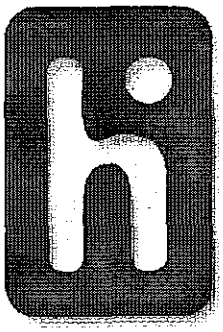


HART intercivic™

eSlate™ Electronic Voting System
Product Description

Hart InterCivic

Election Solutions Group

1650 Coal Creek Drive, Suite E

Lafayette, Colorado 80026

Phone: 303.385.6440 Fax: 303.385.6477

6000-060 Rev. C

Hart InterCivic, Election Solutions Group is committed to election integrity and customer satisfaction. All products, components, and services provided to our customer shall be safe, secure, and effective for their intended use, and they shall meet or exceed the quality and reliability levels expected by the marketplace.

Contents

About This Book

This book describes the Hart InterCivic Election Solutions Group's eSlate™ Electronic Voting System.

How this Manual is Organized

This manual contains suggested procedures for using the Hart InterCivic eSlate™ Electronic Voting System to run an election. The subjects covered include:

- Overview of the Hart InterCivic eSlate™ Electronic Voting System (see page **8**)
- Technical Support (see page **17**)
- Computer Security and Recovery (see page **19**)
- The eSlate™ Electronic Voting System Election Cycle (see page **23**)

Additional Reference Material

Manuals for the eSlate™ Electronic Voting System software and equipment from Hart InterCivic, Election Solutions Group include the following:

eSlate™ Electronic Voting System Product Description (this book)

This manual describes how the various software and equipment components of the eSlate Electronic Voting System are used to run an election.

eSlate™ Ballot Origination Software System Operations Manual

This manual describes how to use the Ballot Origination Software System™ software application, referred to as BOSS, to create an Election database from which you can create MBBs (Mobile Ballot Box™) for use with the eSlate Electronic Voting System.

eSlate™ Precinct Voting System Election Day Manual

This manual describes how to set up and use the eSlate™ Precinct Voting System (PVS) equipment in a polling place on Election Day.

eSlate™ Precinct Voting System Early Voting Manual

This manual describes how to set up and use the PVS equipment in Early Voting polling places.

eSlate™ Precinct Voting System DAU 5000 Voting Unit Setup Manual

This manual describes how to set up and use the DAU 5000™ voting units.

Ballot Now Operations Manual

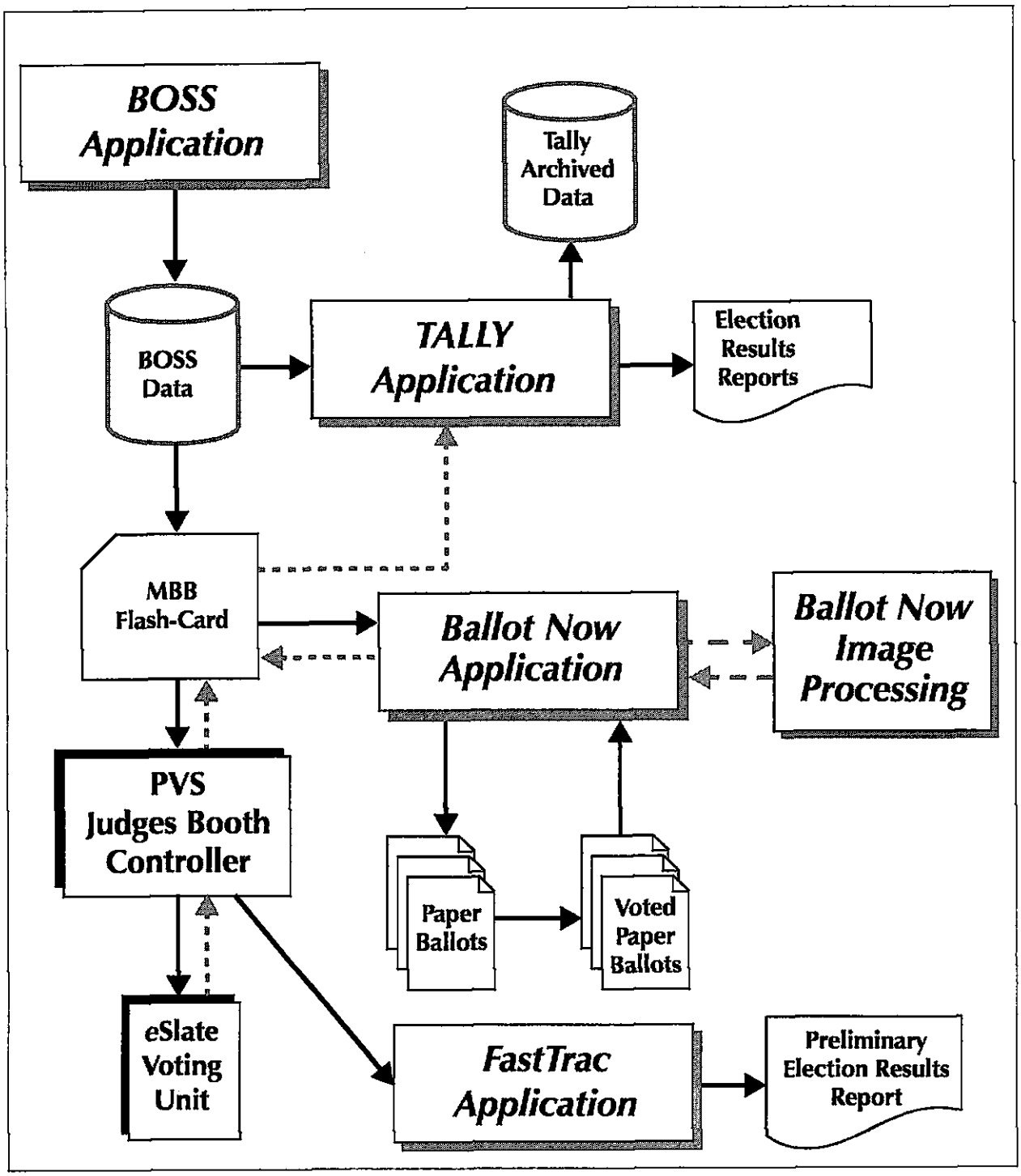
This manual describes how to manage paper ballots for an election created from the eSlate Electronic Voting System.

