

AutoMARK™

Information Management System

Election Official's Guide



PUBLISHED BY

Election Systems & Software, Inc.
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Our documentation currently references the use of AutoMARK with Diebold AccuVote tabulators. Elections created by Diebold Gems are currently not federally certified for import or for manual entry of data.

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1 Introduction

Note:

Three types of tabulators work with the AutoMARK VAT—the ES&S M100, the ES&S Optech and the Diebold Accuvote. Sections specific to the Optech tabulator are clearly identified, usually by a text box or other type of box.

1.1 Purpose

This guide tells how prepare for an election, using the AutoMARK Information Management System (AIMS) software.

The guide's step-by-step procedures explain how to:

- Automatically import a database of voter ballot choices and load it into the AutoMARK™ Voter Assist Terminal (VAT).
- Create an election database manually, if necessary.
- Modify an election database manually, if necessary.
- Customize phonetic pronunciation for non-standard names.
- Install non-English languages into the VAT which vision impaired and non-English voters can use to hear the ballot choices read to them.
- Solve problems you might encounter doing the above steps.

1.2 Overview

AIMS is a program that runs on a WINDOWS PC and manages election specific information for the VAT. This includes information about precincts, splits, races and candidates.

Other software comes with AIMS, including an installer program that loads AIMS and the other required election software. AIMS works with these programs to record and protect all election information.

AIMS works with the ES&S Unity System and the Diebold Global Election Management System (GEMS) software, which produce ballots and election database information that AIMS can understand. With AIMS you can automatically import database information from the ES&S Unity System or the Diebold GEMS System and load it in the AutoMARK election database. If you cannot obtain files to import automatically, you can manually enter the election information into AIMS.

After you preview and verify all election data, you can use AIMS to save the data to a secure compact flash memory card (FMC). Then at election time you insert the FMC into the VAT to supply it with the ballot information it needs to work.

1.3 Voting variations

Because election laws vary across the 50 states, the VAT handles all voting variations described below. If you automatically import election data, this information should automatically appear in the election database. But in case you have to manually create or modify the database, the following terms and definitions indicate how to implement each variation in AIMS:

a. Group

A group is an affiliation that divides voters into two or more categories. Common examples are democrats and republicans. But voters can also be divided in more customized ways, such as “referendum yes” and “referendum no” affiliations.

b. Group-specific race

In this race you are only permitted to vote if you are a member of the specific group the race is associated with or at least *not* a member of any other group.

c. Force-group race

In this race, only voters who are members of the group that the race is associated with can vote. This differs from *group-specific races*. In *group-specific races*, voters *can* vote if they are *not* a member of any group at all.

d. Straight-party ticket race

In this race, all who vote identify themselves with a political party, and so with a *group*.

e. Closed primaries

In these primaries, each party has its own ballot. AutoMARK deals with each ballot independently, so no special support is required.

f. Open primaries

In open primary elections, races from multiple parties may appear on the same ballot, but a voter can only vote in races associated with one party (and in non-partisan races). For example, a voter may *not* vote in both a Republican race and a Democrat race.

g. Preference Race

Some jurisdictions include a preference race at the beginning of an open primary ballot. The preference race lists the parties available on the ballot, and allows the voter to first indicate which party he or she plans to vote for. On the VAT, once the voter selects a party in the preference race, all races associated with other parties disappear. The preference race prints on the ballot in the same way as any other race.

h. Navigation Race

For jurisdictions that do *not* use a preference race, but would still like to offer the convenience of selecting a party at the beginning of the AutoMARK™ VAT selection process, you can set up a navigation race. A navigation race does *not* appear on the printed ballot; the race is only used for on-screen navigation. The race displays the parties available on the ballot, and when the voter selects a party in the navigation race, the VAT displays the races for that party and the non-partisan races.

i. Partisan offices

Races with partisan offices can be assigned to a group (party).

j. Non-partisan offices

Races with non-partisan offices can be assigned to “no party” group (N.P.).

k. Write-in voting

For each race, the number of write-ins can be specified as either zero or equal to the number to vote for. The jurisdiction determines this number.

l. Primary Presidential delegation nominations

Handle these the same way you handle other races. No special set-up is required.

m. Ballot rotation

AIMS handles rotations, but does not do any rotation. Instead, set up each ballot individually (or through import) with the rotation already complete.

n. Straight party voting

The straight-ticket race is specified using the Straight-Ticket Race boolean on the Race screen and candidates are assigned to groups on this race. When a voter selects a candidate or group on the straight-ticket race, the AutoMARK VAT appropriately indicates selections for all candidates for that group on other races. By default, the straight-party uses exclusive logic, but inclusive logic can be turned on in *Machine Properties*. Non-partisan races such as endorsements are not affected.

At the end of the ballot, but before inking the ballot, the selections appear to the voter on the VAT summary screen. Some selections result from actual choices the voter made, and others result from the straight-party ticket choice. If voters do *not* like the selection in any particular race, they can return to that race and change the selection. If the selection resulted from a straight-party ticket choice, this new selection would be an override of the

general straight-party ticket choice. Inclusive rules might still result in some straight-party candidates being selected.

When voters approve all selections, the ballot is marked.

If voters do *not* pick a straight-party choice, and do *not* vote in some contest, a warning appears regarding the under-vote. However, a failure to vote on the straight-party ticket race is *not* considered an under-vote.

o. Cross-party endorsement

Candidates can be assigned to more than one group. In a straight-party ballot, choosing any group the candidate is associated with automatically indicates the candidate as selected. Some jurisdictions use an alternate method of cross-party endorsement where the candidate is listed separately for each party affiliation. When using this method, each candidate listing that represents the same individual must be identified as belonging to that one unique individual. This is accomplished by assigning a Unique Person ID to the candidate listings. Please see Section **10.4.5** for descriptions of both of these methods for cross-party endorsement.

p. Split precincts

All precincts must have at least one split, but may have more. If a precinct does *not* have any splits, the entire precinct is the first split.

q. Vote for N of M

This is specified on the race screen. It is possible to set the race to be Vote-For Exact. This forces the voter either to vote for N candidates or skip the race.

r. Recall issues, with options

Force Group can be used.

Note: You cannot have a straight-ticket and a recall option on the same election, since only one group can be specified per election.

When setting up a straight party, a group (party) is specified for each choice in the straight party race. Then in other races, the candidates can also have the group (party) specified. When a group (party) is selected in the straight party race, the candidates of that group (party) in other races are selected for you.

In recall issues, where the voter's ability to vote in a particular race is dependent on how they voted in another race, again this same group function is used (although it is not now usually a party).

For example, voters may be asked if the governor should be recalled—Yes or No. If they vote “yes”, then they can view the race of replacement candidates.

This is accomplished in AIMS by attaching a group to the Yes or No options in the recall race and then attaching the same group to the follow-up race and selecting "force group."

s. Cumulative voting

Cumulative Voting is not handled by AIMS

t. Ranked order voting

Ranked order voting is not handled by AIMS

u. Provisional or challenged ballots

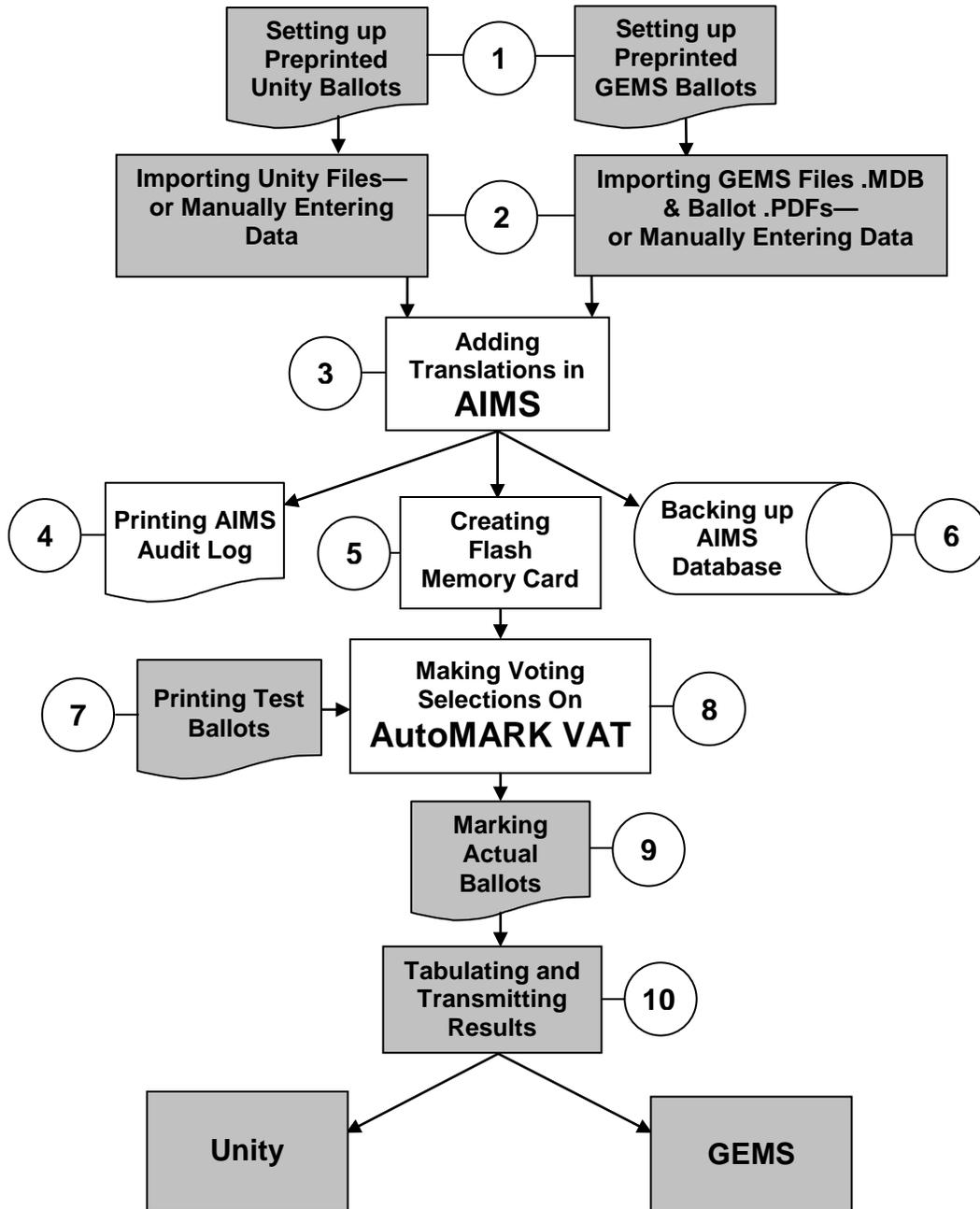
Because AutoMARK is only a ballot-marking device, we handle these ballots the same as any other ballot. We do not do any tabulation.

v. Conditional Question Group Type

Used to present alternate sets of races to a voter depending upon whether he/she selects yes or no to a particular question.

