Chapter 3

System Configuration and Acceptance Testing

Democracy Suite® system installation and configuration procedures are described in *Dominion Voting Systems Democracy Suite® Installation Procedures.*

3.1 Acceptance Testing

3.1.1 ImageCast® Evolution Acceptance Testing

Acceptance testing for the ImageCast® Evolution tabulator unit is simply a matter of confirming that the physical and electromechanical components are functioning properly and have not been damaged during transport, and that certain internal parameters have been programmed correctly. Performing this testing will ensure the integrity of the installed firmware within the voting machines. It should be performed prior to each election. To perform acceptance testing, the supervisory election official or designee must complete the following steps:

Figure 3.1: Inserting Compact Flash Cards

1. Unpack the ImageCast® Evolution tabulator unit and place it on an assembled ballot box if separated from it.

2. Insert the test Compact Flash cards provided with the ImageCast® Evolution tabulator unit, as seen in Figure 3.1.

Figure 3.2: Powering up the ImageCast® Evolution

3. Connect the ATI (Audio Tactile Interface) to the ICE using the RJ-45 cable provided.

4. Plug the power supply into a suitable 120 volt AC power source, and connect the power supply to the ImageCast® Evolution device.

5. Lift the LCD monitor into the upright position.

6. The ImageCast® Evolution will begin the power-up sequence, and the LCD will display a number of messages at each stage of the sequence.

Please insert Security Token to verify and authenticate election and configuration files

image CAST

07:57:17 AM
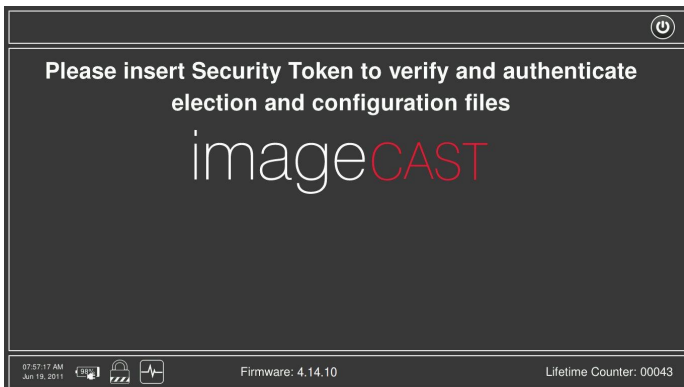Jun 19, 2011   Firmware: 4.14.10   Lifetime Counter: 00043

Figure 3.3: iButton Security Key Prompt

7. Once the ImageCast® Evolution has powered up, the system will prompt for the iButton Security Key to be applied to the iButton Security Key receptacle as seen in Figure 3.3.

8. Press the iButton Security Key firmly to the receptacle, and hold it in place until the login screen appears on the touchscreen.

9. On the Authorization screen, enter the username and password specific for the project and press the 'OK' button. In the event that the username and password are incorrect, the screen will clear the text and provide a new opportunity to enter the correct username and password.

10. Check that the battery icon indicates that the AC power supply is present.

11. Check that the ImageCast® Evolution internal battery is fully charged. There are two ways to do so:

    a. The LCD display is used to display the internal ImageCast® battery status in the same manner as cell phones. There are six different indications that can be shown on the screen:
       - No battery (system on AC/DC power)
       - Almost empty
       - 25% full
       - 50% full
       - 75% full
       - 100% full

    b. Check the externally visible LEDs on the right side of the unit to ensure that the AC power is connected and to determine the status of the internal battery.

    c. When the ImageCast® Evolution is powered down, the status of the battery can be checked by pressing the battery level push button to the right of the LEDs.

12. Check that the security icon (in shape of a padlock) is white color (when security has been compromised, the padlock will turn red).

13. Check that the System Health icon is white. When the system health has been compromised, the icon will turn red. For example, if the ATI is missing, the icon will turn red.

14. In addition to the steps described above, the ICE unit has multiple procedures available for polling place verification:

    - The election's identification data available via printed report and on-screen.
    - Identification of the unit available on-screen only.
    - Identification of all ballot formats available on a printed report.
    - The contents of each active candidate register by office and of each active measure register at all storage locations (showing that they contain only zeros, i.e. zero tape) available on a printed report.
    - A list of all ballot fields that can be used to invoke special voting options available on a printed report.

15. More extensive diagnostic tests and procedures are contained within the Technician menu and can be conducted by authorized vendor Technical staff.

3.1.2   ImageCast® Central Acceptance Testing

Acceptance testing for the ImageCast® Central scanner is simply a matter of confirming that the physical and electromechanical components are functioning properly and have not been damaged during transport, and that certain internal parameters have been programmed correctly. Performing this test will ensure the integrity of the installed firmware within the voting machines. It should be performed prior to each election and initially for customer acceptance testing. To perform acceptance testing, the supervisory election official or designee must complete the following steps:

1. Unpack the ImageCast® Central scanner and place it on the desired workstation surface.

2. Attach the cabling from the scanner to the PC workstation.

3. Plug the scanner and the PC workstation into a suitable 120V AC power source.

4. Power up the scanner and PC workstation.

5. Insert the memory card containing the election files into the memory card port.

6. Log onto the computer.

7. Run the ImageCast® Central application from the computer.

8. Insert the iButton security key and enter the passcode. The application will verify the iButton security key against the election files in the memory card port. Errors at this point indicate that the iButton security key has not be programmed correctly, and a replacement key may need to be ordered. Otherwise, the application will commence internal diagnostics testing before going into User's Mode.

9. If the ImageCast® Central profile has been provided, and the settings match, then there is no need to re-create or re-save the profile. Simply use the one provided.

3.1.3 Election Management System Acceptance Testing

To perform acceptance testing on the Election Management System, the supervisory election official or designee must complete the following steps:

3.1.3.1 Pre-Voting Phase

1. Open the EMS Election Event Designer application

2. Create the Election Project

3. Open the Project

4. Set the Ballot Style and Ballot Style Parameters

5. Define District Types

6. Define the District

7. Define the Precincts and associate Precinct to Districts

8. Create Political Party

9. Create Office, Define Office Settings, Associate Elector Group Types to Offices, set Rotations

10. Import District Rotations

11. Create Contest, Override Office/Contest Settings

12. Define Choice Associate Choice to Contest, Associate Political Parties to Choice

13. Import Template Keywords

14. Define Ballot Manifestation

15. Preview Ballot Types

16. Preview Ballot Manifestation

17. Create Ballot Header

18. Create Contest Headings

19. Create Proofing Ballots

20. Create (Official) Ballots

21. Creating Polling Places

22. Define Tabulators, Assign Polling Places to Tabulators, Assign Precinct to Tabulators

23. Import DCF/MBS Files

24. Define Configuration files

25. Associate Configuration File to Tabulator

26. Generate Election Files

27. Program Memory Card

28. Program iButton Security Key

29. Create EMS Results Tally & Reporting User

3.1.3.2 Post-Voting Phase

1. Open the EMS Election Event Designer application

2. Open Project

3. Login

4. Load Result Files

5. Load Result Images

6. Load Log File

7. List all result files

8. Select Results Files

9. Preview Result Files

10. Preview Result Files

11. Validate and Publish Result Files

12. Create Reports