Students aim to crack 60-year-old mystery

A mysterious death that took place in Adelaide more than 60 years ago is being used as the basis for an undergraduate project for two Electronic Engineering students.

Honours students Andrew Turnbull and Denley Bihari are trying to crack a secret code associated with the dead man, who was found slumped on a seawall at Somerton Beach in December 1948. The man was initially believed to be poisoned, but a post mortem examination could not establish a cause of death.

During the coronial inquest a year later, pathologist Professor John Cleland from the University of Adelaide was assigned to re-examine the evidence.

He found a piece of paper tightly concealed in a fob pocket in the man's trousers, with the words "Tamám Shud" printed on it. This is the only clue police have to solving the identity of the unknown man, thought to be aged about 45 at the time.

The phrase means "ended" or "finished", and was found on the last page of a collection of poems called *The Rubaiyat of Omar Khayyam*. Coincidentally, an unnamed man found a translated copy of the book in the back seat of his car parked on Jetty Road, Glenelg, the night before the man's body was found.

The book was missing the words "Tamám Shud" on the last page and microscopic tests indicated that the colour and texture of the piece of paper matched the book.

In the back of the book, faint pencil markings of a few lines of capital letters were found. Initially the letters were thought to be words in a foreign language before it was realised it was a code.

Code experts were brought in to decrypt the letters without success.

Six decades later, police are no closer to solving the mysterious death.

Professor Derek Abbott from the School of Electrical and Electronic Engineering believes his students may have the best chance yet of cracking the case.

Using their knowledge of information theory and statistics, the students are taking a structured approach to studying different coding schemes, termed 'cipher cracking'.

The students will use a process of elimination to determine whether particular coding systems were used or not.

"While this project has an added excitement factor, due to a mysterious death, it also has a serious, hard-core engineering side," Professor Abbott said.

"Andrew and Denley will use techniques in information theory, probability, statistics, encryption, decryption and data mining. The project will also improve their software skills."

The Somerton man, of European appearance, carried no identification and his dental records did not match any known person.

An autopsy revealed that his stomach was highly congested with blood and his heart had failed, traits consistent with poisoning. However, tests failed to reveal any foreign substance.

Scotland Yard was called in to assist with the case but with little result. Despite a photograph of the man and his fingerprint details being circulated throughout the world, no positive identification has ever been made.

Rumours that the dead man was a Russian spy, poisoned by unknown enemies, have been fuelled by the mysterious nature of the case and the secret code.

"This was a significant time in Cold War history," Professor Abbott said. "The Prime Minister, Ben Chifley, was confronted with an embarrassing situation because the Americans had banned all classified information to Australia in 1948 due to a suspected leak from Australia to Moscow via the Russian Embassy in Canberra."

In the 61 years since the Somerton death, numerous efforts have made been made to crack the code, including efforts by military intelligence and mathematicians.

Andrew and Denley will spend the remainder of this year working on the code cracking aspects of this project. They are being supervised jointly by Professor Abbott and Dr Matthew Berryman from the University of South Australia.

Story by Candy Gibson

Above: Professor Derek Abbott flanked by Electrical & Electronic Engineering students Denley Bihari and Andrew Turnbull, with the code they are hoping to crack

Photo by Candy Gibson