eSlate™ Tally System Operations Manual

This manual describes how to use the Tally™ application software to read and tally the votes on MBBs that were used during an election.

1 Hart InterCivic eSlate™ Electronic Voting System

1.1 The eSlate™ Electronic Voting System Architecture



1.2 System Overview

The Hart InterCivic eSlate™ Electronic Voting System is a completely integrated suite of products that offers the most streamlined and efficient method for conducting and reporting elections. The eSlate™ Electronic Voting System has three major components:

- The Ballot Origination Software System (BOSS)
- Precinct Voting System (PVS)
- Tally System (Tally)

1.2.1 BOSS

The Ballot Origination Software System (BOSS) is a software application that accepts user input of jurisdictional and election specific information. BOSS is a Windows-based program and uses a commercial database product to store and manipulate data. The ballot generation feature of BOSS creates electronic ballot styles based on the jurisdictional and election specific information supplied by the user. Ballot generation creates a single data file that is used to conduct the election at any polling location. The eSlate proprietary data file is written to multiple PC card memory devices called the Mobile Ballot Boxes (MBBs). MBBs are transported to the various polling locations throughout the county. Each MBB contains the same information so that they can be used in any location. In a polling place, the MBB is used to configure the Precinct Voting System (PVS) and supply ballot data for the election. The same MBB is used to return the ballot images captured by the PVS to Election Headquarters for tabulation by Tally. Once BOSS generates the file for the MBB, the BOSS database becomes locked so that no more changes can be made, thus protecting the integrity of the MBB data file. The BOSS database is subsequently used to initialize the Tally database.

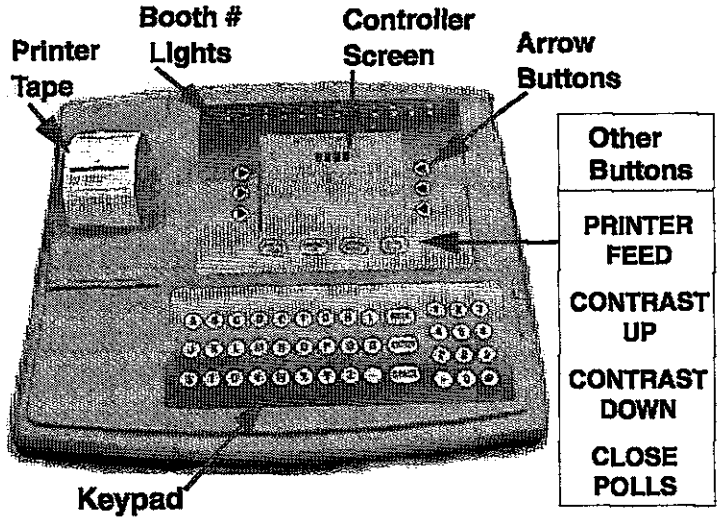
1.2.2 Precinct Voting System

The Precinct Voting System (PVS) is a Direct Recording Electronic (DRE) voting system designed to manage and conduct polling place activities during an election. The PVS is used for Election Day polling places and early voting sites.

