

Experiences as an e-counting election observer in the UK



Photo: Richard Clayton

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In 2007, e-voting and e-counting elections were held in the UK

- England: 10 pilot areas – to be nationwide by 2008
- Scotland: all 32 areas – a consequence of holding simultaneous national and local (STV) elections
- Open Rights Group (ORG) aimed to monitor these elections
 - Integrity of technologies and process
 - Risks of electoral fraud or error
 - Risks to the secrecy of the ballot
 - Collect views of voters, candidates and officials

Conclusion: “The Open Rights Group cannot express confidence in the results for areas observed”

A range of technologies and vendors were used, and time-scales were tight

Technology	Areas	Suppliers
Internet/phone	4	ES&S, OPT2VOTE, Tata
e-counting	5	Indra, OPT2VOTE, Software AG
combined	1	ES&S

Scotland used an e-counting system from DRS

Only 3 months were allocated between confirmation of pilots (29 January 2007) and completion of system development and testing (March 2007)

Elections were held on 3 May 2007

The experiences of election observers varied depending on area

- The 2007 election was the first in the UK where accredited election observers were permitted
- The legislation was not drafted with e-counting/e-voting in mind, so access to servers used had to be negotiated separately
- Guidance from Electoral Commission was “observers must be able to see as much as candidates and their agents”, but this was not always followed
 - I was prevented from viewing the provisional results which shown to agents representing the candidates
 - Other observers were prevented from taking photographs, despite the media being present
 - One vendor refused to speak to observers and another actively misled an observer over the presence of system failures

Procedural problems were endemic

- Vendors were in total control over the process – returning officers, responsible for the accuracy of the vote, had little or no technical expertise available to them
- Training was not performed on real systems, presumably due to the tight deployment timetable
- Political party workers were initially positive about electronic elections but as problems appeared, they became very negative

“It’s like sitting at home, looking at the back of a television with the sound turned off. The process isn’t being communicated to us, and most people have no clue about what’s going on. It’s a shambles.”

— Dan Hannah

Conservative party treasurer for Stratford Avenue and New Town

Usability was poor across the elections

- Running multiple types of election simultaneously led to user confusion
 - The number of spoilt ballots in Scotland could have changed the overall result of the election
- The wrong party logo was shown on an Internet voting site
- Phone voting did not permit re-casting (so a recording would be good receipt for coercion/vote-selling)
- Audit trail, if present, was opaque and unusable (only ≈ 100 attempts from electorate to verify their vote was counted)
- Adjudication system was poorly designed, staff were working for >35 hours without a break
- Scottish results were calculated in Excel, and because the page was too wide votes from one party were missed

Technological failures were prevalent

- Poor printing/perforations led to excessively high number of ballots sent for adjudication
- Systems had to be rebooted multiple times, software upgraded, files manually moved, edited and deleted to restore operation
- Internet connectivity erratic, so failing electoral register
- No systematic manual sampling of e-counting results
 - In the one ward both manually and electronically counted, manual counting had a total 56% higher (368 votes)
- 2 pilots abandoned and manually counted, others massively delayed (Bedford target was 6 hours, actually over 15)
- Under high load, the Bedford system slowed down, displayed “Error 91” and eventually adjudication results were lost
 - Vendor confident that votes would not be double-counted, and offered to show Visual Basic code, but vetoed by returning officer
 - Request for manual recount denied

In summary, the e-voting and e-counting pilots were a failure

- Electronic systems were slower, less robust and more expensive than manual counting
- The accuracy, secrecy and transparency of the vote were brought into serious doubt
- There is a massive gap between research and implementation
 - Research proposals give high assurances of secrecy, accuracy, transparency and receipt freeness
 - Deployed systems cannot get a distributed counter working reliably, let alone the other requirements

Suggestion

- **Become an election observer** – both for manual and electronic elections: practice is not the same as theory (in practice)

ORG report: <http://www.openrightsgroup.org/e-voting-main/>