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Mineta Transportation Institute Releases Research Report on Terrorist Attempts to Derail Trains around the World

Successful attacks can deliver high body counts, significant disruption, dramatic images, and enormous publicity – all sought by terrorists.

San Jose, Calif., April 28, 2010 – The [Mineta Transportation Institute](http://www.mti.sjsu.edu) (MTI) has released a new research report, [*Off the Rails: The 1995 Attempted Derailing of the French TGV and a Quantitative Analysis of 181 Rail Sabotage Attempts*](#), by Brian Michael Jenkins, Bruce Butterworth, and Jean-François Clair. The report underscores the attractiveness to terrorists of targeting surface transportation systems, where a successful attack can deliver high body counts, significant disruption, dramatic images, and enormous publicity – all the results sought by terrorists. But the report also shows that train derailments pose difficult operational challenges to the attackers and don't always deliver the slaughter they seek.

In August 1995, terrorists attempted to derail the TGV high-speed train between Lyon and Paris by planting a bomb. Their triggering mechanism failed to detonate the bomb, although subsequent analysis indicates that even had the bomb gone off, the explosion probably would not have derailed the train.

Nevertheless, the psychological effect of an explosion would have been enormous. France's TGV was the first high-speed rail system in Europe, and it remains a source of national pride. That gives the trains the iconic status, or "emotional value," typically sought by terrorists. Moreover, a successful attack on the TGV would have sent further shudders through a nation already rattled by a terrorist bombing campaign that had commenced a month before.

"The planned expansion of high-speed rail systems in Europe, Asia, and North America, where 15 high-speed rail projects are in preparation or underway in the U.S. alone, makes the TGV episode especially relevant today," said Mr. Jenkins, director of MTI's National Transportation Security Center of Excellence. "We need to better understand the threat and learn what we can do to thwart these attacks even as we lay the rails for new systems."

Therefore, in addition to examining the 1995 attack, the MTI report also provides a statistical review of 181 rail sabotage attempts, which account for approximately 10 percent of all attacks on surface transportation and about 9.5 percent of all fatalities. These statistics are likely to change, however, as MTI continues to expand its database of attacks on surface transportation.

Train derailments take place not only in developing countries afflicted with terrorist campaigns. The terrorist derailing last December of Russia's Nevsky Express, killing 26 people, demonstrates that terrorist derailments occur in developed countries as well. However, the deadliest attacks have occurred in the developing world, with India leading the list.

Terrorists successfully derailed trains in 37 percent of the cases. Bombs

planted on the rails were the most common form of sabotage, therefore causing more derailments. But terrorists using mechanical means to derail trains, such as pulling spikes or loosening plates, had a higher success rate.

Does that mean that passengers on high-speed rail systems face great danger?

“No more than traveling on subways or being in any other public space,” says Mr. Jenkins. “Only 22 of the attacks since 1977 have resulted in fatalities, with a median of six fatalities per incident. That’s hardly the suspense film scenario of trains plunging into ravines killing scores of people. But the potential for a dramatic disaster is there, as it is in commercial aviation. That means we must take it seriously.”

The report concludes with a brief discussion of some possible security approaches. Current research is investigating security measures at high-speed rail systems around the world. This will be the subject of future reporting.

The report may be downloaded at no cost from www.mti.sjsu.edu. Click on “Security” and “Publications,” then scroll down for the report.

ABOUT THE AUTHORS

Brian Michael Jenkins is an international authority on terrorism and sophisticated crime. He directs MTI’s research on protecting surface transportation against terrorist attacks. He is also a senior advisor to the president of RAND. From 1989-98, Mr. Jenkins was deputy chairman of Kroll Associates, an international investigative and consulting firm. Before that, he was chairman of RAND’s Political Science Department, where he also directed research on political violence.

Bruce R. Butterworth has had a distinguished government career, working at congressional, senior policy, and operational levels. With Brian Michael Jenkins he co-authored *Selective Screening of Rail Passengers* (MTI Report 06-07), published by the Mineta Transportation Institute in February 2007. He also co-authored a May 2007 study, *Keeping Bombs Off Planes: Securing Air Cargo, Aviations Soft Underbelly* with P.J. Crowley, senior fellow and director of Homeland Security at the Center for American Progress.

Dr. Jean-François Clair is a former Inspector General of Police. He served 35 years in France’s Security Service, the Directorate of Territorial Security, France’s internal intelligence system, with responsibilities similar to the FBI in the US or MI-5 in the UK. He headed the agency’s Anti-Terrorist Branch until he was promoted to Deputy Director, a position he held until he retired in 2007.

ABOUT THE MINETA TRANSPORTATION INSTITUTE:

The [Mineta Transportation Institute](http://www.mti.sjsu.edu) (MTI) was established by Congress in 1991 as part of the Intermodal Surface Transportation Efficiency Act (ISTEA) and was reauthorized under TEA-21 and again under SAFETEA-LU. The institute is funded by Congress through the US DOT’s Research and Innovative Technology Administration, by the California Legislature through the Department of Transportation (Caltrans), and by other public and private grants and donations, including the US Department of Homeland Security. The US DOT selected MTI as a national “Center of Excellence” following 2002 and 2005 competitions.

The Institute has a Board of Trustees whose internationally-respected members represent all major surface transportation modes. MTI’s focus on policy and management resulted from a broad assessment of the industry’s unmet needs and led directly to choosing the San José State University College of Business as the Institute’s home. MTI conducts research, education, and information and technology transfer focusing on multi-modal surface transportation policy and management issues. Visit www.transweb.sjsu.edu