The PVS is electronically networked and is made up of a controller; called the Judges Booth Controller (Controller), and multiple voter-input devices, called the eSlate.

1.2.2.1 The Judges Booth Controller (Controller)

The Controller is a stand-alone device located at each precinct-polling place and controls from one to twelve eSlate voting units.

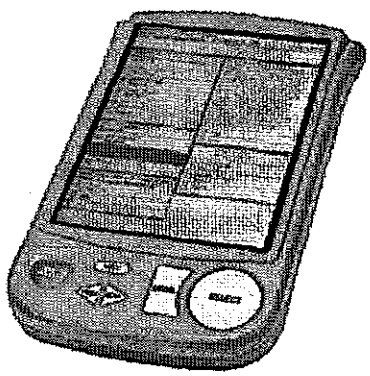


The Controller has the following features:

- A display for delivery of instructions and messages to the operator
- Selection buttons located on the perimeter of the display
- An alphanumeric keypad for entering precinct names, ballots styles and other data
- A built-in printer for printing ballot Access Code tickets, and test and election information
- A slot to insert a PC Card (Mobile Ballot Box [MBB])
- 12 status lights used to indicate the state of each of the connected eSlate voting units

1.2.2.2 eSlate Voting Unit

The eSlate voting unit is used for presenting the ballot to the voting public and accepting their selections.



The eSlate voting unit has the following features:

- A Liquid Crystal Display (LCD) with a protective shield for displaying the ballot
- A user input area that includes a set of push buttons and a wheel for ballot navigation
- A battery area for a battery pack

1.2.2.3 Disabled Access Unit (DAU)

The DAU is an optional device that can be included in the eSlate and provides the following additional features:

- Audio output for "reading" the ballot to the voter
- A slot to insert a PC card containing audio data
- Remote switch input used for the physically disabled

1.2.2.4 The Mobile Ballot Box (MBB)

The MBB is a reusable, portable PC card memory device that is used for storing and transporting election information to and from the polling places. The MBB can have data stored to it many different times using FLASH memory, which does not require batteries to maintain the information written to it. The file created by the ballot generation process in BOSS is written to the MBBs and contains the following:

- All possible ballot styles for the jurisdiction
- A list of polling places and allowable ballot styles for each
- Ballot format information for display on the eSlate voting units and for Ballot Now to print ballots
- A list of serial numbers for registered eSlates and Controllers
- Passwords

During an election, the MBB is installed in the Controller and additional information specific to the voting location is written to the MBB. As voters cast their ballots, ballot images (Cast Vote Records [CVRs]) are written to the MBB as well as audit data associated with the election events.

1.2.3 Ballot Now

Ballot Now is a software application that handles the output and input of paper-based ballots within the Hart InterCivic eSlate Electronic Voting System suite of products. Ballot Now receives data from BOSS via the Ballot Now MBB and delivers data to Tally via the Ballot Now MBB. The system receives input from the user and scanned ballots, and provides the user with reports.

Ballot Now is designed to support paper-based voting solutions, either as a stand-alone system for smaller entities or to complement the Hart Intercivic eSlate Electronic Voting System suite of products. Ballot Now manages a print-on-demand capability to print ballots for testing, sample ballots, and official ballots for delivery to the voter. The same information used to print the ballot is used to define a digital scanning template for processing ballots upon their return. Once the voter returns their marked ballot, Ballot Now uses a high-speed scanner for creating electronic images of the paper ballot, and then applies voting logic to the digital image and extracts the cast vote record.

Ballot Now provides functionality to:

- Apply voting logic to preview and resolve overvoted and undervoted ballots, and write-ins
- Electronically store election records
- Manage the process of writing Cast Vote Record (CVR's) into the MBB for transfer to Tally for tabulation
- Supply a variety of reports about the ballot processing and related activities that can be viewed and printed at any time

The Ballot Now application window displays Public and Private counters.

This system does not:

- Support maintenance of voter registration records
- Print ballot envelopes or labels
- Manage ballot return envelopes

1.2.4 Tally

Tally is a software application that reads, stores, and tabulates the CVRs from the MBBs. At the close of polls on Election Day, all of the MBBs are returned to the central location, including early voting MBBs, and Tally copies the data stored on each. The MBBs contain CVRs captured by the PVS and audit trail data that authenticates the CVRs. Tally is initialized with the locked BOSS database that was used to create the election. This initialization "programs" Tally for tabulation. The only required task prior to beginning the tabulation process is to input any approved write-in candidate names.

1.2.5 Fast-trac

A software utility, Fast-trac, allows a summary of results to be sent to Election Headquarters from the precinct-based Controller to provide advanced, unofficial results. Fast-trac sums the results from the Controller so those preliminary totals may be reported as quickly as possible after the polls close. The utility is separate from the Tally application to protect Tally from possible outside intrusion.

