CASE STUDY – iOmniscient Sydney Harbour Bridge Project

Protecting an Australian icon
An important message has been sent to anyone who intends to harm or infringe on the iconic Sydney Harbour Bridge:

*Security technology has evolved and potential security breaches to the Sydney Harbour Bridge can now be detected anywhere, any time of day or night.*

A unique artificial intelligence system now watches over the Sydney Harbour Bridge. Despite crowds and traffic flow security can identify left parcels or bags, parked cars in no standing zones, intruders and potential violators 24/7.

“Our unique non-motion detection technology means that for the first time the Sydney Harbour Bridge has the most sophisticated intelligent video surveillance system in the world keeping vigil,” stated Rustom Kanga, CEO, iOmniscient – developer of the security intelligence software.

“If an intruder without permission or authorisation enters an area of the Sydney Harbour Bridge in complete darkness, the technology and thermal imaging equipment will pick up their presence as if it were broad daylight.”

Following September 11 and the Bali bombings, security on the Sydney Harbour Bridge was enhanced. A closed-circuit television (CCTV) system and motion detection systems were put in place, and permanent round-the-clock security guards were employed. The Roads and Traffic Authority (RTA) has since been examining what further steps can be taken to further enhance security.

Australian company iOmniscient has developed a world first security system using artificial intelligence technology. The company proposed that the Sydney Harbour Bridge install sixteen iOmniscient IQ series cameras specially enhanced with thermal imaging, and a further eight on the Anzac bridge. The artificial intelligence, which uses human like abilities to identify, reason and make conclusions about non moving objects, was tailored and integrated into existing CCTV cameras. This technology complemented the presence of security guards and was specifically bridged to the digital security system using iOmniscient partner, Dedicated Micros, in the UK.

The technology acts a deterrent for potential offenders and not only detects security breaches in terrorism, but violations such as vandalism, graffiti, theft, parking infringements and public liability. The technology can also assist in collecting higher intelligence data by monitoring object traffic such as people and vehicles, in direction and quantity.

**Artificial Intelligence Technology**
iOmniscient has developed the IQ Product Series using artificial intelligence technology. The intelligence, which uses heuristic algorithms to simulate the human thought process, can identify events that a human operator may miss and brings it to their attention, using an alarm functionality.

Artificial intelligence can identify objects even if they are partially obscured, it minimizes nuisance alarms due to light variations and understands the nature of an object, through understanding perspective and the size and shape of objects.

Heuristic Algorithms replicate the human ability to reason and makes inductive and deductive conclusions from the information available to it. This intelligence has enabled the creation of the Non Motion Detection (NMD) Technology.

**Sydney Harbour Bridge: Quick Facts**
- The Sydney Harbour Bridge is one of the great icons of the twentieth century
- Linking Sydney city with the North shore, the Sydney Harbour Bridge carries eight lanes of road traffic and two railway tracks which form part of the city's suburban rail network.

- Traffic crossing the Sydney Harbour Bridge averages more than 160,000 vehicles every day.

- The Bradfield Highway which crosses the bridge spans 1150 metres or about a mile long and walkers are able to cross the Sydney Harbour Bridge on both sides.

**About iOmniscient**

iOmniscient is a leading pioneer for the next generation of intelligent surveillance.

iOmniscient develops technologies that provide solutions to the most difficult areas encountered in intelligent video surveillance. The company's Intelligent Surveillance products have been implemented by commercial and government users in North America, the Middle East, Europe, Australia and Asia.

iOmniscient has won global recognition as providing the most sophisticated intelligent video surveillance systems in the world.