borders between the U.S. and Canada/Mexico.

## ***Continental Defense***

The first step in pursuing a continental approach will be to establish an understanding of the goals, perception of threats, approaches to risk and decision making processes in each of the three nations. We do share the goal of wanting to protect our ways of life, our identity and values, and our economic and social well being. It was felt that the three countries could own continental security if the security issues were broader than terrorism.

The next step will be to develop cooperative, not identical, approaches to information sharing and decision sharing — approaches that allow each country to reach the goals by their own methods while cooperating on common goals. It was suggested that we review and learn from the war on drugs and the cold war about cooperative efforts between the nations that have been successful. Key to this effort will be identifying the appropriate points for contact, allowing for the existing mismatch of agencies, and finding a way to structure this recurring dialogue among the nations. It is also not clear that a trilateral effort will be more effective than two bilateral efforts with the U.S.



We must recognize that our country borders are used to mark lines of jurisdiction, but can also be part of a threat chain or can be targets themselves. We should consider the impact of considering the North American perimeter as a border and decide what the goals and impacts of a continental alert system might be, avoiding the pitfalls of the current U.S. Department of Homeland Security (DHS) alert system.

Whatever is done jointly must feature capacities and capabilities that are similar, compatible, and complementary – allowing national institutions to do the work, making each nation aware of the other’s capabilities and commitment to continental security -- and should include the institution of confidence building measures as these systems are designed and implemented.

## ***The Terrorist View***

In addition to considering what is unique about countering terrorism as a continent, the participants were asked to think how this shift in approach would be viewed by terrorists. This section reports the results of the participants’ attempt to take the terrorist point of view.

It is not clear that terrorists will find the North American continent (rather than the U.S. alone) a prime target for terrorist acts. However, Canada and Mexico may be a means to attack the U.S. or a target in order to affect the U.S. The target could even be the relationships between Mexico, Canada and the U.S. as a means to impact the economy of the West.

Terrorists might be trying to damage the Western economy by inducing reactive spending in the West to perceived threats, or may try to destroy Western democratic values by invoking non-

democratic responses to perceived threats. If this is true, then time is on their side and they just have to hold on long enough for us to destroy ourselves. They could take advantage of tensions between US and Canada or Mexico over the U.S. responses to terrorism to reinforce their extreme fundamentalist Islam views.



What do we know about terrorist thinking? Are our mental models correct? We need to consider the time scales of planning, recruitment, and the longevity of loyalty to a cause, whether Islamic or otherwise, to understand terrorist strategies and tactics. It appears that the Islamic terrorists view time as being on their side. They believe that their idea is better than ours so they cannot lose. If they die, more will join their cause and the fight will continue.

Terrorists may even be considering recruitment within North America. Can the terrorists successfully recruit the disenfranchised on this continent when they are young and impressionable as they have in other parts of the world? They must be looking for and finding protection or safe haven in many countries of the world, why not on this continent?

The terrorists can see that our intelligence about them is poor and thus believe that they can exploit this to their advantage. Since their goal appears to be cinematic destruction, is there too much cinematic response?

Deterrence may not work against this enemy. Terrorism cannot be punished – it should be prevented. It would appear that we must find a way to make moderate Islam become an ally in the fight against terrorism and not support mechanisms for extremism. We also must be careful to not overstate the capabilities of this enemy. For example, weapons of mass destruction (WMD) may not be the real threat; conventional weapons (explosives, hostage-taking, assassination, disruption of networks (pipelines, telecom, electric) may be the much greater threat.

Finally, the world needs metrics to measure progress against this threat.

## Role and Possible Features of Joint Security Systems

### *Detection and Interdiction*

It was observed that the threats were easier to detect in the cold war than they are in this war on terrorism. What is clear is that anticipating a terrorist attack will require cooperation among the citizenry and agencies of multiple countries.

The most important feature for a security system for countering terrorism is deterrence, and if that fails, then timely detection and interdiction is critical. In order to successfully deter, we must understand the “values” of the adversary to make some devastating actions appear unviable for reaching their goals. Deterrence can also be accomplished through sufficient hardening of particular targets. Once a threat delivery chain has been identified then we must be able to get information, and get it in timely fashion, to enable action. Since resources for response are limited effective cooperation and coordination can pay big dividends. One way to accomplish this is the establishment of common processes.