1.3 Preparing for the Election

1.3.1 Election Preparation

Preparing for an election begins with entering information into BOSS. Typically, jurisdictional information such as precinct and polling place names is entered prior to an election cycle. Once an election cycle begins, election specific information is entered into BOSS. Ballot content is proofed using the reports produced by BOSS and once verified, ballot generation produces the electronic ballot data file that contains all the ballot styles necessary for the election. This file is written to the MBBs, which are distributed to the polling locations. Any MBB may be installed in the Controller at Election Headquarters or at the precinct-polling place.

If Ballot Now will be used to produce and record paper ballots, one MBB is reserved for use with Ballot Now.

With all possible ballot styles in the MBB, all Precinct Voting System (PVS) hardware is generic so that any Controller, MBB or eSlate may be used at any location.

Since the hardware for the PVS is generic, the distribution and delivery of equipment is greatly simplified. The equipment maybe delivered prior to Election Day and securely stored at the site, or, because the hardware is highly portable, the polling place officials may transport it on the day of use.

1.3.2 Election Day and Early Voting

With the PVS, Election Day and Early Voting use the same processes except when closing the polls.

The eSlates, Controller, MBB, and booths are either delivered or are brought to the precinct by the poll workers. The Controller is the host for a serial-connected network consisting of one Controller and from one (1) to twelve (12) eSlates, depending on the size of the precincts and the anticipated turnout of registered voters.

The polling process begins with a pre-election sequence that leads into the polls open operation. Once voting is complete, the polls are closed and the collected information is prepared for transport back to headquarters.

When power is applied to the Controller, a power on self-test is run by the internal software and a check is performed for the presence of the MBB. The MBB may have been installed at headquarters or can be installed at the polling place. The Controller reads the data on the MBB and verifies that the MBB contains the proper data.

The first step in pre-election-sequence requires the poll worker to input the polling location into the Controller and assign booth numbers to the eSlates. The Precinct Voting System is then configured for

voting by pressing the Enter button in each connected eSlate. At this point, a "zero count" tape is printed from the Controller and the polls are ready to open.

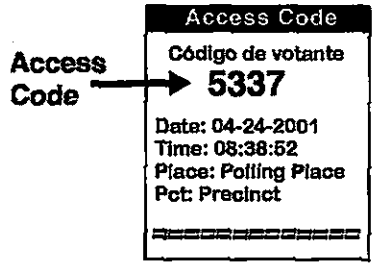
Only after the zero count tape is produced does the Controller display the option to open the polls.

The poll worker selects "Open Polls" and then is prompted for an optional password.

The polls open and the Controller's Booth Status Lights are green, indicating each connected eSlate is "Available."

1.3.2.1 The Polling Process

To begin the voting sequence, a voter presents the necessary identification to the poll worker for validation of eligibility. The poll worker looks up the voter's name, which has an alphanumeric ballot style or precinct number associated with it. The ballot style or precinct number can be input into the Controller directly by the poll worker or can be selected from a list provided by the Controller through a set of menu screens. If a ballot style is required, the ballot style number is entered and the Controller prints a ticket with an Access Code that is a random 4-digit string. The Access Code is displayed on the Controller screen and printed on a ticket by the Controller printer. The Access Code ticket is torn off and given to the voter. The voter now moves to the next available booth with their Access Code ticket.



The Access Code is valid for a time period set by BOSS, with the default being 30 minutes after it has been issued to the voter. Once a voter uses an Access Code, it cannot be re-used; the Controller invalidates a used Access Code. The voter steps into an available voting booth and the eSlate instructs the voter to enter their Access Code. Once the Access Code is input, the eSlate validates their Access Code with the Controller and loads the correct ballot style as previously assigned. With successful entry of the Access Code, the first page of the ballot is displayed on the eSlate and the Booth Status Light on the Controller turns red, indicating that the booth is in use.

1.3.2.2 *Voting in the Voting Booth*

The first page of the ballot is displayed with a header at the top and the election contests occupy the majority of the remaining display area. The user interface area of the eSlate includes a set of push buttons and a rotary input device or wheel. The push buttons and the wheel provide the voter with a set of dedicated functions they can use to navigate the ballot, enter selections, and cast their vote. These include:

Cast Ballot – used when the voter has completed their selections and wants to record their vote.

Next – takes the voter to the next page of the ballot.

Prev – takes the voter to the previous page.

Help – provides the voter with operating instructions and/or signals a poll worker that assistance is requested.

Enter – when a selection is highlighted, activation causes the highlighted selection to be recorded.

