



**Remarks of Jeffrey N. Shane
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International Loran Association
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Introduction

Good evening, and thank you for inviting me to join you at this important conference, which has focused on Loran's role in mitigating the vulnerabilities in our radionavigation systems – particularly in light of the dramatic changes that have occurred in this country since last year's terrorist attacks.

Aviation has always been an important harbinger of the future -- on the very cutting edge of civilized society. By looking through the prism of air transport, we can see a vision of the way the world ought to be: interconnected, in harmony, technologically advanced, and fostering a better quality of life everywhere. That's why the decision by some dark and primitive forces fourteen months ago to use the aviation system as a weapon against civilization itself was all the more tragic. A shining symbol of what is best about humankind was transformed in one shattering moment into tragic evidence of what is worst.

And so today we live in a much more dangerous world than any of us could have imagined just fourteen months ago. This conference has provided an important forum to discuss the strategic responses most appropriate to this new threat environment, including what role Loran and other systems can play in reducing our susceptibility to future attacks.

I want to talk with you tonight about what the Department of Transportation has been doing to address the safety and security of our transportation system since 9/11, how we are preparing for the transition to a new Department of Homeland Security, and some forthcoming decisions relating to radionavigation that will have a direct bearing on the future of our transportation system and on our national security.

Safety and Security

President Bush has asked government leaders to ensure that we have the resources in place to detect and prevent terrorist attacks within the United States, while reducing our country's vulnerabilities and maximizing our ability to respond to any incident as swiftly and effectively as possible.

To meet these goals, the President announced earlier this year a major restructuring of the federal government, including the creation of a new Department of Homeland Security. Currently, homeland security responsibilities are scattered across more than 100 different federal agencies, resulting in a lack of accountability and responsiveness to our most critical needs. The President's plan recognizes that we are fighting a new kind of enemy – not another nation-state, not a competing economic philosophy, but a scattered, shadowy cabal of terrorist cells that seek to rob civilized society of the freedoms that civilized peoples take for granted everywhere.

My boss, Secretary of Transportation Norm Mineta, has worked hard to enhance security across all modes of transportation while creating a Transportation Security Administration that will serve as the heart of this new department.

As we gather here today, of course, Congress has not yet approved the Homeland Security legislation. We await passage of the bill so that the President's plan can be put into action in order to make this country a safer and more secure place for our citizens. While the Department of Transportation will necessarily play a continuing role in homeland security, the new department will allow the federal government to develop a comprehensive security network that is designed specifically to protect our critical infrastructure and improve coordination among federal authorities. The President's plan envisions an efficient, synchronized, and agile line of defense against terrorism that will have the capability to react swiftly to meet any challenge.

As it happens, more than half of the new agency's personnel and budget will come from two organizations that are currently part of the Department of Transportation – the United States Coast Guard and the Transportation Security Administration. These agencies have been working hard to make our transportation systems more secure than they have been at any time in our history. They will continue to strive for further improvements.

Aviation furnishes a useful example. In the aftermath of 9/11, President Bush asked the Department of Transportation to design an aviation security system that would allow travelers to arrive safely at their destinations, free from the threat of terrorism, but also free from unnecessary burdens or intrusions. Then Congress passed the Aviation and Transportation Security Act, which established more than two-dozen deadlines for the deployment of federal screeners, for screening checked baggage, for deploying explosives detection technology, and the like. That legislation also established the new Transportation Security Administration.

We have done our best to respond, and are well on our way to the completion of a new system that combines world-class security with world-class customer service. Admiral Jim Loy, who served his country with distinction as Commandant of the Coast Guard over the past five years, has answered the call once again by providing the leadership that TSA needs at this critical time in its development. Not surprisingly, we have met every one of those daunting statutory deadlines.

Although media attention has been focused, predictably enough, on our aviation efforts, we are also developing heightened security procedures and awareness across every mode of transportation. A key piece of this effort entails securing our Nation's ports and maritime transportation system. The numbers alone give you an idea of the complexity of that challenge: in addition to roughly 360 seaports, our maritime border consists of nearly 95,000 miles of open shoreline, 25,000 miles of navigable waterways, and more than 3.4 million square miles of offshore exclusive economic zone.

Our strategy in this area includes implementing a layered defense in the maritime domain just as we have with aviation security, with a full range of concentric security measures. We want, in effect, to "push our borders out" as far as possible so we can intercept potential threats long before they arrive on our docks. We will also maintain an increased level of maritime security operations directed against terrorism. The U.S. Coast Guard's response to the Palermo Senator – a container ship held at sea for several days until we determined that the trace radiation detected in the cargo did not arise from a security threat – exemplifies this heightened vigilance.

As we strive to create a more comprehensive awareness of threats and activities in the maritime domain, we are also transforming the core competencies of the Coast Guard by modernizing its most vital assets, deploying Maritime Safety and Security Teams for rapid response, and expanding our Sea Marshal program. President Bush and Secretary Mineta are committed to implementing these changes as soon as possible.

Finally, we must strengthen the physical security of our ports and reduce their vulnerability. The Department of Transportation, in a joint effort coordinated by the Maritime Administration, the Coast Guard, and TSA, awarded \$92.3 million in port security grants earlier this year, most of which went towards on-site security measures such as fences and cameras. The Department expects to release an additional \$125 million for port security grants in the near future that will help us continue to improve the security of our port facilities.

Radionavigation Activities

Now that I have touched on the more general aspects of the Department's homeland security efforts, I would like to review how radionavigation comes into play and how we plan to move ahead over the coming months.

