Democracy Suite® ImageCast® X User Guide

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DOMINION VOTING

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CHAPTER 1: INTRODUCTION

The purpose of this document is to describe how to perform basic operations on the ImageCast® X devices.

1.1 Relevant Disclaimers

This document may make reference to certain Democracy Suite® functionalities that are not part of the current 5.17-CO campaign and should be disregarded throughout the document.

For a full list of relevant disclaimers, please see the “Relevant Disclaimers” section in the 2.02 - Democracy Suite® System Overview document.

CHAPTER 2: SYSTEM SETUP

This document contains procedures for setting up and using a voting station that contains the ImageCast® X equipment.

There are 2 types of ImageCast® X stations:

- Ballot Marking Device (BMD)
- Direct-Recording Electronic (DRE), with or without Voter-Verifiable Paper Audit Trail (VVPAT).

NOTE: If ATI is not part of the ICX system configuration, please disregard any references to it.

The ImageCast® X BMD configuration is made up of the following:

- ImageCast® X device
- Smart card reader/writer
- ATI hardware
- Printers:
  - Avision AP3061
  - HP LaserJet Pro M402dn
  - HP LaserJet Pro M402dne
  - HP LaserJet Pro M404dn
  - HP LaserJet Pro M501dn
  - HP LaserJet Pro 4001dn
- A single USB media containing the election files.

The ImageCast® X DRE configuration is made up of the following:

- ImageCast® X device
- Smart card reader/writer
- ATI hardware
- One or more USB media(s) for the purpose of saving the election data.

- A single USB media containing the election files.
- VVPAT printers:
  - KFI VRP3 V1
  - KFI VRP3 V1-C

This document is written with the assumption that the necessary election files for the ImageCast® X are delivered to the customer and loaded onto the device.

Additionally, this document assumes that an Election Official will perform the duties outlined within this document.

The following equipment is needed to set up a voting station:

- ImageCast® X device
- Smart card writer/reader
- APC Smart-UPS 1500VA LCD 120V
- ATI advanced controller interface device for ADA voters with the Paddles, Audio and Sip and Puff

For ADA voters that require only audio support, ImageCast® X application offers “Audio Only” option.

2.1 ImageCast® X BMD

2.1.1 Unpacking The Equipment

The following steps are to be performed by an Election Official:

1. Remove the ImageCast® X devices from the secured storage boxes.
2. Remove the printers from the storage boxes.
3. Remove the following from the storage boxes:
   - 4-Directional switch (for ADA).
   - Headphones (for ADA).
   - ATI device.
   - Smart card(s).

2.1.2 Setting Up The Equipment

The following steps are to be performed by an Election Official:

1. Set up the booth according to the site layout map developed for the polling place.
2. Plug both the printer and the ImageCast® X device into the UPS.

   NOTE: If using the Cyberpower UPS, plug both the printer and ImageCast® X device into the ports labeled Printer at the rear of the UPS.
3. Plug the headphones into the headphone jack.
4. Plug the USB printer cable into printer and into a free USB port.
5. If the ICX device is to be used to support ADA voters then the ATI device should be plugged into a free USB port.

NOTE: The tablet(s) that should have the accessibility features enabled have to be tagged with a blue disability sticker.

2.1.3 Powering On

1. Powering on the ImageCast® X device
   a. **aValue**
      - Open the security door.
      - Press and hold the power button on the right of the unit until it lights up, then release the button.

- Close the bottom security door.
- Secure the bottom security door using a security seal.

2. Power on the printer by pressing the **ON** button.

2.1.4 Setting Up the KFI VVPAT

Voter-verifiable paper audit trail (VVPAT) is a method of providing feedback to voters using a ballotless voting system.

VVPAT ballot is a compact representation of a voter's selection.

It consists of two parts:

- QR barcode encoded voter’s selection, machine readable part of the VVPAT ballot. The size of the QR barcode depends on the data that needs to be encoded (number of available contests, candidates and write-ins).
- Human readable voter selection.

The USB and power cables for the VVPAT are integrated into the printer enclosure.

To connect the VVPAT to the ICX:

1. At the ICX, open the lower right-side panel door.
2. Connect the printer’s USB cable to the USB port located behind the panel door.
3. Plug in the power cord into the power outlet.

CHAPTER 3: USER INTERFACES

Here you will learn about the main modes of operation, i.e. different user interfaces available with the ImageCast® X device.

3.1 Common ImageCast® X Device Elements

The common elements of all user interfaces are listed here.

- Top Status bar (see Figure 3-1)

This is the topmost bar. It displays information about the device that is being used, the battery status, as well as the date and time.

Figure 3-1: Top Status bar

- Bottom Status bar (see Figure 3-2)

It's located at the bottom of the screen and displays the current number of ballots cast.

Figure 3-2: Bottom Status bar

3.2 ImageCast® Classic / Prime Technical Administration Screen

All operations that require a trained technician can be performed from the menu shown in Figure 3-3.

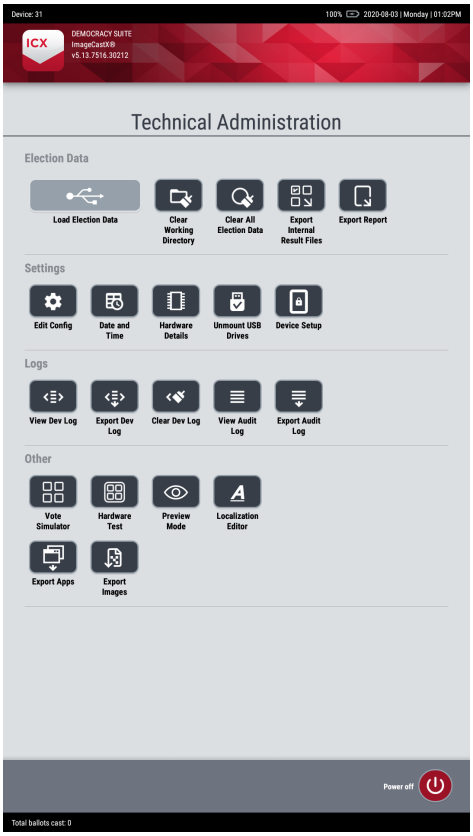

Figure 3-3: Technical Administration menu

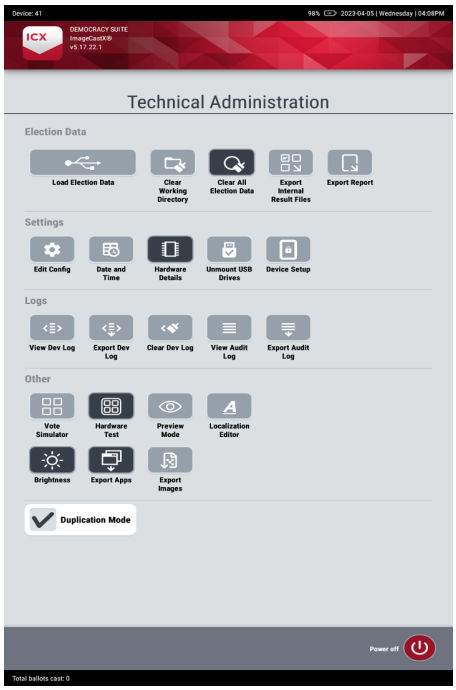

Figure 3-4: Technical Administration Menu - With Duplication mode activated

Once the Technical Administration menu has been accessed, the Technician gains access to the following settings:

- Election Data
- Settings
- Logs
- Other
- Duplication Mode, see Figure 3-4.

Along with the above listed settings, the user has a remaining option:

- POWER OFF: Powers off the machine.

3.2.1 Election Data

The Election Data section is accessible only when the Tech Advisor smart card is inserted.

Handling the election data (clearing the working directory, clearing all election data, export of internal results files and export report) is possible only through the Technical Administration screen, and only when the Poll is closed (see Figure 3-5)
.

Figure 3-5: Poll Closed/Enabled Election Data section

3.2.1.1 Load Election Data

This option is used for loading Election files from a USB media.

It is important to note that prior to copying the Election files, the ImageCast® X device needs to be cleared of all previously loaded Election files (to do so, click the **Clear all election data** button).

To load the Election Data:

1. Press Load Election Data.
   The election configuration files on USB media dialog displays (see Figure 3-6).

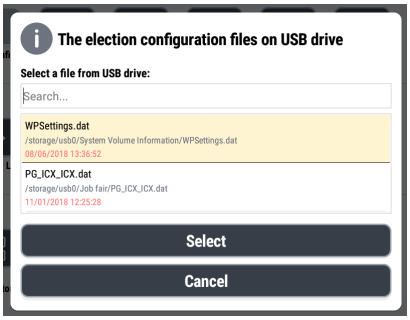

Figure 3-6: “The election configuration files on USB media” dialog.

2. Select the Election file (**.DAT** file) you want to copy onto the machine and press **Select**.

A **Confirm** dialog displays (see Figure 3-7).

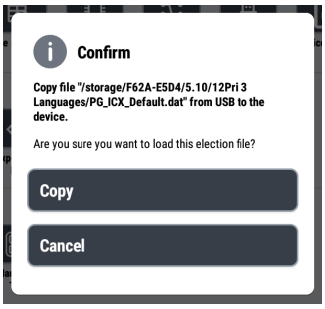

Figure 3-7: “Confirm” dialog.Press **Copy**.
A **Copy** dialog displays (see Figure 3-8).

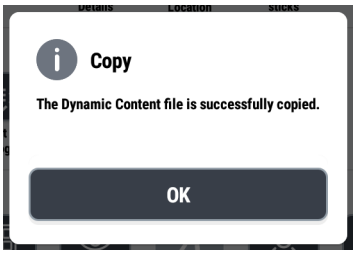

Figure 3-8: The “Copy” dialog

3. Press **OK**.
   The Election Data is successfully loaded.

3.2.1.2 Clear Working Directory

Removes the working copy of the election files (.DAT file) to force election file decryption on the next Poll Worker login and effectively revert the project to defaults.

3.2.1.3 Clear All Election Data

Removes all election data from the tabulator and all attached USB media. Returns the machine to factory default settings making it ready for the next election.

The following is removed:

- Result files from all defined and undefined locations, if they exist. If not all locations are accessible, an appropriate message will be presented.
- Audit log files from all result locations, but the last ten audit logs on the device remain, so that there is evidence of clearing election data.
- Audit trails (test and regular).
- Report file, if it exists.
- Election file (.DAT file).
- Vote Simulator (test deck file).

NOTE: The option **Clear All Election Data** is only available when the poll is closed. Once the poll is opened, this option is automatically disabled and remains so until the poll is closed.

3.2.1.4 Export Internal Result Files

Copies the results from internal storage onto the USB media. The results are in folder “Result” on the USB media.

3.2.1.5 Export Report

Copies the report to the USB media, if the report exists. The report is in folder “Reports.”

3.2.2 Settings

This section contains information on the Settings section of the ImageCast® X device which provides the user with access to the application as well as the system settings, see Figure 3-9.

Figure 3-9: Settings section

3.2.2.1 Edit Config

Allows the user to edit the configuration. This button is enabled when the device is selected from the Poll Administration menu. At that point the device's configuration is loaded and editable by accessing this option.

NOTE: The changes made here will be applied only to the current tabulator.

3.2.2.2 Date And Time

This option (see Figure 3-10) allows the user to set the date and time by scrolling through the available days, months and years and the time zone in a pop-up menu.

To set the time and date:

1. Select the time zone first (see Figure 3-11).
2. Then select the time and date (see Figure 3-11).
3. Press the **Save changes** button at the bottom right of the menu. The date and time are now set.

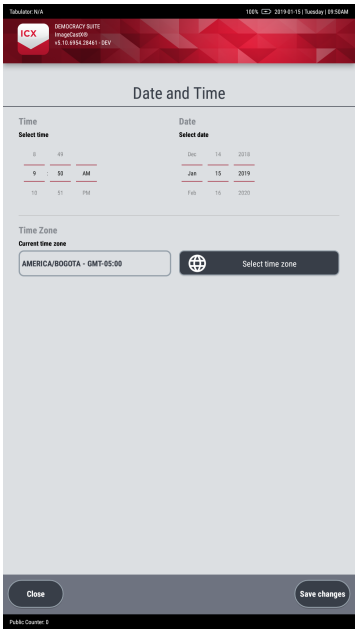

Figure 3-10: Date and Time menu

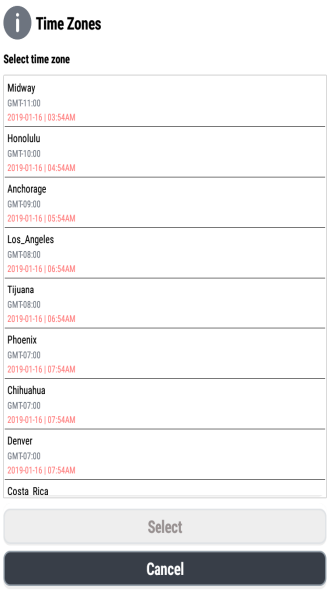

Figure 3-11: Time Zones menu

Once a selection is saved a confirmation dialog displays (see Figure 3-12) at the bottom of the menu.

Figure 3-12: Confirmation pop-up

3.2.2.3 Hardware Details

Displays information such as firmware and serial number of all the connected devices and the supported Android and Firmware version in the manifest file of the application, in the form of a dialog, as seen in Figure 3-13.

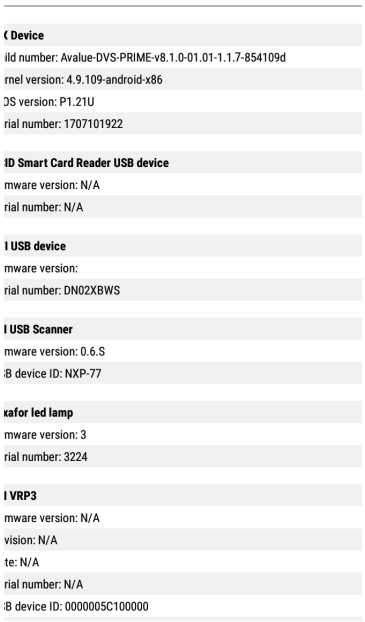

Figure 3-13: Hardware Details dialog

NOTE: At the startup of the application, the supported version of the components from the manifest file is compared with the installed versions. If there are any version mismatches of the components and the ICX APK, the user will be notified with a warning message.

The VVPAT printer's serial number can be found on a label on the back of the VVPAT printer. For more information see section “IDENTIFYING THE PRINTER” in the KFI VVPAT User Manual.

3.2.2.4 Unmount USB media

In order to unmount inserted USB media go to the Technical Administration menu and push the “Unmount *USB media*” button located in the **Settings** section of the menu.

Once the button is pushed the Technician will get a dialog listing (see Figure 3-14) all of the available USB media, and once that list becomes available, all that needs to be done is to choose the desired USB.

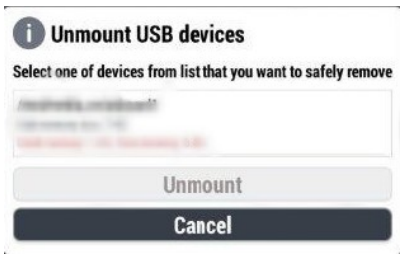

Figure 3-14: Unmount USB media dialog

3.2.2.5 Device Setup

The Device Setup menu (see Figure 3-15) displays information regarding the device's owner and administrator, application version and update option as well as Google's Text-To-Speech version and update option.

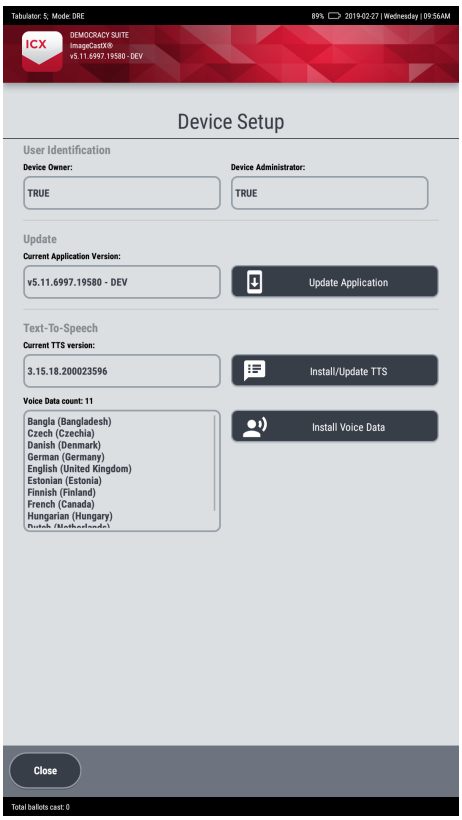

Figure 3-15: Device Setup

To Update the Application

1. In the Device Setup menu, press **Update Application**.
   The APK files on USB media dialog displays (see Figure 3-16).

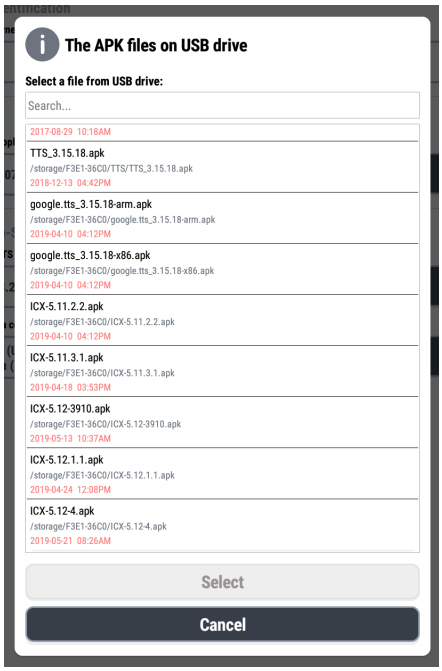

Figure 3-16: The APK files on USB media dialog

2. Select an **.apk** file and press **Select**.
   A confirmation dialog displays (see Figure 3-17).

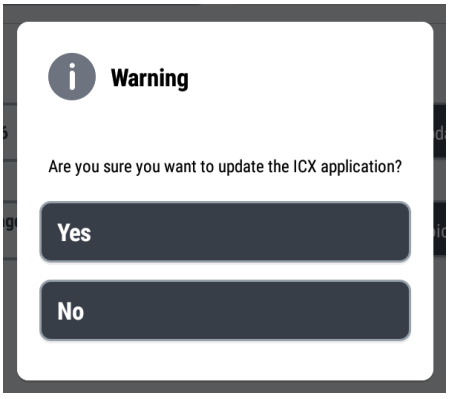

Figure 3-17: Update confirmation dialog

3. Press **Yes.**
   The application is now updated.

If an older version of the ICX application is being installed on the ICX device that has Android OS 8.1, the message “Selected file is not a valid ICX application. Please choose appropriate ICX application file and try again.” appears (see Figure 3-18)

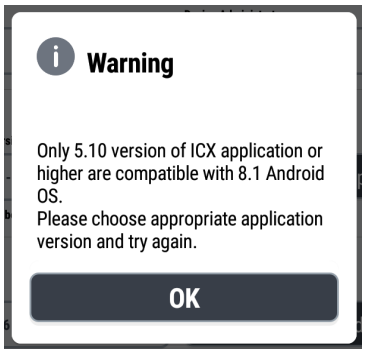

Figure 3-18: Warning dialog

NOTE: If the Tech Advisor smart card is removed while updating the ICX application, the following message displays at the bottom of the screen: ***Installation in progress, currently ignoring smart card removal.***

To Install Google Text to Speech:

1. In the Device Setup menu press **Install/Update TTS**.
   The ***Select a file from USB media*** dialog displays (see Figure 3-19).

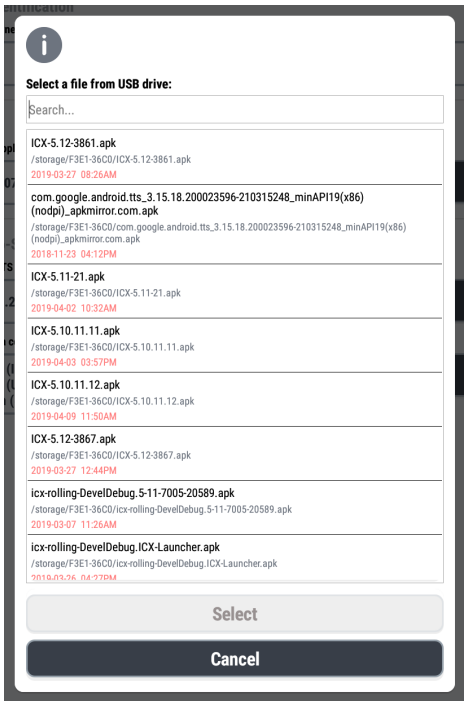

Figure 3-19: ***Select a file from USB media*** dialog

2. Select the desired TTS .apk file and press **Select**.
   A confirmation dialog displays (see Figure 3-20).

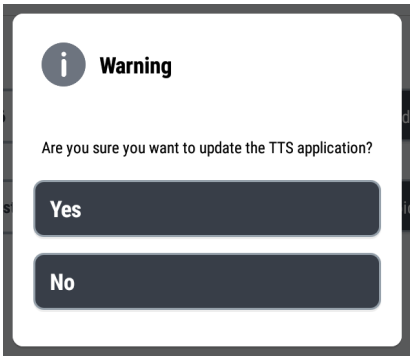

Figure 3-20: Update confirmation dialog

3. Press **Yes**.
   An ***Info*** window displays to confirm the TTS engine was installed (see Figure 3-21).

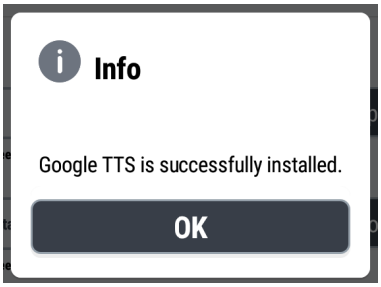

Figure 3-21: Info dialog

4. Press **Yes**.
   The dialog closes.

NOTE: If there is no .apk file on the USB media, the error message in Figure 3-22 displays:

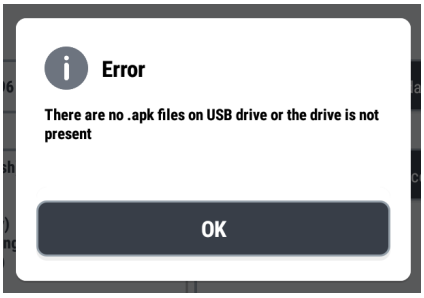

Figure 3-22: No .apk file error message.

To Install Additional Text to Speech Engines:

1. In the Device Setup menu press **Install Voice Data**.
   The ***Select a file from USB media*** window displays (see Figure 3-23).

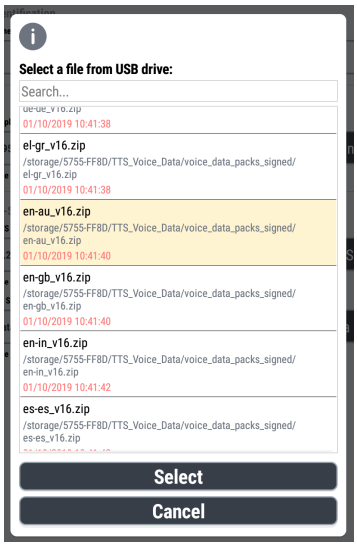

Figure 3-23: File selection window

2. Select the desired .zip file and press **Select**.
   The language file is now installed.

NOTE: If any other file is chosen from the drop-down menu besides the valid ICX version, Google TTS or voice data file, the following messages will appear:

- **For an invalid application:** *"Selected file is not a valid ICX application. Please choose an appropriate ICX application file and try again."*
- **For an invalid TTS:** *"Selected file is not a valid Google TTS application or is not compatible with this device. Please choose an appropriate Google TTS application file and try again."*
- **For an invalid voice data:** *"Selected voice data file is not valid. Please select a valid voice data file and try again."*

3.2.3 Logs

3.2.3.1 View Dev Log

This option is used to access the developer log.

This is mainly used by developers.

It lists all developer log files found on the device. Upon selecting one, the last 100 lines of the log will be shown on the screen (top-down), and more can be loaded by selecting "Load more."

3.2.3.2 Export Dev Log

Exports the Developer logs and Android logs as a .zip file to a USB media. As an additional security feature, the log file has a digital signature that is later verified in RTR.

3.2.3.3 Clear Dev Log

Delete all developer log files from the device. But one file will always remain and that is always the last one that was created.

3.2.3.4 View Audit Log

This option is used to view the audit log.

3.2.3.5 Export Audit Log

Exports the audit log as a .zip file to a USB media. As an additional security feature, the log file has a digital signature that is later verified in RTR.

3.2.4 Other

Figure 3-24 shows the Other section functionality.

Figure 3-24: Other Section

3.2.4.1 Vote Simulator

This option provides the user with access to the Vote Simulator. A valid test pattern file is required in order to perform a valid test. For additional information please refer to section “ImageCast® X Vote Simulator” on page 127.

3.2.4.2 Hardware Test

The functional tests shown in Figure 3-25 allow the Technician to verify the proper operation of the following devices***:***

- ATI device
- Paddles
- Sip and Puff
- Printer
- LED lamp

- Touchscreen

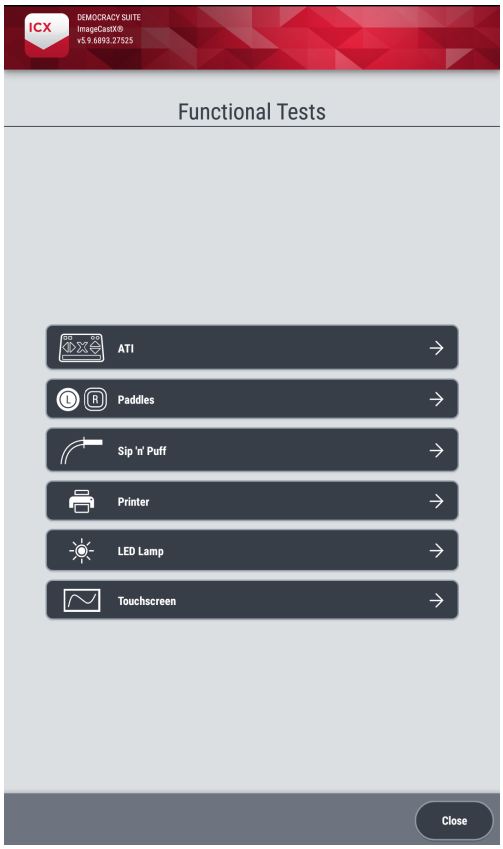

Figure 3-25: Functional Tests menu

ATI

The Audio Tactile Interface (see Figure 3-26) is an optional voting interface, used primarily for voters with visual and auditory impediments.