Select – rotary input device for moving the "cursor" or "Ballot Focus" though the ballot.

Turning Select causes the highlighted area, or Ballot Focus, to move sequentially the ballot. While an element of the ballot is highlighted, pressing Enter will select the element for inclusion in the voter's ballot image. Thus, the voter turns Select until their selection is highlighted and presses Enter to register their choice.

This process continues until all selections have been made, at which time the voter presses Cast Ballot and their ballot is electronically recorded as a Cast Vote Record (CVR). Up to the point the voter presses Cast Ballot, they are free to make any change to previously recorded selections. Using Select, Next and Prev, the voter can navigate backwards and forward through the ballot to change or review any selection.

For write-ins, ballot casting, and other special instructions, Help widows are displayed to communicate with the voter. Each Help window has options available in context with the type of action required by the voter.

1.3.2.3 Disabled Accessibility

With the Disabled Access Unit (DAU) option installed, the eSlate supports the ability of visually or physically challenged voters to cast a secret and private vote. The DAU can be factory installed or an eSlate can be upgraded in the field. When installed, the DAU has an accessible slot for a PC memory card and two audio jacks. The two audio jacks are for headphones and Accessible Switches used to interface with the ballot.

A disabled voter is authorized by the poll worker to vote in the same manner as other voters. Disabled voters may require assistance entering their Access Code, locating and fitting of the headphones, orientation with the user interface and Accessible Switches. Once these preliminary steps are completed the voter is able to vote unassisted.

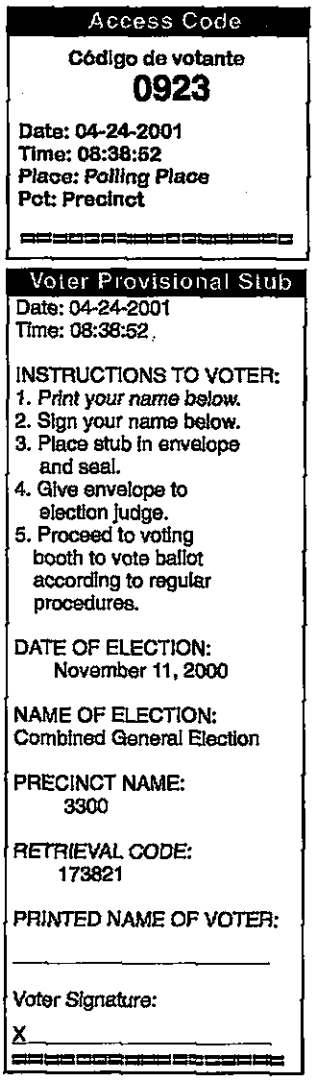
Ballot navigation is accomplished in the same manner as other voters. The user interface is active and operates in the same manner. However, the voter may navigate the ballot by using the Accessible Switches. If the voter is wearing the headphones, as the highlight changes, the element is "read" to the voter. The audio component recorded by BOSS is natural recorded voice so the voter hears the text in a clear, comprehensible manner. When the voter presses Enter, the audio provides a confirmation of their selection and advances to the next race.

1.3.2.4 Curbside Voting

One or more eSlate DAU unit(s) from a Precinct Voting System can be designated for "curbside" voting. This unit may be temporarily detached from the network to allow voting at a nearby location, such as a parking space near the entrance to the polling place. The unit may be detached following entry of the Access Code and must be re-connected to the network to transmit the CVR to the Controller.

1.3.2.5 Provisional Ballots

The PVS supports the contested Voter situation that may arise during the open polls operation. Most States provide for a voter's right to vote to be challenged at the polling place at the time when a voter present their eligibility to cast their ballot. The voter is allowed to vote and a determination as to their eligibility is made after some investigation following the close of the polls. To be able to respond appropriately to the eligibility decision, the Controller prints a Voter Provisional Stub which the voter must sign before they are given their Access Code ticket so that if the voter's eligibility is later denied by election officials, their ballot is not counted.


Access Code

Código de votante

0923

Date: 04-24-2001
Time: 08:38:52
Place: Polling Place
Pct: Precinct

Voter Provisional Stub

Date: 04-24-2001
Time: 08:38:52

INSTRUCTIONS TO VOTER:
1. Print your name below.
2. Sign your name below.
3. Place stub in envelope and seal.
4. Give envelope to election judge.
5. Proceed to voting booth to vote ballot according to regular procedures.