1.4 Automark System Process Flow Chart

Shaded boxes indicate COTS (Commercial Off-The-Shelf) components.



AutoMARK System Process Flow

1. **Setting up Preprinted Ballots in Unity or GEMS:** The AutoMARK™ Voter Assist Terminal (VAT) is a ballot marking device that uses preprinted optical scan ballots set up using ES&S Unity or Diebold GEMS software. The entire election process begins with ballot definition, preparation and printing using Unity or GEMS. This setup process is considered COTS by AutoMARK, because it has already been certified. The AutoMARK process always begins with printed ballots produced by Unity or GEMS.
2. **Importing or Entering Data:** To set up the AutoMARK Voter Assist Terminal, information from preprinted ballots is imported or manually entered into the AutoMARK Information Management System (AIMS). For information on the importing process see Chapter 5.
3. **Adding Translations in AIMS:** In AIMS, translations are added, and the ballot setup is reviewed and pre-viewed to verify the onscreen ballot matches the printed ballot.
4. **Printing the AIMS Audit Log:** Any changes made to the data using AIMS are logged in the AIMS Audit Log (see Audit Log in Section 13), which should be printed and kept as an audit record when the Flash Memory Card is created.
5. **Creating a Flash Memory Card:** Once the data is properly reviewed, a flash card is created for use in the AutoMARK Voter Assist Terminal.
6. **Backing up the AIMS Database:** At this point work with AIMS is complete, since results do not return to AIMS. The AIMS database should be backed up. See Section 4.5.2 of this document for information.
7. **Printing Test Ballots:** Once the Flash Card has been installed and locked in the Voter Assist Terminal, a test ballot print should be performed for all preprinted ballots to verify the AutoMARK Flash Card is set up properly. These test ballots should be stored with other election setup audit records. For procedures on Test Ballot prints see the *AutoMARK Jurisdiction Guide*.
8. **Making Voting Selections on AutoMARK VAT:** On Election Day, voters insert an unmarked preprinted ballot into the Voter Assist Terminal. The races and candidates for the inserted ballot are presented onscreen and via audio. Voters make their selections, view a summary screen, and then select **mark ballot**.
9. **Marking Actual Ballots:** The AutoMARK Voter Assist Terminal fills in the Ballot Targets (ovals or arrows) per the voter's selections and prints in any write-ins entered by the voter. Once the printing is complete, the VAT scans the ballot to make sure that only the appropriate Ballot Targets were marked and that they were printed correctly. The ballot is then returned to the voter for insertion into a tabulator and all selection memory within the VAT is cleared in preparation for the next voter.
10. **Tabulating and Transmitting Results:** The operation of the tabulator and its transmission of the results back to Unity or GEMS is considered COTS by the AutoMARK process. No voting information is stored in the VAT, and it does *not* count votes. It is only a ballot marking device.

1.5 Audience

The information contained in this guide is provided for Election Officials responsible for the setup and operation of AIMS.

1.6 Related Documents

All product related manuals, spare parts lists, and release notes are available upon request. Send requests to:
Election Systems & Software, Inc.

11208 John Galt Blvd
Omaha, NE 68127

800-247-8683

1.7 Proprietary Information

The Automark™ system concepts, as well as many implementation and construction details described in this document, are considered proprietary information protected by a series of U.S. and foreign patents pending.

1.8 Safety and Installation Information

Read the AutoMARK™ safety information, precautions and procedures carefully before attempting to operate the AutoMARK™ Voter Assist Terminal. Refer to the AutoMARK Jurisdiction Guide for specific instructions.

1.9 Technical Support

Election Systems and Software, Inc. (ES&S)
11208 John Galt Blvd.
Omaha, NE 68137
Toll Free: 1-800-247-8683
Fax: 402-593-0101
Email: webelectionsupport@essvote.com

2 AIMS Security

2.1 Security Recommendations

It is the responsibility of the jurisdiction to provide a secure physical and procedural environment for the storage, handling, preparation, and transportation of the system hardware, including the computer which will be used to run AIMS. There are no additional relevant access control measures.

2.2 System Administrator Responsibilities

The System Administrator should set up the AIMS computer according to the procedures and policies outlined in the *ES&S Hardening Procedures – Election Management PC* document.

2.3 Election Official Responsibilities

AIMS software is provided on an Install Shield CD. Complete installation instructions are in Section 3. When installing AIMS, the Election Official must enter the exact user name, company name and serial number which will be provided by AutoMARK. Upon installation, the Election Official will create a password which should be kept private, available to only the Election Official and his designated personnel. This password will be required to start AIMS. This procedure will ensure that unauthorized persons will be unable to access the program.

AIMS databases can only be accessed/used by either the SQL Server System Administrator or the owner of the database, which is the user login the Election Official will have access to. (The password is set by the Election Official using AIMS). Because the SQL Server System Administrator login is encrypted and embedded in the program code before compilation, only Automark Technical Systems will know the login for the SQL Server System Administrator account, and even the NT Administrator account on the AIMS computer will not have SQL Server System Administrator login permissions.

No source code or compilers or assemblers are included with the AIMS software. The only external files are the language audio files (.wav files) for the Vietnamese, Tagalog, and Creole language prompts, and the header graphic file (.bmp file). These files are secured by the NT machine password.

All the election data is verified by the Election Official before being exported to the Flash Memory Card. During the process of creating the Flash Memory Card, the data is hash-code encrypted, so that it cannot be altered without detection. The Flash Memory Card is then delivered to the election site to be used in the Voter Assist Terminal, and is verified there by printing a test ballot. Because AIMS has nothing to do with vote tabulation, any unauthorized changes to the software or data on the AIMS computer after the creation of the Flash Memory Card will have no effect on the election.

There is no built-in time interval limitation to the authorizations discussed above.

3 Installing AIMS

3.1 System Requirements

This section applies to the hardware system used to run the AIMS software for preparing the flash card of election data for use in the AutoMARK VAT.

3.1.1 Hardware

The minimum recommended PC hardware configuration for AIMS is:

- 2.2 GHz Pentium 4 minimum
- 256 MB memory minimum
- 20 GB hard drive minimum
- CD-ROM
- USB port
- Flash Memory Card drive
- Microsoft Windows XP Professional
- Blank formatted compact Flash Memory Card (FMC)

3.1.2 Software

AIMS uses the following external software applications:

- Microsoft Excel version 5.0 or greater (optional)
- Microsoft .NET Framework v. 1.1 (automatically installed with AIMS)
- SanDisk Drivers for writing to Compact Flash Cards

Note: Download SanDisk Drivers from <http://www.sandisk.com/retail/driverdownloads.aspx>. Consult the documentation for your Compact Flash Memory Card drive to determine the appropriate driver for your system.

Note: Administrators should install Excel on the PC used to run AIMS as a stand alone application. Do not install additional Microsoft Office applications on the AIMS system

3.1.3 Physical Characteristics

The physical characteristics of the AIMS hardware is consistent with its intended use. The personal computer used for AIMS should be designated for the sole purpose of collecting, editing, and storing ballot definition data onto a flash memory card which is required by the AutoMARK Vote Assist Terminal (VAT).

AIMS is designed as a single user system. AIMS should *not* be networked. Between elections, the Election Official is responsible for storing the PC in a secure storage area to safeguard the application software and election database for future elections.

3.2 Installing AIMS for the First Time

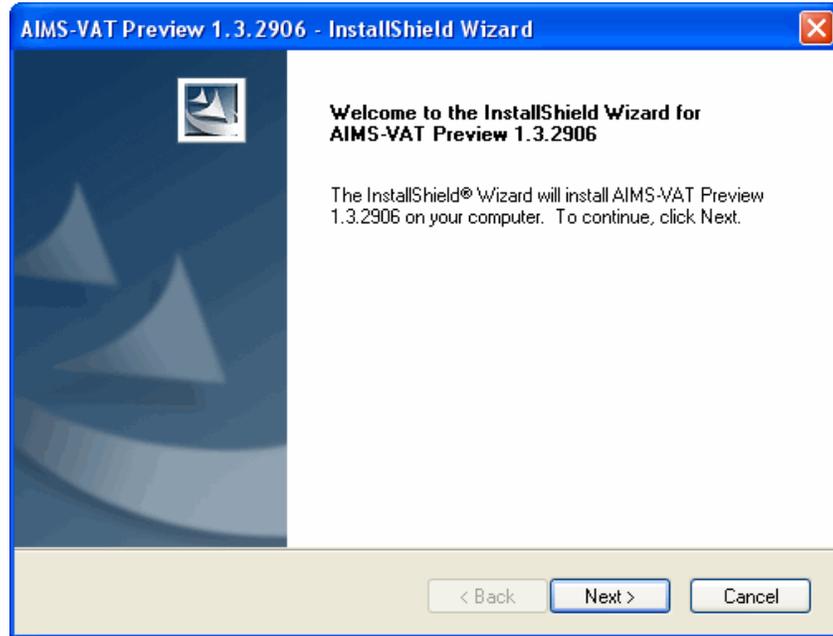
3.2.1 Installing VAT Preview

The VAT Preview must be installed **before** AIMS. Before you begin installation, close all programs and turn off virus protection software to prevent installation conflicts.

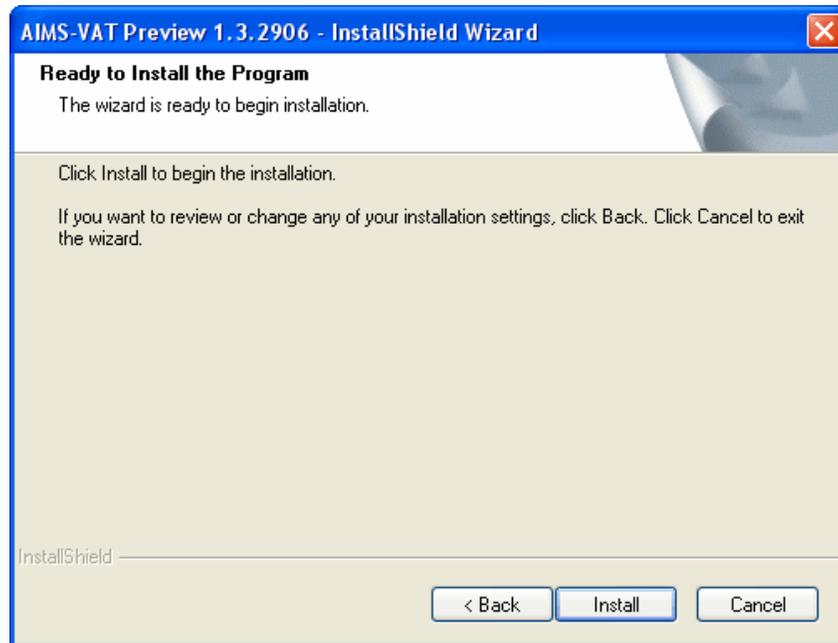
Note: Please make sure that Microsoft .NET Framework 1.1 is installed before proceeding with the VAT Preview installation. Failure to install Microsoft .NET Framework 1.1 will cause the VAT Preview to function improperly.

