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Office of the Secretary of State
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Subject: Review of Diebold's DIMS Advanced Ballot Counter (DABC)

EXECUTIVE SUMMARY

This review is limited to a review of a change history to the DIMS and a brief demonstration of DIMS in Yolo County. No testing was completed as part of this review.

Based on the limited demonstration using March primary ballot cards, there were no obvious problems found other than the weak technical security. Local jurisdictions using the system shall need to be cautious and restrict all access to the system before, during, and after the election and provide checks to confirm if the DIMS software has been modified from the installation.

References:

[DIMS] Diebold Election Systems, *DIMS Advanced Ballot Counter Revision History*, 21 Sep 04.

Introduction

The DIMS DABC system is a software system used for the central tabulation and summary of punch cards. In its present form it has been widely used in California and other states since 1989. The system supports various Votomatic and Datavote ballot formats as well as some optical ballots. It is currently only used to support Datavote punch card readers in California. DIMS is a DOS based legacy system that is expected to be replaced by Diebold's GEMS in a later release but not before the November 2004 election.

Security

DIMS security is weak by newer standards. Election files are in clear text designed to be edited by a simple program like Microsoft's Notepad. Passwords are set in election files and start with an initial default. The observed password usage during the demonstration was weak but strongly guarded by the user. Principle security in use is restricting the knowledge of the password to two users and having the equipment positioned so that any access during office hours was visible to office workers.

California Requirements

Provisional ballots and write-ins are processed using manual hardcopy ballot procedures. California rotation rules are supported but probably by manually keying rotations. ABO 190 primary reporting is supported in separate reports for the aggregate total.

History of Changes

DABC has seven component programs, including the commercial ZipDLL.dll. History shows about four significant changes since first Windows based release Mar 1998. Principle changes were the move to Windows 2000 and networking to allow dual workstations with one workstation principally serving an increased number of ballot counters. Specific changes made in last two releases have been to increase the size of elections and election definitions that could be supported, especially to support the ABO 190 requirement.

Currently , two different versions are installed in Yolo and El Dorado counties but both counties are to installed with the same version. The current versions of the programs are:

DabcWin.exe	4.0.3.x
Ecomp.exe	4.0.1.x
Ehdr.exe	4.0.0.x
Esov.exe	4.0.3.x
Esummary.exe	4.0.1.x
Ereport.exe	4.0.1.x

Conclusion

DIMS security is dependent on restricting physical access to the computers where DIMS is installed to a few trusted employees. Once access is gained to system, the system is fairly open. Beyond the basic security questions, no major problems were observed.

Sincerely,



Steven V. Freeman