Electronic voting system tested by Newcastle University

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An electronic vote capture and counting system, designed to overcome the problems which have dogged computerised voting systems throughout the world, notably the touch screen voting machines in the US and pilot schemes run in the UK , was given its first major test at Newcastle University on Tuesday, 13 May 2008.

The 'Pret a Voter' system was invented by Prof Peter Ryan (pictured) of Newcastle University and implemented by a team of computer scientists at Newcastle and Surrey Universities. It is hoped that that once the system is tried and tested it could attract global interest.

The designers say that Pret a Voter is far less prone to error, hacking and corruption, than either manual counting or the electronic systems which have been tried before. In addition, individuals can check that their votes have been cast and auditors can easily verify that voting has been fair and error-free.

Many countries have tried electronic voting systems, with little success. Last year, the Electoral Commission said that web and phone voting experiments in the UK should be stopped following widespread concern over security of pilot schemes run during the May 2007 elections.

The trial run, supported by the Electoral Reform Services (ERS) and Newcastle University's Centre for Software Reliability and School of Computing Science, took place in the King's Road Centre at Newcastle University. The 'candidates' were three charities, each trying to secure

the votes of students. At the end of the day, the charity with the most votes received a pot of cash of about £1,000 donated by the sponsors, plus further donations by voters.

Student voters were given a ballot paper and asked to draw a cross by a candidate (in this case, a charity) in the normal way. However, the positions of the candidates on each ballot form were selected at random. After the cross had been drawn, the student tore off the list of candidates, so that it was impossible to tell for whom the vote had been cast. The strip of paper with the cross was then scanned in to a computer, along with a serial number which allowed the computer to allocate the vote to the correct candidate. Afterwards, voters were able to check that their vote has been cast by logging on to a special website and entering their serial number.

Professor Peter Ryan, a computer scientists who led the project, said that a successful trial run will help prove that the system could be introduced in polling stations. Eventually, the system could allow people to vote from home via the internet, but that would require further development, he said.

Professor Ryan said: 'We looked very carefully at previous electronic voting systems and we are confident that we have solved many of the problems that existed. This has not been easy but we believe that voters and politicians can have confidence in Pret a Voter.'

As well as offering better security, the system has the potential to be much quicker that manual counting and may even encourage more people to turn out to vote.

Source: Newcastle University