1. Click **Start** on the Windows taskbar and select **Run** to open the Run window.
2. Select **Browse** to locate the CD Rom Drive on your PC. Locate the VAT Preview folder and double-click it to open the folder.
3. Double-click **Setup.exe** in the VAT Preview folder.

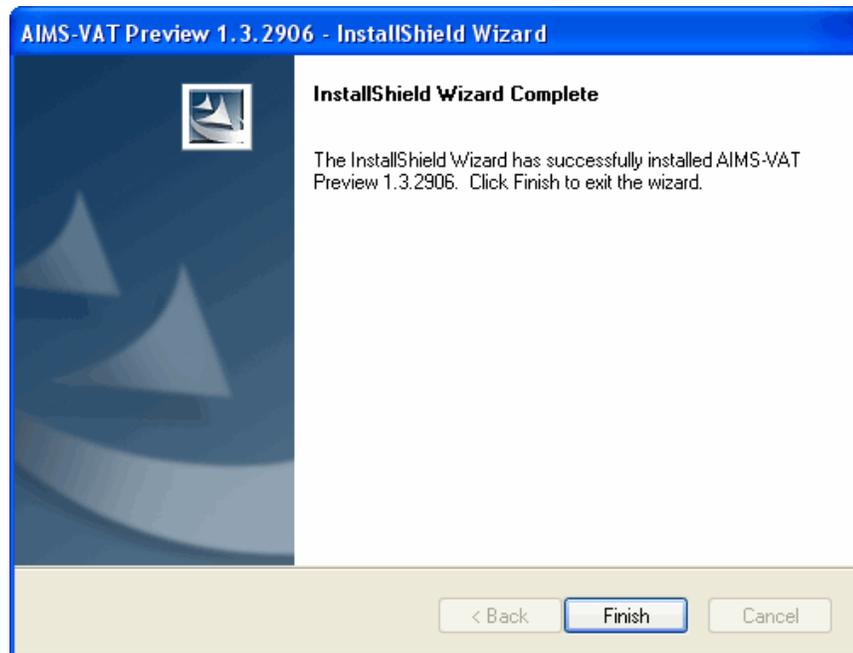
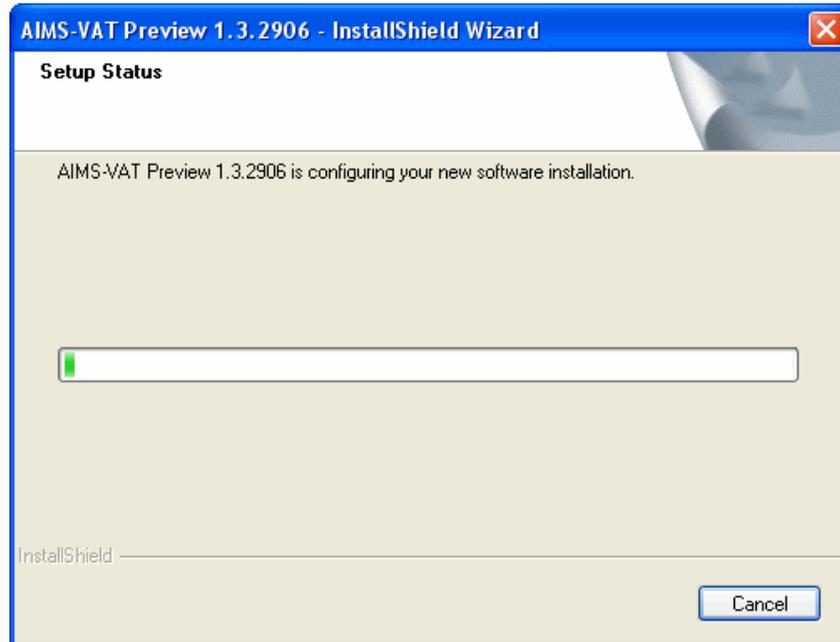
4. Click **OK** to begin the installation. The InstallShield Wizard window will appear.



5. At the VAT Preview - InstallShield Wizard screen, click **Next**.



6. Click **Install** to begin the installation. A Status window will appear showing the progress of the installation.



7. Click **Finish** to exit the installation and close the Wizard.

3.2.2 Installing AIMS

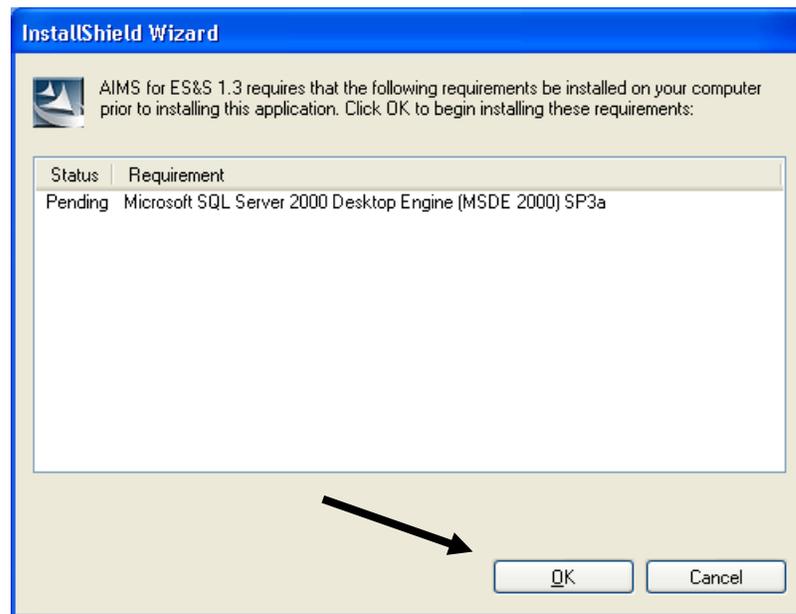
1. Turn on your computer, and load the AIMS CD into your CD-ROM drive.

The InstallShield Wizard appears and begins to step you through the entire installation process.

Note: The first time you install AIMS, the wizard installs the Microsoft SQL Server Desktop Engine on your computer.

If Microsoft.NET Framework is not installed, you are prompted to agree to its Microsoft License agreement, and will be led through its installation.

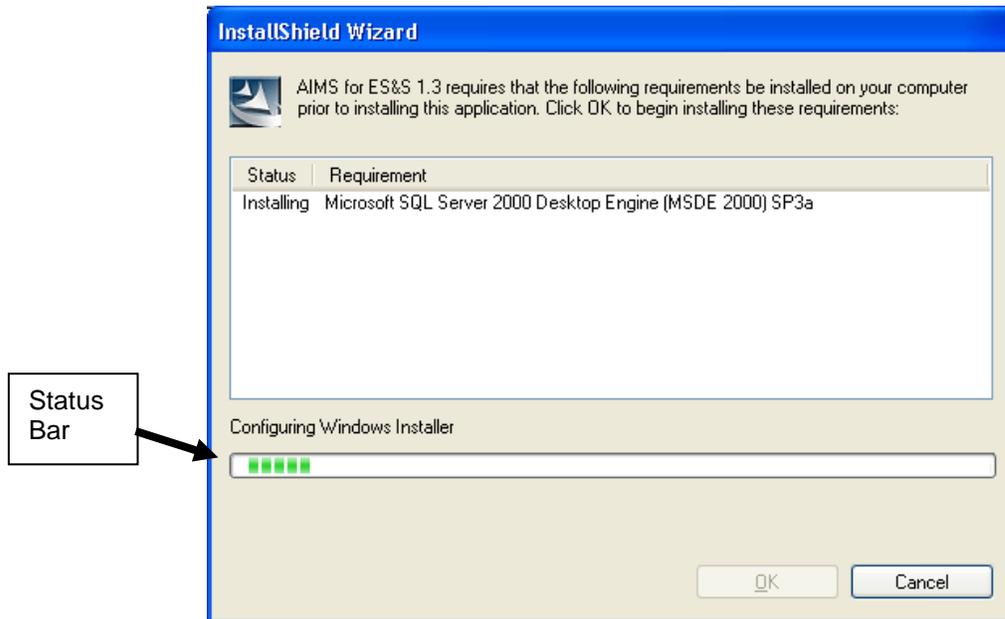
2. When the InstallShield Wizard requirements screen appears, click **OK** to install Microsoft SQL Server 2000 Desktop Engine.



NOTE: If you later install AIMS *again*, you may *not* see this step:

Installing AIMS

A status bar appears, indicating installation progress.

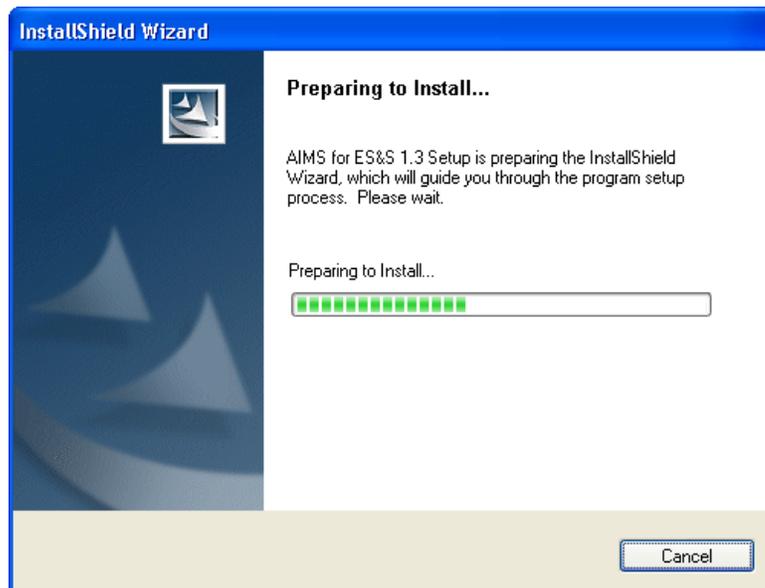


Another window with a status bar appears, indicating further progress.