DATE OF ELECTION:
November 11, 2000

NAME OF ELECTION:
Combined General Election

PRECINCT NAME:
3300

RETRIEVAL CODE:
173821

PRINTED NAME OF VOTER:

Voter Signature:

X

1.3.2.6 Closing the Polls

When it is time for the poll worker to close the polls, a single-purpose function key is used to cause the Controller to initiate the closing process. Two steps are used to protect the integrity of the election information:

- First, the eSlates are frozen so that they cannot be accessed again for voting.
- The final public and private counter of the Controller, time of closing, and the electronic serial numbers of all devices and ballot types are stored and copied to the MBB and the MBB is closed.

All the above steps are performed automatically by the Controller. When the polls are closed, they cannot be re-opened. At this time, the Controller can print an un-official tabulation and/or modem results to Fast-trac. The MBB can now be removed and transported to the central location for cumulative tally.

Once the MBB is removed from the Controller, an exact copy of the data remains intact in the Controller as a back-up. This data is the sum of all eSlates that were connected and a third copy of the information is stored in each of the eSlates. Each eSlate maintains a copy of all votes it has written for

storage in the Controller. This stored data differs from the information stored in the Controller and Mobile Ballot Box in that it is not stored with images from the other eSlates.

1.3.2.7 Suspended Voting

Early voting can begin many days in advance of Election Day. The polling place ID indicates if the location can be an Early Voting site and gives the poll work the option to select it. By pressing the "Close Polls" function on the Controller at an early voting site, the Controller presents the option to the poll worker to suspend voting or to close the polls. When suspend voting is selected, the Controller prints out the reports for the day. These reports include values for the public and private counters of the Controller, the serial numbers and public counters of each eSlate, time, date and location, and totals for Access Codes issued. The Controller writes an entry to the audit log that the unit is going into suspended voting mode and prints out a report with statistics concerning the election activity for the day (public and private counter of the Controller, time of suspension, the electronic serial numbers of all devices and ballot types stored and copied to the MBB).

For Early Voting to resume the next day, the network must be configured as if the equipment were being set up for the first time in the election. Once the Controller powers up, it checks the audit log and acknowledges that it was in suspend mode. On the final day of Early Voting, the Close Polls function is selected and instead of selecting the suspend option, the poll worker selects "Close Polls" and follows the process as described above.

1.3.3 Ballot Now

One BOSS MBB that was created especially for the election's paper ballots is read into Ballot Now to print each precinct's paper ballots on demand.

The Ballot Now application lets you:

- Set up user names and passwords
- Read ballot styles from an Election's Ballot Now MBB
- Print ballot proofs for the Election
- Print TEST, SAMPLE, and ELECTION paper ballots for the Election

1.3.4 Tally

On or before Election Day, the BOSS database for the election is used to initialize the Tally database for tallying the election. Acceptable write-in candidate names or aliases are input into Tally.

When all the polls have closed, the MBBs from Election Day and Early Voting sites are read into the Tally System. The unique serial number in the MBBs is used to prevent duplicate storage of the information in the MBB.

The Tally System tabulates the CVRs from the PVS system MBBs and from the Ballot Now MBB, and generates reports that can be viewed on screen and/or printed.

When all MBBs have been read by Tally, the election officials resolve write-in votes and Provisional Ballots from contested voters.

The Tally database is closed and archived when the officials determine all information for the election has been stored and resolved in the Tally System.

1.3.5 Resetting MBBs and Controllers

When the PVS equipment is required for use in a new election, the MBBs and Controllers can be initialized to erase all previously recorded information, with the exception of the Private Counter in the Controller, which remains at its existing count to provide a usage record for the Controller.

2 Technical Support

2.1 Contact Information

Each customer's requirements are different and the Hart InterCivic eSlate™ Electronic Voting System technical support program is tailored to those particular needs. The purchase agreement under which your eSlate™ Electronic Voting System was purchased contains the specifics of your support agreement. General contact information is provided below, but please refer to your purchase contract for more specific information.

Scott Flom
Director, Election Solutions Group - Austin
Hart InterCivic
P.O. Box 80649
Austin, TX 78708-0649
(888) 223-HART

Neil McClure
Vice President & General Manager
Hart InterCivic, Election Solutions Group
1650 Coal Creek Drive, Suite E
Lafayette, Colorado 80026
303-385-6442

2.2 Acquisition and System Installation

Acquisition of the eSlate™ Electronic Voting System occurs through either bid process or negotiated sale. Regardless of which process is used, specific requirements of the sale are defined in the purchase agreement or contract. As such, the purchase agreement takes precedence over this manual and should be referred to for specific information relative to all sections in this Technical Support section. The Technical Support section of this manual should be used for reference only and to point to areas in your purchase agreement that contains specific information.

System installation is performed by Hart InterCivic employees at your site. This is the first step in the on-site training that is standard with your system acquisition.