Technical sensors for detection of some parts of this threat will be important. Certain signatures are visible with some of these threats, but many threats – e.g., bioweapons – may have little or no

detectable signature at all. There seems to be no “silver bullet” sensors, but we should work toward a successful combination of multiple environmental indicators for detection. Also prerelease detection of WMD tends to be short range at best. While sensors are not the full answer, information from sensors should be useful in inferring an impending attack.

The desired security system must apply technology to help solve problems and develop the skills and capacities in each country to use these technologies. These systems must be interoperable to allow effective cooperation. We also need to develop a knowledge base of potential and suspected terrorists which can be shared among the three countries. We must determine how to jointly spend our limited collective resources to interdict an event before it happens. We must also be alert to the fact that false alarms will occur; and prepare for properly managing these alarms so that we do not deaden our responses when a real event is in play.

To enable interdiction, we must identify the threat delivery chain before the scenario has progressed to the final stage. This will require analysis of both military and non- military intelligence, local police participation, and a high degree of trust among the cooperating parties. While information exchanges between the U.S. and Canada/Mexico are significant, they are not always effective because the information needs to be better contextualized to allow effective detection and interdiction rather than “knee jerk” reactions to alarms.

Better coordination in day-to-day operations to defend our continental security or in emergency operations could occur among government agencies if we could identify who speaks to whom, by what channels, and by formal or informal methods. There are agreements in place but there is room for improvement in these areas:

- Technical detection (e.g., range to detect WMD is limited)
- Collaboration and trust
- Cooperative policies
- Managing resources
- Redefinition of tri-lateral defense systems

A critical step would be to review what the three countries have implemented in these areas to identify the missing parts of the puzzle and to identify the sensitive areas in which we can agree to disagree.

There are some interesting open questions. How will we pay for this kind of continental security system since it will be expensive? Should we use alert systems or do they create more fear? The role of civilian and military agencies is quite different in the three countries. In the U.S., the responsibility for countering terrorism rests primarily with civilian agencies, while in Mexico and Canada, it is with the military.

Finally, since the adversary in this war is geographically diffuse and agile, we must develop and institutionalize agile security systems to stay ahead of this adaptable adversary. But we must also recognize it may not be possible to completely protect ourselves and prepare for the possibility that more violence will be exported to our shores regardless of our best efforts.

## ***Defensive Posture***

For a tri-national defensive posture to develop, it is critical to get buy-in from all three countries and agree on desired outcomes. This requires well-defined relationships, many of which already exist – e.g., Canadian and Mexican air traffic controllers enabled response to bring down planes safely on 9/11. The overall goal is to make it harder for a terrorist attack to succeed but we must accept that we cannot depend on the system to prevent all possible attacks. The fundamental defensive posture is to keep all potential terrorists out of North America. We must also recognize that attacks in one country can impact the other countries on the continent. If a weapon went off in El Paso, Juarez would be affected as well. If agriculture is attacked in one country, it will affect all three. The same is true of infrastructure events since power and water are commonly passed

across borders. It will be very difficult to harden the envelope around all these structures. But infrastructure vulnerability analysis and hardening could use common techniques in all three countries. The larger question is the identification of the most likely risks; e.g., nuclear threats or ordinary car bombs. Hardening every high value target in our respective societies will bankrupt us. In coordinated efforts for dealing with response such as medical facilities or first-responders we should always look for a “no regrets” strategy – that is one where there will be a benefit for our countries whether or not terrorist attacks occur on our continent again

As always, there is a need for Education, Education, and Education!!! We need a better understanding of risk in all three countries and how risk tolerance varies in each country. There is a need for the public to have accurate information in particular about risks. Public awareness is



**Figure 2. Sample written brainstorm sheets**

very important in increasing national security. As an example of post 9/11 awareness, Richard Reeve, the shoe bomber, was thwarted by a vigilant flight attendant and by people who were willing to stop Reeve’s actions. We must also educate decision makers – an example is the WMD-based TOPOFF exercises run in the United States. Geographical separation of Mexican, Canadian borders raised again the issue of which will be more effective - trilateral or bilateral approaches to security issues. Data sharing is critical among all three countries in the event of a bio-attack, for instance, but perhaps less important in other areas.