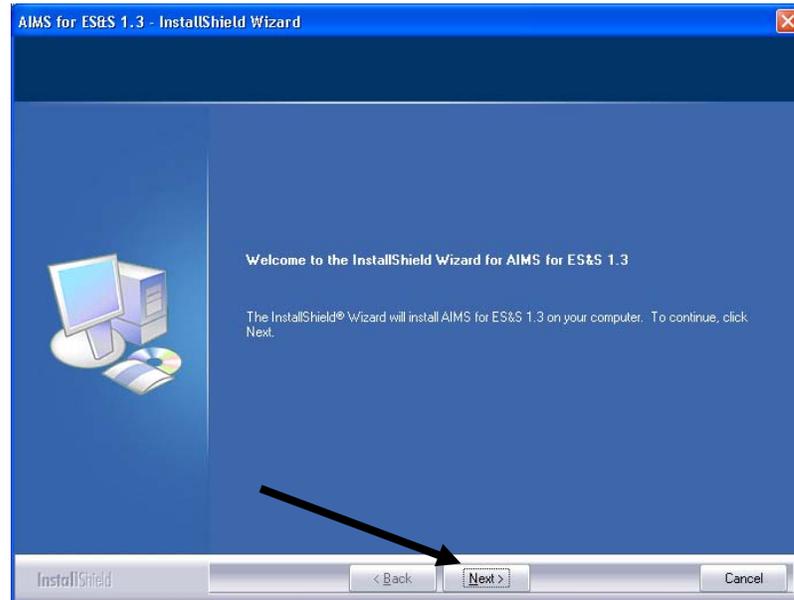
When Microsoft's SQL Server Desktop Engine is installed, you are ready to install AIMS itself.

3. When the InstallShield Wizard, Preparing to Install... screen appears, to continue, just wait until the screen is finished.

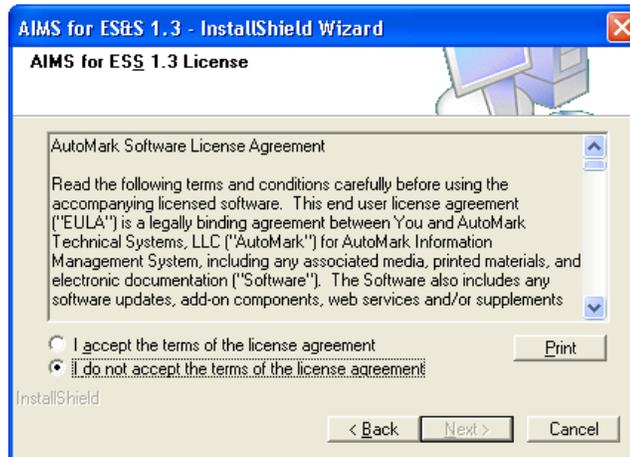


Installing AIMS

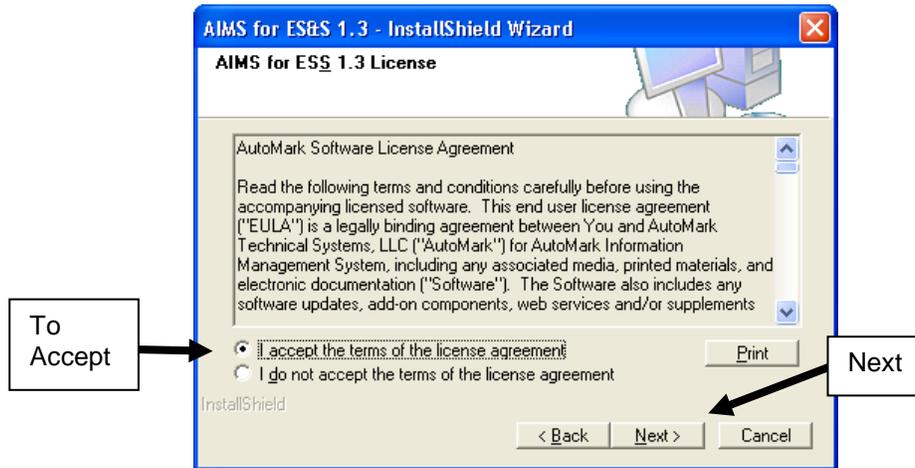
4. To install AIMS now, click **NEXT**. (Otherwise, to wait and to install AIMS later, click **CANCEL**.)



The AIMS license agreement appears for your review:

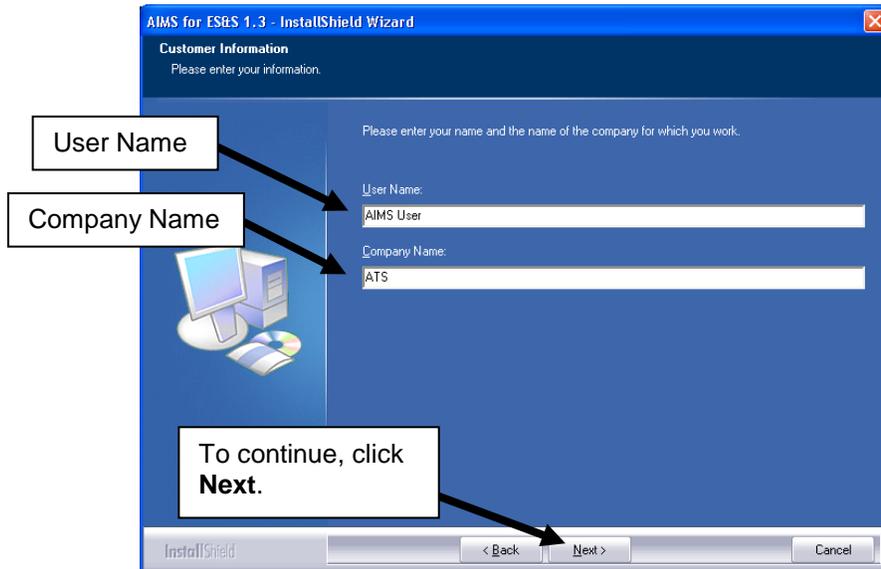


- To agree to its terms, select **I accept the terms of the license agreement**, and click **Next** to continue.

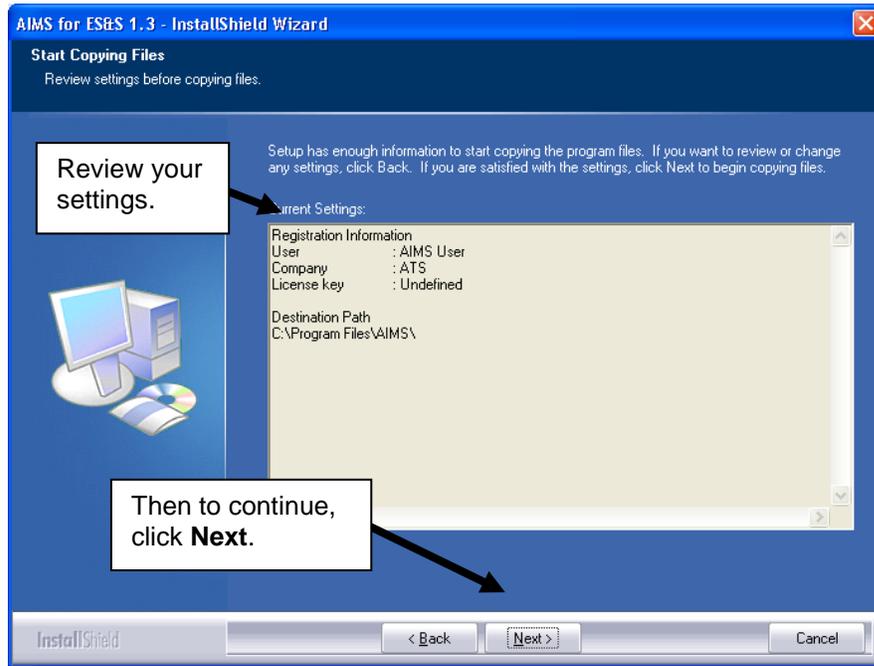


AIMS automatically selects the folder location C:\Program Files\AIMS, and installs its files there.

- Enter a User Name and Company Name in their respective fields, and click **NEXT** to continue.

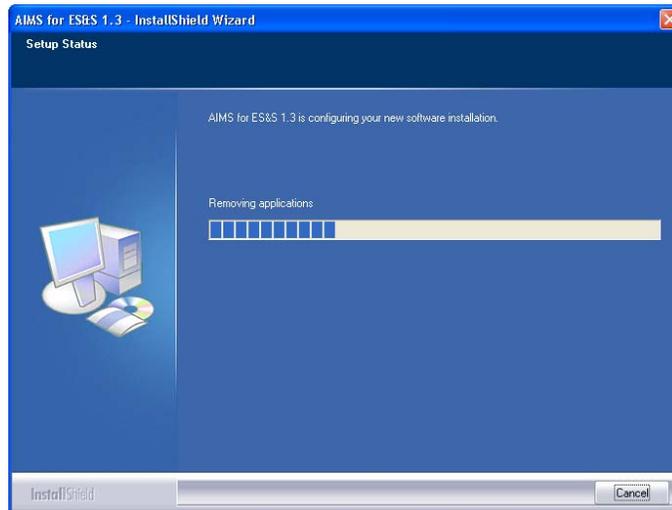


7. Review your settings in the **Current Settings** area.



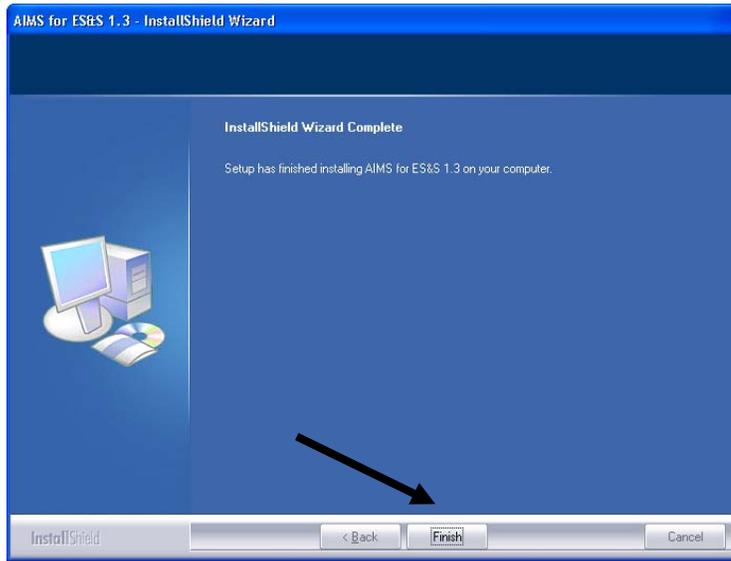
8. To confirm your settings and continue installing AIMS, click **NEXT**. (Otherwise, to change a setting, click **BACK** to go back to any previous screen.)

