

AIRPORT SECURITY

Hands Up!

A Close Look At People Screening Products – Part 2

Part two of our article on body scanners looks at them through the eyes of those who are being scanned. These devices have been given various nicknames in different languages, not all of them complimentary. But despite loud objections from religious as well as human rights groups and even constitutional lawyers to the presentation of the human body on a screen, almost all passengers when asked are, in fact, in favor of the machines.

Hardened business travelers are quite accustomed to waiting in line to be 'frisked' before entering the air side of airports. These frequent flyers tolerate the long lines at peak hours with pragmatism and patience and are the best prepared passengers before going through the metal detecting archway, having previously removed all metal objects from their person and placed them in the bin that runs through the hand baggage x-ray scanner. The hand-held metal scanner and pat-down frisking process for them is then very quick.

You Can Keep Your Hat On

In x-ray and mm-wave scanning systems, the person is simply required to raise their arms above their head to enable the scanner to 'see' the whole body. It is therefore easy to understand why certain religious and human rights groups immediately objected to the introduction of such machines that present what they assume to be a detailed picture of the person to a complete stranger.

Manufacturers have already quite easily overcome this objection in two ways: firstly they have effectively dumbed down the original high-resolution 'virtual striptease' of the body form, and facial features can no longer be recognized. This does not reduce the machine's sensitivity to suspect items at all, but simply removes detail from the body image, although surgical alterations or attachments and piercings will still be visible. Areas of the body marked by the analyst for traditional hands-on frisking are displayed to security staff on a neutral diagram.

Secondly, object recognition software is being trialed – similar to that already successfully used in CCTV systems – that obviates the need for anyone to look at the original scan results. Algorithms will identify suspect items and automatically indicate areas of the body which should be more thoroughly inspected. Although early systems were capable of storing images – and some still are for training and evaluation purposes – operators assure us that the newest machines do not have any storage capacity that allows image output and they can therefore not be misused.

Hot Or Not

It is easy to understand the average person's objections to being subjected to any sort of invisible rays. Science fiction series and even the humble microwave oven have demonstrated over the years that such rays are deadly. But the intensity is the deciding factor and, while it is hard for manufacturers to quickly prove that there is no known danger in being scanned by either type of machine, help is at hand from the American National Standards Institute (ANSI) with ANSI 43.17 which addresses x-ray scanners for security purposes and with which all such personnel scanners comply.

A lot of misinformation is circulating around the Internet and manufacturers are constantly having to defend their technology. In December 2010, for example, Steven Smith, President of Tek84, found it necessary to write to Rush Holt of the US house of Representatives to counter what he considers to be incorrect third-party information. The debate centers around comparisons between medical and security x-ray scanning, specifically about how deeply the x-rays penetrate into the body as well as the radiation dose on the upper skin layers. His reasoning is that the entire x-ray dose in fact penetrates deep into the body, distributing the effect over a much larger volume. The scanner image, however, is created from the backscatter arising from the first few millimeters of the body, predominantly the skin tissue. The radiation exposure is therefore not concentrated on any given area of skin.

Manufacturers also try to make easily understandable comparisons for the less technically-

mindful passenger. For example, The Rapiscan Secure 1000, currently the most widely used device, scans with a dose of less than 10 µREM. Sitting in front of a CRT television for one hour would subject you to around ten times the exposure. During an average two-hour flight above the natural filtering effect of the lower atmosphere you would receive around 100 times the naturally occurring x-rays than being scanned just once. One security scan delivers less than 0.2% the dose of a medical chest x-ray. Fear of the unknown can be countered with facts like these.

It has been noted during trials, by the way, that the emotive word „radiation“ should not be used on any nearby signs or explanatory leaflets due its negative connotations with Chernobyl and atomic warheads, whereas the word „x-ray“ is perfectly acceptable thanks to its positive medical benefit even though the radiation dose is many thousands of times higher than a single body scan.

Spreading the Word

The American Transportation Security Administration (TSA) is taking a firm stance on enforcing passenger scanning. By the end of 2010, around 500 systems will be in mandatory daily use at US airports. As increasing numbers of passengers are going through body scanners and finding the experience quite acceptable, word-of-mouth is ensuring that initial resistance to these systems is fading fast. In fact, four out of five

passengers prefer to be scanned by a machine than have a total stranger pat them down - still a slightly humiliating experience, even for frequent flyers.

Although there are still pressure groups who coordinate their efforts to have the ‚porno scanners‘ banned, reassuring words from manufacturers, government agencies and the media as well as demonstrations of the ‚fuzzy‘ body images that are actually produced are all helping to improve the acceptance of these systems. A continued program of education will help to overcome the often ill-informed and exaggerated opinions held by opponents of such scanners. With further development, shorter scan times will be possible and that will mean shorter lines after check-in before going air-side. That is something the airport operators, security staff and passengers alike will come to greatly appreciate.

Part 1 of this article was published in GIT SECURITY 1/2011. You will find Part 1 of the article also on www.GIT-SECURITY.com

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