

**NCTb Q&A security scan  
dated 6 January 2010**

**What is the technology behind the security scan?**

The security scan is a scanner based on technology that applies millimetre waves. The waves pass through clothing and are reflected by the skin. The waves are also reflected by other materials such as plastic, metal, wood, iron, ceramics etc. This is how suspicious objects are identified.

**What is the procedure for the security scan?**

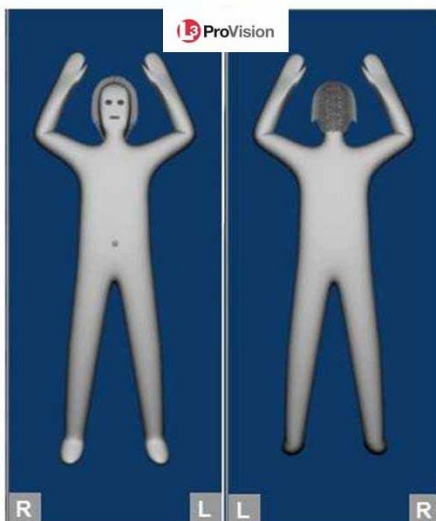
The person being checked walks into the machine and stands with his or her arms raised. A scan is made within two seconds. The security scan software analyses the images and indicates, without intervention from a security guard, whether an object has been detected on the body of the passenger. The security guard sees a simple outline image of a person on a screen next to the security scan. Yellow spots indicate where the security scan has detected something. No picture of the passenger is generated during this process. If the security scan detects an object on the body, the passenger is subsequently searched in the place where the object was detected. If the security scan does not find any objects, the screen will be green and the passenger will be allowed to proceed.

**Is use of the security scan mandatory?**

No, passengers are allowed to refuse to go through the security scan. In such cases, passengers are searched in full.

**What does the security guard see?**

The security guard sees a simple outline image of a person on a screen next to the security scan. Colours on the image subsequently indicate whether a passenger is declared safe or otherwise. If the security scan detects an object on the body, this is indicated with a yellow area on the image where the object has been detected. On the basis of this information, the passenger is subjected to a targeted search.



**Are the images stored?**

No, the equipment with automatic detection does not take pictures of persons, but makes an analysis on the basis of raw scan data. There are therefore no pictures that could be stored. Raw data is not stored either.

**Is the security scan more effective than the existing method of checking?**

Security scan tests have been carried out in the Netherlands since 2006. Both the government and Amsterdam Airport Schiphol are eager to cooperate in further improvement of checks that contribute to safety. The Ministry of Justice, Amsterdam Airport Schiphol and the customs authorities have therefore investigated whether the security scan constitutes in practice a good alternative to the existing checks. The results show that the security scan is also able to detect objects other than metal ones. In view of the new methods used by terrorists, the security scan can make a positive contribution to the effectiveness, but also to the efficiency, of airport security.

**Is the security scan harmful to my health?**

The security scan does not entail any health risks. Unlike certain medical scanners, the machine does not use X-ray technology. Anyone, therefore also pregnant women and people with a pacemaker, as well, can be checked with the security scan without any health-related risks. TNO has performed an investigation into any health-related effects of the security scan. The level of intensity of the security scan is more than 6,000 times lower than the standard level of intensity that is considered safe by both the Health Council of the Netherlands and according to European regulations in the field of public health.

**Is this the same machine that is used to detect drug swallowers?**

No, the body scan that is used for this purpose uses X-rays to look inside the body for any contraband carried internally. The security scan only scans the outside of the body and does not use X-rays.

**Is it comparable to a sonogram?**

No, sound waves are sent through the body during a sonogram. The security scan only scans the outside of the body.

**Is it similar to an MRI scan?**

No, an MRI scan looks inside the body. The security scan only scans the outside of the body.

**What is the difference between a security scan, body scan or millimetre wave scanner?**

The term body scan is often used for equipment that looks inside the body. Naked scanner is a term often used in the media, but which has no relation to a certain type of equipment. The security scan is a machine that can detect objects carried on the body. The Millimetre Wave Scanner is the type of scanner in use at Amsterdam Airport Schiphol.