The Setup Status window appears and indicates progress:



When installation is complete, the **InstallShield Wizard Complete** window appears with a message: "Setup has finished installing AIMS 1.3 for ES&S on your computer."

9. Click **Finish** to acknowledge installation is complete.



10. Remove the AIMS installation CD from your computer.

11. Restart your computer.

Note: If the following screen appears, to restart your computer, just click **YES**.



3.3 Reinstalling AIMS

If you have previously installed AIMS, and you receive a new installation CD for a new version of AIMS, you should first create backups of the election databases you wish to keep, and **Uninstall** the current AIMS program file:

1. CREATE BACKUPS OF YOUR ELECTION DATA

(See Section 13.14.5.2 for details)

NOTE: Do **NOT** save the backup files to the AIMS folder – save them to a different location, because the AIMS folder will be deleted.

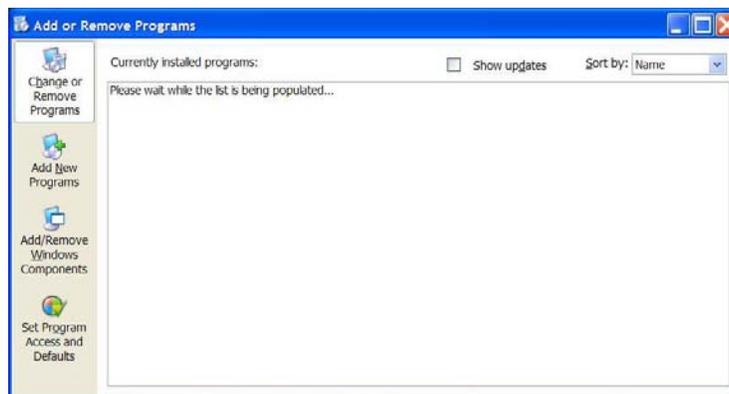
2. UNINSTALL AIMS:



WARNING:

Do NOT perform a partial uninstall, or you could corrupt your database, and AIMS will not start correctly.

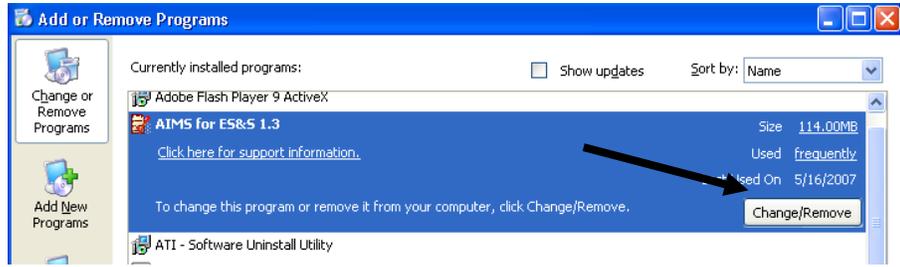
1. Click Start, click Control Panel, and click Add or Remove Programs.
2. Wait until the Add or Remove Programs screen displays a list of the programs on your computer:



3. Click **AIMS ES&S 1.3**.



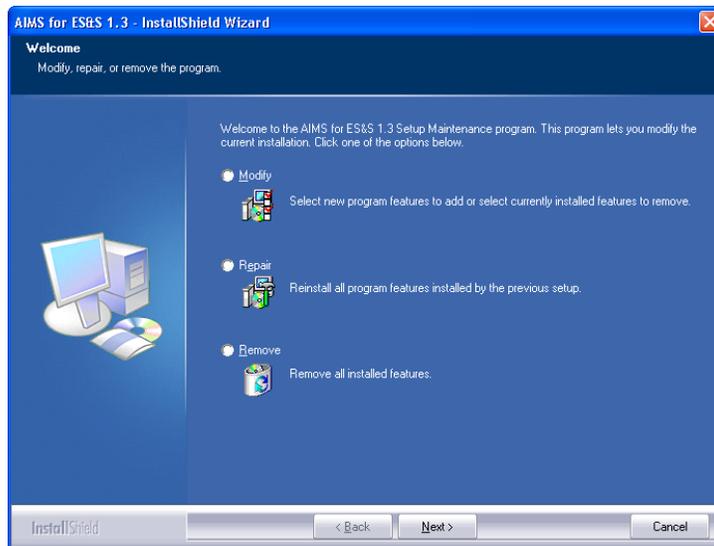
4. When the AIMS file detail appears, click **Change/Remove**.



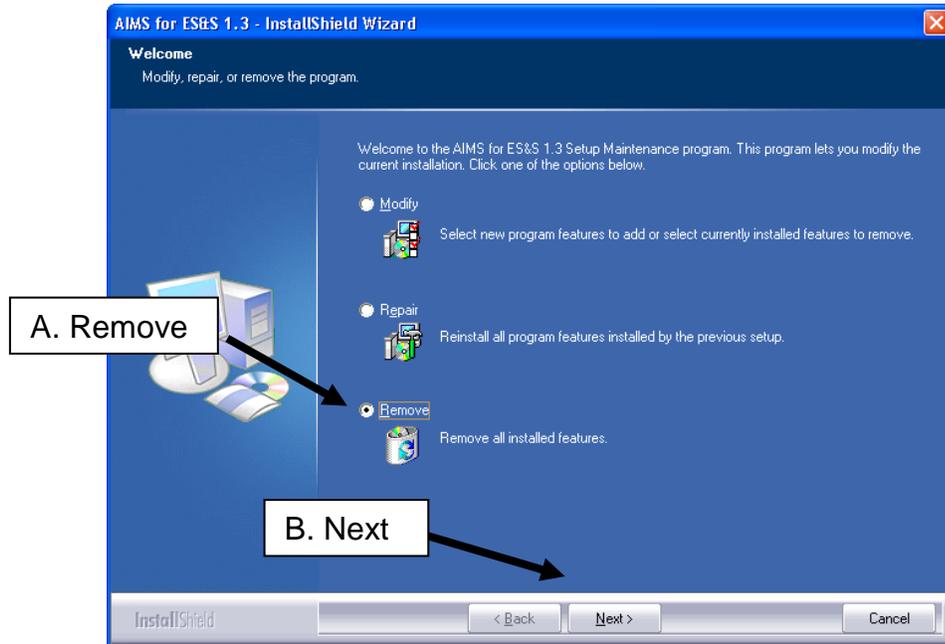
The InstallShield Wizard appears temporarily:



Then the AIMS InstallShield Wizard welcome appears:



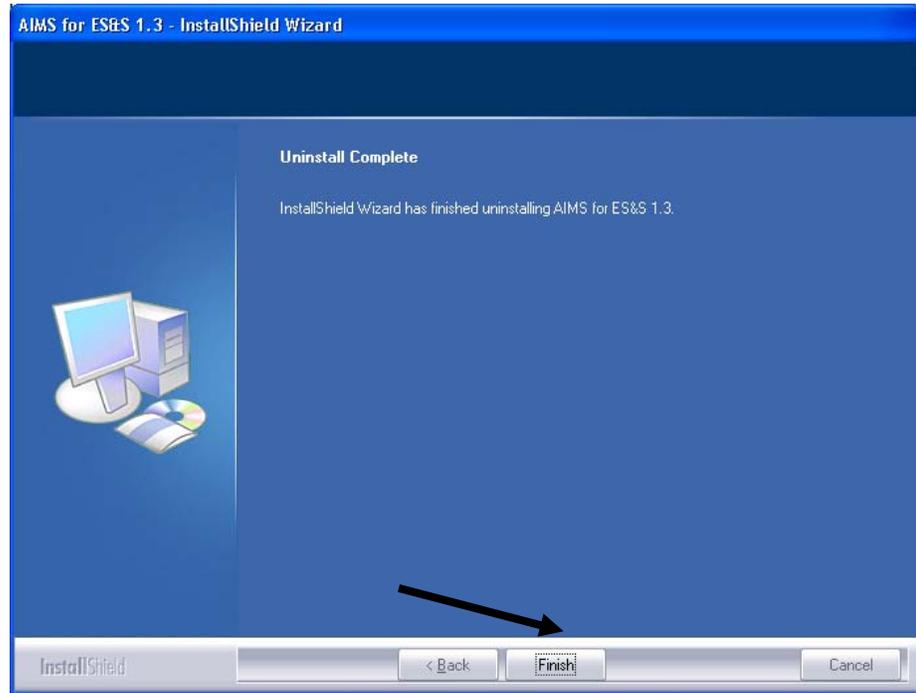
5. Click **Remove**, and then click **Next**.



6. When the following AIMS screen appears, click **Yes** to remove all features in AIMS.



7. When the Uninstall Complete screen appears, click **Finish**.



3. REMOVE EXISTING AUTOMARK FOLDERS AND FILES

1. Locate the AutoMARK folder at **C:/Program Files/AutoMARK**.
2. Right click the **AutoMARK** folder, and select **Delete**.
3. When the Confirm Folder Delete screen appears, click **Yes**.

4. REBOOT YOUR COMPUTER.

5. INSTALL NEW AIMS FROM CD



WARNING:

Make sure you have performed a complete uninstall, or you could corrupt your database, and AIMS will not start correctly.

See Section 3.1, *System Hardware Requirements*, for details.

3.4 AIMS Acceptance Test

To verify your installed copy of AIMS is working properly, you may want to go through the checklist below. Doing so will test the functions and accuracy of AIMS. To perform the full test, use General Election import files.

	Section
A. ELECTION IMPORT	5.3
B. BACKUP/RESTORE FUNCTIONS	13.1
C. EDITING ELECTION PROPERTIES	
Create new election	5.1
Edit election title	5.1
Edit ballot type	5.1
Edit Election Files Folder	5.1
Edit languages associated with election	7.1.2
Edit zoom size difference	7.1.3
Edit race summary max characters	7.1.3
Edit beep on touch	7.1.3
Edit alert more	7.1.3
Edit force more	7.1.3
Edit manually id ballots	7.1.3
Edit alert undervote	7.1.3
Edit Auto Straight-Party Deselect?	7.1.3
Edit write by oval x	7.1.3
Edit write by oval y	7.1.3
Edit write-in length	7.1.3
Edit test offsets	7.1.3
Edit header graphic file	7.1.3
Edit Party graphics	7.1.3
Edit Allow overvote?	7.1.3
Edit Use straight-party inclusive logic?	7.1.3
Edit Show numbers on screen write-in keyboard?	7.1.3
Edit Back arrow prompt on write-in screen	7.1.3
D. EXPORTING ELECTION	
Export election data to a flash memory card	14.1
Export election data to a hard drive	14.2

4 Getting Started

4.1 Starting AIMS



1. Log on to your AIMS computer.
2. Click Start button in the lower left corner of the screen and select **All Programs**, then **AIMS for ES&S** and again **AIMS for ES&S**.

