


Mine technology may wake tired pilots

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Groundbreaking technology used to detect and wake up drowsy truck drivers on mine sites is now attracting interest from the aviation industry, including airlines Qantas and Emirates.

Developed by Canberra-based company Seeing Machines, the technology scans drivers' eyes for signs of drowsiness and then sounds an alarm or triggers seat vibrations if the eyes close for more than a couple of seconds.

First developed for mining companies, the eye-tracking technology has been widely adopted by the automotive industry and is being investigated for air traffic controllers and airline pilots.

Seeing Machines general manager of aviation Patrick Nolan said the firm had partnered with airline pilot training company L3 Commercial Aviation and was in talks with Qantas about how the technology might be used in flight simulators, as well as in the cockpit.

He said “gaze tracking” could determine where pilots were looking in different situations such as during landings and emergencies, with that information then used to enhance training.

“The reason we’re gaining traction is there’s a significant pilot shortage, so the efficiency requirement in pilot training is a strong requirement,” Mr Nolan said.

“The number of aircraft are going to double and the levels of automation will continue to increase so therefore understanding and being able to support more effective monitoring is the key message we’re communicating.”

The applications of the technology to the cockpit were still being developed but Mr Nolan said it would have uses in the area of pilot fatigue and incapacitation.

“What we’re really trying to work on in the simulation and training environment is being able to monitor and understand how the crew are making decisions, how they are taking in the significant amount of information in a cockpit during pretty specific and technical scenarios,” he said.

“Monitoring of systems is becoming as important as piloting ... because there’s so much information being made available and that information is clearly interpreted through the eyes.”

As well as Qantas and Emirates, Seeing Machines had met with Airservices Australia to discuss the practical use of the technology in air traffic control towers.

An Airservices spokeswoman said they were interested in any technology that could enhance safety management and “help us deliver our services more efficiently and effectively”.

Mr Nolan said in the “console environment” of an Air Traffic Control tower the system could pick up on changes to workloads.

“What we’ll be doing there is providing indications of those workload levels and making information available to the shift manager in that space,” he said.

“It’s not so much around punitive measures; it’s more around supporting and making sure that the controllers and operators are in the best workload state to support the operations at hand.”