An integrated response system and a tri-national sensor-alarm system would have advantages. One should have Just-In-Time response packs ready. WMD, particularly bio, does not respect borders; hence we need surveillance and operational compatibility. There is an opportunity to tie in commonalities throughout agencies in all three countries but all must be involved in or at least informed of combined policies and procedures. Sensors and information can push out the boundary of our borders since in many cases if the terrorists get to the gate it is too late to respond! The continent must have a “layered defense” system. Communication and some centralized data access are necessary. We need to get “buy-in” from all three countries recognizing our competing views and interests. We must understand our differences and constraints and we must codify procedures since ad hoc approaches will create failure in joint operations. There was a common theme of challenges in resource allocation and the need for optimization of response in many of these discussions.

## **Policies**

It will be critical to ensure that any continental strategy includes interests of all three states. A tri-national strategy involves sharing risk and responsibility and the asymmetry of power makes cooperation difficult. Since the U.S. is the preponderant partner, Mexico and Canada need to initiate negotiation with U.S. to ensure equal presence in strategy. The onus is on Canada and Mexico to identify how this strategy should include “continent”.



We need to push our continental counter-terrorism mission outward and unburden our geographical borders. However, we still need to have collaborative borders between our nations that allow for economic and social integration while recognizing separate sovereignty and accepted jurisdictions. If there is no perceived erosion of sovereignty, the required domestic political support for this approach will be easier to obtain.

Identifying things in common between Mexico and Canada may be difficult, except on issues related to our linked economies. However, if there are shared values, we could develop a common strategy and perhaps even common field operations, which could flow down and be applied to homelands, borders, and perhaps world-wide.

Should we have common security institutions for all three countries or common training and border patrols? This would be hard to envision although tri-lateralism could provide a large pool of experience which could generate better systems, and even political support of policies. Presently, operational cooperation springs from local, on the ground, interactions. Providing these local operations with a set of guidelines and a vision of the value of cooperation in preserving North America as a prosperous space and the value of migration to the continent would be a good start. This might be started by a negotiated conference with structured dialogue and the formation and regular meeting of trilateral working groups. This conference would involve tri-national operational experts with a focus on North American security writ large possibly modeling the war on drugs of the North American Free Trade Act (NAFTA).

### ***Enhancing communications & maintaining commerce***

What would happen if security - the existence of a secure continent – became a competitive advantage for commerce on the continent? This is the question which this group explored.

While the policy challenges for the development and use of secure communications for law enforcement agencies in all countries will be great, it seemed that if security became a competitive advantage, the private sector would develop and sell systems solutions.

Enhanced communications would be both the enabler and benefactor of this development. The operation of joint security systems could enhance collaboration/communication and as well as enhance commerce for the region. Enhanced communications would also be a requirement for the cooperative development of the technical detection & tracking systems envisioned. Communications can improve the flow of goods from manufacturer to receiver by enabling just-in-time movement of such goods and could be used to help move the “border” away from a geographic line (e.g. BASC [Business Anti-Smuggling Coalition] which moves the border to factory). It was noted that BASC-like systems require trust in the governments involved as well as recognition of the competitive advantage for the private sector in each nation to justify the required investments. The importance of personal relationships and appropriate language skills in the creation and operation of this kind of endeavor cannot be diminished.

A provocative suggestion was the formation of NorthAm Inc - a place where advanced security products are developed and commercialized in North America as a continental industry.

## **Ideal Continental Security Systems for North America**

The participants divided into four teams each chartered to develop a concept for an ideal system for providing continental security but optimized on a particular viewpoint. These four teams represented the primary interests of Canada, Mexico and the United States plus one team devoted to thinking about this as a joint effort. The following sections report the suggestions of each of these teams.



## **Canada Team**

The Canada team began by stating the three key goals of such a security system. These were: 1) all features of the system should respect and preserve our key values; 2) the system should be designed in a way that recognizes we live in a global society based on cross border flows of people (business, academic, tourists, studies, etc.) and goods and services, and 3) we should build on what we have, on our established relationships, procedures, and systems.

A key feature necessary for enabling interdiction is sharing and even jointly developing intelligence. This implies we should strive for complete access to all foreign services information. These include:

- Terrorist databases
  - o Terrorists' networks
  - o Terrorists' movements
  - o Terrorism support systems and financial resources
  - o Terrorist's evolving communication channels
- Human intelligence information (assuring the need to protect methods and sources)
- Advanced technology
- Training and expertise

The end goal is an integrated domestic/foreign collection and analysis across all three countries. There should be joint work on translation and determination of intentions. There should also be joint training and technology sharing to aid deceit detection at borders by local law enforcement.