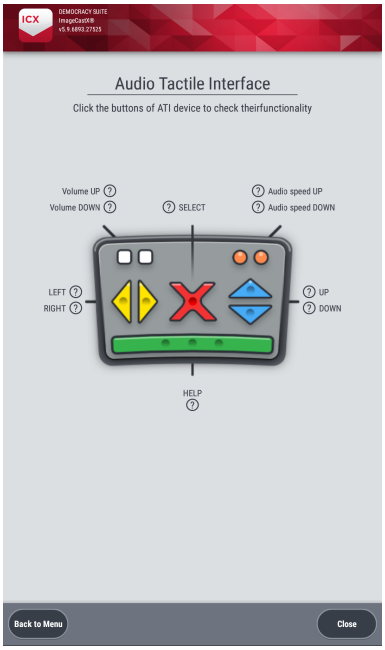

Figure 3-26: Audio Tactile Interface

To test the ATI:

1. Plug in the ATI controller into the unit.
2. Press any button.
   The question mark, associated with the button pressed, will turn into a green check mark on the screen.
   The green check mark (see Figure 3-27) indicates a successful test.

Figure 3-27: Check mark

3. Once the test is done, press **Back to Menu** to return to the *Functional Tests* menu, or **Clear** to clear the touchscreen of any test markings.

Paddles

The Paddle Test screen (see Figure 3-28) allows for the testing of paddles. The paddles are an optional voting interface, used primarily for voters with movement impediments.

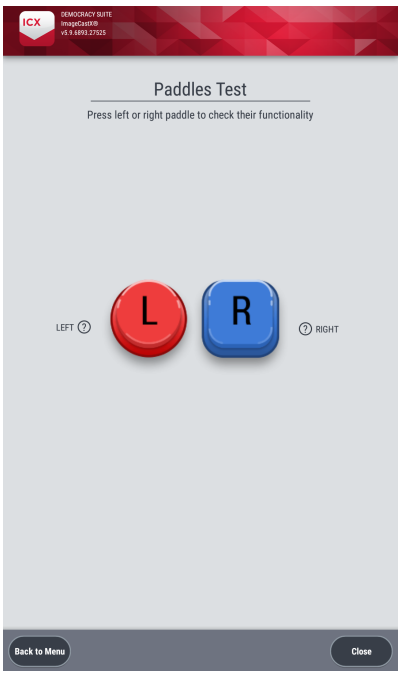

Figure 3-28: Paddles Test

To test the paddles:

1. Attach the paddles to the unit.
2. Press on a paddle.
   The question mark, associated with the button pressed, will turn into a green check mark on the screen.
   The green check mark (see Figure 3-29) indicates a successful test.

Figure 3-29: Green check mark

3. Once the test is done, press **Back to Menu** to return to the *Functional Tests* menu, or **Close** to return to the *Functional Tests* menu.

Sip and Puff

The Sip and Puff Test screen (see Figure 3-30) allows for the testing of the Sip and Puff. The Sip and Puff is an optional voting interface, used primarily for voters with movement impediments.

Figure 3-30: Sip and Puff Test

To test the Sip and puff:

1. Attach the sip and puff to the unit.
2. Sip or puff into the tube.
   The question mark, associated with the action taken, will turn into a green check mark on the screen.
   The green check mark (see Figure 3-31) indicates a successful test.

Figure 3-31: Green check mark

3. Once the test is done, press **Back to Menu** to return to the *Functional Tests* menu, or **Close** to return to the *Functional Tests* menu.

Printer

The Printer Test screen (see Figure 3-32) allows the user to test the printing of a uniform ballot.

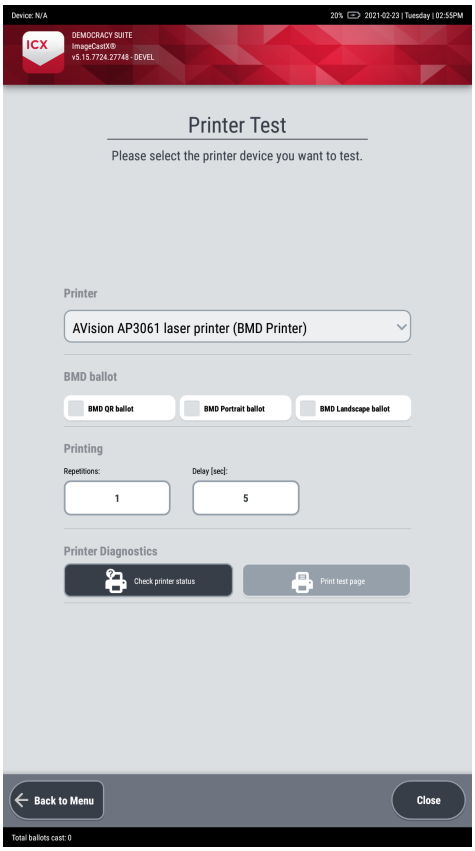

Figure 3-32: Printer Test Project Screen

To test the printer with the project loaded:

1. Attach the printer to the unit.
2. From the *Printer* drop-down, select the printer.
    a. To check the status of the printer, press **Check printer status**.
    a. Set the **Page size** from the drop down options.
    b. To print a test page, press **Print test page.**

To test the printer with the project not loaded:

1. Attach the printer to the unit.
2. From the *Printer* drop-down, select the printer.
3. To check the status of the printer, press **Check printer status.**
4. Select a BMD ballot type:
    - BMD QR Ballot

- BMD Portrait Ballot
- BMD Landscape Ballot

5. To print a test page, press **Print test page.**

Once the printer test is done, press **Back to Menu** to return to the *Functional Tests* menu, or **Close** to return to the *Functional Tests* menu.

LED Lamp

The LED Lamp Test screen (see Figure 3-33) allows for the testing of the LED lamp. The LED lamp is a visual indicator of the unit's status.

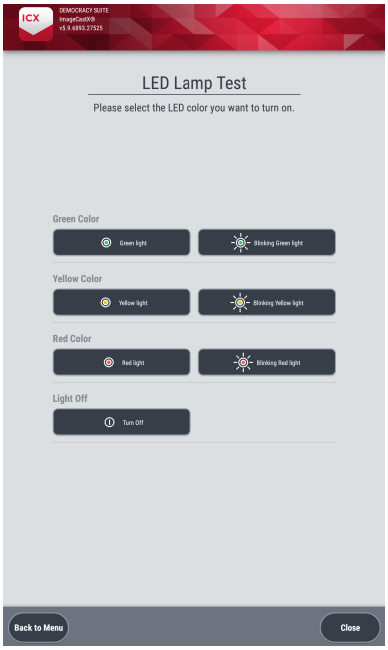

Figure 3-33: LED Lamp Test

To test the LED lamp:

1. On the device's screen, click the color you would like to be shown on the LED lamp. The LED lamp lights up the selected color and mode.
2. Once the test is done, press **Back to Menu** to return to the *Functional Tests* menu, or **Close** to return to the *Functional Tests* menu.

Touchscreen

The Touchscreen is the main input for selections when voting.

To test the touchscreen:

1. Enter the *Touchscreen* test and draw on the screen with up to 10 fingers at one time (see Figure 3-34).
   Each finger will be highlighted with a different color.

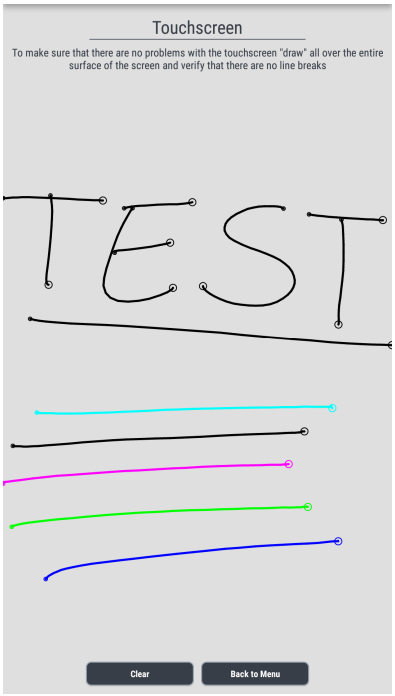

Figure 3-34: Touchscreen

2. Once the test is done, press **Back to Menu** to return to the *Functional Tests* menu, or **Clear** to erase any test markings from the touchscreen.

3.2.4.3 Preview Mode

Allows the preview of the ballot from EED.

In order to start the preview mode, first start the preview in EED, check the EED IP address and port number, then enter those in the ImageCast® X device, and select "Start".

NOTE: A valid LAN Ethernet connection between the EMS workstation and the ICX is required in order to be able to preview a ballot.

3.2.4.4 Localization Editor

The Localization Editor screen (see Figure 3-36) allows for editing localized test resources. This section explains the option on how to edit localized text resources in English. A prerequisite to access the Localization Editor is that the Poll Worker must first select the tabulator. For more information on how to select tabulators, see section "Tabulators" on page 42.

To access the Localization Editor:

1. From the Technical Administration screen, press **Localization Editor,** see Figure 3-35.

Figure 3-35: Localization Editor Icon

2. The **Localization Editor** screen displays.

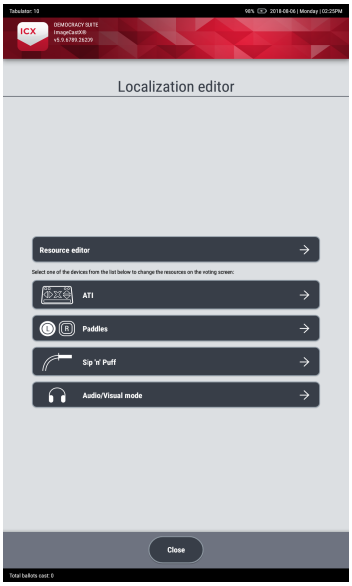

Figure 3-36: Localization Editor

3. To edit a resource, press **Resource Editor.**
   A window with a ***Table Editor*** and ***JSON Editor*** tabs displays (see Figure 3-37).

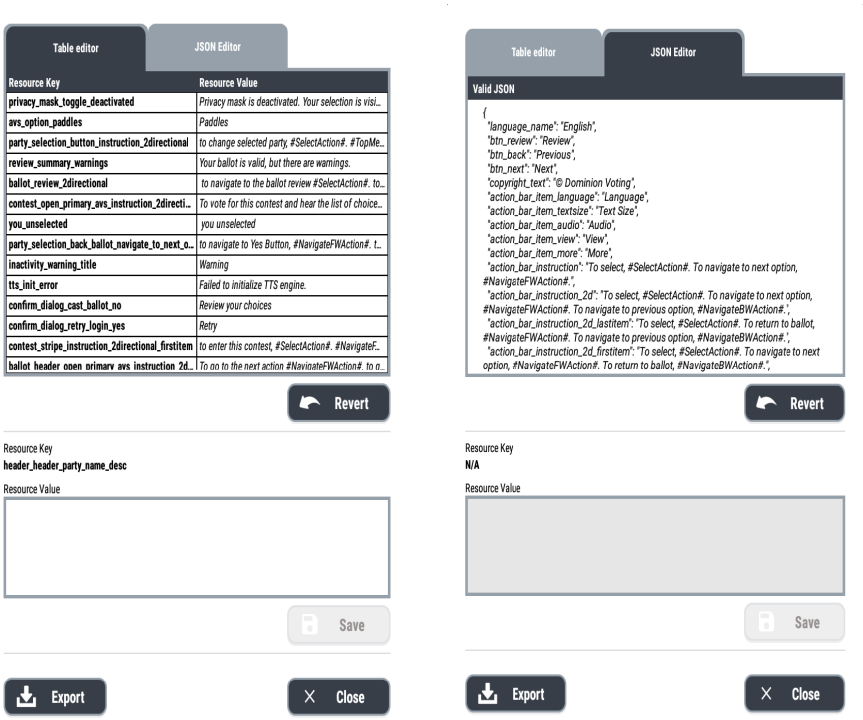

Figure 3-37: Table /JSON Editor

4. To edit a resource in the **Table Editor** tab, select a row.
   The value is auto populated in the **Resource Value** field.
   a. Edit the value with the on-screen keyboard, and press **Save**.
   b. To revert all the values, press Revert.
      A ***Confirm*** dialog displays.
   c. Press **Revert**.
      The value is now reverted to its original state.
   d. To export the updated English localization file, press **Export**.
      An ***Info*** dialog displays.
   e. Press **OK**.
      The English localization file is now exported.
   f. Once done, press **Close**.
5. To edit a value in the **JSON Editor**, select a value by tapping on the value text at the end of the line.
   An on-screen keyboard displays to edit the value.
   a. Edit the value with the on-screen keyboard, and press **Save**.

b. To revert all the values, press **Revert**.
A ***Confirm*** dialog displays.

c. Press **Revert.**
The value is now reverted to it's original state.

6. To export the updated English localization file, press **Export**.
An ***Info*** dialog displays.

a. Press **OK**.
The English localization file is now exported.

b. Once done, press **Close**.

Editing ATI / Paddles / Sip 'n' Puff or Audio/Visual mode:

To edit a localization file through the ballot user interface, select one of the following options ***ATI/ Paddles/ Sip'n'Puff or Audio/Visual mode***:

Any focused element in the user interface has an option to be edited.

1. To edit, press on a button or screen section.
An ***Edit*** button displays (see Figure 3-38).

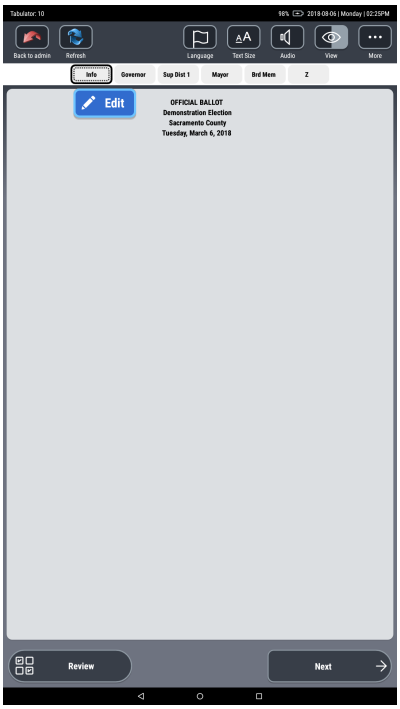

Figure 3-38: Edit

2. Press **Edit**.
   A ***Table editor*** for that focused element in the user interface displays (see Figure 3-39).

Figure 3-39: Table Editor window

3. To edit a resource in the **Table Editor** tab, select a value.
   The value is auto populated in the **Resource Value** table above.
   a. Edit the value with the on-screen keyboard, and press **Save**.
   b. To revert all the values, press **Revert**.
      A ***Confirm*** dialog displays.
   c. Press **Revert.**
      All the value is now reverted to its original state.
   d. To export the updated English localization file, press **Export**.
      An ***Info*** dialog displays.
   e. Press **OK**.
      The updated English localization file is now exported.
   f. Once done, press **Close**.
4. To refresh the displays, press **Refresh.**
5. Once done, press **Back to admin.**
   The **Localization Editor** displays.

NOTE: Please note that all the resources that contain a hashtag should not be edited. This is to ensure that the consistency of navigation is not disrupted. For example: #NavigateFWDesc#.

3.2.4.5 Export Apps

The “Export Apps” button in the Technical Administration menu checks if there is a USB media present and exports ICX and Google TTS APKs to it.

When the Export is complete a dialog will pop-up saying **Export Complete** with an **OK** button which will close the dialog.

3.2.4.6 Export Images

The Export Images menu (see Figure 3-40) allows the Technician to export or clear screen images and misread QR codes generated from the printer's scanner. As an additional security feature, the exported files have a digital signature that is later verified in RTR.

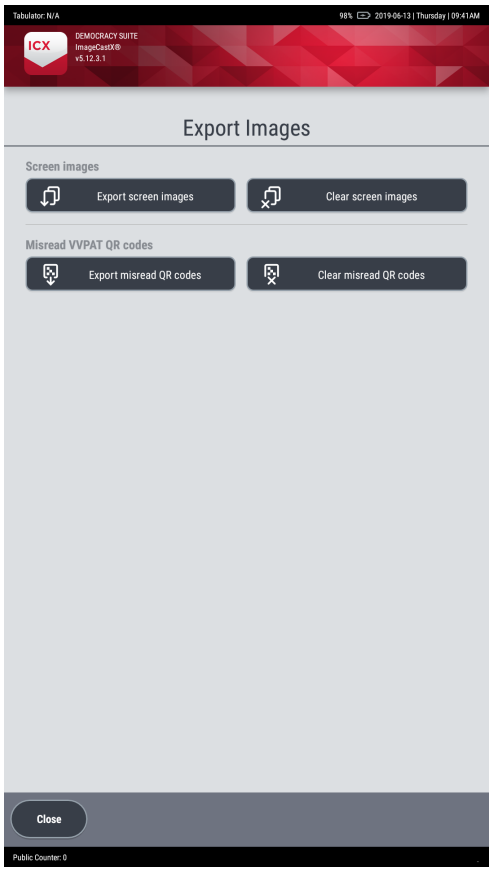

Figure 3-40: Export images menu

- **Export screen images** - exports all captured screen images as a .zip file to a USB media.
- **Clear screen images** - deletes all captures screen images.
- **Export misread QR codes** - exports all misread QR code images as a .zip file to a USB media.
- **Clear misread QR codes** - deletes all misread QR code images.

3.2.5 Duplication Mode

Duplication mode is a feature that allows the administrator to create a duplicate ballot of a pre-voted ballot that was marked by hand. When in Duplication mode the voter does not have permission to use the ICX tabulator, only the administrator can use the ICX tabulator.

NOTE: Use of duplication mode increments the Protective Counter. For more information on the Protective Counter, refer to “Protective or Lifetime Counter” on page 48.

If working with a multi-card ballot, only those cards selected to be shown are printed.

Before enabling this option, make sure the following conditions are met:

- That the tabulator is set in BMD mode in the *Edit Config* option
- The election files are loaded in the *Poll Administration* menu
- That the poll is open

To enable Duplication Mode:

1. In the *Technical Administration* menu, click **Duplication Mode**.
   A confirmation dialog displays (see Figure 3-41).

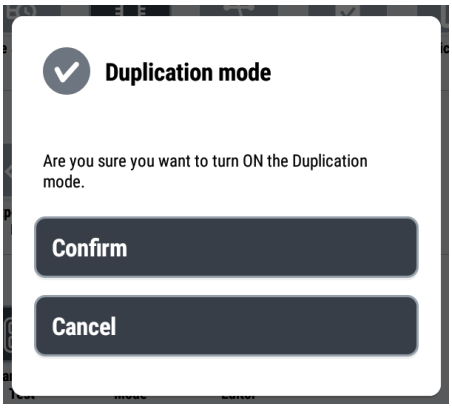

Figure 3-41: Confirmation dialog - ON

2. Press **Confirm**.
   The Duplication Mode is now enabled.

This option overrides the following MCF settings to their new values:

- Split contest options - All set to True, except for continuation messages
- Overvote - Prompt
- Admin Authentication - False
- Default tab for admin login dialog - Ballot Activation

Once it is enabled, the *Poll Administration* menu will have a red message at the bottom of the page to indicate that the Duplication Mode is active.

Figure 3-42: Duplication Mode message in Poll Administration menu

The Login screen also has a indication message (editable in the localizations) at the bottom of the screen (see Figure 3-43) and the printed ballot can have a indication text at the bottom indicating that it was produced by duplication.

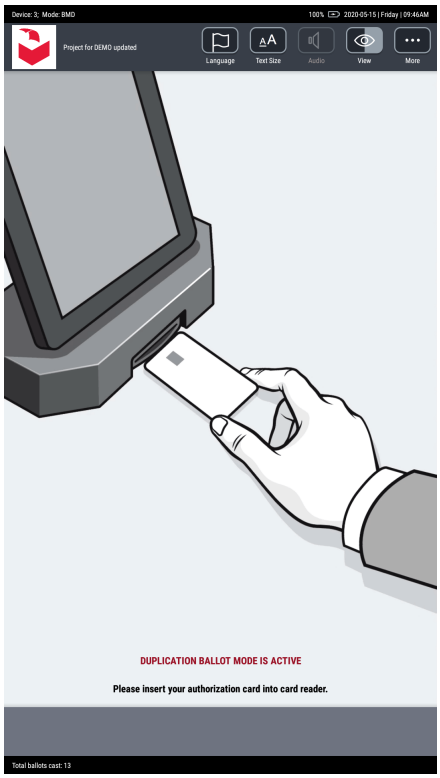

Figure 3-43: Duplication Mode message on Login screen

To disable Duplication Mode:

1. In the *Technical Administration* menu, uncheck the option **Duplication Mode**.
   A confirmation dialog displays (see Figure 3-44).

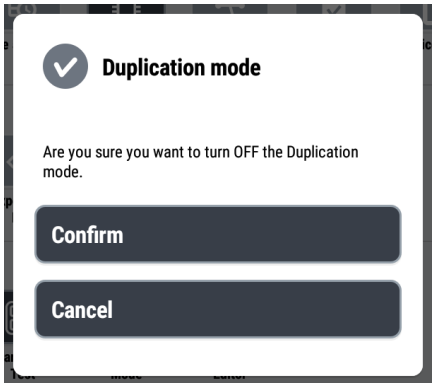

Figure 3-44: Confirmation dialog -OFF

2. Press **Confirm**.
   The Duplication Mode is now disabled.

This option is also turned OFF automatically once the poll is closed. When the **Duplication mode** is turned OFF, all of the MCF options should be set back to their original settings.

3.3 Poll Administration

All Poll administration operations can be performed from the menu shown in Figure 3-45.

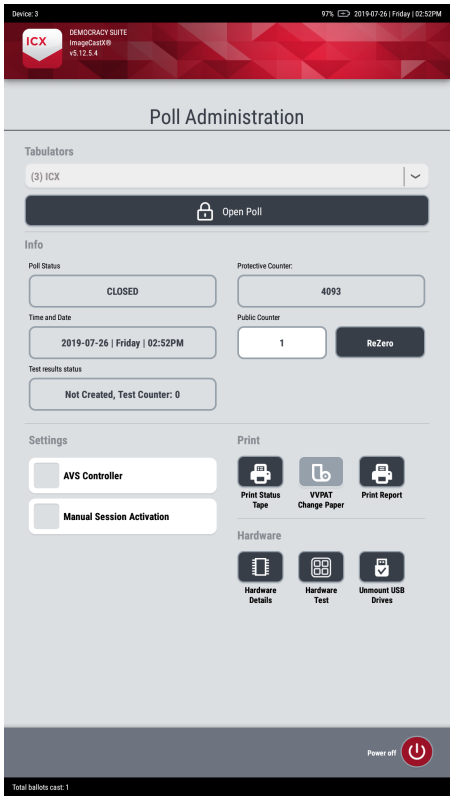

Figure 3-45: Poll Administration menu

Categories:

- Tabulators
- Info
- Settings
- Print
- Hardware

Along with the above listed settings, the user has one remaining option:

- POWER OFF: Powers off the machine.

3.3.1 Tabulators

At the top of the screen is a drop-down menu with all available tabulators.

1. Insert the Poll Worker smart card and enter the PIN.
   The ***Poll Administration*** menu displays (see Figure 3-46).

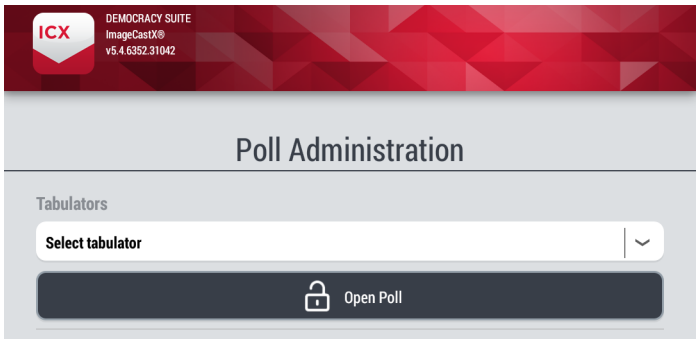

Figure 3-46: Tabulator

2. In the drop-down menu select a tabulator from the provided list.
   When clicking on the drop-down Tabulators menu, a keyboard pops up to type in the desired tabulator.
   The application starts verifying the election files, and when that's finished a dialog displays with information of the integrity of the election files.
   a. In the ***Info*** dialog, press **OK** (see Figure 3-47).

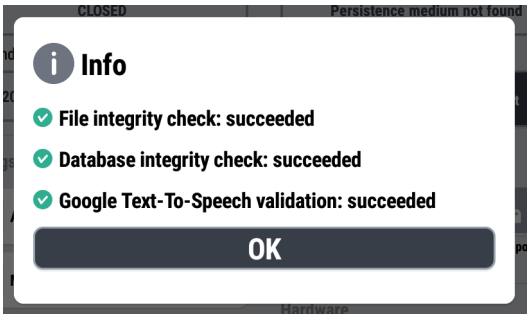

Figure 3-47: Verified File and Database Integrity

The tabulator is now selected.

NOTE: If the list of tabulators is empty, that means that the HMAC key on the Poll Workers smart card is different from the HMAC keys of the tabulators in the database, and a warning message displays: “Loading tabulator failed. Election data contains tabulator with HASH different from one on smart card data.”

NOTE: For issues regarding loading election files, please see section “Error When Loading Election Files In Poll Administration Menu” on page 107.

3.3.1.1 File Integrity Check

Upon checking and verifying the current state of files, the ImageCast® X device returns a list of missing .png (examples: ballot header, logo, party logo) or .spx (examples: contest, contest heading, choice, political party, ballot header, audio files) files for the selected tabulator, for each of the available languages. A dialog is displayed after the File integrity check (see the image in Figure 3-48 for an example).

The files that will be checked and reported depend on the selected tabulator operating mode (DRE or BMD).

Localized printer resources for all available languages are also checked and verified during the File Integrity check: VVPAT resources in DRE mode or printer resources in BMD mode.

