# European Union:
# EU Airport Security: Body Scanners

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August 2010
MR-156

**Summary**

In June 2010, the European Commission (EC) published a Communication on the use of body scanners, as one of the screening methods allowed by the EU Civil Aviation Security Directive. The Communication assesses the potential risk of body scanner technologies to human rights, data privacy and to the health of the individuals exposed. It remains up to the EU Member States to choose whether or not to make use of these technologies. Some EU Member States have been testing such technologies while others currently ban the use of ionizing radiation other than for medical purposes. This report outlines the background and basic recommendations of the EC.

## The Civil Aviation Security Directive

Regulation 300/2008/EC on Common Rules in the Field of Civil Aviation Security is the framework regulation which establishes common rules to protect civil aviation against acts of unlawful interference that jeopardize the security of civil aviation. The common basic standards set out in this regulation, among others those regarding the screening of passengers, are only minimum security requirements on top of which EU Member States may apply more stringent measures.

## Screening Methods Allowed

The allowed methods of passenger screening can be found in Regulation 2009/272/EC supplementing the common basic standards in Regulation 300/2008/EC. Body scanners were not mentioned in this regulation. The EC's Communication of June 2010 concerning the use of body scanners is the first step aimed at including them in the scope of the Regulation.

In the Communication to the European Parliament and the Council, the EC addressed the increased use of body scanners in EU Member States with the intention of passing a measure that would harmonize the standards applicable to these scanners throughout Europe. In this report, the EC assesses the available technologies as well as emerging ones which are still under development. Among the existing and commercially available technologies, the EC mentions **passive millimeter-wave**, **active millimeter-wave**, **X-ray backscatter** and **X-ray transmission imaging**. While the Communication underlines the ongoing use of the first three technologies in various airports worldwide, it also implies that X-ray transmission imaging systems are not to be used for aviation security screening in Europe because of the high radiation doses they emit. The emerging technologies (still under development) mentioned include **passive and active sub millimeter-wave imaging**, **passive and active terahertz imaging**, **infrared thermal imaging** and **acoustic imaging**.

## Performance

With regards to the performance of these body screening technologies, the Communication outlines their capacity to detect non-metallic items and liquids as opposed to the walk-through metal detectors used in airports today. The EC goes further by referring to trials conducted by certain EU Member States reporting that body scanners "are a valid alternative to existing screening methods" – comparable to full-physical hand searches – with an emphasis on the added speed and convenience.

## Fundamental rights and data privacy issues

According to the EC, data should be protected and the persons to be scanned should be informed of the potential use of the images taken. "As a rule personal data such as images should only be collected, processed and used in compliance with the applicable data protection principles. Images should only be used for aviation security purposes. In principle, storage and retrieval of images created by Security Scanners[1] should not be possible once a person has been cleared for not carrying any threat items. Only if an individual is stopped for carrying such a prohibited article an image may be retained as evidence until the passenger is ultimately cleared or denied access to the security restricted area and eventually the aircraft."

Regarding the protection of fundamental rights and human dignity, the EC stresses the need for these to be protected. To do this, the EC proposes the use of certain operational rules or technologies. These can be found in section 5.2.3. of the Communication, along with additional technologies which might be used to enhance data protection.

## Health issues

The Communication details the health and safety issues related to each of the commercially available technologies by looking at the extensive research and evaluation preformed by the relevant agencies and organizations. It concludes that:

- **passive millimeter-wave imaging systems** do not emit any radiation and do not raise health concerns;
- **active millimeter-wave imaging systems** use non-ionizing radiation generally considered not harmful compared to ionizing radiation such as X-rays and "studies on millimeter technology […] indicate that the exposure of persons to non-ionizing radiation below limit values specified in current legislation has not been shown to have health implications";
- **X-ray backscatter** exposes individuals to ionizing radiation, but the report underlines that the dose is low – it would take around 40 screenings per day to reach the dose limit imposed by law. The EC states that "the use of X-ray technology should always be preceded by an assessment of the proportionality and justification of the measure being proposed";
- **X-ray transmission imaging** exposes individuals to radiation much higher than the dose from backscatter technology and therefore, is not considered for systematic screening in aviation security (and in certain cases could cause some of the recommended annual limits to be exceeded).

[1] Body scanners.

Moreover the Communication underlines that under Euratom legislation[2] the responsibility of making an in-depth risk assessment and of deciding whether or not an activity exposing persons to radiation can be justified lies with the EU Member States. Currently, certain EU Member States preclude exposure of persons to ionizing radiation other than for medical purposes through national legislation.

## Report's conclusion

According to the EC, body scanners would improve the quality of security controls at EU airports but "any possible future EU harmonization in this area needs to provide for alternative security checks for vulnerable groups including pregnant women, babies, children and people with disabilities." The EC ends the Communication by stating that "today Security Scanners exist that neither produce full body images nor emit ionizing radiation. … current security scanner technologies can meet existing EU health standards but certain types of equipment will require technical and operational standards to be fixed. Maximum radiation doses must be respected and precautionary safeguards established."

## Future Legislative Procedure

The EC plans to introduce further implementing measures in two steps.
To start with, the EC plans to include body scanners in the scope of Regulation 300/2008/EC through discussions with an advisory committee consisting of EU Member State representatives. After the EC has presented its proposal, the European Parliament and the Council have three months to examine it.
Secondly, the EC plans to introduce implementing measures on health and privacy. This should be done without the involvement of the European Parliament.

## Weblinks

The Communication of the EC on the use of body scanners in the EU:
http://ec.europa.eu/transport/air/security/doc/com2010_311_security_scanners_en.pdf

Directive 300/2008/EC on Civil Aviation Security:
http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2008:097:0072:0084:EN:PDF

Directive 272/2009/EC supplementing the common basic standards in Regulation 300/2008/EC on Civil Aviation Security:
http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:091:0007:0013:EN:PDF

Regulation 185/2010/EC laying down detailed measures for the implementation of the common basic standards on aviation security:
http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:055:0001:0055:EN:PDF

The European Commission website on aviation security:
http://ec.europa.eu/transport/air/security/security_en.htm

[2] Council Directive 96/29/EURATOM of 13 May 1996 laying down basic safety standards for the protection of the health of workers and the general public against the dangers arising from ionizing radiation (OJ L 159, 29.6.1996, p. 1).

## For More Information:

The U.S. Commercial Service at the U.S. Mission to the European Union is located at Boulevard du Regent 27, Brussels BE-1000, Belgium, and can be contacted via e-mail at: brussels.ec.office.box@mail.doc.gov; or by visiting the website: www.buyusa.gov/europeanunion.
One can locate the nearest U.S. Export Assistance Center or Commercial Service offices throughout Europe by visiting www.buyusa.gov and www.buyusa.gov/europe.

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