

# Improved security for electronic devices

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Developing new ways to keep the information held in electronic devices safe will be the focus of a Fulbright Scholar's research over the next twelve months.

Craig Costello is the winner of the prestigious 2010 Fulbright Postgraduate Scholarship in Technology and Communications sponsored by Telstra. The scholarship was established by Telstra in 2004, to support communications technology development and its professionals.

Based at the University of California, Irvine, Mr Costello will undertake twelve months' research into new techniques for security on computer and telecommunications devices.

Craig will work with world-leaders in an applied field of mathematics known as pairing-based cryptography, which promises to make it possible to improve digital security, particularly on devices with limited computational power such as mobile phones, palm pilots, laptops, remote sensors, and smartcards.

His work will focus on 'pairings on elliptic curves', which are unique, complex mathematical functions that have very special properties.

Craig plans to use the knowledge gained in the U.S. to develop technology that will benefit all users of electronic communications who require security for their information, including the financial sector, commerce, national security agencies and domestic users.

In congratulating Mr Costello, Dr Hlubucek, Executive Director, Australian-American Fulbright Commission, said that expertise in the area of secure encryption is of paramount importance to keep Australia at the cutting edge in international markets.

"Australian technology development will be enhanced from Mr Costello's collaboration with U.S. expert cryptographers. His U.S. experience will benefit both Craig and his colleagues after his return," Dr Hlubucek said.

The Telstra sponsored scholarship provides a wonderful opportunity for both the Fulbright Scholars and for the industry Dr Hlubucek said.

"The Fulbright Commission is grateful for Telstra's support to enhance opportunities for the technology and communications sector through this scholarship," Dr Hlubucek said.