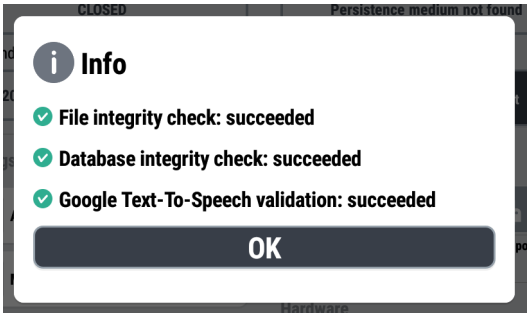

Figure 3-48: File Integrity Check dialog

NOTE: Should there be any missing items, the device will prompt a message similar to the one below:

["PRINT_BLANK_BALLOT_TEMPLATE",

"PRINT_BLANK_CONTEST_TEMPLATE",

"PRINT_CHOICE_SELECTION_TEMPLATE",

"PRINT_CHOICE_SELECTION_TEMPLATE_RANK",

"PRINT_CONTEST_NAME_TEMPLATE",

"PRINT_OVERVOTE_CONTEST_TEMPLATE",

"PRINT_UNDERVOTE_CONTEST_TEMPLATE",

"PRINT_CHALLENGED_TEMPLATE",

"PRINT_PROVISIONAL_TEMPLATE",

"PRINT_CHALLENGED_LABEL_TEMPLATE",

"PRINT_PROVISIONAL_LABEL_TEMPLATE",

"PRINT_PARTY_ABBREVIATION_TEMPLATE",

"PRINT_CHOICE_SELECTION_TEMPLATE_WRITE_IN"]

If a Google TTS voice data file is missing or unsupported, one of the corresponding dialogs shown in Figure 3-49, display with a description in a form of a bullet text at the bottom of the dialog.

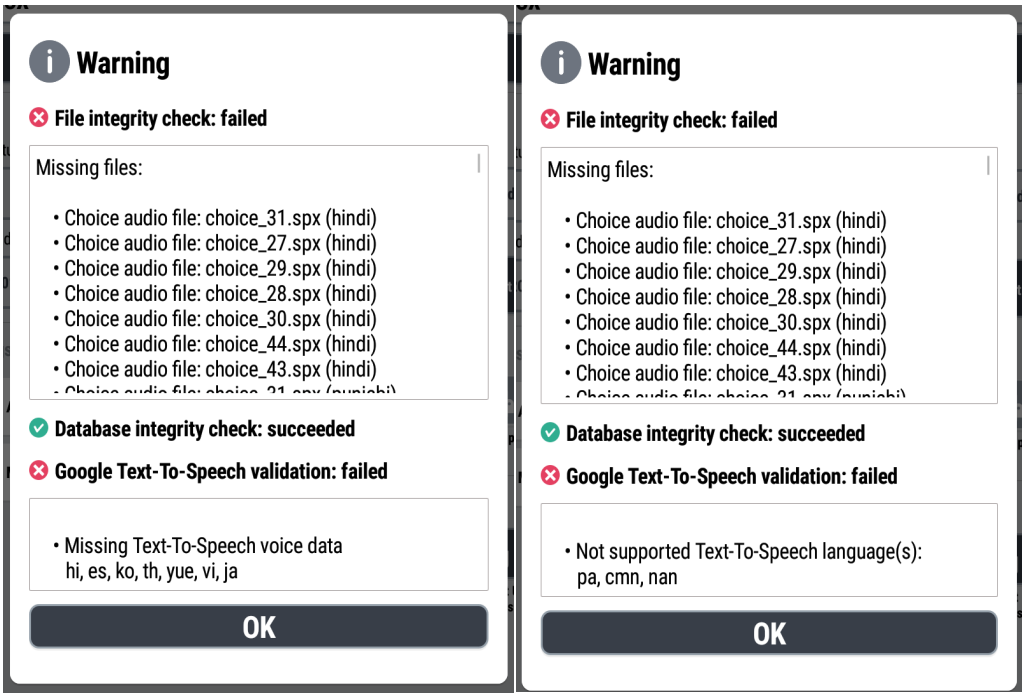

Figure 3-49: File verification failed: missing/unsupported TTS voice data

If the Google TTS voice data files are both missing and unsupported, the pop-up dialog will display both error messages in the description.

3.3.1.2 Open Poll

After a tabulator is selected, the Poll Worker can now open a poll.

1. Press **Open Poll**.
   An ***Info*** dialog displays, with two options (see Figure 3-50).

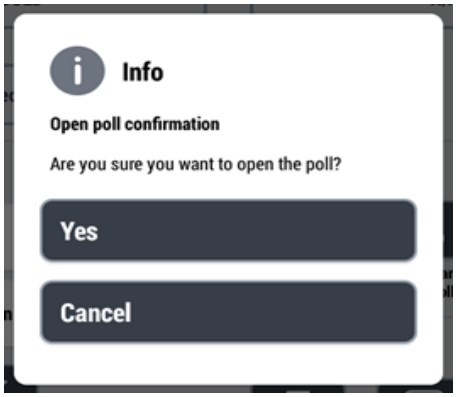

Figure 3-50: Open Poll Confirmation dialog

   a. Pressing **Yes** opens the Poll.
      If a tabulator has not been selected, after pressing Yes, the user will be informed to select a tabulator from the list before trying to open the Poll. If a tabulator has already been selected, and all configuration settings correspond to the selected tabulator and device, the Poll will be opened and the user will be moved to the login voter activity screen.
   b. Pressing **Cancel** closes the dialog and the Poll Worker can proceed to change the voting settings.

NOTE: If the device wasn't configured appropriately, the user will be informed about a problem and the Poll will remain Closed.

3.3.1.3 Close Poll

To close the poll, please perform the following steps:

1. In the Poll Administration menu, press **Close Poll**.
   In the **Info** dialog, press **OK**.
2. Once the Results report has completed printing, and if the MCF configurable option “Print report on close poll” is set to TRUE, you can choose one of the following options:
   - Save to File
   - Print Another Report
   - OK

If the MCF configurable option “Print report on close poll” is set to FALSE, you can choose one of the following options:

- Print report
- Save to File
- OK

3. Press **OK**.
   The election summary and information is printed.
   The Poll is now closed.

3.3.2 Info

The info section within the Poll Administration menu contains general information about the device and the Poll status, see Figure 3-51.

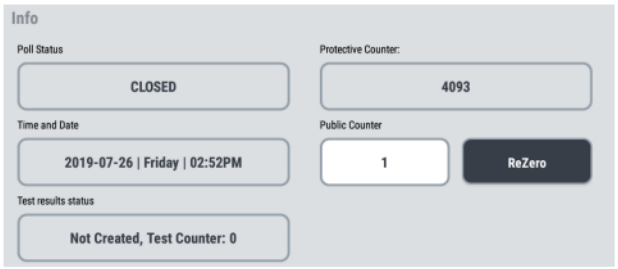

Figure 3-51: Info Section

3.3.2.1 Poll Status

There are two available possibilities:

- CLOSED
- OPEN

If the “Use DRO Box in Print Headers” is checked in EED during the preparation of the election project, upon selecting “Open Poll” the Poll Worker will be prompted a dialog where Election judges will be able to add their signature/ initials.

The poll can be open ONLY if the initials are entered.

These initials will be seen in a reserved space on the ballot for election judges to initial when the ballots are provided to the voter.

The ballot will only be accepted by the scanner IF the initials are detected. If no initials are present, the ballot must be rejected with appropriate warnings (see Figure 3-52).

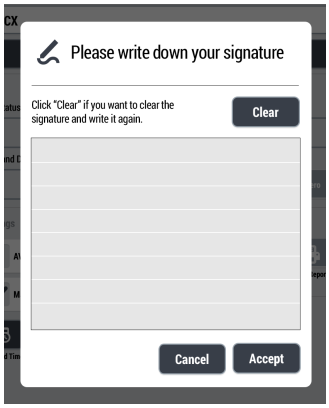

Figure 3-52: Judges signatures

3.3.2.2 Protective or Lifetime Counter

Shows how many ballots were marked on the device in the lifetime of the machine. For a BMD the value will be N/A.

NOTE: This counter increments for duplicated ballots when ICX is in Duplication Mode. For more information on duplication mode, refer to “Duplication Mode” on page 38.

3.3.2.3 Public Counter

Shows how many ballots were printed or cast on the device for the particular election.

Depending on the operating mode of the selected tabulator:

- **ReZero** – Resets the public counter to zero and deletes the test results and the regular results for the selected tabulator on the locations where the results are stored.
- **Reset** – Resets the public counter to zero.

If the USB media containing the result files is not attached to the ImageCast® X device when closing the poll, the following message displays:

”All the found result files are deleted from the existing result locations. The result files from the missing storage path is not deleted. Storage paths that do not exist> /storage/... .
Export log to see detailed message.”

To resolve this, insert the USB media and perform the ReZero again.

During ReZero **do not remove the Poll Worker smart card** until the process finishes!

- If the ReZero is in progress and the Poll Worker smart card is removed, the following message displays: ***“Deleting results is in progress. Please wait until the operation is complete.”***
- If a smart card is inserted after that, a toast message displays at the bottom of the screen: ***“Deleting results is in progress, please wait...”***

However, please note that no confirmation will appear if the smart card is removed at proximately the same time as the result are deleted.

3.3.2.4 Test Result Status

If the Vote Simulator has been run, the results will display in the **Test result status** bar as seen in Figure 3-53.

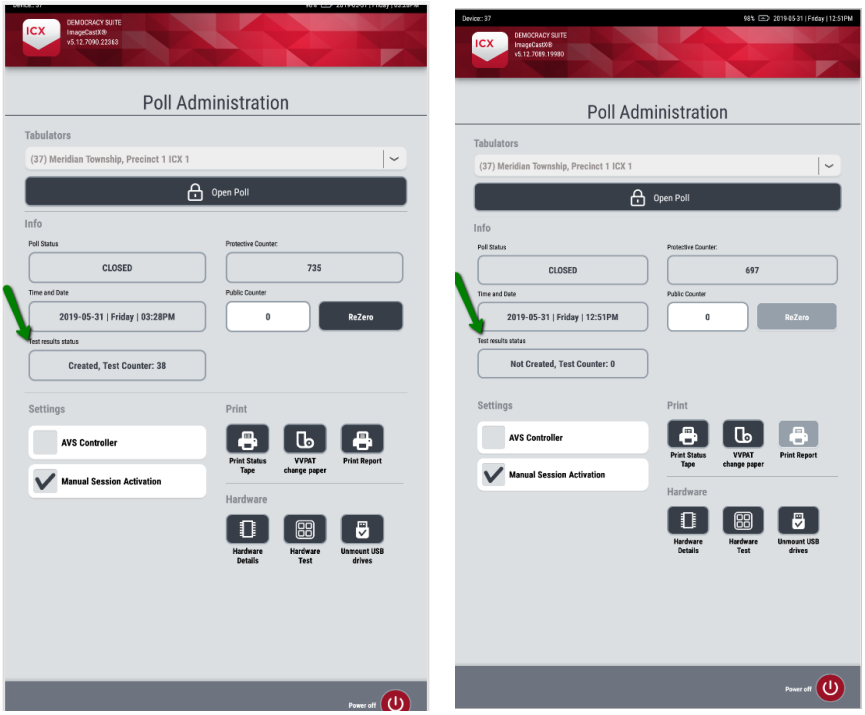

Figure 3-53: Test result status bar

3.3.3 Settings

Figure 3-54 described the Settings section.

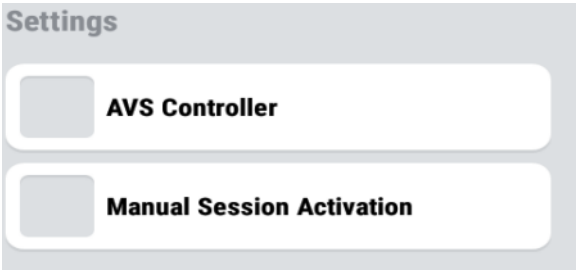

Figure 3-54: Settings section

Settings section contains the following:

- ***AVS Controller***– the default option is "**Disabled**". If the AVS mode is available on the machine, the user should select this option.
- ***Manual Session Activation***– Disabled by default. Select this to allow manual voting session activation.
  - ***Provisional vote:*** once a Manual session is activated and a Provisional vote is chosen, a code will be generated on-screen prior to proceeding to the ballot and can commence voting.
  - ***Challenge vote:*** once a Manual session is activated the screen automatically proceeds to the Challenge vote tab which contains a Challenge code. Upon clicking continue the user proceeds to the ballot and can commence voting.

3.3.4 Print

The Print section (see Figure 3-55) elaborates on the available options for the ImageCast® X device.

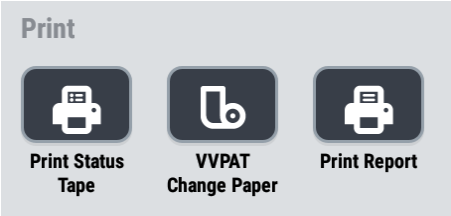

Figure 3-55: Print bar

- **Print Status Tape** – During the voting process, the Poll Worker can print a Status Report containing the following information (top-down):
  - Election data
  - Tabulator data (name and ID)
  - Voting Location (name and ID)
  - Precinct names
  - Total number of votes Cast
  - Total number of Voters
  - ImageCast® X device information (model, serial no., Protective Counter and software version).

Beneath all the above-mentioned information there is room available for the signatures of Election Officials.

The footer of the report contains information on the date and time the report was printed, the status of the Poll as well as the Unit status.

- **VVPAT Change Paper** – This option should be selected if the VVPAT Printer runs out of paper during the election process. Please refer to Section 4.1 - PAPER LOADING of the Voter-verified paper audit trail (VVPAT) Model: VRP3 User Guide for detailed information on how to change the paper roll on the VVPAT.

Once the report is printed, the following information can be observed on the header of the new paper roll:

- Election name
- Election date
- Voting location name
- Tabulator name

- Counting group name
- Open/close/change roll date / time
- Voting session ID (generated every time poll is opened)
- Public counter

If "Low **Paper Status**" is triggered the tape will be fed through till the end and will contain the following text at the end of the used paper roll - "*Keep Safe. Official election results. Authorized personnel only.*"

NOTE: Selecting this option when the low paper sensor is not triggered, a dialog displays stating that the device isn't low on paper (see Figure 3-56).

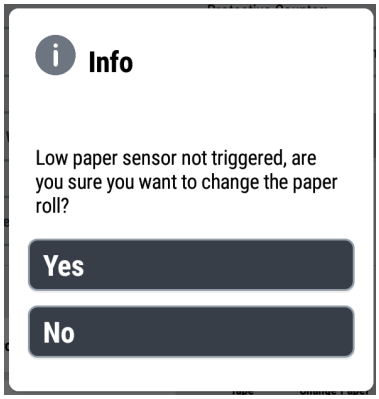

Figure 3-56: Low paper isn't triggered dialog

- **Print Report** – this option is prompted upon the opening/closing of the Poll. See Figure 3-57.

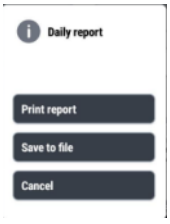

Figure 3-57: Print Report Options

NOTE: The **Print Report** button is available only if no ballots have been cast.

This option allows the Poll Worker the following options:

- Print report
- Save it to file
- Cancel

When printed, the report has the following layout:

Daily report

Election Title: xxxxx

Date: Day, yyyy-mm-dd

Number of Printed Ballots: x

Number of Voted Ballots: x

Number of Blank Ballots: x

Number of Duplicated Ballots: x

When saved, the report is packaged as a .txt file that can then be exported to a USB media from the Technical Administration Menu via the **Export report** option.

A test report can also be created by using the data from the Vote Simulator. By default, this report will be saved to Internal storage *Daily_Report_TEST*. From the Vote Simulator menu there is an option to **Export Test Report** which will export the test report onto a USB.

NOTE: Number of Duplicated Ballots field is not displayed on the Daily Report when generating a test report.

Cancel Report Printing:
ICX users have the option to enable/disable the "Cancelable printing report" option in the MCF options (Edit Config in Technical Administration menu) allowing the cancellation of the report printing during the printing process. This option is disabled by default. Upon tapping the **Cancel** button, the user will see a dialog allowing them to: **Reprint the Report**, **Continue Printing, Save Report to File and Cancel**. After confirming the cancellation, the report printing will be canceled.

Only the Poll Worker can print out the report. Inserting the Tech Advisor smart card while printing the report is followed by a message at the bottom of the screen: *"Report printing in progress, no action is allowed for a Technician"*. However, if the Tech Advisor smart card is inserted after the report is printed the following pop-up message displays:

"Technician login. The report is successfully printed. Since the Poll Administration card has been removed, the election information on opening the poll was not printed. If you wish to proceed, you will be logged in and redirected to Technician menu".

Pressing **Proceed** continues to the *Technical Administration* menu, while **Cancel** closes the windows and reverts to the welcome screen.

3.3.5 Hardware

3.3.5.1 Hardware Details

Displays information such as firmware and serial number of the connected devices in the form of a dialog, as seen in Figure 3-58.

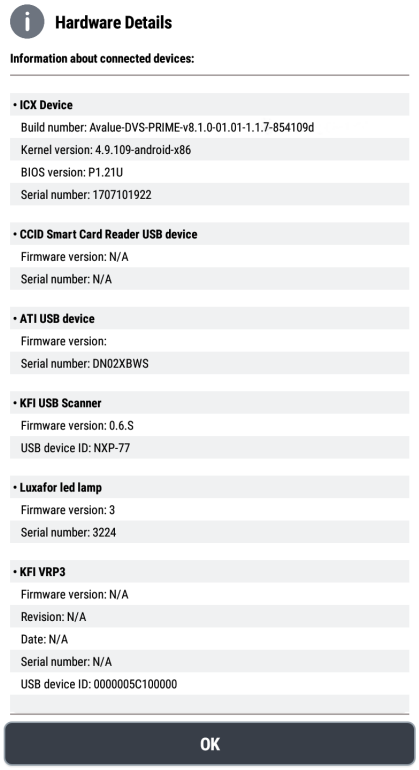

Figure 3-58: Hardware Details dialog

3.3.5.2 Hardware Test

Allows the user to test the hardware connected to the ImageCast® X device.

There are tests for the following:

- ATI device
- Paddles
- Sip'n'Puff
- Printer
- LED Lamp
- Touchscreen

NOTE: Refer to "ImageCast® Classic / Prime Technical Administration Screen" on page 8 for a more detailed explanation of the Functional Tests.

3.3.5.3 Unmount USB media

For information on unmounting USB media, refer to "Unmount USB media" on page 17.

3.4 Voting

Prior to commencing with the voting section, the following conditions need to be met:

- Election files are loaded and decrypted,
- All the necessary files are present in the Election Files (confirmed with verification of election files),
- The Poll is open.

After the Poll Worker Opens the Poll, the application will redirect the user to voter

screen (see Figure 3-59).

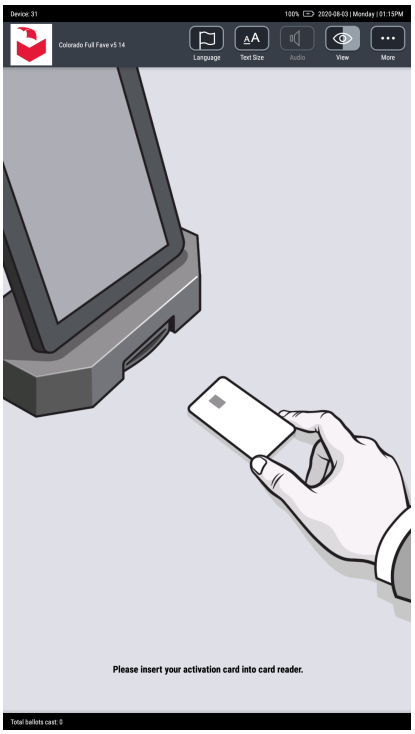

Figure 3-59: Voting interface

A user has to have an appropriate smart card to access the voting screen. On the other hand, voting can be started with the Poll Worker's assistance if the manual session activation is enabled in the Poll Administration menu.

If the voting session is started with a voter card, a voter will be redirected to language selection screen, as seen in Figure 3-60.

Figure 3-60: Language Selection Screen

When the user selects the desired language, that user can start, and the application will show the screen where the voter can choose one of the available accessible voting devices (AVS voter), otherwise, the application will open the Ballot in the previously selected language (regular voter).

NOTE: When voting in an Open Primary, the Voter will be greeted by a screen with a choice of parties running in that election.

NOTE: The choice is made by clicking the appropriate button on the choice screen (see Figure 3-61).

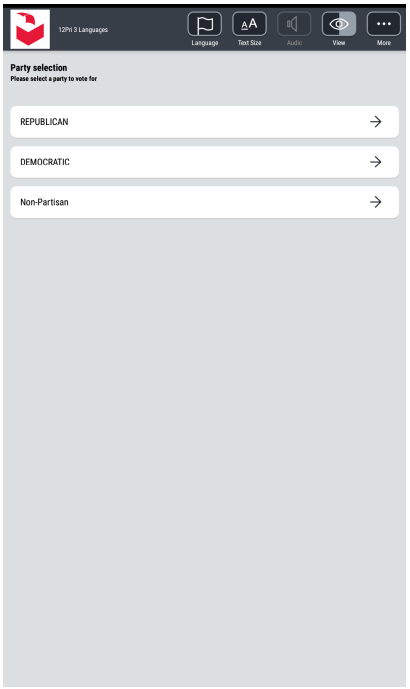

Figure 3-61: Party selection

At any time during the voting, a user can change the language, text size, screen view and, in AVS mode, audio settings.

A Voter can navigate through the Contests using the navigation buttons at the bottom of the screen - Next and Previous buttons.

At any point during the voting process, the voter can go to the Review page using the Review button that is in-line with the navigation buttons.

NOTE: For more details about these features please refer to sections “Voting Interface” on page 60 and “AVS (Accessible Voting Session) Voting Interface” on page 94.

3.4.1 Full Ballot Preview

This section describes the Full Ballot Preview screen (see Figure 3-62) that may appear following the language selection and, if applicable, Party selection. Its appearance is dependent on selections made in the Machine Configuration File (MCF).

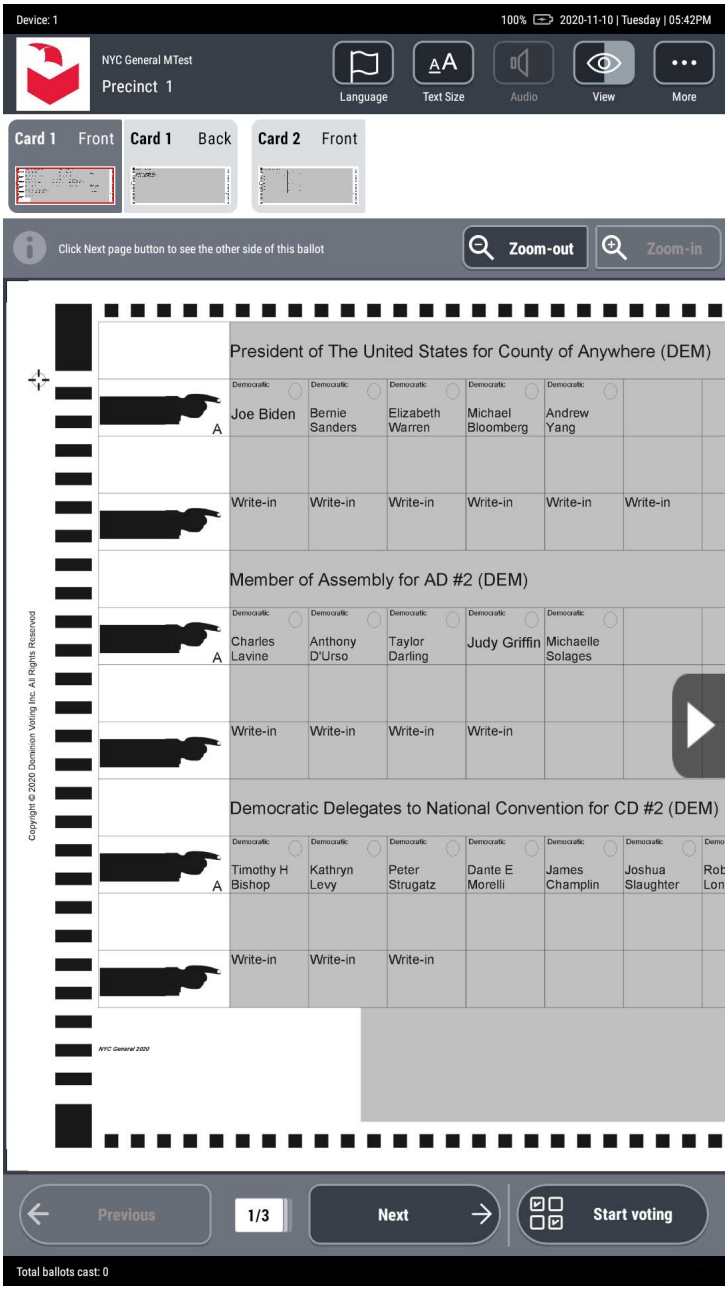

Figure 3-62: Full Ballot Preview screen

If previewing the full ballot is mandatory for the voter, the message “You need to go through all the cards before being able to start voting” appears. The **Start Voting** button will be unavailable until the voter has previewed all cards. The cards are previewed by tapping **Next.**

If previewing the full ballot is not mandatory, the **Start Voting** button will be available when the screen appears. This allows the voter to by-pass the preview and begin voting.

For an AVS, Full Ballot Preview is available only in Audio/Visual mode. For more information on AVS, see “AVS (Accessible Voting Session) Voting Interface” on page 94.

3.4.2 Voting Interface

During the active voting session, there are several menus and bars intended for adjusting the voting interface as desired and navigating through the ballot. At the top of the screen, an ***Action*** bar (see Figure 3-63) contains buttons for changing various graphic and audio settings. These settings can be changed at any point in the voting session and are consistent throughout the whole session.

3.4.2.1 Action bar

Figure 3-63: Action bar

- The **Language** button opens a pop-up menu with all the languages defined for the current elections. The voter can change the language by pushing a checkbox with the desired language.
- The **Text Size** button allows the voter to chose either **Small** or **Large** text size.
- The **Audio** button is active only during an AVS session. For details refer to section “AVS (Accessible Voting Session) Voting Interface” on page 94.

- The **View** button allows changing the visual theme of the voting interface with the following options: **Color**, **Black on white** and **White on black**, see Figure 3-64.