Note: If you already have Microsoft Access on your computer, you might be prompted for the location of MSACCESS.EXE. If so, click the **Browse** button to locate the file MSACCESS.EXE.

The AIMS splash screen appears:



4.2 Logging On to AIMS

Note: The AIMS Logon procedure provides system security.

The following screen appears:



Note: The initial AIMS password is “AutoMARKTS” and is case-sensitive.

Enter your Password. Click **OK**.

You are now logged onto AIMS.



WARNING:

To prevent access to the election database, change this password the first time you log onto AIMS.

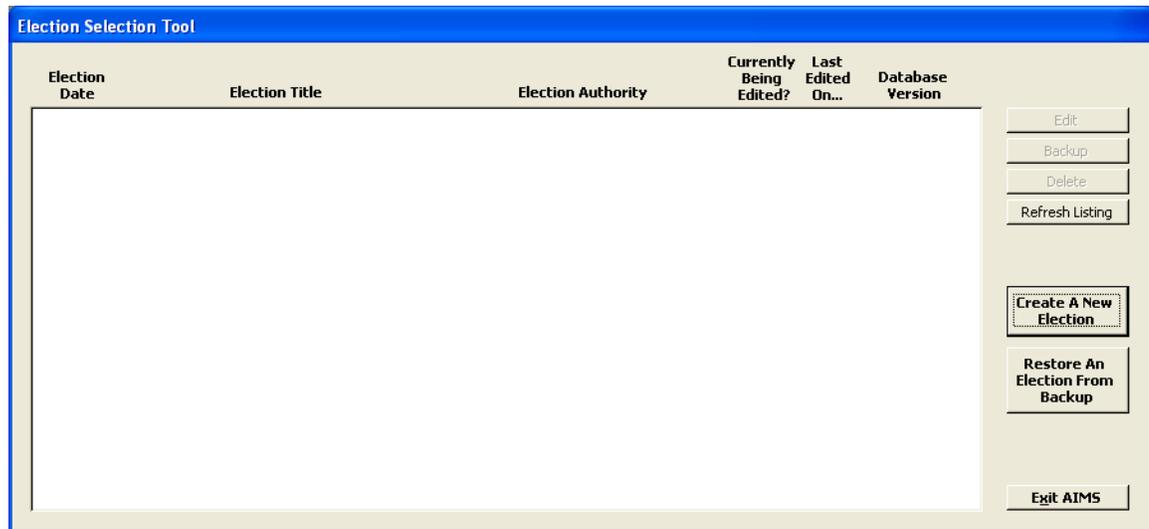


WARNING:

Never lose your password, or you could lose access to your election data.

Note: Before you can change the password, you must create an election database (see Section 5 *Setting Up a New Election*). For instructions on changing the password, see Section 13.5 *Password Manager*.

The Election Selection Tool screen appears:



At this screen you can begin creating a new election or restore a previous election you entered.

If this is your first time in AIMS, you don't have any Elections to restore. You can only select **Create a New Election**, and **Exit AIMS**.

To exit the program, click **Exit AIMS**, and when the following window appears, click **Yes**.

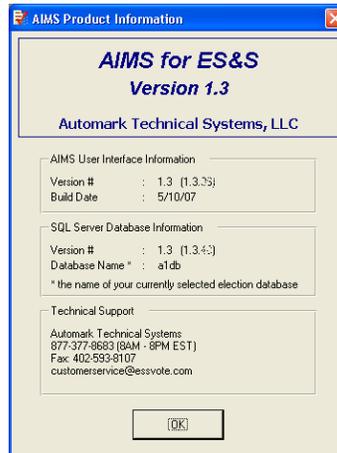


If this is *not* your first time in AIMS, your options are to **Create a New Election**, **Refresh Listing**, and **Restore An Election From Backup**, and **Close**.

4.3 Using the Help Menu

Click **Help** and select **About**. To do this, you may need to close any open forms.

The AIMS Product Information screen appears:



It displays the following information:

- The AIMS User Interface Version and build date.
- SQL Server Database number (the election database currently being edited).
- The data file version.
- The technical Support 877 phone number and hours, the fax number, and email contact information.

4.4 Creating a New Election

If this is your first time using AIMS, you have no previous elections to select from, so click **Create a New Election**, and go to Section 5 to continue.

4.5 Working with a Previously Entered Election

If you are working with a previously entered election, you have the following options:

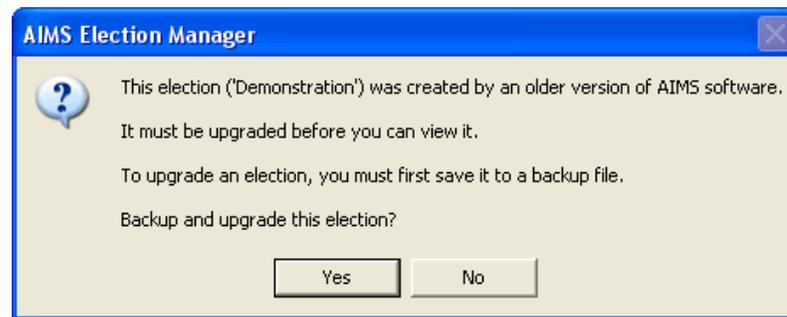
4.5.1 Editing an Election

To edit an election:

1. Highlight an election.
2. Click **Edit**.
3. Edit ballots, races, etc.—tasks explained in the following sections.

When you exit AIMS, and later start it again, AIMS automatically selects the same election you were working with previously.

If you select an election that was created with a previous version of AIMS, it prompts you to create a backup file, and upgrade the election to the current version:

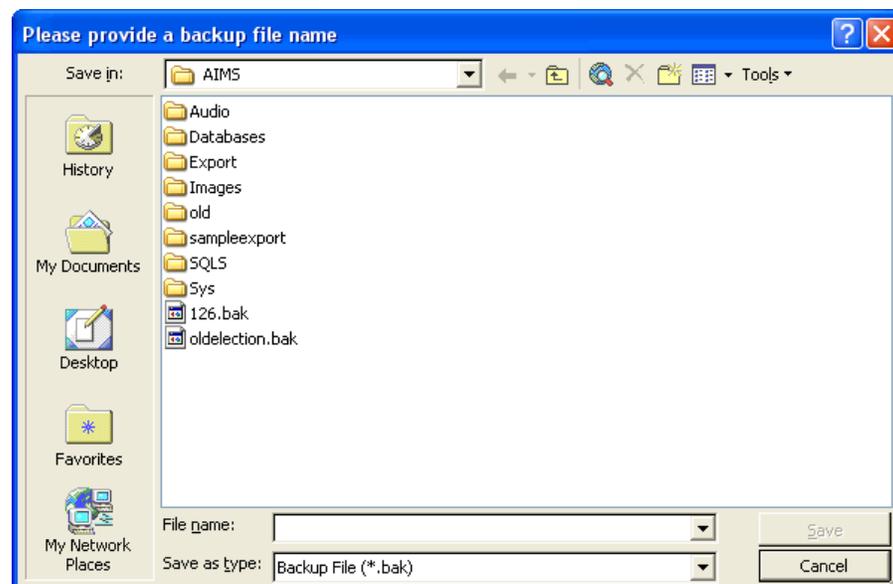


4.5.2 Backing up an Election

To create a backup copy of an election:

1. Highlight an election.
2. Click **Backup**.

The following screen appears:



3. Enter a filename and location for the backup copy.
4. Click **Save**.

The following screen appears, allowing you to enter a password for your backup copy, if you like.

Note: Entering a password for your backup copy is optional.



Database Backup Password-Protection Tool

Password

Password (confirm)

Backup file password-protection is optional. If you do not want to password-protect your election backup file, leave the textboxes blank and click OK. To cancel the backup entirely, click Cancel.

5. To backup without a password: Just leave the boxes blank and click OK.
6. To backup *with* a password:
 - (a) Enter a password.
 - (b) Enter the password again to confirm it.
 - (c) Write down the password.



WARNING:

Never lose your password, or you could lose access to your election data.

- (d) Save the password in a safe place, and click **OK**.
 - (e) Later, to access your election data, you must enter the password again, or you will *not* be able to restore that election from the backup copy.
7. If the election contains any labels that link to .WAV or .BMP files: In the AIMS directory, locate the folder named “audio.” (It contains the files that end in .WAV (audio files) and the files that end in .BMP (graphic files). Copy the “Audio” folder to the folder you selected for your backup file.



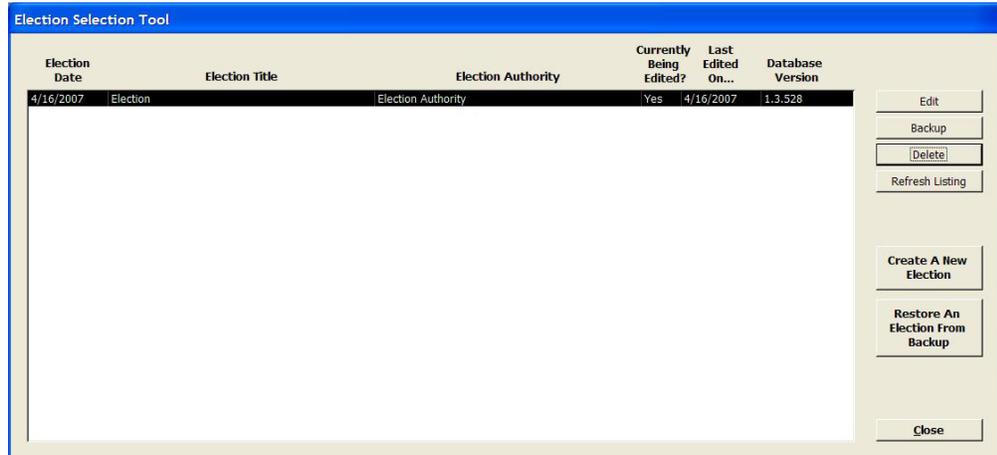
Caution

If the election contains any labels that link to .WAV or .BMP files, these files are *not* included with the backup. So you must copy the audio folder containing the .WAV and .BMP files to the folder you selected for your backup file.