2.3 Acceptance Test

The specific requirements of acceptance tests for your purchase of the eSlate™ Electronic Voting System are given in your purchase agreement. Generally, Hart InterCivic employees will be on-site to install computer systems and assist in the delivery of your equipment. As part of this process, acceptance testing is performed to verify all systems are functioning properly. The acceptance testing is actually part of the on-site training that is standard with your purchase. The acceptance tests involve the entire system and require conducting a complete mock election cycle as described in this manual. This includes entering data into BOSS, producing MBBs, casting ballots on the PVS and verifying the results using Tally. Any options or utilities you have purchased will be included in the testing as well.

2.4 System Maintenance

2.4.1 Precinct Voting System Hardware

All hardware for the Precinct Voting System are Field Replaceable Units (FRUs). As such, any device that requires repair is returned to Hart InterCivic. The specifics of your service contract is part of your purchase agreement and should referenced for a complete description.

2.4.2 Databases

The eSlate™ Electronic Voting System has two primary software applications, BOSS and Tally, which are database applications developed by Hart InterCivic using a commercial database product. The database "engine" is incorporated into the eSlate™ Electronic Voting System applications and was selected for its low maintenance requirements. By database standards, the amount of data required to conduct and report an election is very small and coupled with the fact that each new election starts with a new database, there is no database maintenance required by the user.

2.5 Software Upgrades and Correction of Defects

Refer to your purchase agreement for specific information about software upgrades and correction of defects. This service is typically covered under a software maintenance agreement that defines the software upgrade program. Unless otherwise stated in the software maintenance agreement, correction of defects is at the sole discretion of Hart InterCivic.

2.6 Training

Training begins with the on-site installation of the eSlate™ Electronic Voting System. Refer to your purchase agreement for specific information about the training program purchased by your county. Training can range from a two-day, on-site installation and acceptance test to a one-week program with multiple sessions.

2.6.1 Standard Training Courses

The eSlate Training Services Manager can customize training packages to suit the needs of your jurisdiction.

The standard eSlate training courses are:

- Ballot Origination Software System (BOSS) Course
- Polling Place Operations Course
- Poll Workers & Voter Education Course
- Ballot Now Course
- Tally Tabulation Software Course
- eSlate EVS Warehouse Utilities & Management Course

3 Computer Security and Recovery

3.1 General Security Considerations

The idea of computer security is to secure your computer and your eSlate™ Electronic Voting System software application against unauthorized use, alteration, or deletion. The people against whom you are securing your computer vary from the co-worker who wants to surf the Internet to hackers attempting to subvert elections. Computer security is always a balancing act between security and ease of use. In the following you will find tips and techniques towards maintaining a secure computer environment. It is up to the election administrator to choose and implement the appropriate level of computer security.

The following topics were discussed as part of your system acquisition and are repeated here for review and awareness. Any options that require system support are delivered as part of your installed system and are a result of your administrator electing to implement the particular security feature.

3.1.1 Physical Security

3.1.1.1 Controlled Access Environment

Computers should be operated in a room that is limited to only authorized personnel. The room should be locked except during working hours.

3.1.1.2 Lock Your Computer to a Desk

Computers should be locked to a desk, table, or stanchion using a Kensington or similar lock. The cost of recreating the data lost in a stolen election computer could be many times the cost of the computer itself.

3.1.1.3 Lock Your Computer Housing

The housing of a computer should be locked to prevent unauthorized people from accessing the computer boards, memory and hard drives. No data is safe from talented intruders with access to the inside of your computer.

3.1.1.4 Lock Your Floppy Drive and CD Drive

The floppy drive and CD drive of your computer should be physically locked against unauthorized use. Hackers that can boot your machine onto their floppy or CD may be able to install malicious software on your computer, read your hard drive, or alter your BIOS settings.

3.1.1.5 No Network

The computer running the eSlate™ Electronic Voting System election software should not be connected to a county's computer network. Most computer security attacks are through a network, which allows a hacker to work anonymously and provides a handy access path to your computer.

3.1.1.6 No Internet Access

The computer running the eSlate™ Electronic Voting System election software should not have access to the Internet. Computer security attacks can be made through active Internet connections. In addition, even an employee innocently browsing the web can unknowingly download malicious viruses.

3.1.2 Disaster Security

3.1.2.1 Back Up Your Data

Frequently back up important election data created using eSlate™ Electronic Voting System election software. Properly label back-up data disks and store them in a secure location. Refer to the section on back-up and archiving in this manual.

3.1.3 Operational Security

3.1.3.1 Always Log Off Computer

Log off your computer anytime you are not actively using the eSlate™ Electronic Voting System election software, even if you leave your terminal for just a few minutes.

