

Unilect Election Systems

The Unilect system was re-examined in Austin on August 18, 2005. The system's components and current releases are as follows:

- Patriot PCU** - version 2.56 – precinct control unit used select the voters ballot
- Patriot CVU** - version 2.54 – DRE touch screen voting machine
- Patriot CurbSide Model** - version 2.54 – portable DRE touch screen voting machine
- Patriot Freedom Unit** - version 1.0 – keyboard used with curbside DRE
- IntEllect Voting Software**- version 2.61 – PC based ballot preparation, accumulation, and reporting system
- Absentee Optical card reader**– Model 1000 – used to read large volume of absentee mark-sense ballot cards
- Absentee Optical Mark reader**– Model 20 – generic mark-sense card reader made by Peripheral Dynamics used to read small volume of absentee ballots.
- InfoPackER**– version 1.0 – utility to burn the Info Packs
- InfoPack**– version 1.0 – portable device containing the election setup and ballots cast records; used in the Patriot PCU's

This examination was a follow-up to the May examination where many deficiencies were noted. It appears that the vendor has made significant changes. The changes were made in the central server software, *IntEllect*, as it was the only component that had a release number change. The *IntEllect* release is now 2.61, up from 2.60 in May.

Findings

- *IntEllect* now runs on a PC running Windows 2000 Pro which is more stable than the Windows 98SE that it was running on in May.
- The internal audit log is now encrypted using 128 bit encryption.
- The problem with the IntEllect operator's console having poor message display (i.e. messages interspersed in the middle of a list of precincts) has been corrected.
- *IntEllect* now polls the parallel port used by the real-time audit log printer. It will display a message to the operator if the printer is disconnected or turned off. After the operator acknowledges the message he will have to log in again to resume. However, if the printer is in "pause" mode, *IntEllect* will continue to operate. The messages will be buffered in the printer and will be printed after the printer is put back on-line. If the printer's buffer fills up with the pending messages, new messages will be lost. Most likely, the *IntEllect* operator would notice that the printer is off-line, but this needs to be corrected so that the potential for message loss is eliminated. There may be a dishonest

operator who would try to exploit this flaw. Although, it is unlikely because the number of messages needed to fill up the buffer is unknown and messages are still written to the encrypted disk audit log.

- A cosmetic change was made on the Patriot PCU. The key that previously was labeled "ACCUMULATE RESULTS" now has a five point star which is more indicative of its multiple function usage.
- The large card-reader (model 1000) and the small card-reader (model 20) were tested and performed without error. A message "Invalid Ballot Style" was displayed on the *IntElect* console when the wrong header card was intentionally inserted in the card stack. This message also needs to be written to the real-time audit log.
- Modem transfer from Patriot PCU to *IntElect* was done without a problem. I recommend that the audit log message be enhanced to show that precinct results were received via the modem.
- An attempt to input a precinct was not logged to the the audit log. The message indicated that the precinct was "zeroed". I recommend that the audit log message reflect that this precinct has previously been read prior to the message that it was "zeroed". This would provide a more complete indication as to what was occurring on election night.

Conclusion

The system meets the standards outlined in the Texas Election Code. I recommend certification with the condition that audit log printer "pause" mode problem be corrected before the next scheduled examination.

Tom Watson
Examiner