The envisioned system would enable interdiction by having a joint task force for terrorism for rapid response. When an unfolding terrorism plot is identified by the analysis team, a series of responses would be triggered. First, information would be fed to authorities to attempt to locate and track the suspicious people, equipment, and materials involved in the plot. The system would feed available evidence to authorities to allow arrest or seizure when appropriate. The system would also allow for the timely sharing of acts involving citizens of North America. The suspected targeted areas would be notified to allow them to activate defensive measures. In most cases, the role of the military would be to provide assistance to civil authorities.

Key challenges for this system will be making sure that the system does not interfere with the North American states' involvement as a member of the global community, and the creation of a continental common integrated terrorism knowledge system and common processes such as a shared visa application data system. Efficient and effective communications will be required. These need to be based on establish relationships and enable joint networks between institutions. The system must be willing to share and help partners build terrorism fighting capabilities. Finally, the team identified several key enabling technologies which included sniffing capacity for explosives, chemicals, etc., port protection, bio-metrics that work, and rapid knowledge generation.

## **Mexico Team**

The Mexico Team began with the discussion of a major concern in Mexico: namely that terrorists will enter the U.S. through Mexico and carry out a successful attack. The Fest's Mexican participants expressed the belief that such an event would lead to a backlash against Mexico and its citizens, with expatriate Mexicans living in the U.S. treated as scapegoats. In this aftermath, there is a possibility that migrants (both legal and illegal) would not be treated fairly, that they and their families would suffer, and that Mexico as a whole would suffer economically. The economic



impact could be exacerbated by an associated closing of the border between the U.S. and Mexico. It was also pointed out that a terrorist group could gain significant value from an attack against U.S. tourists in Mexico. A large loss of life of U.S. citizens in Mexico would be a challenge to U.S./Mexico cooperation. An improper response by one or both countries could magnify the “value” of the attack beyond the original loss of life.

Hence, the ideal solution should be designed to maximize the movement of legitimate people, goods and services while minimizing the possibility for unwanted individuals to enter our countries. There needs to be recognition of the current state of flow across the border and a move to legalize migrants. One proposal for this ideal system was to consider how to deal with the Mexican southern border; i.e., move the lines of control. Perhaps there could be U.S./Mexico participation on protecting this southern border which could produce fewer required controls on the northern border! This move to a more “borderless” area between the U.S. and Mexico could help eliminate this fear of scapegoating.

How could this be done? We could start with a national biometric ID with Canada and the U.S. There would be seasonal worker permits at the southern Mexican border, and a pre-clearance process for those who cross on a regular basis. One major barrier would be selling this ideal system to the Mexican people and their government. There was the observation that Mexican nationalism could hurt their Latin American compatriots by closing the southern border and so maintaining this flow was critical. The maintenance of commerce was the key issue. The wait time and number of people in lines outside ports of entry must be reduced. More remote detection technology and the creation of an elite cadre of border security guards would be implemented. All efforts would be working toward the creation of a “continental border” that would protect national identity and prerogatives. Cost would be a driver as money and other resources for these efforts would be expected to flow from the U.S. to Mexico.

There would be several U.S. – Mexico military cooperation challenges. The U.S. seems to have a strategy to reduce the Mexican military to a police force. There needs to be an explicit acknowledgement that the military has a traditional role in this arena in Mexico. This could be done with the creation of a pan American force and a formal organization to deal with critical issues and fears (a kind of North American defense board). This approach would be attractive for:

- Reducing blame by risk sharing
- Providing stability for Mexico
- Gaining the economic benefits of a more open border
- Enhancing intelligence of terrorist activities and plans
- Enhancing trust (over time)
- Allowing for a more effective use of limited resources
- Reducing pressure on Mexico’s northern border

The system would allow for several types of interdiction. In most cases, local agents (who might be from the bordering nation) have the best perspective, but the actual arrests would usually be done at the national level. The sharing and joint creation of intelligence through an intelligence fusion center would strengthen cooperation and effectiveness (North Am Intelligence System, NAIS). This could be even be populated by dual citizenship personnel. The key enabling technologies would be effective national IDs, good information generating systems, processes to synchronize tri-national legislation, and standardized forensic technologies.

## **United States Team**



The U.S. team first laid out the requisite design criteria for this kind of a system. It would need to be evolutionary, enabling cooperation (protecting civil liberties and obeying laws) which would not impede commerce. It would provide timely access to information, filter noise and be credible – enabling credible decision making. It would include political, social, behavioral considerations. It would need to be affordable and maintainable with the requisite enabling infrastructures in place.

