Sheldon Jacobson, an expert on aviation security

On April 2, the Transportation Security Administration announced new airport security measures to vet passengers based on specific intelligence information, replacing the current system that indiscriminately singles out travelers from 14 “terrorism-prone” countries for mandatory screening. The new measures would be based on information gathered about passengers’ travel patterns, names and passport numbers. Sheldon H. Jacobson, a U. of I. computer science professor and expert on aviation security, was interviewed by News Bureau news editor Phil Ciciora about the changes to airport security screening procedures.

Will this new intelligence-based system of information profiling be more effective than the current system?

This is a step in the right direction for the TSA, but it does not go far enough. Using intelligence information to target passengers who are riskier based on the information they provide or based on their behavior prior to boarding will improve the use of our finite security resources, but the next natural step is to use such information for domestic passengers and flights, and revamp the entire aviation security system to utilize the most effective security resources on the right passengers.

If the current system had been in place last Christmas, would it have caught the would-be terrorist before he even got on the plane?

The easy answer is yes. But bigger question is whether the information on the Dec. 25 terrorist fits with the intelligence that would have flagged a more detailed search. Evidence suggests that it would have.

Would full-body scanners help to provide an extra layer of security? Given that the concerns over privacy issues has ebbed, would they be an effective screening tool given the TSA’s new procedures?
Yes, provided it’s targeted at the right passengers and not indiscriminately at all passengers. The most robust strategy is to use high-level security resources, like full-body scanners, on passengers for whom the least information is known, or intelligence suggests a possible risk. Security, not privacy, is the most troubling issue with the indiscriminate use of full-body scanners.

If a passenger either has a questionable risk profile, or their information is unknown or missing, then subject them to the most aggressive screening procedures, including full-body-scanner screening. But screening all passengers with the highest level of security resources is like taking a sip of water from a fire hose rather than a water fountain.

In essence, what we need is a reallocation of security resources and a refinement in how they are used, not a simple deployment of more of them. Only the appropriate use of such a technology will provide the TSA with a fighting chance to protect the airspace and work toward eliminating the occurrence of events like the one last Christmas.

Since 9/11, we have spent billions of dollars to improve aviation security. Since then, every time a near-miss has occurred, we reactively rush to fill the apparent security void. If full-body scanners are such an important tactic in securing our air system, shouldn’t we just subject everyone to it?

The TSA’s strategy to stop terrorist tactics has hidden the real need to stop the terrorists themselves. Explosives don’t destroy airplanes, malicious people destroy airplanes. It is time that we stop wasting money on aggressively screening and inconveniencing the wrong people, and focus fewer security resources on the people who are least likely to be a threat, so that more security resources can be used to target everyone else, including those who are more likely to be a threat, or for whom information is unclear about their threat status.

If all passengers are required to be screened using a full-body scanner, then our system will indeed be less secure, not more secure, by diverting valuable and limited resources away from the actual terrorists. Although this may seem counterintuitive – less screening resulting in more security – the resulting policy would lead to more security resources targeted toward the people who may pose the greatest potential threat.

Full-body scanners will also require image interpretation by people, in the same way that explosive-detection system and X-ray machine images must be interpreted. Therefore, they are certain to be fraught with the same human errors that result in threat items getting past security screening checkpoints today. The reduced throughput rate for such devices will also increase the
opportunity for human error, and the indiscriminate use of full-body scanners will only serve to create a false sense of security and effectively make our air system less secure.

Information is the greatest tool we have to protect our air system. Cutting-edge technologies are only as effective as the information that supports their use. Of course, the best way to protect our air system is to remove the need and incentive for others to afflict harm on it, which goes far beyond the capabilities of any technology.

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