**Is the security scan a method of checking that has been approved by the government?**

Yes. The Ministry of Justice, which is responsible for civil aviation security in the Netherlands, has granted Amsterdam Airport Schiphol permission to use the security scan following approval from the European Union.

**Do security guards have to attend special training?**

Yes, security guards that operate the security scan have followed special training.

**How long has this technology existed?**

Millimetre wave technology has existed since 1986. It was first developed for the clothing industry, where it was used for taking measurements. The technology has since been used for several years as a security resource.

**What are the results of the security scan?**

The security scan is also able to detect objects other than metal ones. In view of the new methods used by terrorists, the security scan can make a positive contribution to the effectiveness, but also to the efficiency, of airport security. The security scan is client-friendly as well. Its use leads to fewer searches. Passengers are therefore able to pass through personal checks faster and, it is expected, in a more pleasant and convenient manner.

**Am I allowed to pass through the security scan together with my child?**

No, only one person at a time is allowed to use the security scan. The waves of the security scan are reflected off of the skin, so stepping into the security scan together means that no clear image can be created. Children pass through the security scan independently. If they are unable to do so, they will be searched.

**Is a hand search performed following the scan?**

Only if the software detects an object and indicates its location on the screen.

**Can the security scan operator see me in the nude?**

No, the security scan does not take pictures of passengers. The security scan analyses the scan data and subsequently indicates on the outline image on the screen whether and, if so, where an object is located on the passenger's body. The security guard therefore only sees the image on the screen and decides on the basis thereof to investigate further.

**Can I bring anything through the scan, including my wallet, keys, mobile phone etc.?**

No, you will have to place these objects together with your coat in the tray.

**How many scans are being installed?**

It is the intention that, within the foreseeable future, all passengers departing for the US will be checked by means of the security scan. The number of machines will be based on the number of passengers.

**Is it the intention that all detection gates will, in time, be replaced by security scans?**

That will depend on developments at the European level.

**It takes two seconds for passengers to be scanned, while they otherwise can pass through a detection gate in a shorter time. Will this not result in significantly longer queues?**

The current security checks consist of a metal detection gate and, for a portion of the passengers, a search. The use of the security scan means that a portion of the passengers need not be searched anymore.

**Will use of the Security Scan eliminate the need for performing a hand search?**

The security scan does not replace searches, but its use is expected to lead to fewer searches.

**Can all passengers be checked with the aid of a security scan? Including passengers with for example a pacemaker, prosthetic limb, crutches or those in a wheelchair?**

Passengers with pacemakers can use the security scan without any problems.

It is necessary, for the proper operation of the equipment, that the passenger is able to stand for several seconds with raised hands. This will perhaps not always be possible for someone on crutches or in a wheelchair. These passengers will be screened by means of a search and investigation of the aids, as is currently already the case during the use of metal detection gates. As the equipment is intended to provide an alert in the event objects are carried on the body, it is possible that prosthetic limbs will also trigger the alert. These alerts will be resolved by the security guard involved, with due observance of the rules of courtesy.

**How is it ensured that privacy will – to the greatest extent possible – not be violated during the use of the security scan?**

An automatic detection algorithm for the scanner, such as in use at Amsterdam Airport Schiphol, has been developed. Its use means that it is no longer necessary for an operator to examine the scan, this is done automatically by a computer. This technology means that the scan image is no longer seen by any person, including by a person remotely. As a result of the fact that the security scan indicates where the object is located on the body, it will be sufficient to perform a local search.

**How is it guaranteed that the health of passengers, crew and security guards is not jeopardised during the use of the security scan?**

The security scan, as in use at Amsterdam Airport Schiphol, uses *millimetre wave* technology. Passengers are not exposed to X-rays. Scanning with the *millimetre wave* technology presents no health-related risks. This has been confirmed by research performed by TNO.

**Which security scanner is being used at Schiphol Airport?**

The Provision security scanner, by L3 Communication equipment (<http://www.l-3com.com/>)