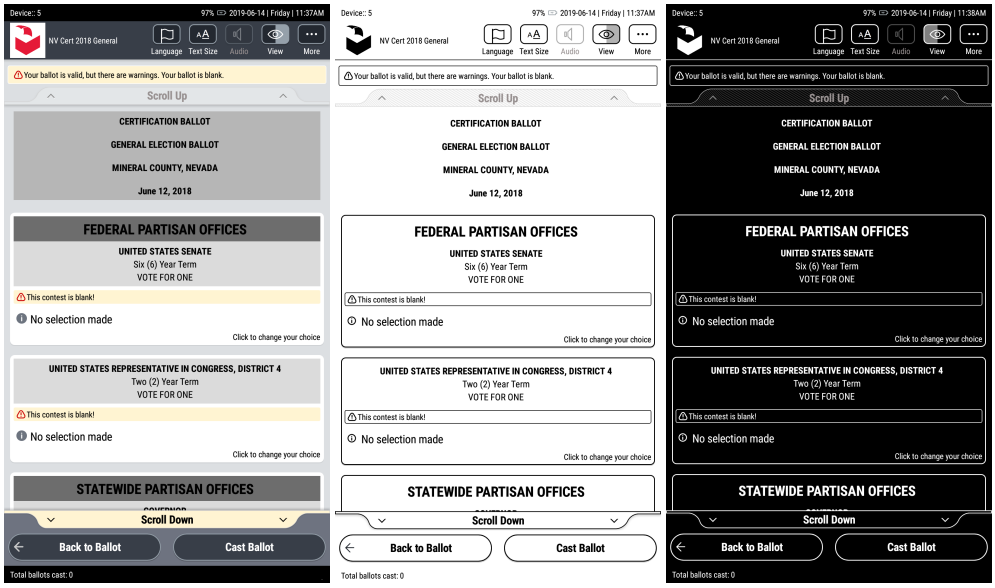

Figure 3-64: View (color) options

- Pressing the **More** button allows the voter to navigate through the ballot screens, cancel the current voting session by pressing the **Cancel Activation** in the pop-up menu, or display the information about the ICX device and software by pressing the **About** button.

NOTE: Please note that the text right next to the logo contains the following information:
Project name - this information cannot be disabled and will always be shown.
Precinct name - this option can be enabled or disabled through the Edit Config option in the Technical Administration Menu, or through the MCF in EED during project creation.

3.4.2.2 Contest bar

Figure 3-65: Contest bar

The **Contest bar** (see Figure 3-65) is located right under the Action bar and is used for navigation between the contests on the ballot. By tapping on the desired button, the corresponding contest will be displayed on the screen. When using a navigation device, the contest stripe does not display.

NOTE: The Cancel Activation button is available only when the voting session was Manually Activated.

3.4.2.3 Stripe

Figure 3-66: Stripe

The Stripe (see Figure 3-66) is located right under the Contest bar and is used to indicate the number of the page the voter is on during an active voting session as well as the voters chosen Party.

Both options can be enabled or disabled through the Edit Config option in the Technical Administration Menu, or through the MCF in EED during project creation.

NOTE: The following applies depending on the type of election:
For open primary elections the party name shown is the selected party name. It is already present on the screen per design for open primary elections. Setting "Show party name" to true will duplicate this information on the screen.

For closed primary elections the party name is not present per design, so it's only visible if configured.
For general elections, the party name is not present on the screen ignoring the configuration.

3.4.2.4 Navigation Bar

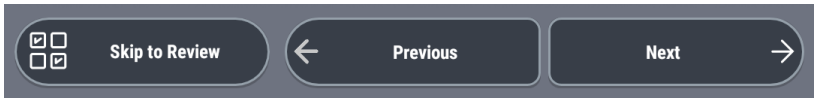

Figure 3-67: Navigation bar

Beside the Contest bar, the voter can navigate between the contests by using the **Navigation bar** (see Figure 3-67) at the bottom of the screen. Pressing the "Previous" and "Next" buttons will display the previous/next contest listed in the Contest bar.

Selecting the **Skip to Review** button will display the Review screen that contains all contests and choices marked by the voter.

The Review screen will also display notifications about any errors or warnings if the ballot is not valid or incomplete.

On the final contest, the **Skip to Review** button disappears and only options are **Previous** and **Continue to Review** (see Figure 3-68).

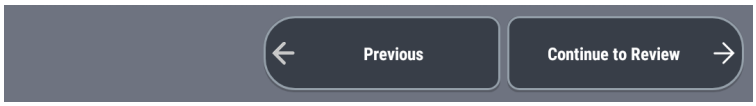

Figure 3-68: Previous and Continue to Review buttons

The voter can navigate through all of their choices by pressing **Scroll Down / Scroll Up** buttons at the bottom/top of the contest list.

In case the voter wants to change the choices for a specific contest, selecting (tapping) that contest in the review list will return the voter to that specific contest screen.

The same functionality is provided by pressing the **Back to Ballot** button in the bottom left corner of the review screen.

3.4.3 Casting / Printing The Ballot

- **BMD** - The ballot (see Figure 3-69) is printed by selecting the **Print Ballot** button in the right bottom corner. Pressing this button prompts a final dialog that, again, displays any warnings for the ballot and provides the options to confirm the ballot printing or to return to the Review screen. The marked ballot is printed by selecting the **Print your ballot** button in the dialog.

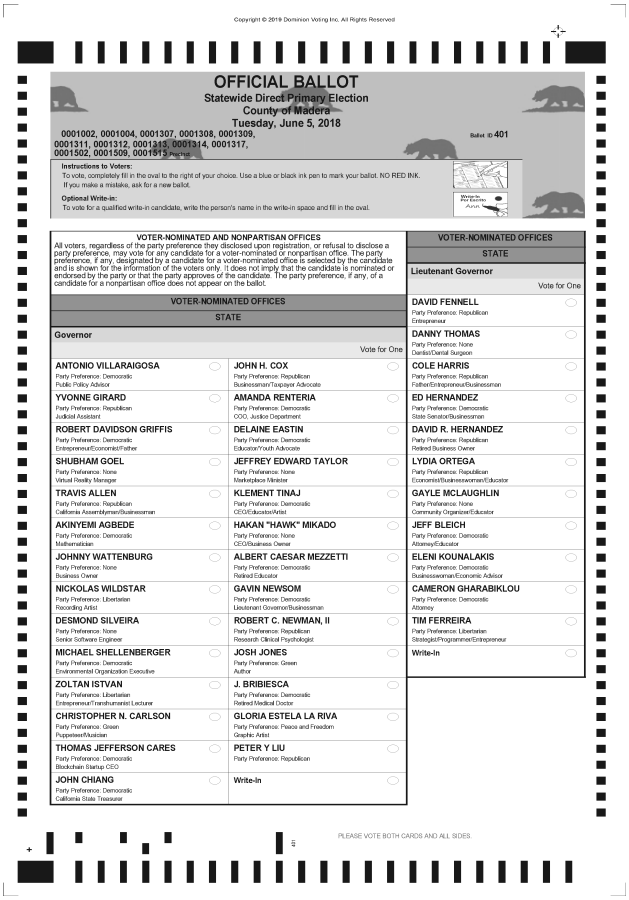

Figure 3-69: BMD Ballot

If the options "*Show review screen help animation*" and "*Use trembling animation for cast button*" are enabled in the Technical Administration menu (under Edit Configuration) then the **Cast/Print Ballot** button will tremble and display an animation to remind the voter to cast/print the ballot, as seen in Figure 3-70.

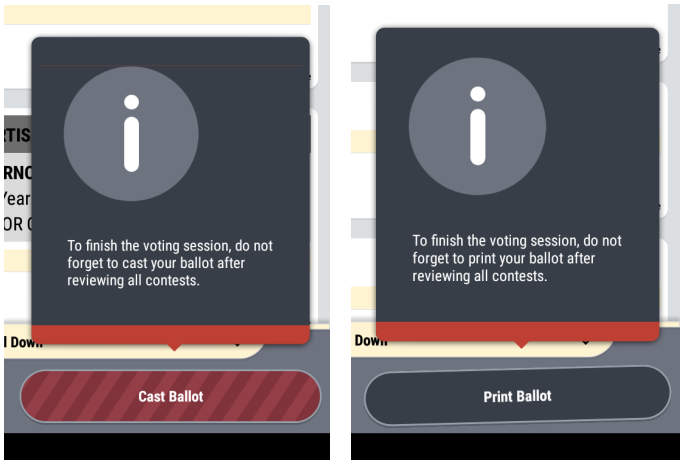

Figure 3-70: Cast/Print Ballot animation

Once the voter has casted the vote, Figure 3-71 displays as a confirmation depending on the mode of operation.

For **BMD** mode, depending on the "BMD instructional screen" option:

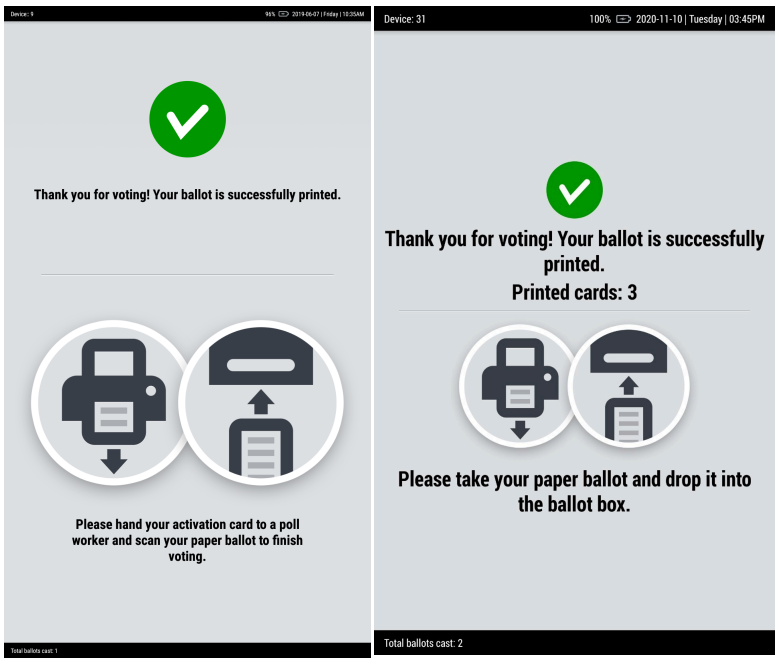

Figure 3-71: Thank you for voting screen - "Scan your ballot" option (left) / "Drop ballot in the box" option (right)

3.4.4 Manual Session Activation

Manual Session Activation, which is disabled by default, allows the Poll Worker to manually activate the voting session, if a Voter card cannot be used for any given reason (i.e. shortage of cards).

Alongside a regular vote there are two other voting options accessible in the Manual Voting Session:

- ***Provisional vote:*** once a Manual session is activated and a Provisional vote is chosen, a code will be generated on-screen prior to proceeding to the ballot and can commence voting.
- ***Challenge vote:*** once a Manual session is activated the screen automatically proceeds to the Challenge vote tab which contains a Challenge code. Upon clicking continue the user proceeds to the ballot and can commence voting.

Depending on the election file, either the Challenge or Provisional voting option will display.

To start the Manual Voting Session:

1. Insert the Poll Worker smart card and log in with the appropriate credentials. The log-in page displays (see Figure 3-72).

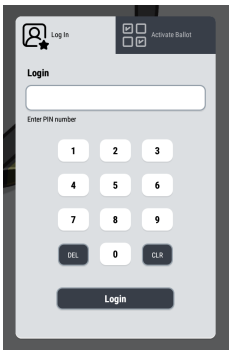

Figure 3-72: Log-in dialog

2. Click the **Activate Ballot** tab.
   The Activate Ballot window displays (seeFigure 3-73).

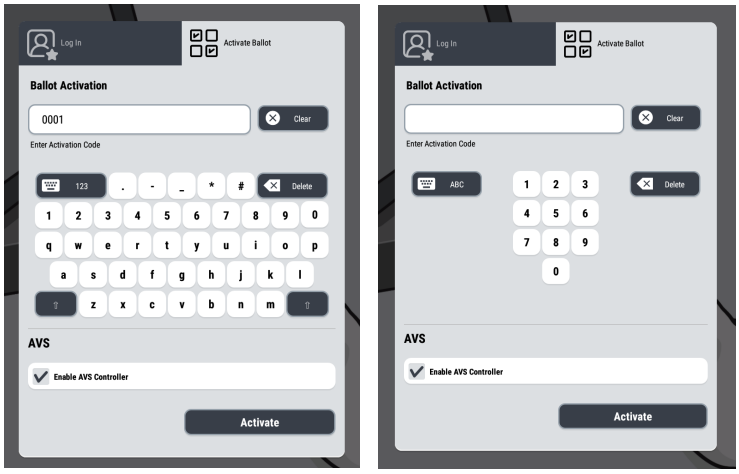

Figure 3-73: Activate Ballot window - Alphabetic keyboard (left) / Numeric keyboard (right)

3. With the on-screen keyboard, type in the *Ballot Activation Code*.

NOTE: You can also **Enable AVS Controller** on this window.

4. Click **NEXT**.
   The **Challenge Code** displays (if the conditional voting mode was set to CHALLENGE in the election file, see Figure 3-74).

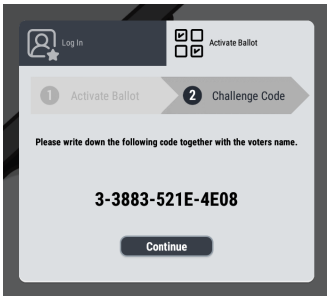

Figure 3-74: Challenge code 1

If a conditional voting mode was set to PROVISIONAL in the election file, the **Provisional Code** menu displays, see Figure 3-75:

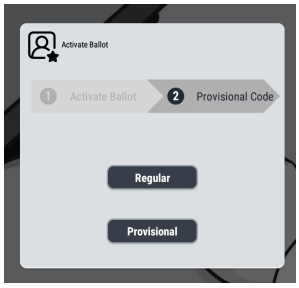

Figure 3-75: Provisional Code menu 1

a. To start a regular voting session, click **Regular**.
b. To start a Provisional voting session, click **Provisional**.
   The **Provisional code** displays, see Figure 3-76.

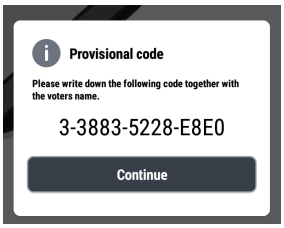

Figure 3-76: Provisional Code 1

5. Click **Continue**.
   The Voting session is now open.

If the MFC configurable option *"Admin authentication for a manual voting session"* is set to **TRUE**, the Poll Worker will have to first enter the appropriate credentials before starting a manual voting session.

If this option is set, the Manual Session Activation can be done as follows:

1. Insert the Poll Worker smart card.
   The log-in page displays, see Figure 3-77.

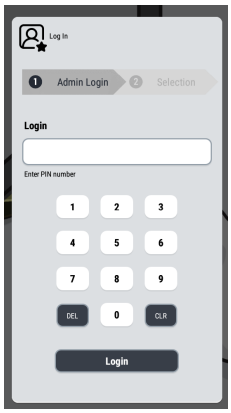

Figure 3-77: Log-in page.

   a. Log in with the appropriate credentials
      The **Selection** window now displays with the options **Admin Menu** or **Ballot Activation,** see Figure 3-78.

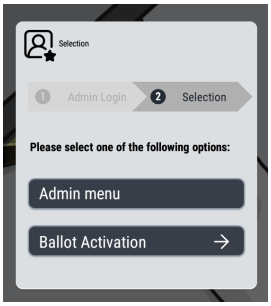

Figure 3-78: Selection

2. To start the manual voting session, click on **Ballot Activation**. The *Activate Ballot* window displays, see Figure 3-79.

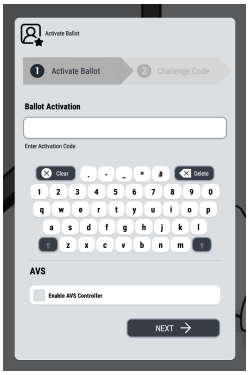

Figure 3-79: Ballot Activation

3. With the on-screen keyboard, type in the *Ballot Activation Code*.

NOTE: Note: You can also **Enable AVS Controller** on this window.

4. Click **NEXT.**
   *The **Challenge Code** displays,* see *Figure 3-80 (if the conditional voting mode was set to CHALLENGE in the election file).*

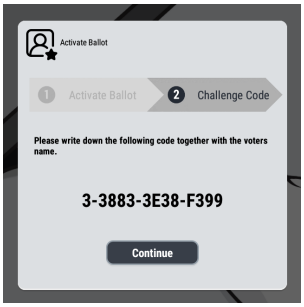

Figure 3-80: Challenge Code

If a conditional voting mode was set to PROVISIONAL in the election file, the Provisional Code menu displays, see Figure 3-81:

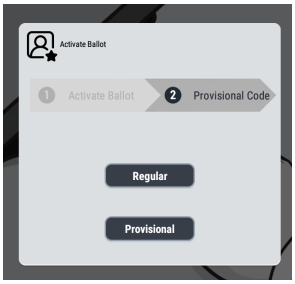

Figure 3-81: Provisional Code

a. To start a regular voting session click **Regular**.
b. To start a Provisional voting session, click **Provisional**.
   The *Provisional code* displays, see Figure 3-82.

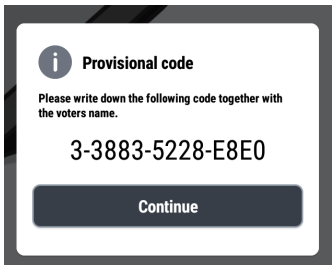

Figure 3-82: Provisional Code

5. Click **Continue**.
   The voting session is now open.

Once the ballot is cast using the manual session, one of the following screen will display depending on the configuration (“Mode of operation” and “BMD instructional screen”).

For **BMD** mode, depending on the “BMD instructional screen” option, see Figure 3-83:

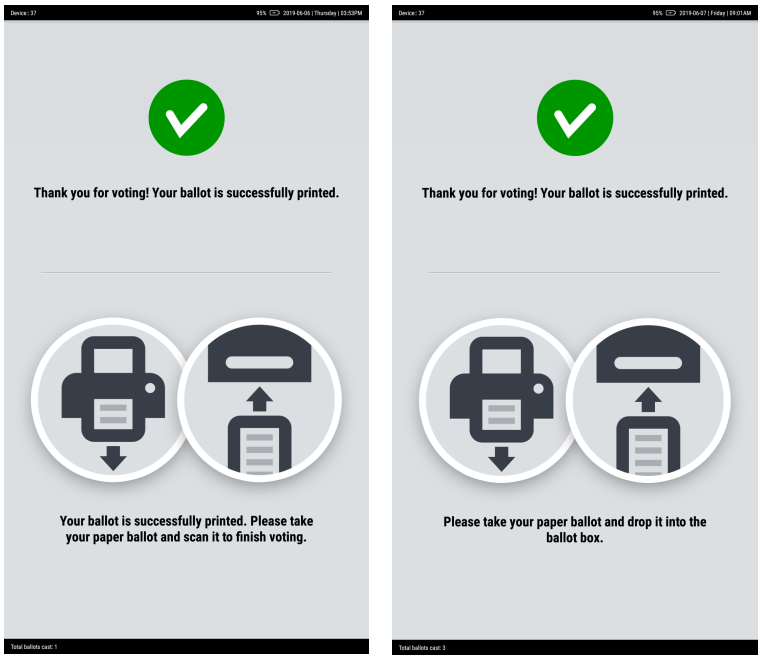

Figure 3-83: Thank you for voting screen - “Scan your ballot” option (left)/ “Drop ballot in the box” option (right)

3.5 Styling Support

To prepare for the elections, election officials now have the ability to present various text styles on the ImageCast® X. The selection and editing is handled through Election Event Designer (EED)

Types of formatting that are supported are the following:

- Bold
- Italic
- Strikethrough
- Underline
- Unnumbered lists
- Big text
- Small text
- Text color
- Background color
- Indentation
- Tables
- Superscript
- Subscript
- Numbering (various options)

Examples for the available styles are presented in Figure 3-84 and Figure 3-85:

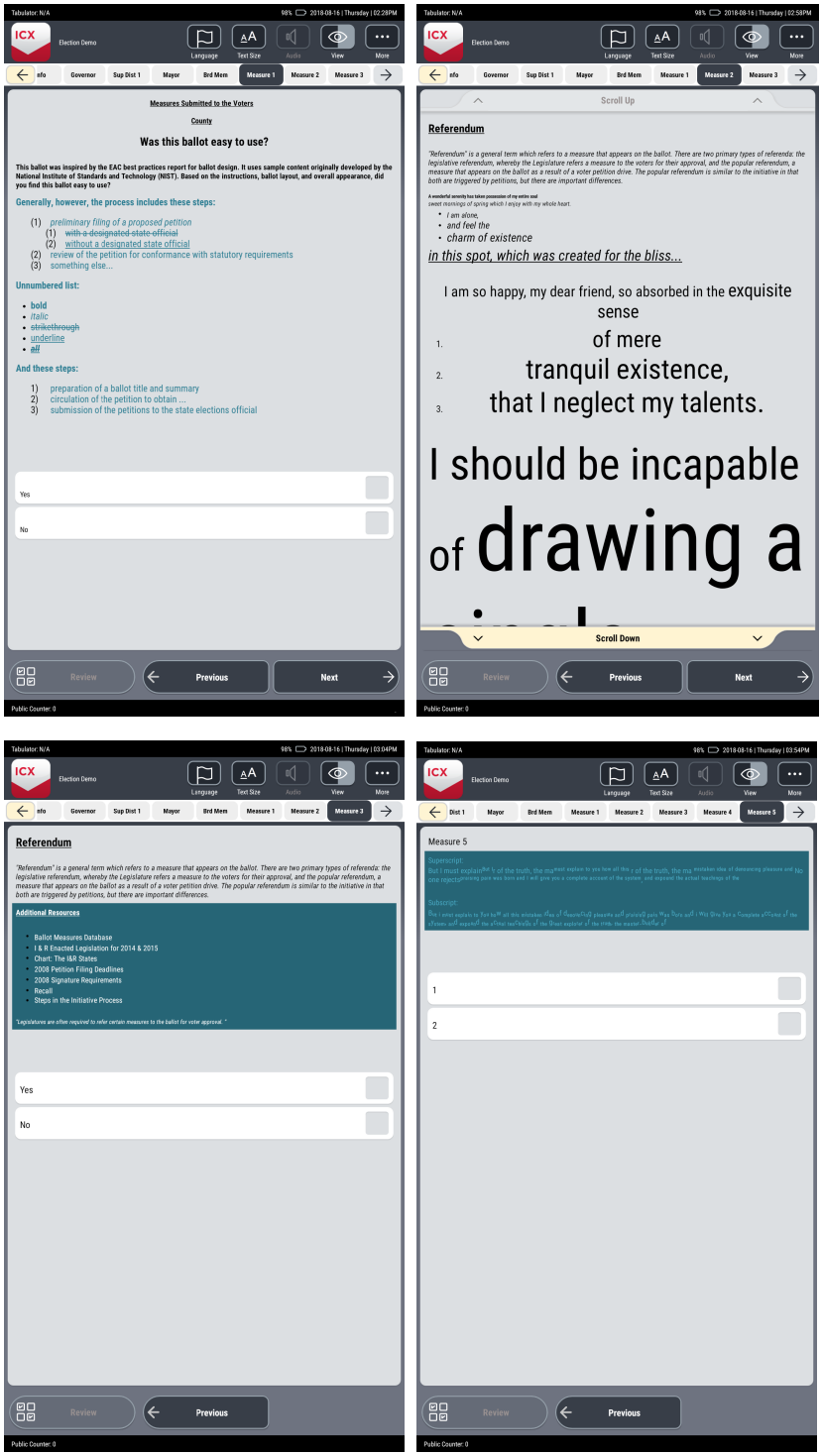

Figure 3-84: Examples 1

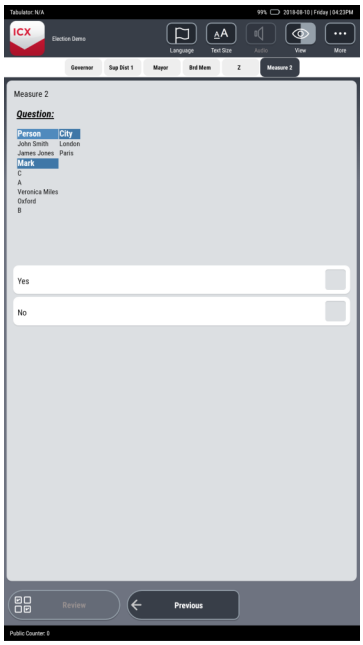

Figure 3-85: Example 2

For more information on how to edit the ballot text through EED, please see section “Screen content translations” in the *Democracy Suite® EMS Election Event Designer User Guide*.

CHAPTER 4: PROCEDURES

This Chapter contains information on the various procedures that can be performed on the ImageCast® X device.

- Preparing the Election
- Pre-LAT
- Advanced Voting
- Election Day Voting
- Post-LAT
- Cast Ballots
- AVS (Accessible Voting Session) Voting Interface

4.1 Preparing the Election

This section will introduce Poll Workers to the necessary steps in preparing the ImageCast® X device for voting.

4.1.1 Configuring The ICX for Printing Uniform Ballots

The ImageCast® X can be configured to produce a uniform ballot when used by a voter to make their selections. The output of a uniform ballot from the ICX BMD is identical to a hand-marked paper ballot.

This section details the project settings that must be defined to utilize this functionality.

4.1.1.1 Election Project Setup

During election project creation when official ballots are generated users must ensure that .PNG files are generated. The .PNG version of each ballot is used by the ImageCast® X to produce the marked uniform full ballot.

This is done when advancing the project from 'Election project styling' to 'Ballots generated'. The PNG files is generated in EED, from the top menu under **Actions > Create Ballots and Audio Files**. See Figure 4-1.

