



SAFETY & SECURITY

Jane's Airport Review

Date Posted: 07-Sep-2009

Omniperception teams with BAE Systems on facial recognition technology

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Omniperception of the UK has joined forces with BAE Systems on a research-and-development project that aims to develop next-generation facial recognition technology.

Meanwhile, an undisclosed company operating at London Heathrow has become the first aviation customer to use the Affinity CheckPoint facial recognition system from Omniperception for staff access control.

"Heathrow is the first airport to use CheckPoint," confirmed Omniperception Chief Executive Officer Dr Stewart Heffernan. "The customer will also roll it out at its other airports in the UK and abroad.

"The one thing the customer appreciated above all about CheckPoint is that ambient lighting conditions do not affect its performance."

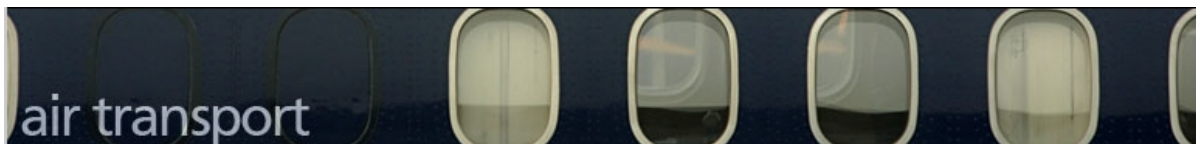
At initial enrolment two separate images of the subject are taken - one in normal light and the second in infrared. The system then applies an algorithm to create a neutral image that is unaffected by ambient conditions; this is then stored in a database.

The Omniperception/BAE Systems contract is effectively an 18-month programme starting from early 2009.

"The contract is exclusively for the research and development of facial recognition systems," Heffernan told *Jane's*. "We're working towards delivering an actual product at the end of it."

Omniperception is carrying out "95 per cent" of the work and retains intellectual property rights for any products or technologies arising from the contract, he added. "There's a bit of project management and systems design work being done by BAE Systems. That 5 per cent means that anything we develop would fit in with BAE's product suite."

The project aims to deliver a range of competencies to both parties, mutually identified by Omniperception and BAE Systems as being strategically important. "For example, both Omniperception and BAE Systems have identified that for facial recognition to be more widely deployed, we have to cope with relatively poor-quality



images from CCTV," said Heffernan. "The algorithms also have to be more resilient to angles, lighting conditions and subject poses, since people don't generally look straight into the facial recognition camera. The programme we've got aims not only to produce algorithms that can be used with low-quality images but also deliver new technology that means we can cope with a wider diversity of images, lighting conditions and so forth."

Increasing the resilience of the algorithm should directly benefit access control biometric products for aviation security such as CheckPoint, Heffernan said. "There are two products - one of which exists now - that are aimed specifically for aviation security. The first is CheckPoint which will be used increasingly for airside staff access control - absolutely not for passengers. And, as we go forward and make use of developments under the BAE Systems contract, we will increasingly move away from pure access control to a product that processes live video for either facial recognition or video analytics purposes."

Heffernan said he expected this surveillance-type product to come on-stream in 2010. "We've got consultations with a number of interested parties to ensure that the product meets official standards for image quality, user interface and so forth," he remarked.

The application of biometrics at airports arguably suffered a severe setback on 30 June when the UK government decided to scrap plans under the Critical Worker Identification Card (CWIC) programme to make biometric identity cards compulsory for all airside workers, in favour of a voluntary scheme.

London City and Manchester airports are still proceeding with CWIC as each airport has already invested significant resources in the scheme, but wider acceptance is highly improbable. "What's the point of having it if it's voluntary? There is none," argued Heffernan. "What happened was an expedient alternative to cancelling the project outright, which would be politically unacceptable. Yet any airport wishing to adopt CWIC may not find funds or support forthcoming from central government.

"It's a sad thing that the government has done. Making a biometric card compulsory for an airside worker is not a civil liberties issue - biometrics are stored in lots of other applications. The biometrics industry has to take some of the blame for not pressing its case enough and making it understood how we can help security while not infringing liberties. If government has taken the wrong decision because we haven't educated them, we have to take the blame."