3.1.3.2 Never Give Administration Privileges

If the county is given administration passwords with the computer hosting the eSlate™ Electronic Voting System election software, administrators must never give the administration password to any regular operator. A regular election worker can perform his or her work well without the use of administrator passwords. An election official should never log in as an administrator unless they need to perform a function only available as an administrator.

3.1.4 Data Security

3.1.4.1 Never Run Personal Software on Computer

No personal software of any kind should be run on computers hosting eSlate™ Electronic Voting System election software. Even seemingly innocent software can introduce viruses into your computer.

3.1.4.2 Protect Against Viruses

Regularly run the anti-virus software that comes standard on your eSlate™ Electronic Voting System computer. Register the computer with your county's computer support specialist so they can provide anti-virus software updates as they become available.

3.2 Password Security

Selecting, storing, and changing your password properly is vital to computer security. A typical 8-character password has trillions of possible combinations and, if properly picked and managed, can help keep your computer be secure. But passwords that are taped to the screen or keyboard, passwords that the user has used on their primary desktop machine, or passwords like "bob2" are not very secure at all.

3.2.1 Change Your Password Frequently

Your password should be changed at least every 6 months. Immediately change the password when it is given to you initially by the administrator. Administrators should remove usernames and passwords when employees are no longer engaged in election business.

3.2.2 Where Not to Store Your Password

Do not store your password anywhere near your work area. Do not tape it to the bottom of the keyboard, to the monitor or store it in the desk drawer. If possible, do not store your password anywhere, simply memorize it.

3.2.3 What Not to Do with Your Password

Do not email your password to anyone. Do not use your election password for anything else. Never store your password in a computer file. Don't share your password with anyone.

3.2.4 Picking a Secure Password

When picking your password –

Don't Use:

- Any password you used previously
- Any word found in an English or foreign-language dictionary
- Any string of three characters repeated or reversed
- Any character repeated more than twice
- Your name or initials
- Your user ID in any form (i.e, reversed, capitalized, doubled, etc.)
- The names of relatives, birthdays, phone numbers or company name
- The number for this year, last year or next year or the three-character abbreviations for the months
- Telephone number or car license plate number
- Common mathematical values (like pi, gamma, and natural log)

Do Use:

- A combination of upper and lower case letters and numbers
- A password that is at least eight characters long
- *A new password every six months*
- Random characters you'll remember

Here are some tips on generating a good user password for yourself:

- You might want to consider a password created from the first letters of a memorable phrase. For example, the phrase "I was born in Brooklyn some years ago" yields IWBIBSYA as a password. Imaginative and easy-to-remember phrases are easy to think up.
- Another scheme is to use a meaningless but easy-to-remember phrase such as "I like noodles!".
- A combination of letters and numbers can be good. For example, if your pet dog's name is Rover and your friend's apartment number is 192, your password could be Ro192ver.

3.3 Abnormal System State

Software is not bug-free. The most popular computer operating system in the world still has software bugs in it that can cause your computer to produce an error or lock-up. The same is possible for your eSlate™ Electronic Voting System election software. The eSlate™ Electronic Voting System election software has an extensive list of error messages that are displayed in clear English and are related to whatever action you were involved in at the time of its occurrence. This is not an abnormal system state and is resolved by acknowledging the error and correcting the condition. An abnormal system state results in a cryptic "computer-type" message.

Given the combination of the operating system (Windows NT) and the eSlate™ Electronic Voting System applications, you may encounter an abnormal system state. If such a state occurs within one of your eSlate™ Electronic Voting System election software applications, your data is safe. The applications are designed to require frequent "saves" of your data, so should an error or lock-up occur, the data that existed at the time of your last save action is secure. In all cases, write down the exact error message, the conditions under which it occurred, and forward the information to your customer service contact.

In most instances, you will be able to continue working by resolving the error or power cycling the computer. Match your condition to those given below and follow the steps given for each.

- **Error message with "OK" button**
  Read the error message and write it down. If the message contains any information about the data that you were entering at the time, it should indicate the problem, select "OK" and correct the data or re-try the event. If no description is given, select "OK" and continue with your task. If the problem persists, contact customer service.
- **Application locks-up**
  If the application locks-up, the mouse pointer or the keyboard will not responds. By pressing CONTROL-ALT-DELETE, the Windows NT Task Manager will come up and allow you to shut down the application. Again, data entered and saved is safe. If the problem persists, contact customer service.
- **Windows NT error or locks-up**
  Windows errors or lock-up are best resolved by either shutting down the task causing the problem as described above, or by power-cycling the computer. Power cycling requires the power be turned off and then back on again. When Windows is shut down in this manner and subsequently turned back on, Windows will run a series of diagnostics that you my have to respond to. If the problem persists, contact customer service.