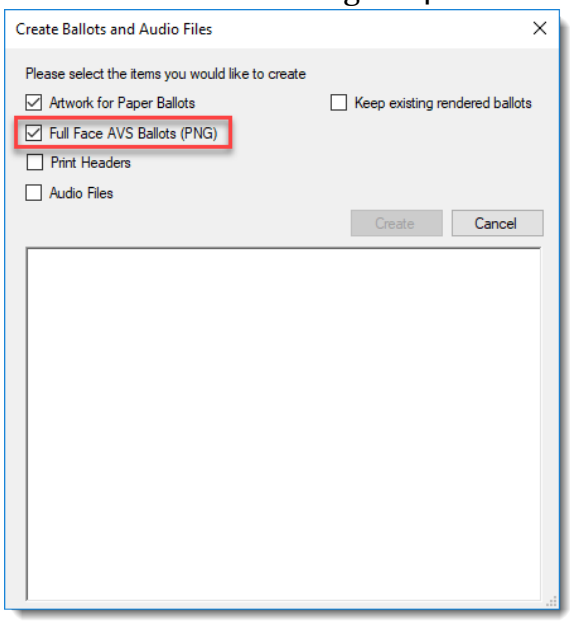

Figure 4-1: Generate PNG Files

4.1.1.2 Configuring ICX Settings In EED

ICX settings require configuring in EED to print uniform ballots.

To configure the ICX settings in EED:

1. At the EED *Settings* menu, see Figure 4-2, click **Project Parameters**.

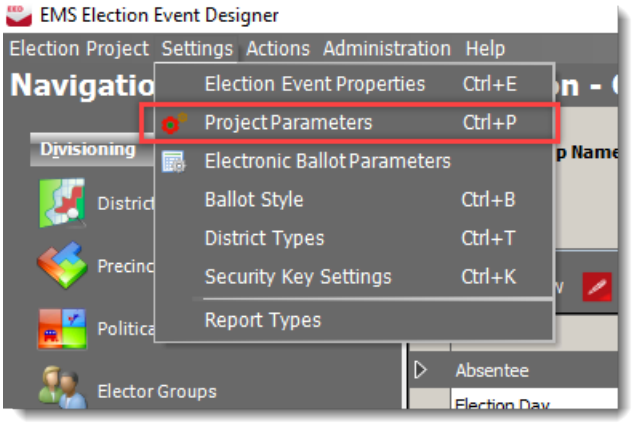

Figure 4-2: EED Settings menu

2. At the P*roject Settings - Project Parameters* window, see Figure 4-3, click the **Tabulators** tab then click **Open**.

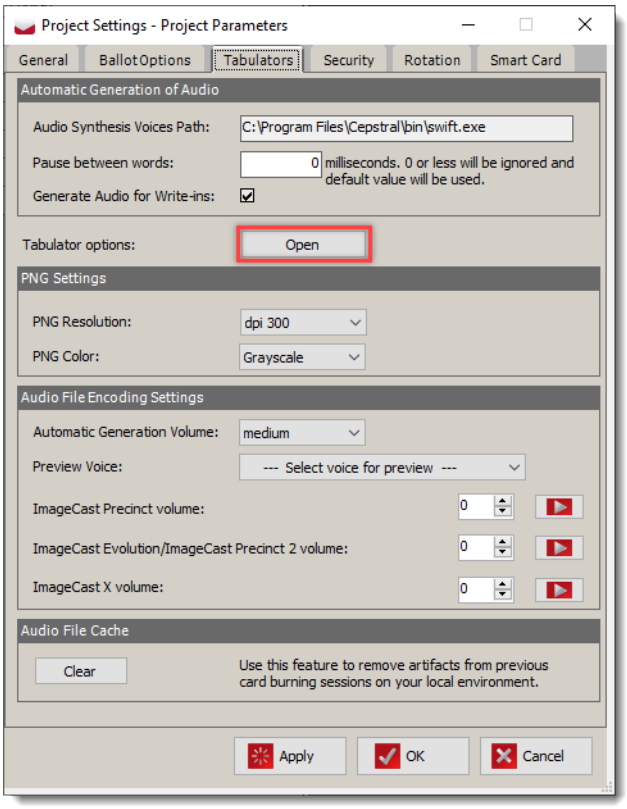

Figure 4-3: Project Settings - Project Parameters window

3. At the *Tabulator Operation Mode Settings* window, under *ICX Settings*, click the **Voting record** drop-down arrow.
   The drop-down listing appears, see Figure 4-4.

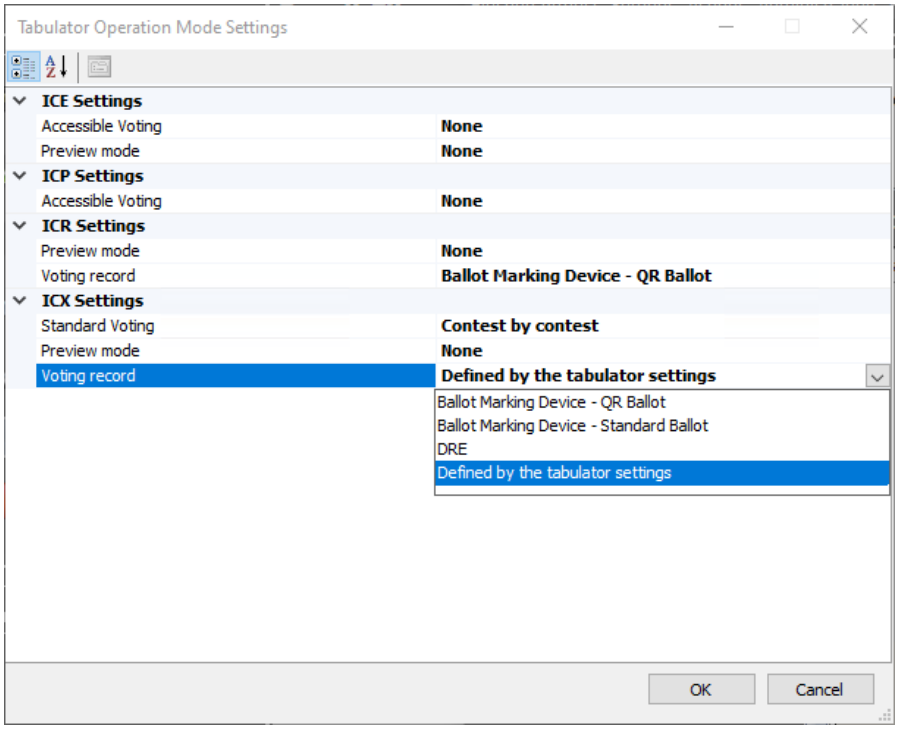

Figure 4-4: ICX Settings Voting record drop-down listing

The Voting record drop-down listing provides the following options:

- Ballot Marking Device - QR Ballot: Operates in BMD mode and prints an Electronic Mobile Ballot.
- Ballot Marking Device - Standard Ballot: Operates in BMD mode and prints a uniform ballot.
- DRE - QR Ballot: Operates in BMD mode and prints a QR ballot using the VVPAT printer.
- Defined by the tabulator settings: Operates in BMD mode and allows the user to define the settings at the tabulator level.

4.1.2 Election File Transfer

The preparation for voting starts with the **Election Files** that were previously generated in EED.

After generating and coping the Election Files onto a USB media, follow the steps below to make sure the Election Files have been copied onto the ImageCast® X device. These steps can only be performed by the Technician, and the Tech Advisor smart card needs to remain inserted during the setup.

1. Copy the Election Files onto a USB media.

NOTE: If the Aegis USB media is being used, make sure it's previously formatted to the FAT32 format before loading the Election files onto it and later to the ImageCast® X device.

2. Insert the USB media containing the Election Files into the ImageCast® X device.
3. Insert the Tech Advisor smart card
4. Enter the PIN provided by Democracy Suite EMS EED Administrator.
5. Log in with the appropriate PIN.

NOTE: In case the ImageCast® X device is restarted the "Date/Time Confirmation" dialog will be prompted, allowing for the date and time to be altered if necessary. If everything is in order, just press the Confirm button.

4.1.2.1 Loading Election Data

To load the Election Data:

1. Press Load Election Data.
   The election configuration files on USB media dialog displays, see Figure 4-5.

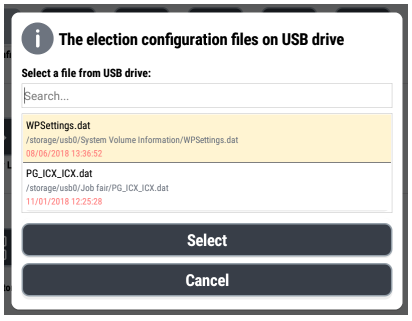

Figure 4-5: "The election configuration files on USB media" dialog.

2. Select the Election file (**.DAT** file) you want to copy onto the machine and press **Select**.
   A **Confirm** dialog displays, see Figure 4-6.

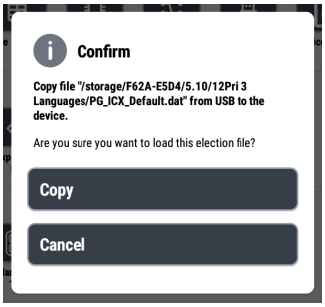

Figure 4-6: “Confirm” dialog.

3. Press **Copy**.
   A **Copy** dialog displays, see Figure 4-7.

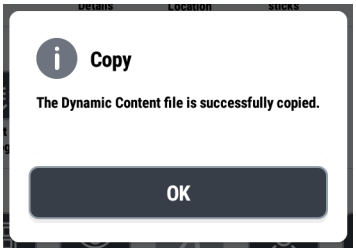

Figure 4-7: The “Copy” dialog

4. Press **OK**.
   The Election Data is successfully loaded.

If the Election files are copied incorrectly the user will be notified. At this time the Technician should clear the copied files by pressing the **Clear All election data** button in the Technical Administration menu and proceed to copy them onto the ImageCast® X device from the USB media again.

4.1.3 Opening The Poll

The following procedural steps for opening the poll can be performed exclusively by the Poll Worker.

- Decryption of election files
- Selecting the tabulator
- Verification of election files
- Open poll

Once the election files are present on the ImageCast® X device and the Technician is logged out, the **Poll Worker** should then insert the Poll Worker smart card, enter the PIN provided by Democracy Suite EMS EED Administrator and log in.

After the Poll Worker is successfully logged in, the decryption of election files begins. The Poll Worker card contains the keys for decryption, therefore it must remain inserted in order to complete this action. The progress bar is shown, and you have to wait until decryption is done. The process of decryption will be started only if existing files haven't been decrypted yet or after the “Clear working directory” is done (See section “Clear Working Directory” on page 12 for further information). The duration of the decryption process depends on the size of the Election Files. In case of large election files, it will last longer.

After this operation is completed, go to the **Tabulators** section on top of the screen where the drop-down list containing all available tabulators is.

Select the drop-down menu with text “*Select tabulator*” and choose the needed tabulator (See Figure 4-8). The option of searching for a specific tabulator by entering a tabulator number is also available.

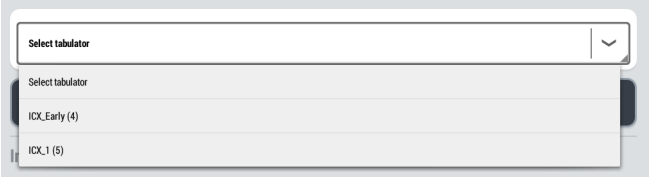

Figure 4-8: Select tabulator

Upon selecting the desired tabulator, the verification of election files will start. The following things for the selected tabulator are checked during this process:

- .png files
- .spx files
- localized resources
- Google TTS validation
- database integrity.

Every component found to be missing will be reported and presented in a dialog so that the Poll Worker can decide what to do next (See section “Tabulators” on page 42 for further information).

If ballot images are missing at startup, the following error message (Figure 4-9) is displayed and the poll will not open. Tap **OK** and refer to the log files for details before proceeding.

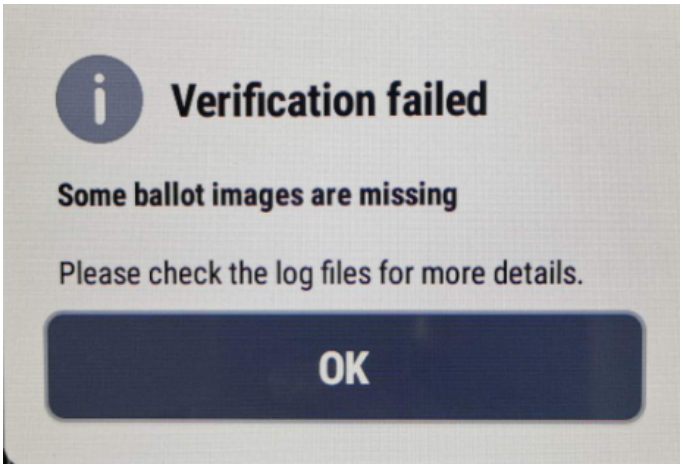

Figure 4-9: Ballot images missing error message

If ballot header images are missing, the following warning message (Figure 4-10) is displayed listing the missing files Tap **OK** to continue opening the poll.

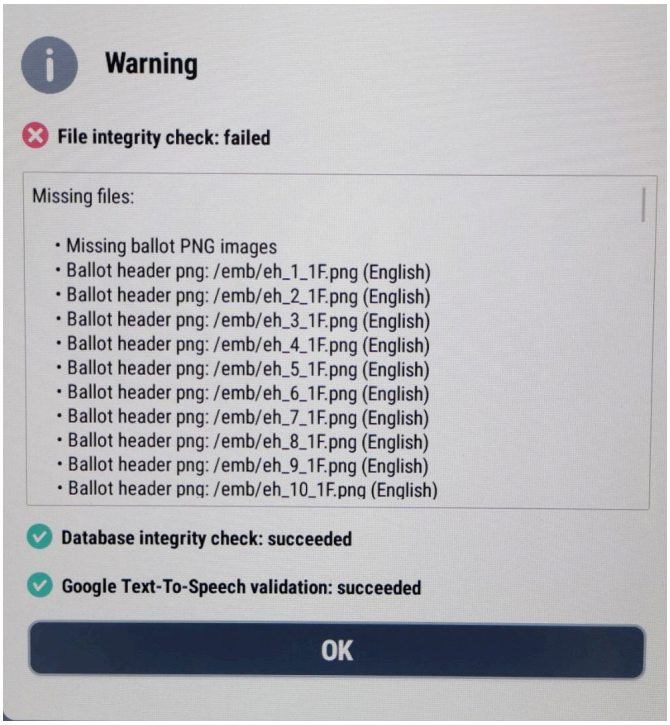

Figure 4-10: Ballot header images missing warning message

Depending on the chosen tabulator operating mode, a verification dialog can be either closed or printed on a connected printer - **thermal** or VVPAT- by pushing the Print button.

If during the poll opening process, .res files are detected on the tabulator (Figure 4-11), on the USB media from another tabulator (Figure 4-12) or test results are detected internally on the tabulator or on the USB media (Figure 4-13), the following message appears:

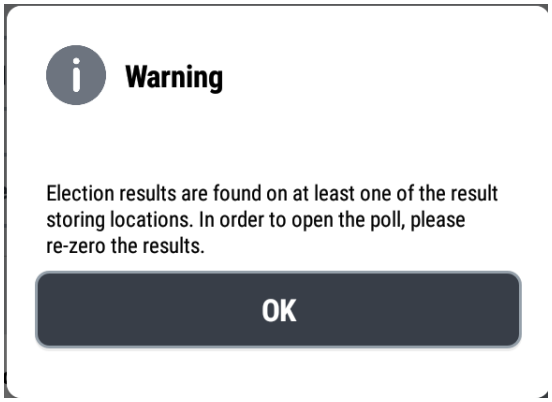

Figure 4-11: Election results detected on tabulator

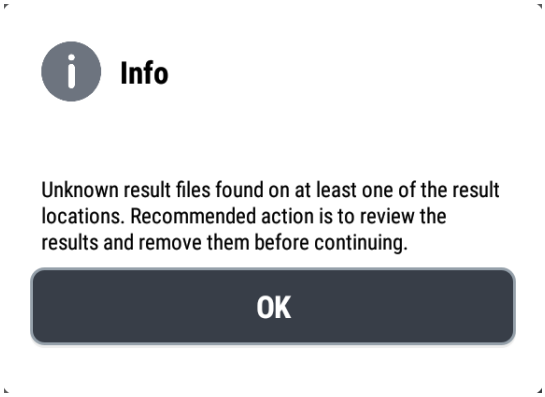

Figure 4-12: Election results detected on the USB media from another tabulator

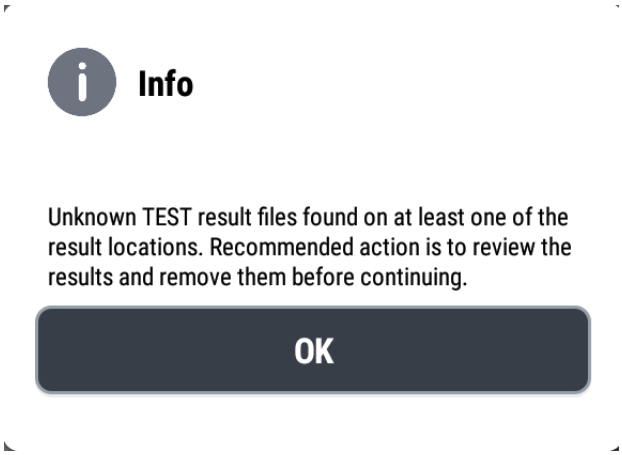

Figure 4-13: Test results detected

NOTE: If you are reopening the poll after unintentionally closing it, the detected election results files may contain valid election results. Before rezeroing the tabulator, load the election results files into RTR to prevent losing the results. For information on loading the election results, refer to *Democracy Suite® EMS Results Tally & Reporting User Guide*, Importing Election Results.

NOTE: , section Importing Election Results.

To resolve the issue:

1. At the message window, tap **OK**.
2. At the **Poll Administration** screen, tap **ReZero**.
3. At the **Warning**, see Figure 4-14, tap **Yes** and enter the Poll Worker PIN to verify your identity.

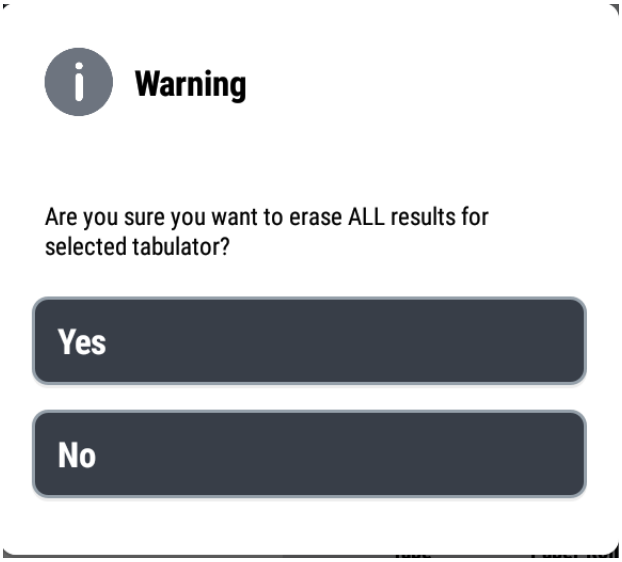

Figure 4-14: ReZero warning window

4. At the **Info** window, see Figure 4-15, tap **OK**.

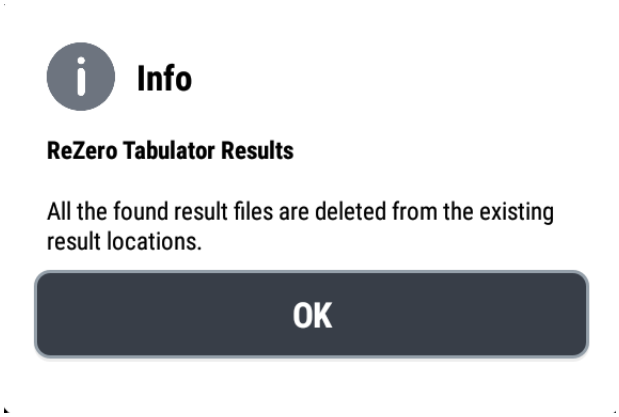

Figure 4-15: Info window

5. Now that the tabulator is rezeroed, tap **Open Poll** again.

In case the **BMD tabulator** is chosen, *"Public Counter*" must read 0 in order for the Poll to be opened. If that value is not 0 the *"Public Counter*" needs to be **Reset**. After pushing the **Reset** button, additional confirmation is required, and the Poll Worker must enter his PIN number again. After the *"Public Counter*" is successfully reset, the Poll can be opened. The **Reset** option is available in the Technical Administration screen if the "Reset button" is set to **Technician**.

To open the poll, push the "Open **Poll**" button. A confirmation dialog will be prompted. The dialog offers a choice between **YES** and **CANCEL**.

Pushing the **Cancel** button will close the dialog and allow the Poll Worker to change/confirm the voting settings.

Pushing the **Yes** button will lead to an attempt at opening the Poll. If all settings for the selected Tabulator are set, the Poll will open and the "***Login Voter Screen***" will appear.

In case the **DRE tabulator** is chosen, prior to switching to the "*Login Voter Screen"* and if the report printer is set to VVPAT or Thermal Printer in the Technical configuration, the ZERO REPORT is printed.

Also, depending on the set configuration options the Zero Report is immediately printed if the configuration value is set to **True** and the Poll Worker will have the option of choosing the desired action from the prompted dialog (see Figure 4-16), however, if the value is set to **False** the user will immediately be redirected to the "*Login Voter Screen*":

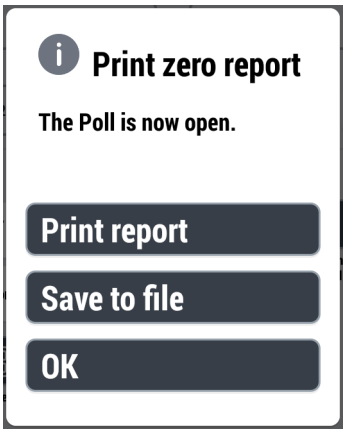

Figure 4-16: Print zero report dialog

4.1.4 Voting Support

In order to provide voting support to all Voters, there are additional options enabling voters to cast their ballots.

Two such additions are:

- **AVS Controller:** If the ImageCast® X device should support the ADA voters, the Poll Worker should set the AVS Controller to Enable.

  Push the **Save** button to save the selection and exit the dialog. Push the **Cancel** button to exit the settings and exit the dialog.
- **Manual Session Activation:** If the Poll Worker needs to enable Manual Activation of the voting session, see Figure 4-17, the Manual Session Activation should be set to **Enable**. This is used if there is a need for the Poll Worker to activate the voting session for a voter manually.

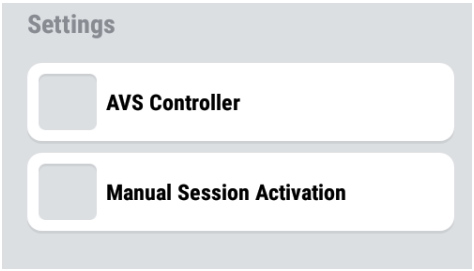

Figure 4-17: Manual Session Activation

Additional settings:

- The Date and Time can be adjusted by pushing the "**Date and Time**" button. This button is *disabled* when the poll is open.
- By pushing the "**Hardware details**" button, the Poll Worker is presented with the information about connected devices.
- The "**Hardware Test**" button, when pushed, enables the Poll Worker to perform functional tests of connected devices.

4.2 Pre-LAT

4.2.1 Prerequisites

In order to start the Pre-LAT procedure, the election files should be loaded into the ImageCast® X application (for more information please check section "Election File Transfer" on page 80).

4.2.2 Clearing The Results

1. Insert the Poll Worker card and enter associated PIN.
   If you are opening the poll for the first time, after successful validation of the Poll Worker's smart card, the decryption of election files begins.
   If the decryption is successful, the Poll Administration menu displays.
2. From the Tabulators drop-down, select the desired tabulator.
   This starts the verification process for the selected tabulator.
   - On the confirmation dialog, press the **OK** button.
3. Notice the field *Public Counter* which indicates the current number of ballots cast for selected tabulator.
   If the value is zero then the selected tabulator is ready for the Pre-LAT test, if not push **Reset** to re-zero it.

4.2.3 Cast Ballots

1. Open the poll, by clicking on the **Open poll** button.
2. Cast desired number of ballots.

For more information about how to cast ballots, see the section 3.4.2 “Voting Interface” on page 60.

4.2.4 Compare Results

Compare printed ballots visually with desired results or import into RTR and compare them there.

NOTE: All ballots printed during Pre-LAT will have the word TEST printed on them.

4.3 Advanced Voting

When advanced voting, lasting a number of days, is required, use the following procedure to start/stop the voting:

- Open the poll as per prescribed procedure.
- Vote as per prescribed procedure.
- At the end of the day, shut down the ImageCast® X device (see section “Shut Down” on page 90) without closing the poll.
- If you want to continue voting, power up the machine and insert a Poll Worker smart card in order for the voting to continue (see section 4.3.2 “Resume Voting” on page 92).
- Vote as per prescribed procedure.
- Repeat as many times as required.
- Once the voting is complete, close the poll and export the results (DRE).

The remainder of this document shows how to shut down the ImageCast® X device and resume voting after restarting it.

4.3.1 Shut Down

The ImageCast® X can be powered off through the user interface or by pressing the power button in the side panel.

To manually shut down the ImageCast® X, please be aware that the Technician is required to unlock the panels of the device in which the On/Off button is located. Press and hold the On/Off button (located in bottom right panel) until a dialog displays on the upper right corner of the screen.

Powering off the ImageCast® X through the user interface:

Figure 4-18: Power Off button

1. Login to the *Technical Administration* menu.
2. At the bottom of the menu press the **Power Off** option (see Figure 4-18). The power off options display (see Figure 4-19).

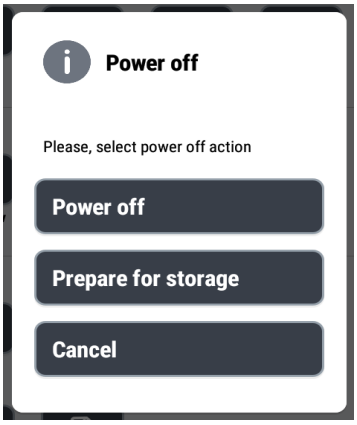

Figure 4-19: Power Off

a. Pressing **Power Off** shuts down the device.
The following confirmation displays, see Figure 4-20.