The ideal security system would be an information system consisting of distributed databases, sensors and human intelligence (both overt and covert). The system would use intelligent software agents tailored to each decision maker allowing adaptable questions to be asked of the data. It would have an architecture of computers and infrastructure that could be supported in all nations would support the policies and procedures for access agreed upon. The system would be ubiquitous with common training for all personnel.

This system would augment decision making by the users, feeding alerts to low level operations. The users would be able to add data and ask questions through their personalized software intelligent agents. Automation would be controlled by policies to control abuse.

This system would allow more timely information than today's systems with alerts focused on the threat delivery chain. It would be much more adaptive and less reactive than systems of today.

This system would be good for continental security because it accessible by all three countries, each with the ability to add data and get data. It would both require and enable cooperation and it would be adaptable with non-prescriptive selective access by policies of the three nations.

This system would enable interdiction by providing timely useable information to right people, take advantage of current infrastructures, and allow for buy-in from all players.

## **Joint Team**



The goal of the joint security system would be to keep the threat away from continent while protecting and maintaining sovereignty and maintaining a commitment to rights and “shared values”.

The national institutions in each country will do the job and need confidence building measures for collaborative work. There must be similar, compatible, and/or complementary communications, training, and procedures for information collection and analysis. The system needs to allow users to know what is available and what of that is applicable to them and be able to get it.

The design of the system needs to engage the private sector, making sure its interests are served and must recognize relevant international systems and standards when developing new technology systems. It also needs to engage civil society and understand concerns about civil liberties and the protection of individual freedoms.

In order for this to happen it is important to know how each country is organized to deal with this problem. Of particular importance is the issue of jurisdictional authority in identified areas of concern. If all officials in each country knew who their counterpart in each country was, better

coordination could happen at all levels of government. The system needs to address all levels - from operational to policy levels - and extend to forward deployment areas when needed.

Training will be a critical need here. We have to develop the appropriate attitudes of collaboration/multilateralism (culture) while serving interests of sovereignty. There need to be coordinated exercises in all operational areas and systematic programs of exchange. We must recognize the importance of human capital development and skills training for these systems to be useful.

There are a number of features that such security systems should have - a complementary visa regime, complimentary policies of interdiction, information exchange while protecting sources and methods while respecting privacy issues, trilateral military co-operation/coordination including a common operational picture of approaches to North American air and sea and land and a common identity card.

## Challenges and Opportunities

### *Economic Challenges*

The biggest economic challenge in accomplishing the creation of a continental security system will be getting effective security without impeding the flow of commerce. More regulation creates higher costs too. But for continental security systems there is an added challenge of the infrastructure differences among the three countries. This may require larger investments for one or more countries with more sharing of cost. The cost of new policies and infrastructure and technology maybe more difficult now the under economic stress that is possible in U.S. and with Mexico having fewer resources than the other two nations. Getting the private sector to invest where necessary will also be a challenge. If we develop a protectionism approach, the impact on our economies given the current trends toward globalization may be dire.



**Figure 3. Small group session**

### *Policy Challenges*

For this concept to be effective, we have to think globally even though we have three differing national agendas. There will be political opposition from some sectors of civil society in each nation. There will need to be public support in each country for the required policy initiatives and local politicians be need to push this initiative. Some current national policies will have to be reexamined if this were our continent's approach, e.g. the different countries' policies toward Cuba. The current U.S. unilateralism in Iraq will be an issue and nationalism in Mexico, the U.S. and Canada will be an issue. Trust will have to develop among various government institutions.

Bureaucratic systems in each country will have to be able to deal with this tri-national concept. Legal issues related to detaining and monitoring "suspects" will have to be worked out. Joint decision making will have to be addressed including how the final decision will be made in the event of major policy or operational conflicts. Finally paying for these joint systems will be difficult and will likely require flexible application of resources among the three nations. Security and classification issues will be a major barrier to intelligence sharing.

Time is critical! We may not have the time to allow the determination of correct processes. We will need to strike a balance between protecting intelligence and sharing with those who need to know.

## ***Existing R&D and Available Products***

The following list was generated by the participants.