4.5.3 Deleting an Election

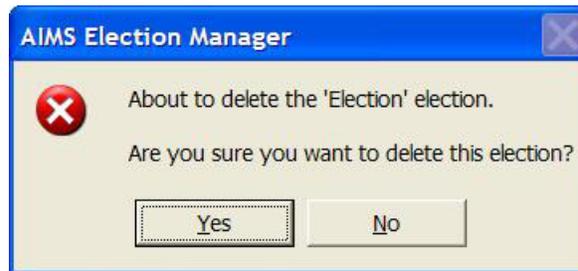
To delete an election:

1. In the Election Selection Tool, highlight an election.



2. Click the Delete Button.

The following screen appears:



3. To delete the election, click **Yes**.

The following screen appears:



4. Click **OK**.

4.5.4 Updating Elections in the Election Selection Tool (Refresh Listing)

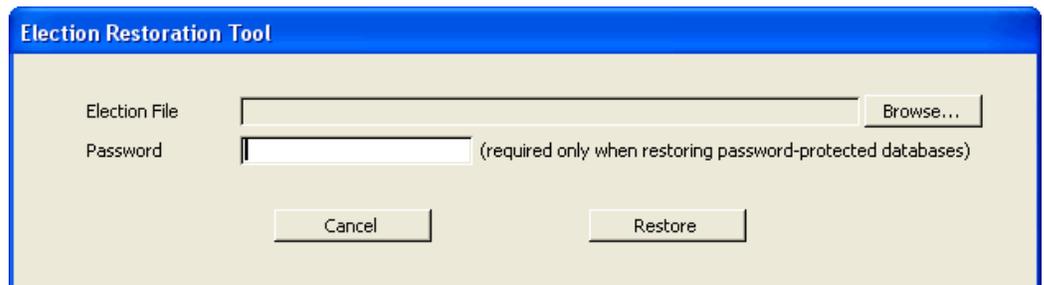
Clicking on **Refresh Listing** will update the list of elections showing in the Election Selection Tool.

4.5.5 Restoring an Election from Backup

1. To restore an election from a backup, click the **Restore an Election from Backup** button.

The **Election Restoration Tool** screen appears:

2. Click the **Browse** button to locate and select the backup file.



3. Enter the password (if there was one). Click **Restore**. If the restore was successful, you will see:
4. Select **Browse...** to locate the previously created .BAK File. If a password was used when creating the file, enter it in the Password text field and press **Restore**.

The following screen appears:



5. Click **Yes**. You can now proceed to edit that election.

This page intentionally blank

5 Setting Up a New Election

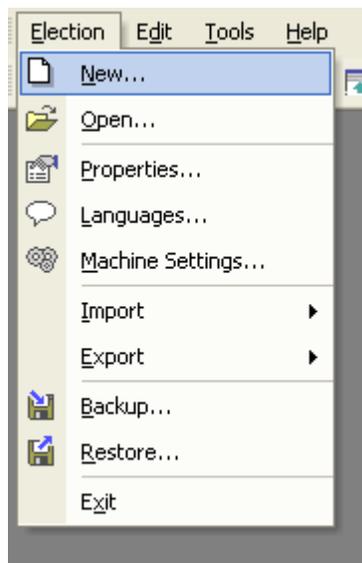
The following procedures must be performed before every election.

5.1 Setting Up a New Election in AIMS

To create a new election in AIMS, you must:

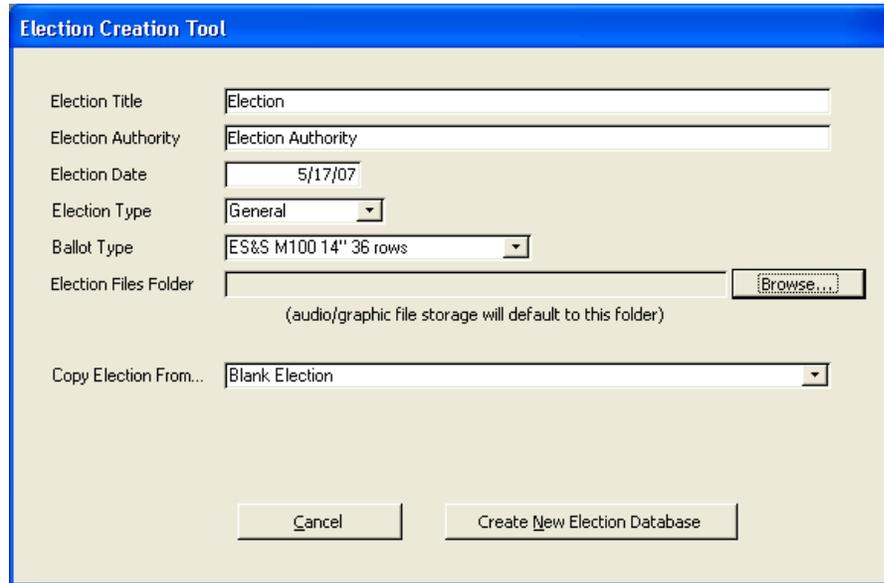
1. Create the election database.
2. Set up the election by importing (or manually entering) data into the database.
3. Preview the ballots. See Section 6 *Previewing Ballots*.
4. Edit the election components (precincts, ballots, races, headers, groups and splits). See Sections 7 *Editing Election Information* and following.

The first time you enter AIMS, you must click **Create a New Election** to create a new database, later, on the Election Selection Tool you can also select **Restore an Election from Backup**.



Setting Up a New Election

The Election Creation Tool provides general information about the up-coming election:



Election Creation Tool

Election Title: Election

Election Authority: Election Authority

Election Date: 5/17/07

Election Type: General

Ballot Type: ES&S M100 14'' 36 rows

Election Files Folder: Browse...

(audio/graphic file storage will default to this folder)

Copy Election From...: Blank Election

Cancel Create New Election Database

Enter the following information in the Election Creation Tool dialog box:



1. Election Title
2. Election Authority
3. Election Date
4. Select Election Type

Choices are:

- Closed Primary
- General
- Open Primary
- Special

Note

The election type is only for the AIMS user's information and does not affect the setup or logic of the election.

5. Select Ballot Type
Choices available at this time:

- ES&S Optech: 1-Column

These ballots have arrow type voting locations, are 3.75 " wide and of various lengths.

- ES&S Optech: 2-Column

These ballots have arrow type voting locations, are 6.75 " wide and of various lengths.

- ES&S Optech: 3-Column

These ballots have arrow type voting locations, are 9.75 " wide and of various lengths

- ES&S M100 14" 36 rows

These ballots have 36 timing marks down the side, are 8.5" wide and 14" long.

- ES&S M100 17" 41 rows

These ballots have 41 timing marks down the side, are 8.5" wide and 17" long.

- ES&S M100 17" 45 rows

These ballots have 45 timing marks down the side, are 8.5" wide and 17" long.

- ES&S M100 19" 51 rows

These ballots have 51 timing marks down the side, are 8.5" wide and 19" long.

- ES&S M100 11" 36 rows

These ballots have 36 timing marks down the side, are 8.5" wide and 11" long.

- ES&S M100 14" 48 rows

These ballots have 48 timing marks down the side, are 8.5" wide and 14" long.

- ES&S M100 17" 60 rows

These ballots have 60 timing marks down the side, are 8.5" wide and 17" long.

- ES&S M100 19" 68 rows

These ballots have 68 timing marks down the side, are 8.5" wide and 19" long.

- ES&S M100 11" 31 rows (Expo)

These landscape orientation ballots have 24 votable timing marks on the short edge, 31 votable timing marks on the long edge and are 11" wide

-ES&S M100 11" 38 rows (Expo)

These landscape orientation ballots have 24 votable timing marks on the short edge, 38 votable timing marks on the long edge and are 11" wide.

-ES&S M100 11" 50 rows (Expo)

These landscape orientation ballots have 24 votable timing marks on the short edge, 50 votable timing marks on the long edge and are 11" wide.

-ES&S M100 14" 41 rows (Expo)

These landscape orientation ballots have 24 votable timing marks on the short edge, 41 votable timing marks on the long edge and are 14" wide.

-ES&S M100 14" 50 rows (Expo)

These landscape orientation ballots have 24 votable timing marks on the short edge, 50 votable timing marks on the long edge and are 11" wide.

-ES&S M100 14" 65 rows (Expo)

These landscape orientation ballots have 24 votable timing marks on the short edge, 65 votable timing marks on the long edge and are 14" wide.

-ES&S M100 17" 50 rows (Expo)

These landscape orientation ballots have 24 votable timing marks on the short edge, 50 votable timing marks on the long edge and are 17" wide.

-ES&S M100 17" 62 rows (Expo)

These landscape orientation ballots have 24 votable timing marks on the short edge, 62 votable timing marks on the long edge and are 17" wide.

-ES&S M100 17" 81 rows (Expo)

These landscape orientation ballots have 24 votable timing marks on the short edge, 81 votable timing marks on the long edge and are 17" wide.

-ES&S M100 19" 56 rows (Expo)

These landscape orientation ballots have 24 votable timing marks on the short edge, 56 votable timing marks on the long edge and are 19" wide.

-ES&S M100 19" 70 rows (Expo)

These landscape orientation ballots have 24 votable timing marks on the short edge, 70 votable timing marks on the long edge and are 19" wide.

-ES&S M100 19" 91 rows (Expo)

These landscape orientation ballots have 24 votable timing marks on the short edge, 91 votable timing marks on the long edge and are 19" wide.

-Diebold GEMS

These ballots have 34 timing marks across the top, are 8.5" wide, and vary in length.

Note

For Unity and M100, select the same ballot type as was selected in the Image Manager when the ballot was originally set up.

6. Election Files Folder

User must provide a folder that will contain the audio and graphics files for this election. Any .WAV files and graphic files that are created or linked to in the election will be automatically copied to this folder. The user cannot proceed without providing the path to a folder. This folder must be created in the Audio folder of the AIMS installation; c:\Program Files\AIMS\Audio\.



7. Copy Election From... (Source Database) drop down

Setting Up a New Election

First-time users have only one option—a Blank Election. Later, you can use an old election as the source data for your new election.

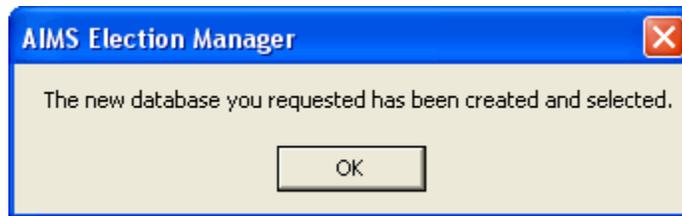
Selecting an old election copies all the information from that election for precincts, races, etc. This can be a time saver, especially when setting up an election manually.