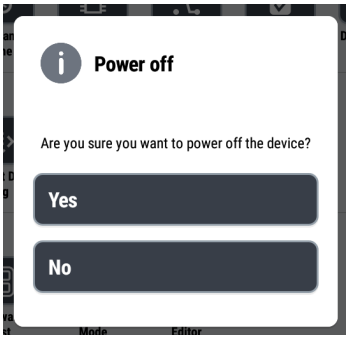

Figure 4-20: Power Off confirmation

b. Pressing **Prepare for storage** shuts down the device and powers off the battery to prolong the battery's life span.
The following confirmation displays, see Figure 4-21.

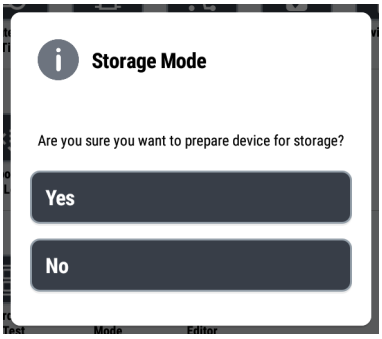

Figure 4-21: Storage Mode confirmation

c. Pressing **Cancel** closes the *Power off* dialog.

4.3.2 Resume Voting

NOTE: Please note that this step can be done by the Poll Worker only.

Whenever you want to start the machine and the voting, hold the power button on the device until it starts.

You should make sure that all cards are ejected from the machine.

After the application launches, insert the Poll Worker smart card, enter the PIN provided by the Democracy Suite EMS EED Administrator and log in.

At this time the *Date/Time Confirmation* dialog is presented (due to the machine restart), and if there is any problem (with the results, hardware machines connected, etc.) the dialog will be shown to the user in this case, the Poll Worker.

The status of the Poll is Open. If everything is as it should be, remove the Poll Worker smart card and you will be moved to the Login Voter Screen and proceed with the voting as usual.

4.4 Election Day Voting

Election day checklist:

1. Log in as poll worker.
2. Verify date and time.
3. Verify that the chosen poll/tabulator is correct.
4. Make sure results are **zero.**
5. Open the poll to start voting (DRE - print zero report).
6. Remove the Poll Worker smart card.
7. Voting can continue for as long as required.
    a. Vote using ICVA activated smart cards.
    b. Vote using manual session activation (Poll Worker card is required).
8. Once voting is complete, log in as Poll Worker again.
9. Close the poll (DRE - print result report).
10. Export results (DRE only).

4.5 Post-LAT

4.5.1 Prerequisites

To start the Post-LAT procedure, the election files should be loaded into the ImageCast® X application (for more information please check section “Election File Transfer” on page 80).

4.5.2 Clearing The Results

1. Insert the Poll Worker card and enter the associated PIN.
   The main Poll Worker screen displays.
2. To close the poll, press **Close Poll**.
3. To re-zero the results, press **Reset/ReZero**.
4. Press **Yes** on the Warning popup windows and enter the Poll Worker PIN to verify your identity, see Figure 4-22.

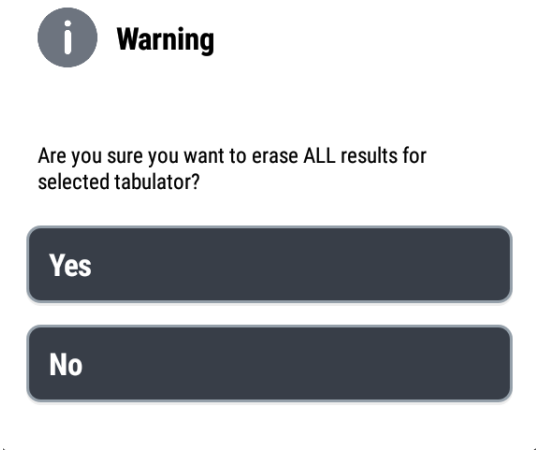

Figure 4-22: Warning message

5. At the Info screen, see Figure 4-23, tap OK.

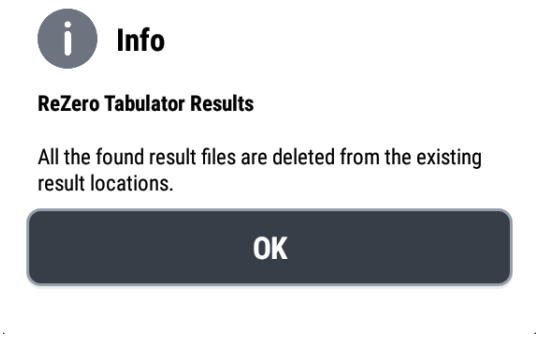

Figure 4-23: Info screen

If the ***Public counter*** field shows zero value, you can proceed to the next step.

4.6 Cast Ballots

Open the poll, by clicking on the Open poll button. Cast the desired number of ballots (for more information on how to cast ballots please refer to section 3.4.2 “Voting Interface” on page 60).

4.6.1 Compare Results

Compare printed ballots visually with desired results or import into RTR and compare them there.

4.7 AVS (Accessible Voting Session) Voting Interface

In order to use the ImageCast® X device for an Accessible Voting Session (AVS) the following conditions need to be met:

- The Poll Worker has configured the ImageCast® X device to use one of two available AVS controllers - ATI.
- The AVS controller is properly connected to the ImageCast® X device and fully operational.
- The ImageCast® X device is set for AVS in one of the following ways:
  - The voting session is started using a smart card configured for AVS upon the voter registration.
  - Manual session activation is enabled, and the Poll Worker activates the voting session on behalf of the Voter by checking the “Enable AVS Controller” checkbox during ballot activation.

To start an AVS:

1. Insert the Voter smart card, or start a Manual voting session.
   The AVS is activated and the first screen to display is the language selection screen, see Figure 4-24.

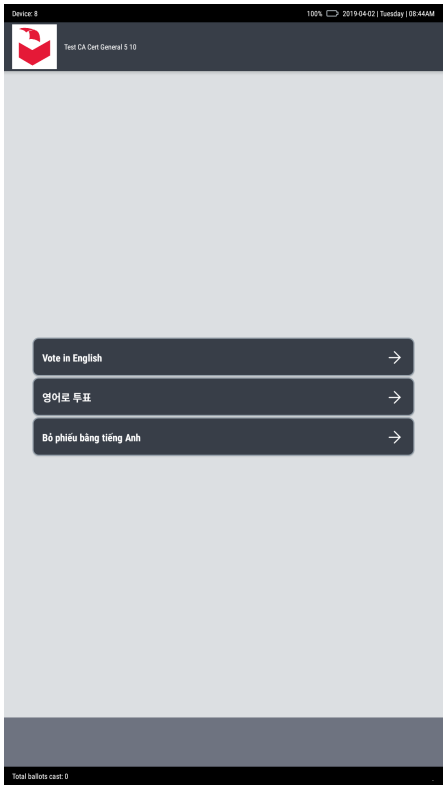

Figure 4-24: AVS Language selection

2. Select a language.
   After selecting the language of the voting session, the Voter can select the preferred AVS device - ATI, Paddles, Sip and Puff, or Audio/ Visual mode, which can be seen in Figure 4-25.

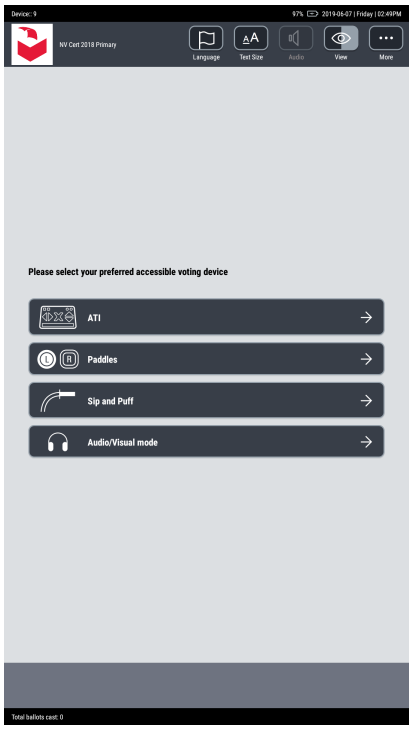

Figure 4-25: AVS device selection screen

The AVS device selection screen will contain the following options:

- ATI *(Audio Tactile Interface)*
- Paddles
- Sip and Puff
- Audio/Visual mode

At this point, the AVS device is activated, and a voter can use the ImageCast® X device independently by using the attached AVS device to vote and cast the ballot, with no help from other persons.

If the Sip and Puff option is selected an on screen keyboard (see Figure 4-26) will display for Write-In choices.

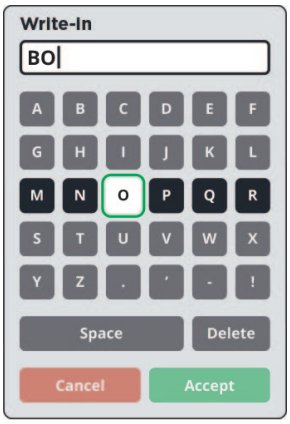

Figure 4-26: Sip and Puff keyboard

Optionally, if the selected AVS device is an ATI controller, the first screen that will be shown to a voter is the "ATI Help and instructions to use" (see Figure 4-27).

This instructional screen describes all the functions of the ATI device and can be accessed by a voter at any time during the voting session.

The "Help" dialog can be closed by pressing the Select button on the ATI device.

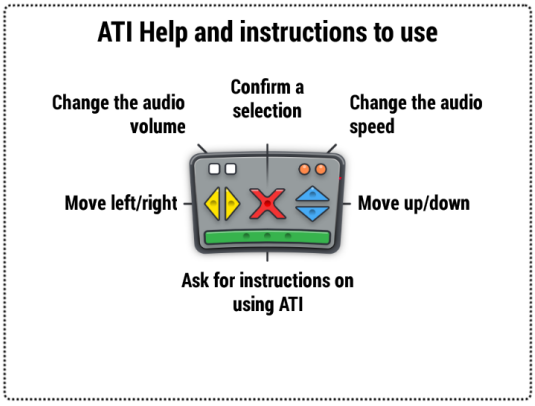

Figure 4-27: ATI usage instructions

During AVS, all interaction with the ImageCast® X device is done by controlling the ImageCast® X device without the touch screen, using the selected AVS device only.

3. Once the voter selects a device from the previous screen, the following (third) screen is to confirm whether to activate the privacy mask (see Figure 4-28).
   This option is used to activate privacy mode during the voting session.

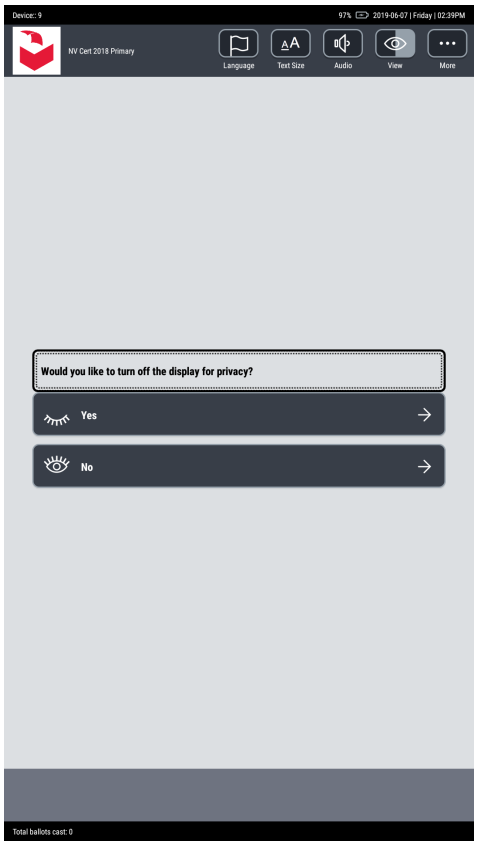

Figure 4-28: Privacy mask screen

At this point the AVS is activated and the voting session can begin.

Depending on which screen is presented to the voter, there are different processes when the voter presses the *left or right ATI buttons*:

- On the party selection screen (OP elections), the ICX application ignores these events because the ballot has not been loaded yet.
  - On the *ballot* screen, no matter which part of the screen focus it is currently on, the yellow left/right ATI buttons will navigate the voter to the previous/next contest. There are two specific situations:
    - On the first ballot contest, pressing the left button does not do anything because there isn't a previous contest.
      - Pressing the yellow right button on the first ballot screen will continues to the next ballot screen. Pressing the left yellow arrow stays on the same ballot screen. The red selection button skips to the review screen.

- The blue UP and DOWN buttons will navigate across the contest choices and the Review, Previous and Next buttons on the ballot screen. The yellow LEFT and RIGHT are used to navigate through the ballot screens. The red X is used for selection.

- On the last ballot contest, pressing the right button the voter will be navigated to the Review screen.

- On the *Review* screen, the **left** button returns the voter to the ballot (the same behavior as when the ***Back to Ballot*** button is clicked), and the **right** button goes to ***Cast/Print Ballot*** opening the ballot cast confirmation dialog. From here select either:
  - **Print your ballot**
  - **Review your choices**

Voice is enabled, and content of the ballot can be heard through the attached headphones.

When AVS is activated, the volume setting for the headphones is previously configured to a default value.

Audio volume and tempo (speed) can be adjusted by the voter at any time during the voting session. Volume adjustment is done by pushing the Audio options button in the top menu bar.

Instructions on how to access this menu are provided as spoken text during the voting session, as well as contest pagination, spacing in write-ins and the write-in entries on the write-in screen.

Alternatively, if the selected AVS device is ATI, a voter can change the audio volume and tempo (speed) by pressing either of the two sets of buttons on the ATI controller itself (see Figure 4-29). Also, the layout of the buttons on the ATI controller and their functions are described on-screen and spoken.

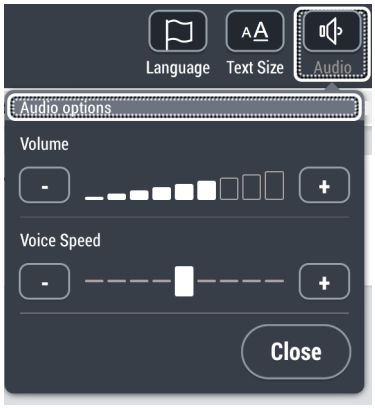

Figure 4-29: Audio options menu

During AVS, the ballot is marked and cast by a voter, by using the selected AVS device.

Instructions can be heard on any user interaction with the device. In accordance with the selected device settings, appropriate instructions are spoken, and a voter can navigate through the ballot contests and choices, as well as configurable options for selecting language, text size, audio volume and tempo, screen colors.

NOTE: Also, a voter can end the voting session by choosing to cancel activation in **More** options menu if the session was activated manually.

The **More** menu (see Figure 4-30), located in the top right corner of the ImageCast® X Voting interface, also offers AVS voters the following:

- A ***MANUALLY*** activated voting session:
  - Quit Voting (this option allows the Poll Worker to quit the voting session).
  - Go to next Contest (this option allows the voter to skip a contest they do not wish to vote on).
  - Fast Navigation (if activated, removes the confirmation windows when navigation through the ballot screens using the ATI).
  - Review your ballot (this option allows the user to proceed directly to the Review screen).

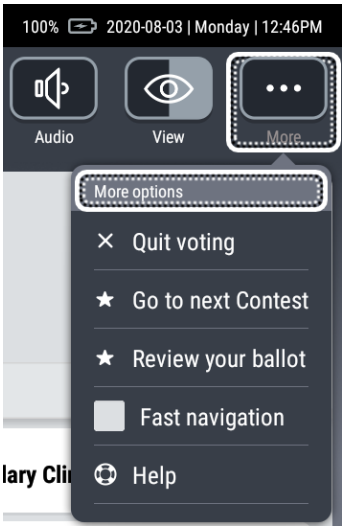

Figure 4-30: More options (Manual activation)

- A voting session activated with a ***VOTER CARD***:
  a. Go to next Contest: This option allows the voter to skip a contest they do not wish to vote on (see Figure 4-31)
  b. Review your ballot: This option allows the user to proceed directly to the Review screen (see Figure 4-31). Once at the review screen, the Voter will have the following option:
     - Go to navigation bar: This option will lead the Voter to the screen navigation bar where they can choose to either Print their ballot or to go back to the ballot (see Figure 4-31).

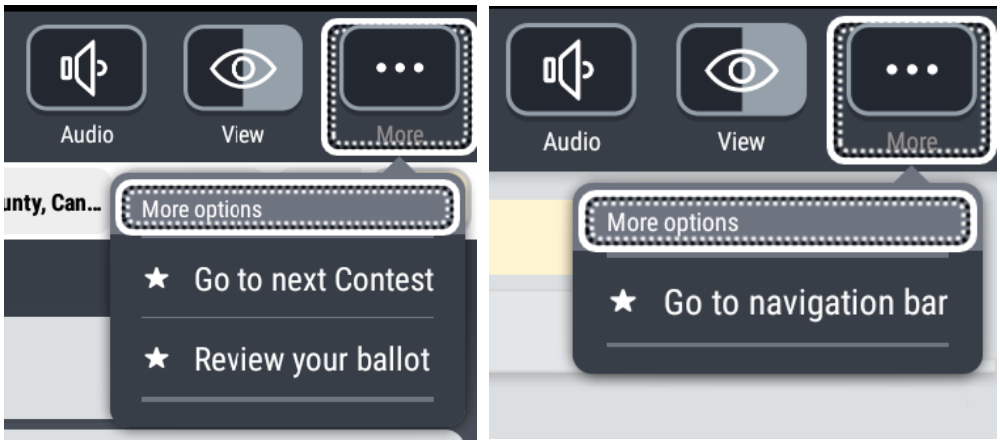

Figure 4-31: More options (Voter card) - AVS session (left) / Regular session (right)

The ballot is presented in the following order during an AVS:

1. Initially, the first contest on the ballot is selected and spoken. The voter can hear instruction on how to use the selected AVS device to vote for the first contest or to navigate to any other contest.
2. If a voter chooses to enter the first contest, the contest description and instructions on how to hear the available choices will be spoken.
3. If a voter chooses to vote for a selected contest and listen to the list of choices, the first choice and instructions on how to mark a choice, or how to navigate to the next choice will be spoken.
4. The voter repeats the same process - to vote or hear the next choice until all choices of selected contest are presented.
5. After hearing/selecting all available choices in a selected contest, the voter can easily navigate to the contest navigation buttons and choose to select the next contest and repeat the procedure to vote for each available contest.
6. When the last contest is reached, after selecting all the available choices, the voter is moved to the “Ballot review” screen.
   The ballot review screen can be navigated to at any time by using a dedicated

navigation button on the bottom of the screen, or by navigating through available screen action buttons as instructed by the voice instructions for the selected AVS device.

7. On the ballot review screen, the first summary ballot validation status is spoken and instructions are given to the voter on how to hear and review all contests, and when the voter reaches the last contest, an instruction is given on how to cast the ballot.
8. When the user activates the command to cast the ballot, a confirmation dialog is presented, and the voter has the option to accept the casting of the ballot or to review the choices that were made by returning to the review screen.
9. When the voter accepts the casting of the ballot, the application shows an operation information status screen and speaks a success message (or in case something went wrong, a warning message).

Chapter 5: Avision Printer Cleaning

This chapter describes the cleaning procedures for the Avision AP3061 printer. Perform the procedures at the end of voting day or, after printing approximately 500 ballots, whichever comes first. Cleaning the printer ensures the quality of the printed ballots.

The cleaning procedures consist of:

- Cleaning Interior With Microfiber Cloth
- Cleaning The Printer Path With Cleaning Sheet

The following are required:

- Microfiber cloth
- Laser printer cleaning sheets

5.1 Cleaning Interior With Microfiber Cloth

To clean the printer with the microfiber cloth:

1. Turn off the printer.
2. Unplug the printer from the power source.
3. Disconnect the printer from ICX.
4. At the front of the printer, open the access door to the toner / drum unit.
5. Lift up and pull out the toner / drum unit.
6. With a clean microfiber cloth, gently wipe down the bottom interior of the printer.
   There may be toner that has fallen and is being picked up by the paper.
7. Carefully reinsert the toner /drum unit to ensure toner does not fall to the bottom interior of the printer.
8. Close the front access door.
9. Plug the printer into the power source.
10. Connect the printer to the ICX.
11. Turn the printer on.

12. At ICX, go to **Technical Administration** > **Hardware Test** > **Printer**.
13. At the **Printer Test** screen:
    a. In the **Printer** drop-down menu, select the Avision printer.
    b. Set **Repetitions** to **5.**
    Five tests ensures any toner that fell during the toner / drum reinsertion is removed.
    c. Set **Page Size** as required.
    d. Tap **Print test page**.
    Five test ballots are printed.
14. Inspect the quality of the ballots.
    Now that the printer interior is clean, the printer path can be cleaned.

5.2 Cleaning The Printer Path With Cleaning Sheet

NOTE: Before proceeding, read the manufacturer's instructions located on the cleaning sheet.

To clean the printer path with the cleaning sheet:

1. At the input tray, remove approximately 90% of the paper.
2. Ensure there are at least 5 sheets remaining in the tray.
3. Place a new cleaning sheet in the input tray, on top of the remaining paper.
4. At the **Printer Test** screen:
    a. Set **Repetitions** to **1.**
    b. Set **Page Size** to **11**.
    c. Tap **Print test page**.
    A test ballot is printed onto the cleaning sheet.

    NOTE: The paper beneath the cleaning sheet may be wet. If so, replace with dry paper.
5. Print five additional test pages.
6. Ensure the ballots printed correctly with no smears or smudges.
    The cleaning process is completed.
7. Reload the input paper tray.

CHAPTER 6: TROUBLESHOOTING

The troubleshooting section contains the following sections:

- General Troubleshooting Guidelines
- Loss Of Power
- Invalid Time Stamp Error On ICX Prime
- Error When Loading Election Files In Poll Administration Menu
- Storage Error When Accessing The Poll Administration Menu And Opening The Poll
- Smart card reader
- ATI Device Loss Of Connectivity
- Joystick, Paddles, Or Sip and Puff Not Working
- BMD - Ballot Marking Device
- Voter-verified Paper Audit Trail Printer (VVPAT)
- Audio Cannot Be Heard While In AVS Mode
- Device Not Responding To Touch
- Voter Fled And The Ballot Is Still Active
- Error when Using a Non-certified USB Mass Storage Device

6.1 General Troubleshooting Guidelines

In the unlikely event, the ImageCast® X voting system is temporarily inoperable for any reason (loss of power, loss of printer, etc.) the Election Official shall use the Mobile Ballot Production (currently in use at the ImageCast® Voter Activation station - ICVA) for voting as a backup system.

6.2 Loss Of Power

When power is lost, the Mobile Ballot Production (MBP) system is used as the backup so that voting may continue. It is recommended that the dedicated computer and printer be connected to an Uninterruptible Power Supply (UPS).

NOTE: In case the power is lost, and the machine turns off, please remove all smart cards from the smart card reader. When the machine is fully powered on, the smart cards can be inserted in the smart card reader.

6.3 Invalid Time Stamp Error On ICX Prime

If a date / time discrepancy is detected (see Figure 6-1) when the Poll Worker smart card is inserted into the ICX Prime, the following error message appears.

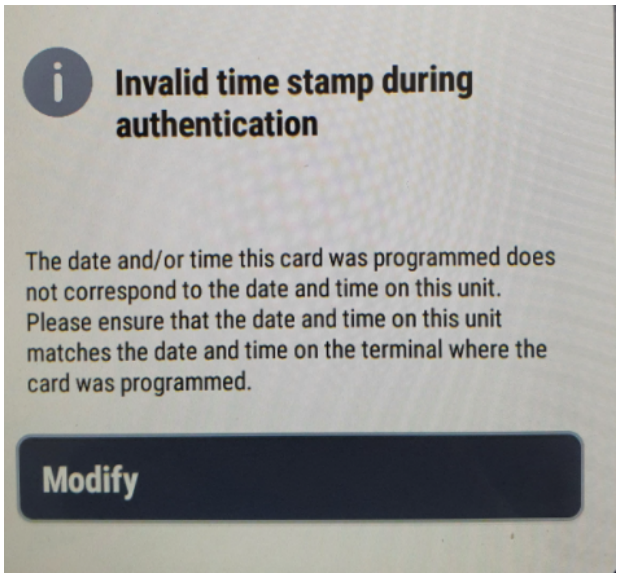

Figure 6-1: Date/Time Discrepancy Error Message

The error occurs when the time stamp on the Poll Worker smart card is out of sync with the date /time set on the ICX Prime. This is due to one of the following:

- The date /time on ICX Prime has reverted to the default factory setting
- The date / time on the EED workstation used to program the Poll Worker smart card is incorrect

To correct the error, either:

- Tap **Modify** and from the Date / Time screen, correct the date and time, or
- At an EED workstation, verify the workstation's date / time and reprogram the Poll Worker smart card

Removing the Poll Worker smart card will close the error message.

6.4 Error When Loading Election Files In Poll Administration Menu

After the Poll Worker inserts the Poll Worker smart card, the election data is loaded and the decryption starts.

If the card is loaded with an incorrect project, alongside different election signatures and keys for decrypting the election data, unzipping the decrypted data will fail and the following message will display: "**Unzipping file failed!**".

In a different scenario where the keys for decrypting the election data are valid but election signature on card is not, the following error message will display:
"**Election verification code is not valid.**"

To resolve the issues in both these scenarios, the Poll Worker smart card must be re-written with the correct project, keys and election signature.

6.5 Storage Error When Accessing The Poll Administration Menu And Opening The Poll

If a storage error displays in the Poll Administration menu, then make sure that all the USB media are inserted into the unit. If any of the pre-mapped USB media are not attached when accessing the Poll Administration menu, the following message displays:
Storage error. An error occurred, unable to proceed. Error details are written on the log. Please call the qualified Technician.

Pressing **OK** on this message displays a second, ***Info,*** message:

Unknown result files found on at least one of the result locations. Recommended action is to review the results and remove them before continuing.

6.6 Smart card reader

This section explains potential issues regarding the smart card reader.

6.6.1 Not Responding

If the smart card reader is not responding activate voting sessions manually, see section "Settings" on page 50. After that proceed to activate the voting sessions manually.

6.6.2 Unable To Read The Card

If ICX is not able to read the card, please check the following:

1. Verify the smart card contacts are facing upwards and re-insert the smart card into the reader.
2. Make sure the card contacts are clean.
   You can use rubbing alcohol and a clean cloth.

NOTE: Do not pour liquid onto the card. Add the liquid to the cloth and wipe the card.