- Blast protection capability
  - Architecture surety guidelines
  - CPTED (Crime Prevention Through Environmental Design)
- Integrated security systems
- Just-in-time custom security systems
- Global Positioning Systems (GPS)
- Decontamination technologies
- Active/passive protection technologies
- Data analysis/connections/pattern recognition
- Information security systems – information operations technology
- Multilevel security
- Intelligent browsers
- Security defeat technologies
- Seals/tags/trackers/RF (radio frequency) tags
- Non-lethal weapons (people, vehicles, information)
- Human behavior modeling
- Infrastructure modeling
- Augmented decision support systems
- Physical security systems technologies
- Biometrics
- Implantable bio-track chips
- Wide- and local-area surveillance
- Persistent ubiquitous sensor networks

Knowing where to get all of these may be the bigger challenge.

## ***Existing Tri- or Bi-National Efforts***



The following list was generated about current Tri-Bi-National Agreements. We need to form a Commission to study this list and determine which efforts are similar or different between Canada and Mexico, which efforts are really currently in effect and which efforts represent significant activities, especially in intelligence. Then we could look to some agencies “to plug the gaps.”

- ASIS International (international organization for security professionals)
- FAST (Free And Secure Trade) Program (U.S./Canada)
- BASC (Business Anti-Smuggling Coalition) Program (U.S./Mexico)
- PIP (Partners in Protection) Program - Canada
- C-TPAT (Customs Trade Partnership Against Terrorism)
- CIP (Carrier Initiative program)
- DCL (Dedicated Commuter Lane)

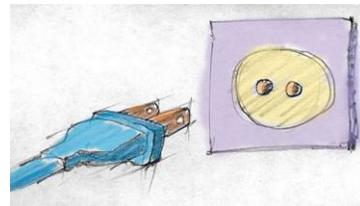
- Law Enforcement Information Centers like:
  - o Canadian Police Information Center (CPIC)
  - o National Crime Information Center (NCIC)
- Crossing Borders Conference (2002) (U.S./Canada)
- Secure and Smart Borders Action Plan (U.S./Canada)
- Commercial Vehicle Safety Alliance - North American Standard Inspection Program – Decals
- Bi-national Planning Group (CAN/U.S. military planning)
- NORAD
- International Biometric Group - U.S.VISIT Program
- Megaport program (U.S.- Department of Energy)
- Smart Border Declaration (CAN/U.S.) (MEX/U.S.)
- CAN/U.S. chemical/biological/radioactive/nuclear (CBRN) Guidelines
- Bi-national bridge and border crossings committee
- “War On Drugs” programs
- NAFTA’s inspection of forms for compliance of technical and health standards
- CAN/U.S. Bilateral Consultative group on counter-terrorism
- CAN/U.S. Bilateral Consultative group on Emergency Preparedness
- Integrated border enforcement teams (CAN/U.S.)

## **Technical Gaps**

The following gaps in technology for these systems were identified:

### Sensors:

- Powerful sensors with long range
  - o Range issues for nuclear, radiation and explosives detection
  - o 100 m stand off for chemical/biological/radiological/nuclear/explosive (CBRNE) detection
- Enhanced sensors
  - o vision systems
  - o acoustic
  - o electromagnetic
  - o chemical sniffers
- Smart sensors that reduce false alarms
- U.S.-VISIT (land ports) chip-person-distance
- Ability to tag/track/regulate high explosives.
- Lack of threat signatures for weaponized biological agents, chemicals



### Surveillance Systems:

- Satellite surveillance
- Long-distance maritime surveillance
- Stand alone power sources, better than batteries and longer life
- Facial and biometric recognition technology

### Forces

- Air vehicle
- Robot protective guards
- Autonomous (air, land, sea) swarms for border protection
- Effective unmanned aerial vehicles (UAVs) and micro-UAVs that can communicate with each other and with other systems
- Long distance non-lethal attack
- Man Portable Air Defense Systems (MANPADS)

### Threat Detection and Manipulation

- Ability to computationally manipulate socio-cultural qualitative data – development of a multidisciplinary community of experts that wants to and can engage with this

- Intention detection technologies
  - Behavior modification beam
- General Needs
- Secure info/communication systems
  - Trusted augmented decision aids
  - Cost/affordability/reliability of security systems
  - Improvements in training
- Barriers to technology applications include:
- Speed of advancement of technology
  - Decision makers are not always technology aware
  - Public acceptance/trust
  - Who owns it?

A provocative suggestion was the creation of a trilateral research and development facility - A Tri-National Security Laboratory (TNSL) - in physical security to work the gaps identified above.

