



STAR PRODUCT: Seeing Machines operations manager Belinda Burgess uses her own face to demonstrate the company's faceLAB computer vision processing technology.

Firm's technology looks to future

By Sonya Neufeld

A local award-winning vision technology firm is letting the rest of the world see that Canberra's burgeoning technology industry can play a big part in helping others.

Seeing Machines, based at the Australian National University campus in Canberra, develops computer vision processing technologies that allow machines to see and track human faces and moving objects.

It might not sound like much, but the technologies can actually play a part in combating driver fatigue as well as helping doctors detect and manage eye diseases such as glaucoma.

Founded in 2000, the company's star product is called faceLAB, which tracks head pose, gaze direction and eyelid closure to monitor driver fatigue.

Operations manager Belinda Burgess said the technology had been picked up by researchers, car and transport companies, defence organisations, the marketing sector and even child psychologists around the globe.

At a conference in Washington last week, the company also issued its new product, Driver State Sensor, which detects and warns against both fatigue and driver distraction.

Ms Burgess said the truck industry was particularly interested in the

technology. "There is a camera in front of the driver looking at his face and detecting whether he is looking at the road scene as well as his eyelid behaviour to monitor fatigue and if he is falling asleep it warns the driver," she said.

"That's important because if we can reduce the number of accidents, we can save lives and prevent serious injury as well as reduce the enormous cost of transport accidents."

According to the NRMA, driver fatigue is a factor in 25 per cent of fatal motor vehicle crashes.

Ms Burgess said the company had also developed a non-intrusive glaucoma detection device that offered the first stress-free objective test for

the eye disease rather than the subjective methods which relied heavily on human input.

The device was more accurate than existing tests and worked by shining light patterns into patients' pupils, using their involuntary response to detect for glaucoma within three minutes.

"It will hopefully save people's eyesight and the economic and social cost of eye disease is enormous in Australia, so that will be a big benefit to the community," Ms Burgess said.

While it's still early days for the glaucoma device, which is expected to be launched later this year, she said it would eventually be able to help with many other eye diseases.