6.7 ATI Device Loss Of Connectivity

If the ATI loses connection, please do the following:

1. Verify that the ATI device is plugged into a USB port on the device.
2. Verify that the power indicator light is on.
3. Perform a hardware test of the ATI device
   See section “Settings” on page 50.

6.8 Joystick, Paddles, Or Sip and Puff Not Working

If the Joystick, Paddles, or Sip and Puff don't work, please do the following:

1. Verify all connections.
2. Perform a hardware test of the device.
   See section “Settings” on page 50.

6.9 BMD – Ballot Marking Device

- Ballot Casting Error With Avision And HP Printers
- Paper Jam In HP Printer Tray 2
- Device Not Printing
- Loss Of Connectivity
- Ballot Not Printing
- Poor Ballot Quality Or Misreads With Avision Printer
- Unexpected Paper Size Error With HP404dn Printer

6.9.1 Ballot Casting Error With Avision And HP Printers

The following message appears if there is a ballot casting error due to a ballot printing interruption / printer not ready or if the print job is not successfully sent to the printer:

“There was an error on casting your ballot. Please call a Poll Worker for more info”.

The printing interruption / printer not ready is due to:

- Paper jam
- Printer runs out of paper
- User cancellation
- Printer is disconnected

The procedure to correct the error is determined by the Reprint procedure mode option set in the machine configuration file (MCF).

There are two modes:

- Standard:
  - Does not consider what has been printed from the current print job.
  - In printer Ready state, only two options are available:
    - Reprint the entire job
    - Reject the ballot entirely (cancel the session)
- Advanced:
  - Considers current state of printed job - how many pages printed, how many pages remaining
  - In printer Ready state, same options as Standard mode, plus:
    - Accept the ballot (all ballot cards printed but the printer error occurred before it was communicated to ICX)
    - Print remaining ballot cards (printing not completed and the printer returns information on remaining vs printed ballot cards, once the printer is in Ready state again).

6.9.1.1 Standard Mode

To correct the ballot casting error in Standard Mode:

1. At the ICX, insert the Poll Worker smart card and enter the Poll Worker credentials.
   The message “Printer status: <paper jam / load paper / user canceled / printer disconnected>. Please press Cancel button on the printer to reset its status before fixing the printer issue.” appears.
2. At the printer, press the **Cancel** button to reset the printer.
   After resetting the printer, the message “Cause of issue: <paper jam / load paper / user canceled / printer disconnected>
   Ballot printing was not fully completed.
   If any ballot cards are printed, please invalidate them before selected next action.” appears.
   The following actions are available:
   - **Reject ballot**: Ballot is rejected. No ballot cards are printed. Voter can initiate new session.
   - **Print ballot**: All ballot cards are printed.

6.9.1.2 Advanced Mode

To correct the ballot casting error in Advanced Mode:

1. At the ICX, insert the Poll Worker smart card and enter the Poll Worker credentials.
   The message “Printer status: <paper jam / load paper / user canceled / printer disconnected>. Please press Cancel button on the printer to reset its status before fixing the printer issue.” appears.
2. At the printer, press the **Cancel** button to reset the printer.
3. Determine the reason for the ballot casting error:
   - If there was a printing interruption or the printer was not ready, proceed to Step 4.
   - If the print job was not sent to the printer, proceed to “Print Job Not Sent To Printer” on page 114.
4. Determine the reason for the printing interruption or the printer not being ready:
   - If due to paper jam / no paper / user cancellation, proceed to “Printing Interruption / Printer not Ready due to Paper Jam / No Paper / User Cancellation” on page 112.
   - If due to the printer being disconnected, proceed to “Printing Interruption / Printer not Ready due to the Printer Being Disconnected” on page 113.

Printing Interruption / Printer not Ready due to Paper Jam / No Paper / User Cancellation

1. Resolve the issue.
   After the issue is resolved, the message “Cause of issue: <paper jam / load paper / user canceled>. Number of ballot cards printed successfully: <#>. Number of remaining ballot cards: <#>
   If using **Print remaining ballot card(s)**, in case nth ballot card is printed, please invalidate it first.

Otherwise, please invalidate all printed ballot cards and select next action" appears.
Make note of the number of ballot cards printed successfully.
The following actions are available:

- **Reject ballot**: Voting session cleared from memory. Spoil existing ballot cards. Voter can initiate new session.
- **Print remaining ballot card(s)**: Remaining ballot cards are printed.

  NOTE: In some cases, ballot cards already printed are not considered valid by printer and will be reprinted. Refer to the number of successfully printed ballot cards to determine which ballot cards need to be spoiled.

- **Reprint ballot**: All ballot cards are printed. Spoil existing ballot cards.

2. If the printer is not reset as described in Step 2 of "Advanced Mode" on page 112, the following message appears after the printing interruption / printer not ready issue is resolved:
"Cause of issue: <paper jam / load paper / user canceled>. All ballot cards been successfully printed. Printer ballot cards <#>
If you are not accepting the ballot, please invalidate all printed ballot cards the select next action" appears.
The following actions are available:

   - **Reject ballot**: Voting session cleared from memory. Spoil existing ballot cards. Voter can initiate new session.
   - **Accept ballot**: Increments the counter. The voting session is accepted as well as the printed ballots.
   - **Reprint ballot**: All ballot cards are printed. Spoil existing ballot cards.

Printing Interruption / Printer not Ready due to the Printer Being Disconnected

1. Reconnect the printer.
   After the printer is reconnected, the message "Reconnecting…" appears.
   - If printing was in progress at the time of the disconnection, the message "Printing…" appears and card(s) are printed.
2. After the printer reconnects, the message "Cause of issue: printer disconnection. No info available on printed or remaining ballot cards. Please invalidate all printed ballot cards and select next action" appears.
   The following actions are available:

   - **Reject ballot**: Voting session cleared from memory. Spoil existing ballot cards. Voter can initiate new session.
   - **Reprint ballot**: All ballot cards are printed. Spoil existing ballot cards.

Print Job Not Sent To Printer

- After resetting the printer, the message “Cause of issue: <paper jam / load paper / user canceled> Error occurred before a single card was fully printed. If a card has been produced, please invalidate it, as it is not counted, then select next action.” appears.
  The following actions are available:
  - **Reject ballot**: Ballot is rejected. No ballot cards are printed. Voter can initiate new session.
  - **Print ballot**: All ballot cards are printed.

6.9.2 Paper Jam In HP Printer Tray 2

If a paper jam occurs during ballot printing, printing functionality is suspended and an error message is displayed on the ICX. The voter is prompted to contact the poll worker to resolve the issue and resume printing.

To resolve a paper jam in tray 2, the poll worker should complete the following:

1. Insert Poll Worker smart card and enter access code.
2. To clear the buffer, press the Cancel button on the printer.
3. Clear paper jam.
   For detailed instructions on clearing the paper jam, refer to *HP LaserJet Pro M304-M305, M402, M404-M405 User Guide*.
4. Printing can resume when the control panel's Ready light is green. “Ready” will also be visible in the control panel display.
5. On the ICX screen, press **Reprint**.
6. Remove the Poll Worker smart card.

NOTE: Important: Please make sure to spoil any interrupted ballots.

6.9.3 Device Not Printing

If the device is not printing, please do the following:

1. Verify the device is powered on.
2. Verify the connection to the printer.
3. Verify there is sufficient paper in the paper tray.
4. Check the printer manual for information about printer statuses.

6.9.4 Loss Of Connectivity

If the Ballot Marking Device loses connection, please do the following:

1. Verify the “READY” light is ON.
2. Verify the printer is plugged into a power outlet.
3. Verify the USB cable is plugged both into the printer and into the ImageCast® device.

6.9.5 Ballot Not Printing

If the Ballot is not printing, please do the following:

1. Verify the printer is powered on.
2. Verify the paper tray has paper.
3. Call Tech Support.

If the printer door is open on the HP LaserJet Pro M404 while printing the ballot, the ballot will not print out. To resolve this:

1. Insert Poll Worker smart card and enter the appropriate PIN.
2. Close the printer door.
   Printing can resume when the control panel's Ready light is green. “Ready” will also be visible in the control panel display.
3. On the ICX screen, press **Reprint**.
4. Remove the Poll Worker smart card.
   The ballot is now reprinted.
5. Rewrite the Voter’s smart card for a new voter.

NOTE: The Voters smart card will have an error code 75 (*Cast Ballot Error Printer Door Open*) written in it. For more information on smart card error codes see “*Democracy Suite® EMS ImageCast® Voter Activation User Guide*”.

6.9.6 Poor Ballot Quality Or Misreads With Avision Printer

If you are using an Avision printer and the quality of the printed ballots is degrading or, you are experiencing more misreads than usual, the printer interior and printer path require cleaning.

To clean the printer, refer to “Avision Printer Cleaning” on page 104.

6.9.7 Unexpected Paper Size Error With HP404dn Printer

If an unexpected paper size is detected (see Figure 6-2) by the HP404dn during ballot printing, the following error message appears on the ICX screen:

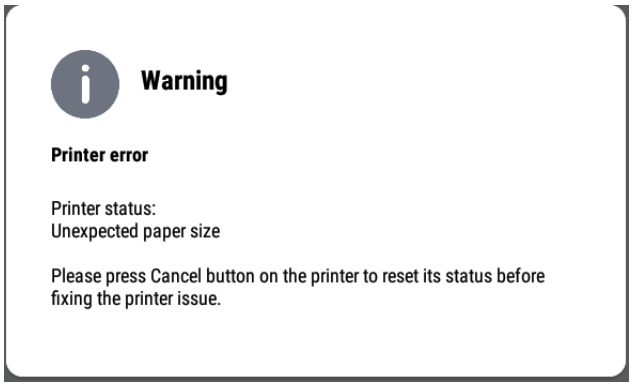

Figure 6-2: Unexpected paper size error

To resolve the error:

1. At the printer, press the **Cancel** button.
   The **Printer Ready** screen appears (see Figure 6-3) .

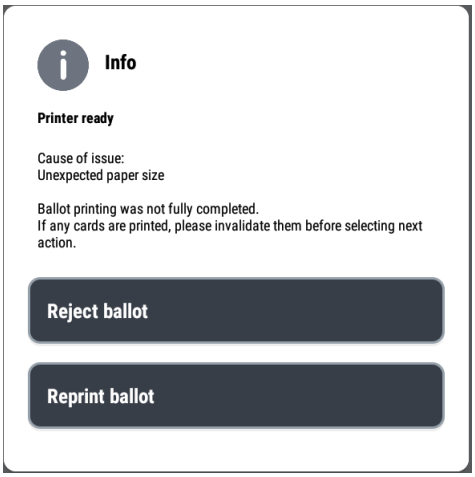

Figure 6-3: Printer Ready screen

2. If applicable, invalidate the cards for the partially printer ballot.

3. At the printer's input tray, insert the correct paper size.
4. At the **Printer Ready** screen, tap **Reprint ballot**.
   The complete ballot prints.

6.10 Voter-verified Paper Audit Trail Printer (VVPAT)

A voter-verified paper audit trail printer (VVPAT) is used to print voter selections, as well as Poll and Status Reports.

The following sections are meant to aid the Poll Worker in handling situations such as paper jams, the printer not printing, potential losses of connectivity as well as situations where ballots will not print.

- Paper Jam
- Not Printing
- Loss Of Connectivity
- Ballot Will Not Print
- VVPAT Printer Paper Roll Empty
- Printer Error - QR Code Failed To Read 6 Times

NOTE: Please refer to the Voter-verified paper audit trail (VVPAT) Model: VRP3 User Guide for any additional information.

6.10.1 Paper Jam

In cases of paper jams the following steps should be followed:

1. Open the printer.
2. Pull out the blue stop in the bottom left corner where the paper is jammed.
3. Pull out the paper.
4. Replace the printer mechanism.
5. Test the printer by pressing the blue button in the bottom right corner.
6. If the mechanism is operational close the printer.

NOTE: Please refer to the Voter-verified paper audit trail (VVPAT) Model: VRP3 User Guide for any additional information.

6.10.2 Not Printing

Verify there is enough paper on the roll and test the mechanism by pressing the blue button in the bottom right corner - if the mechanism isn't feeding the paper, disconnect and reconnect the printer's power cable and repeat the test procedure.

NOTE: Please note that upon clicking either “Continue printing” or “Reprint report”, a dialog will be shown to the user with the following warning message: “The printer is not connected”. Please check the printer power cable and the connection (USB) to the ICX Device.

6.10.3 Loss Of Connectivity

If there is a loss of connectivity from the VVPAT Printer to the ImageCast® X device, the ImageCast® X device will prompt a dialog advising the Poll Worker of the issue.

1. The Poll Worker needs to check the cables connected to the VVPAT printer and confirm that everything is in order.
2. If the cables are connected and the issue persists, remove the USB cable and reattach it.
3. If the Warning dialog is still shown, the Poll Worker should replace the USB cable.
4. If the issue is still not resolved, the Poll Worker should contact the Dominion Voting Systems personnel for additional troubleshooting.

6.10.4 Ballot Will Not Print

In case the ballot cannot be printed the ImageCast® X device will prompt a dialog advising the Poll Worker of the issue.

The following may occur:

- Low paper - this will allow the ongoing voter session to finish, after which the Poll Worker can open the printer and replace the paper roll.
- Paper roll is empty - when this issue occurs the Poll Worker should proceed to replace the paper roll.
- Cover is open - the Poll Worker should make sure the VVPAT printer cover is securely in place and locked.
- Paper jam/cutter error - please refer to the section “Paper Jam” on page 117.

NOTE: Please refer to the Voter-verified paper audit trail (VVPAT) Model: VRP3 User Guide for any additional information.

6.10.5 VVPAT Printer Paper Roll Empty

If the VVPAT printer runs out of paper during the voting process, the Voter will receive a Warning at which point the Poll Worker should be contacted.

Once the Poll Worker enter the Poll Administrator menu they will see a dialog shown in Figure 6-4.

At this point the Poll Worker can proceed to replace the Paper Roll and then the Voter will be able to restart their session.

NOTE: Please refer to Section 4.1 - “Paper loading” in the VOTER-VERIFIED PAPER AUDIT TRAIL (VVPAT) MODEL: VRP3 USER GUIDE for detailed information on how to change the paper roll on the VVPAT.

Figure 6-4: Paper Roll Empty Warning dialog

6.10.6 Printer Error - QR Code Failed To Read 6 Times

During continuous use, it is possible for the VVPAT printer head and scanner to collect dirt. When this happens, ImageCast® X will display the VVPAT error message: “There was an error on printing selections on VVPAT printer. Please go to the officer for more info” (see Figure 6-5).

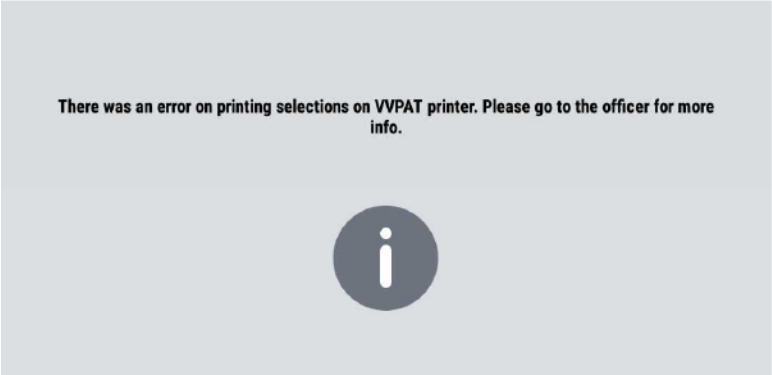

Figure 6-5: VVPAT Error

When the Poll Worker inserts their smart card, the ImageCast® X displays the VVPAT error message “Error while printing selections on VVPAT printer. QR Code scan fail for 6 times” (see Figure 6-6). The Poll Worker should clean the thermal head, roller and scanner on the VVPAT printer before continuing.

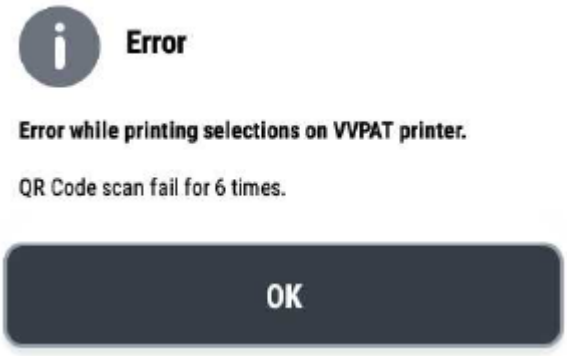

Figure 6-6: QR Code Error

To Clean the Thermal Head, Roller and Scanner:

1. With the Poll Worker smart card inserted, press OK.
2. Follow the instructions in section “5.2 - Cleaning the Thermal Head” in the Voter-verified paper audit trail (VVPAT) User Manual.

3. Remove the Poll Worker smart card.
4. The Voter will now have to restart the voting session by following the on-screen instructions.

6.11 Audio Cannot Be Heard While In AVS Mode

If the audio cannot be heard in AVS mode, confirm the following:

- Headphones are in working order: Test the headphones on another device with audio
- Headphones are correctly connected to the ICX: For connection instructions, see “Setting up the Equipment” on page 5.

6.12 Audio Cannot Be Heard On The “Thank You For Voting” Screen In AVS Mode

This issue occurs if the *.dat* (election) file is missing an audio file. To resolve this, please follow the steps below.

1. Insert the Poll Worker smart card and enter the appropriate PIN.
   The warning message in Figure 6-7 displays:

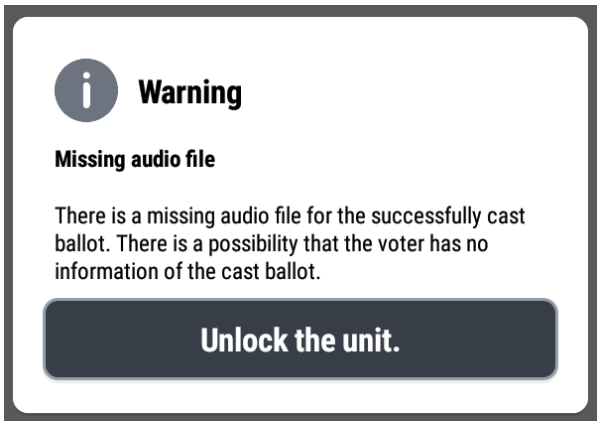

Figure 6-7: Audio file missing warning message

2. Press the **Unlock the unit** button.
   The pop-up screen closes and the unit unlocks.

6.13 Device Not Responding To Touch

If the device is not responding to touch, please do the following:

1. Clean the tablet’s screen using a soft cloth.

2. If still unresponsive, power the tablet off and then power it on according to the instructions in this guide.

6.14 Voter Fled And The Ballot Is Still Active

Follow jurisdictional procedures.

6.15 Error when Using a Non-certified USB Mass Storage Device

If a non-certified USB mass storage device is inserted into an ICX, an error message displays: “One or more unsupported USB mass storage devices are connected. Please detach all of them.” To resolve this:

- Remove the USB mass storage device and insert a certified USB mass storage device.

To remove the USB mass storage device on the ICX, refer to “Unmount USB media” on page 176

APPENDIX A: STATIC AUDIO FILE INFORMATION

Here you can find the static audio file information.

- File Contents
- File Format

A.1 File Contents

Static Audio files are used in AVS sessions in place of languages that are not supported by Google Text-to-speech.

A set of static audio files in SPX OGG format used for an Accessible Voting Session (AVS).

In that case the ImageCast® X application will play static audio files that are generated to read the appropriate resources in the application during the voting session.

The name of the Static Audio File should be the key of one of the system resources, and what the file is meant to be saying should be a value of the resource localized to a certain language. Please refer to Table A-1 for examples.

btn_review	Review
btn_back	Previous
btn_next	Next
action_bar_item_language	Language
action_bar_item_textsize	Text Size
action_bar_item_audio	Audio
action_bar_item_view	View
action_bar_item_more	More

Table A-1: File Content

It is important to note that the static audio files *must be named exactly the same way they are named in the Localization (JSON) file*, that they are *case sensitive* and that there are *no spaces anywhere*. Failure to comply with these conditions will lead to having unusable audio files.

The folders containing the generated static audio files need to be created manually on the EMS server by the Administrator and stored at the following location on the EMS server -

\NAS\Common\Resources\ImageCast_X\staticaudio\. All languages contained within this folder will not be supported by Google Text-to-speech.

Once inside the Audio folder, right-click and select to create New Folder.

Name the newly created folder so that the name matches the language code corresponding to the desired language in the EMS EED application exactly (case sensitive).

This folder should contain audio files for all static resources in that language. Repeat the process until all desired languages have been added.

The static audio files have the following folder structure:

- **languages**
- **lang-code 1 (ex. en)**
- **lang-code 2 (ex. es)**

The **languages** folder has audio files for languages that are supported in the election files.

Example of the folder structure for English Language Static audio files:

- Folder: **en**
  - Root File containing Static Audio Files (e.g. 0.spx, 1.spx,… a_hundred.spx,… accept_your_entry.spx…)
  - Folder **instructions**
    - Folder **ati**
    - Folder **joystick**
    - Folder **joystick_inv**
    - Folder **paddles**
    - Folder **sip_puff**

Instructions for different accessible devices (ATI, Joystick, Paddles, Sip and Puff) are customized specifically for said device as can be seen in Table A-2.

Tem-plate	ATI	Joystick	Paddles	S&P
#Selec-tAction#	press_red_x-_but ton_with_ati	navi-gate_up_do wn_with_joy-stic k	press_lef t_red_ paddle	sip_the_-sip_and _puff

Table A-2: Instructions

Tem-plate	ATI	Joystick	Paddles	S&P
#Navi-gateF-WAct ion#	press_down_or_ right_button_wi th_ati	navi-gate_right_ with_joystick	press_rig ht_blue _paddle	puff_the _sip_an d_puff
#Navi-gateB-WAct ion#	press_up_or_lef t_button_with_a ti	navi-gate_left_wi th_joystick		
#Select-Desc#	select_action			
#Navi-gateF-WDes c#	navigate_fw_de sc			
#Navi-gateB-WDe sc#	navigate_bw_de sc			

Table A-2: (Continued)Instructions

A.2 File Format

Codec	Speex
Channels	1, mono
File extension	spx

Table A-3: File Format

Table A-3 described the format of the Static Audio Files.

APPENDIX B: IMAGECAST® X VOTE SIMULATOR

The Vote Simulator is a Logic and Accuracy test created with the purpose of verifying that the pre-defined patterns are read and tabulated correctly.

In order to run the Vote Simulator a valid test pattern file is required.

The Vote Simulator is to be run before the ImageCast® X machine is put in production on the day of the election.

The simulation is performed by loading an XML file (test deck) and ImageCast® X election files provided by Dominion Voting. Should there be a requirement for personalized data, the XML file can be edited manually.

NOTE: Copying the necessary file for the Vote Simulator can be done using a second USB media that contains only the test deck file (used for the vote simulation) and not any necessary election project or result files. Once the test deck file is copied, the second USB media can then be removed without interrupting the vote simulation.

NOTE: The primary USB media, containing election information, should not be removed at any point during the vote simulation, unless the **Require Voter card for Vote Sim** is set to **False** in the MCF.

If the option **Require Voter card for Vote Sim** is set to **False,** the vote simulation can be started without the Voter smart card. If a Voter smart card is inserted during the simulation the following error message will display, see Figure B-1.

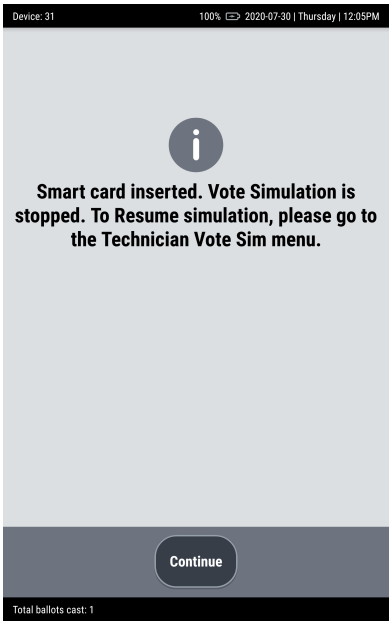

Figure B-1: Smart card inserted when Vote Simulator is running

The following steps need to be taken in order for the Vote Simulator to perform a valid test:

1. Turn on the ImageCast® X.
2. Insert the USB media provided by Dominion Voting.
3. To copy the necessary files from the USB media, Log in as a Technician by inserting the Tech Advisor smart card, see Figure B-2.
   The ***Administrator Login*** screen displays allowing the technician to enter their PIN.
4. Enter the PIN, see Figure B-3.

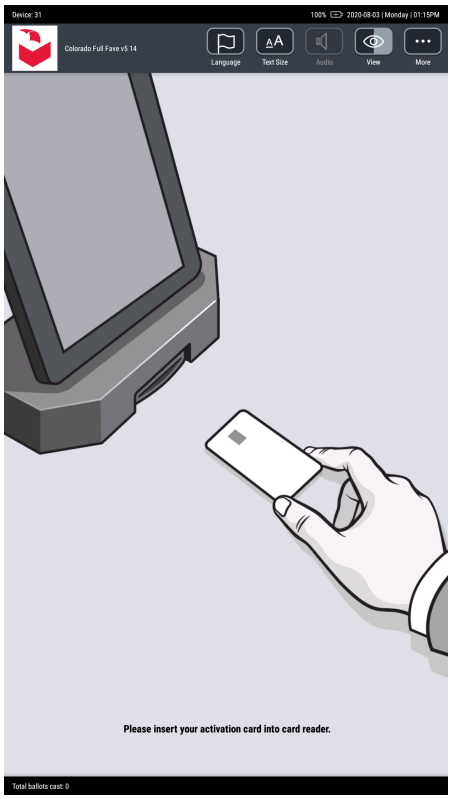

Figure B-2: Introductory screen

Figure B-3: Login screen

5. In ***The election configuration files on USB media*** dialog the Technician chooses the needed file and copies the data to the ImageCast® X device. The files are sorted alphabetically by file name, see Figure B-4.
   a. Press **Select**.