## Summary

The basic measure of success that we apply to a fest is the level of energy and involvement by the participants, and this fest resulted in a very lively and fruitful discussion. Several reoccurring themes throughout the exercise were identified.

- ◆ First among these was the recognition that ***the three countries share a set of core values, namely democracy, prosperity and security that should always serve as the basis for joint interactions and will allow for the development of a culture of cooperation*** while maintaining the sovereignty of the members.
- ◆ It was frequently emphasized that the creation of continental defensive strategy would require a set of strategic guidelines and that smart secure borders play a pivotal role. The need for the joint security system to operate from a set of complementary but not identical policies and procedures, such as complementary VISA programs and complimentary identification systems was identified.
- ◆ The value of a joint task force for response with full knowledge of national response systems and of the available technology and people was recognized, along with a shared information system, sharing both technology and people.
- ◆ The need for the private sector to be a critical player in cross-border interactions and must be included in the design.

Finally, a "Tri-National Security Laboratory" was envisioned that could bring together researchers and practitioners to develop and test new counter-terrorism technologies and processes.



**Figure 4. Roadmap session**

One of the interesting observations from the fest was the very different views of the terrorism problem that exists between the three countries. Basically, the U.S. feels threatened, Canada is concerned about the U.S. approach to terrorism (particularly the U.S. unilateralism), and Canada and Mexico are worried that they will be blamed for failing to stop terrorists who may travel or stage from within their country, with consequent repercussions on expatriates and citizens and the closure of borders. Each perspective represents an expression of fear. The concern, however, is not terrorism per se, but the different impacts and outcomes for each participating country

if an event were to occur on U.S. soil. Canada and Mexico are aware that they may be targets but are more worried about these secondary effects that are centered more on the U.S. potential reaction to a future attack and the impact of this reaction to trade. Any progress on building a working relationship in the counterterrorism role needs to recognize and deal with these different perspectives of the problem.

There was also a strong emphasis on the linked futures of the three countries. We should build on our shared values of democracy, prosperity, and security to increase the trust that allows for efficient cross border trade and flow of people. These activities are essential to all of our economies and, to a large extent, our individual cultures. In addition, the flow of goods to and from the rest of the global economy is critical.

Several looming issues and some opportunities were identified. Everyone recognized that any plan for continental security would be easier to achieve if it was focused on broader security issues like transnational crime, with terrorism being a part of the focus. The flow of illegal drugs and the organized crime elements that transport people illegally across the border create an atmosphere of corruption that makes progress and security difficult. In some cases, it was felt that Mexico could provide a model for advanced techniques such as biometric identification. A final question fundamental to this approach is to consider the actual benefits, if any, to a tri-national approach as opposed to a set of multiple bi-laterals.

In conclusion, the fest accomplished its objectives and those involved seemed convinced that these types of informal, participatory interactions between cultures are highly useful. A series of fledgling relationships were begun between individuals and organizations and there are commitments to follow up with future meetings. One of the key agreements from the fest was for a set of participants representing the three countries to publish a joint paper outlining the elements of a Continental Security plan. The Advanced Concepts Group was encouraged by the results of the fest and by the general consensus of the participants that adopting a continental approach could result in better security for our three nations.



