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Wayne weighs in with X-ray vision

By Science Reporter
SEAN FEWSTER

YOU can't see dangerous gas pipes running under your feet but, if there are, Wayne Piekarski could see them.

The 24-year-old University of South Australia student has developed a computer imaging system that will give search-and-rescue workers X-ray vision.

Mr Piekarski built the Timmith-ev05 virtual-reality system as part of his PhD studies in computer information systems.

Today, his revolutionary system will be one of the competitors for the nation's highest computer science prize, the Eureka.

He will be up against two national research centres but Mr Piekarski said yesterday he was confident about his chances.

"(The system) looks a little like something from a movie, but the system hasn't been developed to look sharp - mind you, the technology is sharp," Mr Piekarski said.

It consists of goggles - a prototype head-mounted display - and a backpack computer.

Wearers can see the graphics on the screen in front of their eyes, while also being able to see through the visor to the surface they are working with.

"By mapping the internals of a building and having that data on computer, the system will allow kitted-up rescue workers to see where the gas pipes are on a real building as they are going in to fight a fire or prevent a gas explosion," Mr Piekarski said.

The system merges computer game-style virtual-reality graphics with a high-speed computer processor and a global-positioning system - or GPS.

The GPS keeps track of where the Timmith-ev05 is in the building and feeds that information to the computer backpack.

The backpack updates the blueprints, which are then overlaid on what the user sees through the goggles.

"The system is so responsive that, as the workers move around the building, the information displayed on the head-mounted screen is accurate - no matter where they are or what perspective they're looking from," Mr Piekarski said.

The winner of the Eureka is expected to be announced late today.



READY TO RESCUE: Wayne Piekarski and the new Timmith virtual reality imaging system yesterday.
Picture: BRETT HARTWIG

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