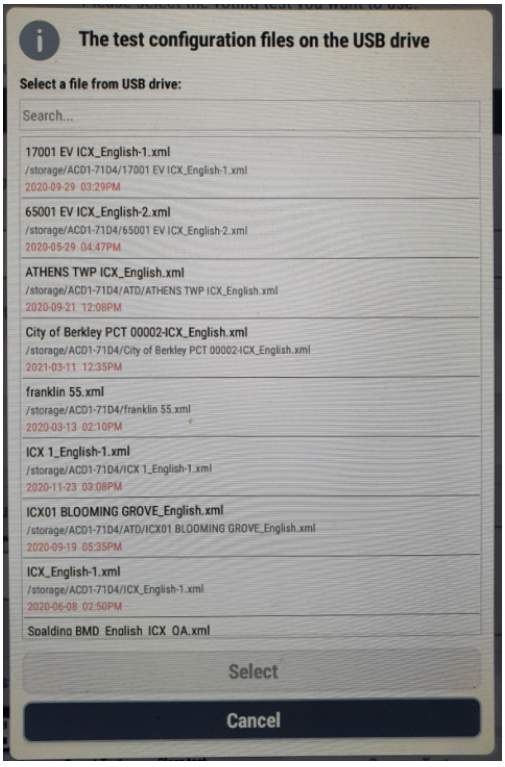

Figure B-4: USB media containing Election Files and the Copy/Cancel Election Files Dialog

b. On the ***Confirm*** dialog, press **Copy,** see Figure B-5**.**

Figure B-5: Confirm dialog

Having completed this portion, decrypt the election files.

To decrypt the election files:

1. Enter the Poll Worker card and enter the PIN.

   The election file decryption begins and, when completed, the Poll Administration panel is accessible to the Poll Worker, see Figure B-6.

Figure B-6: Election File decryption screen and Poll Administration screen

2. Select the appropriate tabulator.
   Only one tabulator should be chosen, see Figure B-7.

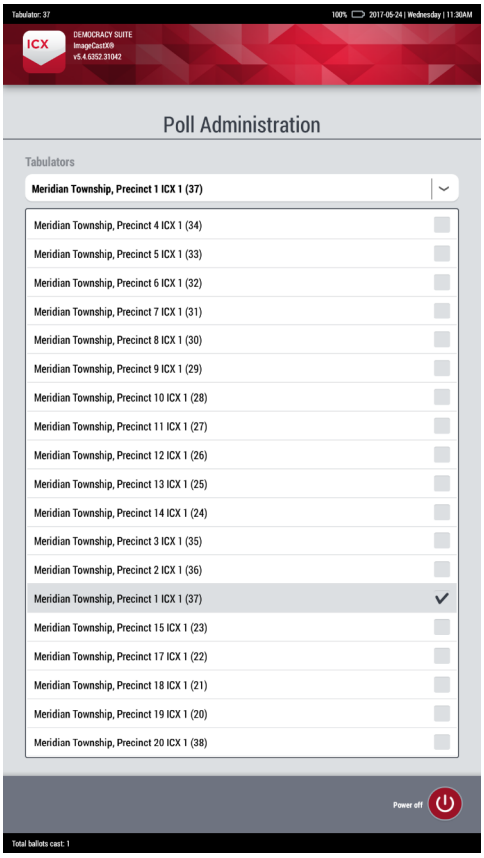

Figure B-7: Tabulators

3. Once the tabulator validation is completed, see Figure B-8, press **Open Poll**.

Figure B-8: Open Poll

a. To confirm the selection, on the ***Info*** dialog, press **Yes,** see Figure B-9.

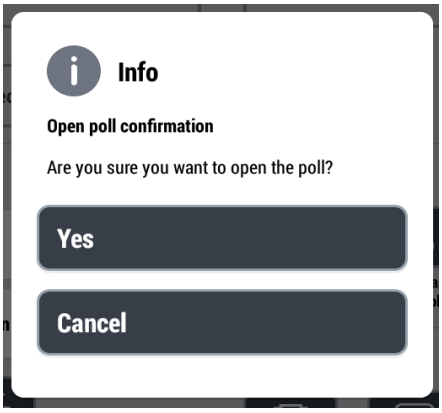

Figure B-9: Info dialog

Once the Poll is Open, the Poll Worker will be prompted to ***Print the Zero*** report in order to confirm that the ImageCast® X device is prepared for the Vote Simulator, and that no redundant files remain on the device.

To print the zero report:

1. On the Poll Administration screen, press **Print zero report**.
   The ***Print zero report*** dialog appears, see Figure B-10.

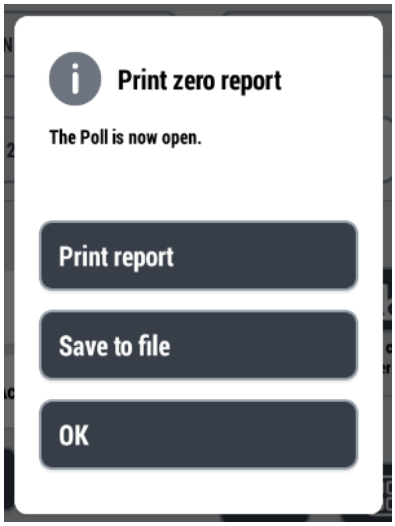

Figure B-10: Zero Report

2. Remove the Poll Worker card and insert the Tech Advisor smart card and PIN.
   After the Technical Administration screen is presented, a Warning dialog displays advising the user that the Administrative menu is unavailable while the Poll is open.
   NOTE*:* In order to proceed the Poll MUST remain OPEN, see Figure B-11.

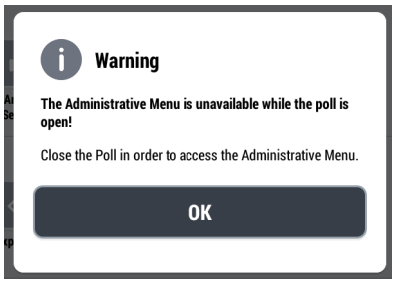

Figure B-11: Warning Dialog

All options except Hardware Details, Brightness, the Hardware Test and the Vote Simulator are grayed out and cannot be selected.

3. Press **OK**.
4. Press **Vote Simulator.**

The ***Voting Test*** screen displays, see Figure B-12.

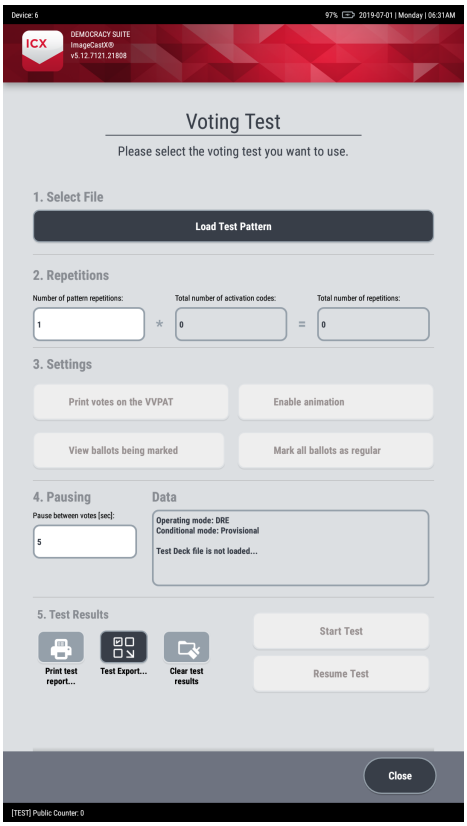

Figure B-12: Voting Test screen

On the ***Voting Test*** screen, the user has the following options to choose from:

- Load test pattern
- Number of repetitions - optional number to be entered
- Enable animations - enabled/disabled - default disabled
- View ballots being marked - enabled/disabled - default disabled
- Mark all ballots as regular - enabled/disabled - default disabled
- Pause between votes - optional number to be entered
- Print test report -enabled/disabled - default disabled
- Export test result - enabled/disabled - default disabled
- Clear test result - enabled/disabled - default disabled
- Start Test - enabled/disabled - default disabled
- Resume Test - enabled/disabled - default disabled
- Close - exits the Vote Simulator screen

NOTE: The available options are enabled depending on the Automated Test Deck

file provided for the testing.

If the **View ballots being marked** box is unchecked (Figure B-13), a Progress bar displays.

If the **View ballots being marked** box is checked (Figure B-14), the ballots will be marked on-screen, see Figure B-15.

Figure B-13: View ballots being marked

Figure B-14: View ballots being marked

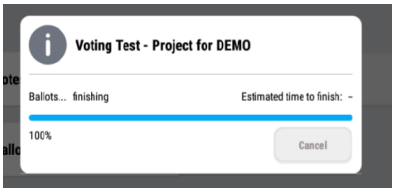

Figure B-15: Vote Simulator Progress bar

NOTE: Be advised that the settings available on the Vote Simulator start screen are independent from the MCF, so any settings for the Vote Simulator can be changed from the Vote Simulator start screen exclusively.

To start the Vote Simulator Test:

1. Press the **Load Test Pattern,** see Figure B-16**.**

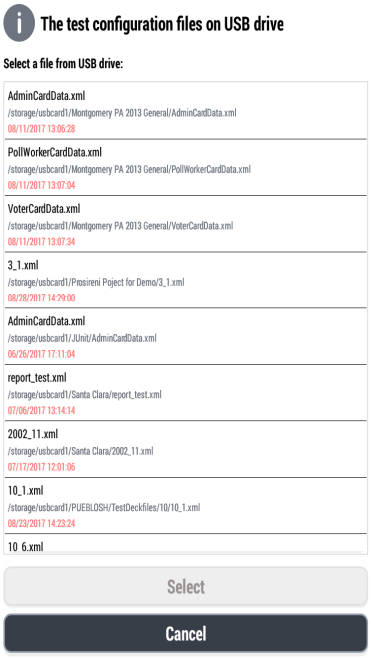

Figure B-16: Load Test Pattern

2. In ***The test configuration files in USB media*** dialog, navigate to the XML file needed.

   The XML files are copied over to the ImageCast® X.
   The XML files are then validated, and the Technician can proceed to set the Test parameters as needed.

NOTE: "Number of repetitions" refers to the whole pattern.

3. Once a test file is selected, press **Select**.
   A *Confirm* dialog displays, press **Copy**.
   In the Info dialog press **OK,** see Figure B-17.

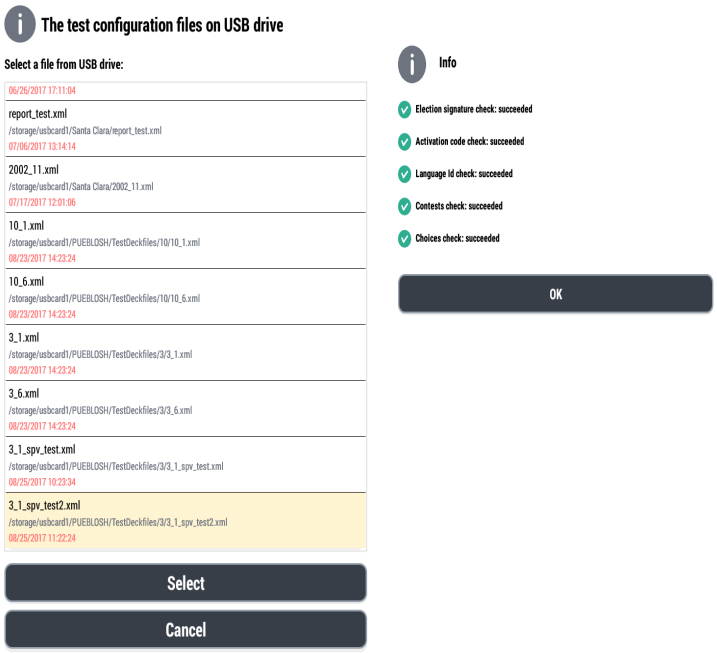

Figure B-17: Vote Simulator

4. For an automated test, leave the option **View ballot being marked** in the *Settings* bar unchecked and press **Start Test,** see Figure B-18.

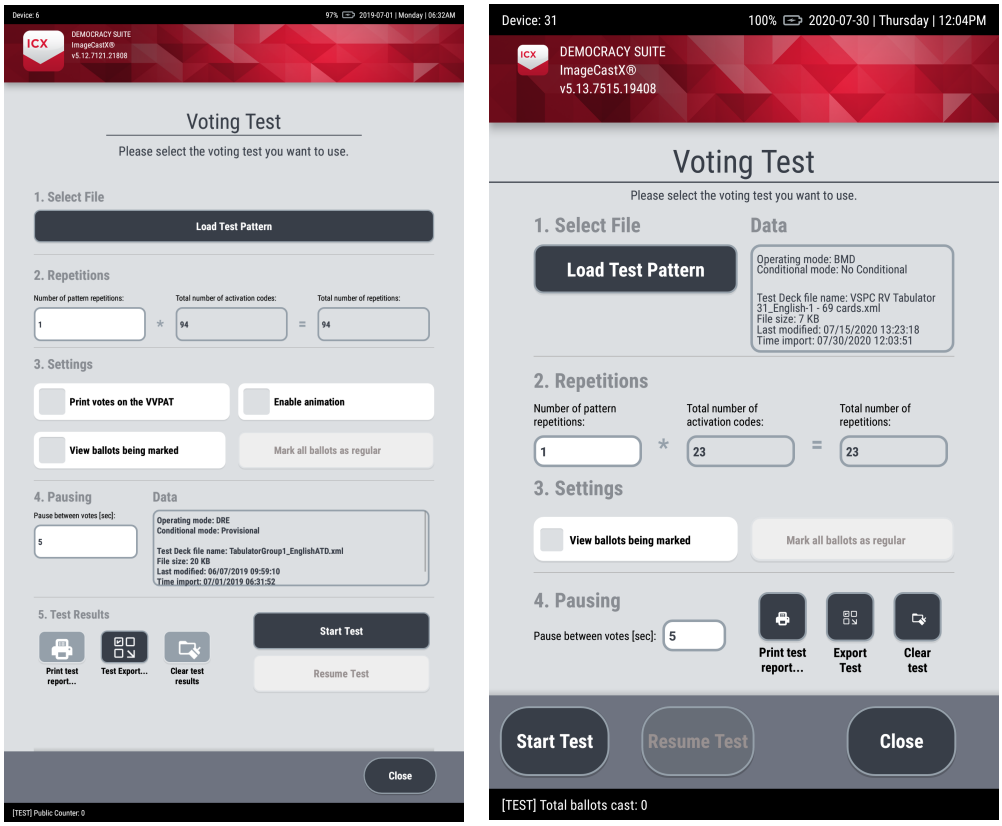

Figure B-18: Loaded test pattern

The voting simulation starts and a progress bar displays, see Figure B-19.

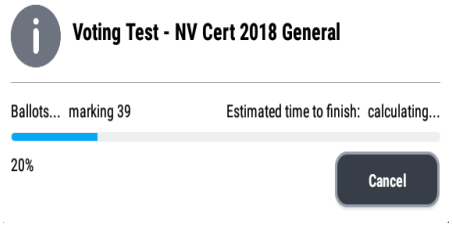

Figure B-19: Voting simulation in progress

a. Once complete, an *Info* dialog displays to confirm the simulation is complete.
Press **OK,** see Figure B-20.

Figure B-20: Info dialog

5. For a manual test check the **View ballot being marked** in the Settings bar and press **Start Test**.
The Voting Test menu closes.
   a. Insert a Voter card.
   The test will display an animated voting selection simulating multiple voting sessions.

NOTE: The Voter card has to remain inserted through the duration of the entire test. If you decide to end the test, prior to completion, simply remove the Voter card. Should an issue occur while printing the BMD Paper Ballot, the user will receive the following error: “Check the printer. If the ballot has been printed, please discard it, otherwise, press Cancel on the printer control panel.”

NOTE: If the ballot does not exit the printer once this error message is shown, the user is advised to check for potential paper jams, and to resolve the issue accordingly, see Figure B-21.

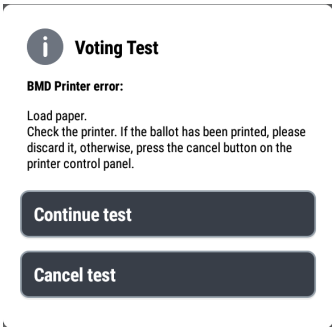

Figure B-21: Vote Simulator BMD Printer Error

b. Once complete, remove the Voter card.

6. Insert the Tech Advisor smart card.
   Press OK in the warning dialog, see Figure B-22.

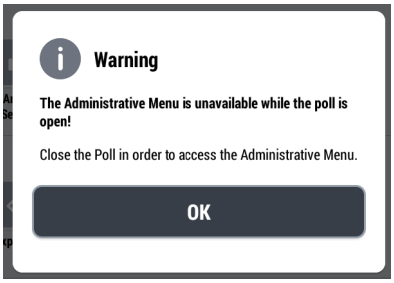

Figure B-22: Warning dialog

7. Press **Vote Simulator**.
   The voting simulation is complete and can now be **Printed**, **Exported** or **Cleared** using these options in the *Test Result* bar.

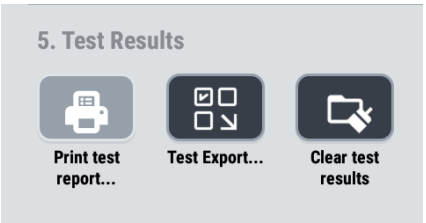

Figure B-23: Test Results bar

Selecting the **Test Export** option, see Figure B-23, opens a pop-up dialog with the following options (see Figure B-24):

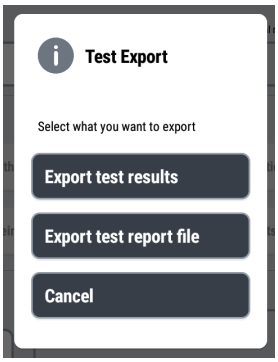

Figure B-24: Test Export options

NOTE: The “test results” refer only to the result created in the Vote Simulation and not to the regular votes created either with the Voter smart card or with a manual voting session. The “test results” can only be accessed and exported via the Technical Administration menu’s Vote Simulator option and not through the Poll Administration menu. On the other hand, once the poll is closed, the summary report that is automatically printed will not contain any “test results”, only regular votes (via Voter Card or via manual session). This setup prevents any uncertainties and confusion with producing the voting results. When the results are exported the “test results” will be marked with the prefix “test_”.

APPENDIX C: VOTER-FLED SCENARIO

During regular ImageCast® X operation, removing the Voter card may lead to one of three possible scenarios. A configurable audiovisual indication may be enabled through the **Edit Config** option in the *Technical Administration* menu by setting the option **Audiovisual indication of voter flee** to **True**.

Please note, that in order to use ImageCast® X, an activation card (*Voter, Poll Worker, Technician*) is needed for the device to operate since the cards function as a key to activate specifically intended menus. If a situation occurs in which a Voter card is removed prematurely, please follow the instructions mentioned below.

Do note that if the Poll Worker inserts a Poll Worker card with an incorrect election signature, the error message: “Election verification code not valid” displays. Only a Poll Worker smart card with the correct election signature can be used to resolve any situation that requests the Poll worker's assistance.

Be advised that the ImageCast® X device can be configured to notify the Poll Worker of a Voter-Fled situation by playing an audio alert (default duration is 15 seconds) and by flashing RED (if the LED notification light is attached to the ImageCast® X device).

The lockout duration is also configurable through the ImageCast® X MCF, with the default time being 5 minutes.

C.1 Removing Voter Card (Voter Fled) While Voting Or Printing

Description

If a Voter card is removed while voting, prior to casting the ballot, or while printing, the following message displays on the device's screen: "V*oter card removed. BALLOT WAS NOT PRINTED. Please re-insert Voter card or call a poll worker for assistance".*

NOTE: This situation may lead to a ballot being canceled because the voter left the voting session unfinished and before printing or casting their vote. If the ballot is canceled, a QR code for that voting session will be printed on the VVPAT printer.

Solution

This situation can be resolved if **the voter inserts their Voter card back into the smart** card reader, after which they will be returned to the page they were on when the voter card was removed. This preserves all the choices made from the beginning of the voting session and allows the voter to resume voting.

If the voter flees from the voting session, **the Poll Worker must then insert the Poll Worker card** and enter the PIN to unlock the system. The voter's session will be cleared, and the same voter can vote, once again, with the same Voter card, printing only one proper vote. If the voter abandons the voting, the voter card should be re-programmed for the next voter.

In addition, if the Poll Worker inserts a Poll Worker card with an incorrect election signature, the error message: "Election verification code not valid" displays. Only a Poll Worker smart card with the correct election signature can be used to resolve any situation that requests the Poll Worker's assistance.

NOTE: If the ImageCast® X device has been locked due to a voter fled situation, the voting cannot continue until the Poll Worker resolves the issue or until the original voter re-inserts their card and completes the voting session, or until the "Ballot recovery timeout" session expires.

C.2 Removing Voter Card After Maximum Number Of Rejected Ballots

During an active voting session, the Voter has the opportunity to reject the ballot.

If the voter rejects the ballot the maximum number of times allowed, which can be configured in the MCF file, an ***Information*** dialog displays the number of remaining rejection ballot as 0, see Figure C-1.

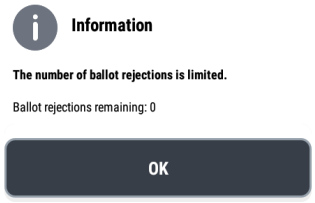

Figure C-1: Ballots rejection remaining zero.

If the Voter removes the Voter card from the smart card reader, the Voter Fled screen displays.

If the voter tries to resume the voting session by re-inserting voter card in the smart card reader, an ***Info*** dialog displays with the message: “Please call poll worker for assistance”, see Figure C-2

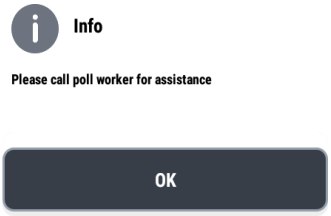

Figure C-2: Info

Once the Poll Worker inserts the Poll Worker card and enters the appropriate PIN, the application shows a ***Warning*** dialog with two available options, see Figure C-3:

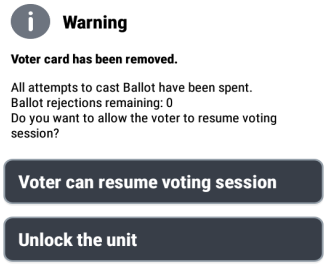

Figure C-3: Warning

If the Poll Worker selects the **Voter can resume voting session option**, the voter can then insert the voter card and continue the voting session.

NOTE: The remaining ballot rejection is still zero.

If the Poll Worker selects the **Unlock the unit** option, the login voter screen displays and the previous voting session is cleared. The **Unlock the unit** option is a configurable MCF option and can be set to be either: **Unlock the unit**, **Print blank ballot** or **Print ballot with selections.**

C.3 Removing Voter Card And Pressing The "Accept" Button Simultaneously

This scenario has two possible outcomes. The outcomes are explained in the following sections.

C.3.1 Removing Voter Card With Error Message "Voter card removed. BALLOT WAS NOT PRINTED. Please re-insert Voter card or call a Poll Worker for assistance"

Description

If a voter card is removed after the voter presses the Accept button but ImageCast® X has not registered the "Accept", the following message displays: "Voter card removed. BALLOT WAS NOT PRINTED. Please re- insert Voter card or call for immediate help".

When this situation occurs, the vote is not counted but the application will change the information on the voter card. The voter card will now contain information that the session status is registered as "CAST" (the ballot printing process is interrupted by the Voter card removal from the device), and the end of the voting time.

NOTE: If the voter abandons the voting, the application will need to be unlocked by a Poll Worker. That voter card will be invalidated and will no longer be used for voting, until it is rewritten with a new ID for the next voter.

Solution

If a voter tries to recover the ballot, the application will identify the card as an invalid card and will log an error code on it (code: 84). The voter will be shown another screen with the message: “Data on smart card is not valid. Please remove your activation card and notify a poll worker for assistance”. At this point the Poll Worker’s assistance is required.

This situation can be ***resolved if the Poll Worker inserts the Poll Worker card and enters the PIN***, after which a dialog displays, describing the situation that has occurred: “Voter card has been removed during printing. Vote was not counted! The card is no longer usable! Please rewrite the voter smart card.” Once the Poll Worker selects OK, the Poll Worker will be redirected to the login voter screen. The machine is now unlocked and voting can resume.

Removing Voter card with error message “There was an error on your ballot printing. Please remove your activation card and go to the officer for more info”.

Description

If a voter card is removed as the voter presses the Accept button, the following message displays: “There was an error on your ballot printing. Please remove your activation card and go to the officer for more info”.

When this situation occurs, the vote is not counted but the voter card is not deactivated yet.

Solution

The voter can click Continue and the Log In voter screen appears. The voting session can start again.

If the voter leaves the voting place prior to completing the voting session, the Voter card will need to be re-written.

In addition, if the Poll Worker inserts a Poll Worker card with an incorrect election signature, the error message: *"Election verification code not valid"* displays. Only a Poll Worker smart card with the correct election signature can be used to resolve any situation that requests the Poll Worker's assistance.

NOTE: Be advised that the ImageCast® X device can be configured to notify the Poll Worker of a Voter- Fled situation by playing an audio alert (default duration is 15 seconds) and by flashing RED (if the LED notification light is attached to the ICX Device). The lockout duration is also configurable through the ImageCast® X MCF with the default time being 5 minutes.

C.4 Removing Voter card with the option "Audiovisual indicator of voter fled" enabled

This scenario explains what happens when the Voter card is removed during a voting session with the option **Audiovisual indicator of voter fled** enabled.

Description

If the Voter card is removed while voting, the following message displays: *Voter card removed. BALLOT WAS NOT PRINTED. Please re-insert Voter card or call a poll worker for assistance,* see Figure C-4.

Figure C-4: Voter-fled warning

Solution

To resolve this, insert the Voter card and continue the voting session.
If the voter has left the voting session, the Poll Worker can enter the Poll Worker card and enter the appropriate PIN. The device is now unlocked and the next voting session can begin.

NOTE: Depending on the configuration (MCF settings), the Pol Worker can print an unfinished vote.

Voter Inactivity

If the option **Inactivity warning timeout** (in the *Edit Config* menu) is set to any number other than zero, a few seconds of inactivity during the voting session will trigger the screen starts to display an animation reverting the colors of the screen with an audio indication, see Figure C-5.

Figure C-5: Voter Inactivity screen.

REVISION HISTORY

Rev.	Date	Summary
4	05-03-2023	• Revised with Colorado review feedback
3	04-18-2023	• Updated as per Colorado revisions
2	04-05-2023	• Revised with grammar and content corrections
1	02-13-2023	• Branched for 5.17 Trunk

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