**Figure 5. The NorthAm Fest participants**

## List of Participants

Earl Basse	Director Operations, O.B.N. Security, Toronto
Oscar Rocha	Director of The Joaquin Amaro Foundation for Strategic Studies
Ernesto Ruiz	Owner, Transportes J y R, Ciudad Juárez, Chihuahua, México
Dick Gerdes	Executive Director, The North American Institute in Santa Fe, New Mexico
Gary Boutelle	Law Enforcement Coordination Officer (LECO), United States Northern Command Interagency Coordination
Paul Maxwell	Vice President for Research and Sponsored Projects, University of Texas at El Paso
Michael Theilmann	Chief, Operational Readiness, Counter-Terrorism Division, Emergency Management and National Security Branch, Department of Public Safety and Emergency Preparedness Canada
Gustavo Vega	Professor at the Center for International Studies of El Colegio de Mexico
LTC Dave Whiddon	Theater Security Cooperation Branch of the Policy and Strategy directorate, US Northern Command
Jessica Glicken Turnley	President, Galisteo Consulting Group, Inc, Albuquerque, New Mexico
Barry Cardwell	Deputy Division Chief, Strategy Division, Policy and Planning Directorate, United States Northern Command.
Jon Amastae	Director of Center for Interamerican and Border Studies, University of Texas at El Paso
Dan Rondeau	Deputy to the Director of Applied Physics, Sandia National Laboratories
David Crane	Author, newspaper columnist, Toronto, Canada
Peter Bates	Deputy Director, Terrorism, Foreign Affairs Canada International Crime and Terrorism Division
Luis Herrera Lasso	Director General, Grupo Coppan, Coyoacan, Mexico
Victor Trevino	Consul Assistant, Mexican Consul Office in El Paso
Richard Williams	District Commander, New Mexico State Police in Las Cruces, New Mexico
Judy Moore	Manager, Sandia National Laboratories Advanced Concepts Group
Jaime Campos	Executive Director, Border Authority, State of New Mexico
Dan Drache	Senior Research Fellow and Associate Director of the Robarts Centre for Canadian Studies, York University, Toronto
Juan Carlos Cue Vega	Consul General, Mexican Consul Office in El Paso
Jorge Chabat	Professor of the Division of International Studies at the Center for Research and Teaching on Economics (CIDE) in Mexico City
John Whitley	Manager, Sandia National Laboratories Advanced Concepts Group
Bernd "Bear" McConnell	Director, Interagency Coordination, US Northern Command
Diana Natalicio	President, University of Texas at El Paso
Robert Bach	Senior Fellow, Inter-American Dialogue
Ms. Cathy Bakker	Analyst and Advisor to the Vice-President of the National Research Council (NRC), Canada
Gerry Yonas	Principal Scientist and Vice President, Sandia National Laboratories Advanced Concepts Group
Col. Felix Gonzalez	Chief, Office of Defense Coordination, American Embassy Mexico,
Laura McNamara	Sandia National Laboratories Cooperative Monitoring Center
Jose Garcia	Associate Professor, Government Department, New Mexico State Univ.

## **Agenda**

### **Evening of September 14**

**6:30** Social

**7:30** Dinner

- Introductions and sharing of common interests
- A starting discussion topic at tables to begin the dialogue "What aspects of terrorism do you find most terrifying?"

### **Day One – September 15**

**8:30** Continental breakfast

**9:00** Welcome and Background

**9:30** Opening Panel "The Borderless Threat of Terrorism"

Dan Drache (Canada), Bear McConnell (USA), Jorge Chabat (Mexico)

**10:30** Break

#### **Session 1 - What are the unique issues of terrorism from a tri-national North American approach?**

**10:45** Written brainstorm

Consider 4 different perspectives:

- The terrorist
- A continental defender
- Commercial interests
- Cultural preservation-

**11:30** Small group refinements

**12:30** Lunch

**1:15** Reports to full group

#### **Session 2 - What is the role of joint security systems and what are the required/desired components/dimensions of such systems?**

**2:30** Written brainstorm

Consider 5 different aspects of this question:

- Detection & interdiction: knowing when a terrorist attack is in the works or about to happen and stopping it?
- Defensive posture: making it harder for a terrorist attack to succeed
- Maintaining commerce: effective and secure movement of people and goods
- Enhancing communication and collaboration within the alliance
- Policies, strategies and doctrines needed to make joint security systems work

**3:15** Break

**3:30** Small group refinements

**4:30** Reports to full group

**5:30** Day one wrap-up and adjourn

*-- No formal dinner arrangements on Wednesday --*

## **Day Two – September 16**

- 8:30** Continental Breakfast
- 9:00** Welcome and instructions for day two

### **Session 3 - What would be an ideal system solution for countering terrorism against the North American Continent?**

- 9:15** Four different groups develop their ideas for an ideal security system to protect North America and report back:
  - Mexico team
  - U.S. team
  - Canada team
  - Joint team
- 11:00** Report backs
- 12:00** Lunch
- 1:00** Large group discussion of the commonalities and selection of ideas to pursue

### **Session 4 - What will be the challenges and opportunities for these systems to become operational?**

- 2:00** Written brainstorm
  - Consider:
    - Social/ cultural challenges
    - Economic challenges
    - Policy challenges
    - Technical gaps - both short and long term requirements and needs
    - Existing tri- or bi-national efforts
    - Existing research and development and available products
- 2:45** 3 small group refinements (group identified by color above)
- 3:45** Break
- 4:00** Reports to full group

### **Session 5 - Development of a roadmap – recommendations and actions**

- 5:00** Written brainstorm
- 5:30** Dinner
- 7:00** Development of recommendations, actions, communications, next steps
- 8:30** Adjourn