As you know, we have been looking closely at the potential vulnerabilities of GPS, not only because of its importance to our nation's military but also because we have come to rely so heavily on it for many applications that make our country more productive each and every day. This is especially true in the transportation field, where GPS and other radionavigation technologies provide positioning, timing and related assistance that helps to move both people and goods throughout our transport system while minimizing delays.

In 1997 the President's Commission on Critical Infrastructure Protection identified GPS vulnerabilities as an area of specific concern. As civil aviation, land, and maritime modes of transportation have become more reliant on GPS we have become more focused on the need to have sufficient back-up systems in place.

In response to a 1998 Presidential Directive, the Department sponsored a GPS vulnerability assessment completed by the Volpe National Transportation Systems Center to assure the continued safe operation of our transportation system. The study identified transportation operations that employ GPS, methods for GPS disruption, and possible impacts on transportation safety, while exploring different approaches to ensure service reliability. The Volpe Center's report, publicly released just one day before the 9/11 attacks, concluded that GPS is vulnerable to both intentional and unintentional interference, but that it can fulfill its potential as a key part of the national transportation infrastructure if a response plan is developed and executed based on the report's recommendations.

The Department of Transportation agrees with the findings and recommendations of that report. The report now serves as a roadmap for the Department to address potential vulnerabilities in GPS, and the proximity of its release to 9/11 only strengthened our resolve to complete the work in a timely way.

With safety and security as the top priorities, the Department has developed a 14-point action plan to mitigate these potential vulnerabilities. Based on public outreach and evaluations conducted by each of the Department's component administrations, a Departmental response has begun to take shape. Several action plan elements are already being implemented by operating administrations within DOT.

For example, we are continuing with GPS modernization, strengthening spectrum protection, and developing our capabilities to quickly locate sources of interference. We will encourage equipment enhancements through standards and certification, while addressing human factor risks through user education programs, training and outreach.

Our modal administrations have performed internal threat assessments to their own GPS-reliant operations, with infrastructure protection as a primary focus.

The Department's senior officials receive periodic reports on these actions through our Positioning and Navigation Executive Committee, and the remaining action plan elements – those that involve the appropriate mix of federal radionavigation services – are being addressed by a multi-modal task force that will recommend additional improvements.

Each transportation mode has critical applications that must be backed up. Whether it is navigation and air traffic control for aviation, timing and frequency for highways, or emergency response across all modes, safety-critical transportation applications that use GPS currently have adequate backups in place. In looking to the future however, we must ensure that we fully understand the potential threats as we continue to further integrate GPS technologies into our daily lives.

As we strive for an efficient mix of radionavigation services, we also need to consider carefully all potential impacts before terminating any existing services. For example, the Canadian Coast Guard decided to suspend a previously planned termination of Loran-C service following the events of 9/11, citing the need for a backup in the current security environment. The Volpe Center itself has suggested that back-up systems for safety-critical uses of GPS may also serve security functions, and endorsed Loran-C as an ideal back-up for GPS-based container tracking devices.

As some of you may know, the Department has been working closely with the Customs Service on a variety of initiatives that are focused on improving container security. One of those initiatives is called "Operation Safe Commerce." That program will test a variety of different technologies to determine the best ways to secure containers at their point of origin, track them as they move through the supply chain, and ensure that Customs, Coast Guard, and other authorities have as much information as possible to identify high-risk shipments.

We expect that the use of innovative products based on GPS technology will allow us to make substantial improvements in the way we track container shipments. That means, again, that we must have confidence in our ability to support GPS with appropriate backup systems.

Let me share with you some details regarding our roadmap for the future of radionavigation infrastructure. As I mentioned earlier, the Department has created a task force to study the future mix of radionavigation systems and backup systems. Members of the task force included representatives from all stakeholder organizations within the Department and other government agencies with an interest in these issues. The group was asked to identify the capabilities of existing radionavigation systems as well as current Federal user requirements. Over the last eight months, the task force has carefully evaluated the hundreds of possible navigation system combinations and selected several realistic alternatives that can meet our multi-modal needs. The Department will

now use the task force findings and recommendations to determine the appropriate mix of Federally provided radionavigation services.

In evaluating the utility of various navigation services, the task force had to balance several important decision factors, including operator and user safety, the developmental nature of new ITS architectures, the yet uncertain capabilities of systems still in research and development, and questions regarding which services are truly redundant and therefore should be eliminated.

You will be interested in two of the task force's preliminary findings:

- First, Loran is currently the only radionavigation backup that is multi-modal in scope.
- Second, while the current Loran-C system cannot meet future user requirements, research completed thus far seems to indicate that enhanced Loran is likely to deliver its promised benefits.

The Positioning and Navigation Executive Committee is currently considering the task force's recommendations, and we will present a recommendation to Secretary Mineta by the end of the year. In the expectation that enhanced Loran will deliver its promised performance, it is my personal hope that we will be able to move forward with the system's implementation once our research is completed sometime in 2004.

I must caution you, however, that there are still lots of opinions within the government, and even within the Department of Transportation, about whether maintaining Loran over the long term – even in an enhanced configuration – is the right public policy choice. It would be a mistake, therefore, to conclude from anything that I've said that the future of Loran is assured. Until some further decisions are made – and they will be made above my pay grade – we just won't know.

Conclusion

Let me just end by saying that the men and women of the Department of Transportation have been working day and night to ensure that terrorists can never again use our transportation system as a weapon against us.

Ultimately, our ability to respond to these challenges rests upon the very virtues we seek to defend – liberty, democracy, and free and open markets. The strongest, most vibrant economy in the world depends on the world's safest and most efficient transportation system. And more than ever before, the quality and integrity of that transportation system varies directly with the quality and integrity of the timing and navigation technologies that support it.

That's why I am so pleased to be with you this evening, and why I appreciate so much your invitation to share these thoughts with you.

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