Import replaces all election data, such as precincts, races and candidates. However, even if you use import to load the data, copying from a previous election uses the same election settings and system prompts.

8. Click Create New Election Database.

Note

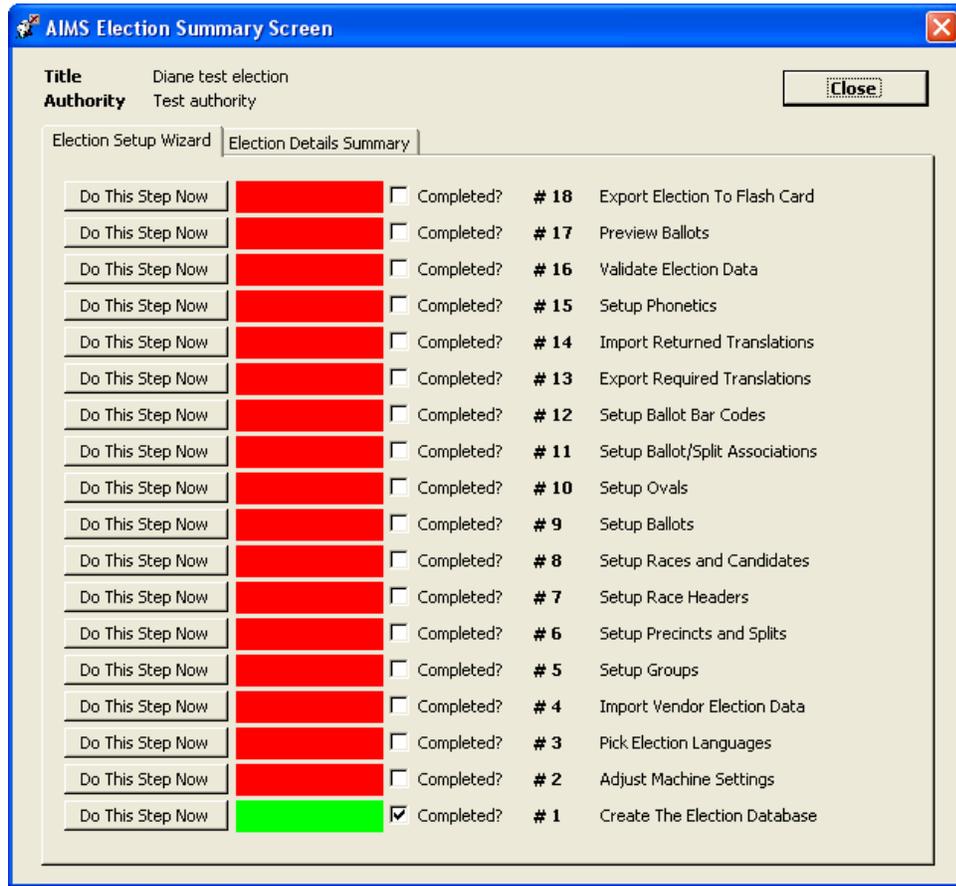
The creation process can take up to a few minutes to complete.



When the creation process is complete, the AIMS database is ready to be populated with data via the Import Tools or manually.

9. Click **OK** to proceed.

The screen then displays the **Election Summary Screen** (also referred to as the **AIMS Wizard**).



5.2 Using the AIMS Wizard

The AIMS Wizard can help you setup an election. If you are using ES&S Unity or DIEBOLD GEMS as your election management system, AIMS recommends you use the Import feature in Section 5.3 to automatically import and reformat your data into the AIMS Election Database format. Doing so completes steps 4 – 12 of the steps shown above on the AIMS Election Summary Screen.

Otherwise, the Wizard guides you through the steps of creating the AIMS Election Database.

The purpose of the **AIMS Election Summary Screen** is to take you step-by-step through the setup process. Steps 1 through 18 should usually be completed in order. As you complete each step, check it off the list to help keep track of your progress.

Detailed information about each step can be found in the chapters indicated below. To complete the next step in the process, click the **Do This Step Now** button, and AIMS will take you directly to the form(s) that must be completed for that step. When you complete that step, click the Setup Wizard button to return to the Summary Screen to check off the step you have just completed, and proceed to the next step. Red indicates that a step has not yet been completed or approved by you.

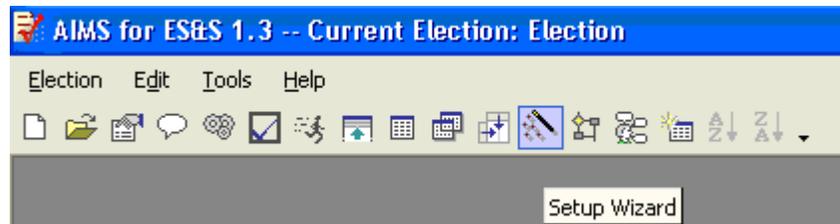
Setting Up a New Election

Step #1:	Create the Election Database	For more information see Chapter 5.1
Step #2:	Adjust Machine Setting	For more information see Chapter 7
Step #3:	Pick Election Languages	For more information see Chapter 7
Step #4:	Import Vendor Election Data	For more information see Chapter 5
Step #5:	Setup Groups	For more information see Chapter 12
Step #6:	Setup Precincts and Splits	For more information see Chapter 9
Step #7:	Setup Race Headers	For more information see Chapter 12.1
Step #8:	Setup Races and Candidates	For more information see Chapter 10
Step #9:	Setup Ballots	For more information see Chapter 11
Step #10:	Setup Ballot Targets (ovals)	For more information see Chapter 11
Step #11:	Setup Ballot/Split Associations	For more information see Chapter 11
Step #12:	Setup Ballot Bar Codes	For more information see Chapter 12
Step #13:	Export Required Translations	For more information see Chapter 14
Step #14:	Import Returned Translations	For more information see Chapter 15
Step #15:	Setup Phonetics	For more information see Chapter 12
Step #16:	Validate Election Data	For more information see Chapter 14
Step #17:	Preview Ballots	For more information see Chapter 6
Step #18:	Export Election to Flash Card	For more information see Chapter 14

Note

When programming ES&S ballots, ballot style number 840 and each multiple of 840, requires a manual update to the code channel. See Section 12.3.3. for additional information.

1. After completing each step, return to the Election Summary Screen.
2. To get there, click the **Wizard Icon** on the AIMS Toolbar. (Or Select Tools > Setup Wizard.)



3. As you progress through the steps to set up the election, click off the step just completed.
4. Then click the button for the next step to be transferred to that screen.

5.3 Importing Election Data into AIMS

There are import tools available that will import data from ES&S Unity or Diebold GEMS.

Note

Any data files for importing must be on the hard drive in a folder which is writeable. You cannot import directly from a CD.

5.3.1 Importing ES&S Unity Data for M100, Expo, and Optech Ballot styles

Users of AIMS have the option of importing data directly from the ES&S Unity files. Doing this means that you do not have to re-enter the election data, which has already been entered into Unity. The import process is straightforward and completely automated.

Notes:

1. For Unity **straight parties**, AIMS supports only the “default party style sheet”.
 2. The AIMS load process does not import text frames or graphic frames from Unity. These are normally used for instructional text such as how to mark a ballot target (oval) and would not be applicable on screen. If frames are being used to display race or candidate information, you may enter this information directly into AIMS or you may modify your use of frames in Unity and then re-import the data.
 3. The EFC file used must be the version created within the Unity Ballot Image Manager using the Update IFC file menu option. Intermediate versions of EFC files will not work.
 4. With Unity 2.4.3 files, the .EFC files should be unmerged. There should be a different .EFC file for each .EDF file.
 5. AIMS expects internally consistent values within the Unity files for Unity Election Official, Election Title, and Election Date fields.
 6. Any non-English language text that is included in the English portions of Unity will be imported into AIMS as English labels. This includes text that is present within .ETF and .EXT files. The non-English text must either be removed from within Unity, or manually separated in AIMS after it has been imported. Please see Chapter 10, *Editing Races* and the Note in Chapter 10.4.
 7. If a Closed Primary election contains a Universal Primary Contest (UPC) Race, please refer to Chapter 10.4.15 for details on how to handle the race.
 8. The AutoMARK VAT cannot print more than 35 items in the 2 1/2" - 5" top or bottom margin of the ballot. The layout of the printed ballot must conform to this requirement, otherwise significant Y offset print errors may occur when the VAT marks the ballot.
 9. For recall/retain conditional questions, the conditional logic must be set manually within AIMS after importing the election data. Please see Section 10.7 *Setting Up a Recall/Retain Race*.
 10. Foreign language translations used with Straight Party / Party Preference contests will not be included in the EDM export for use with AIMS. AIMS validation process will identify any missing translations.
-

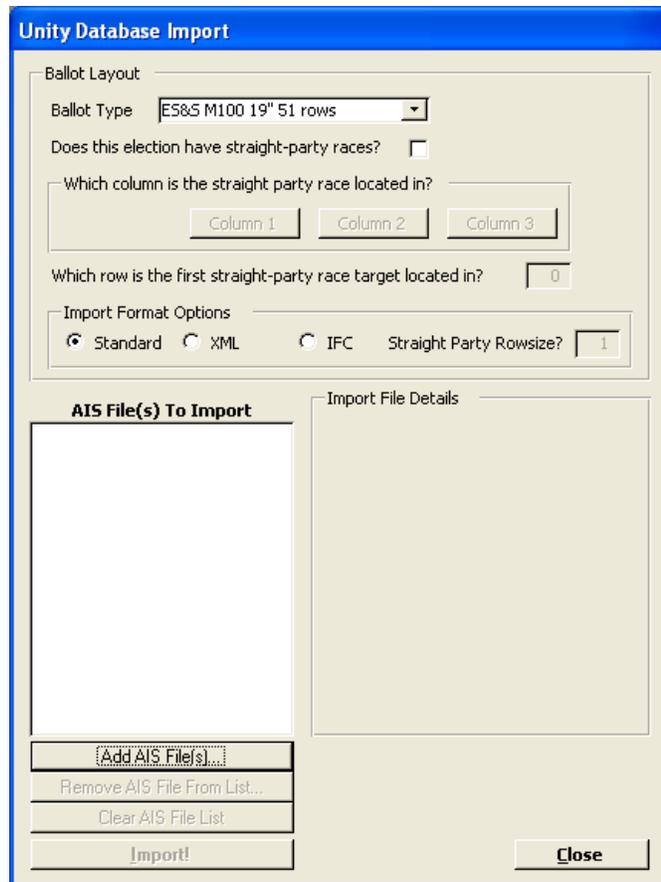
5.3.1.1 Importing ES&S Unity Data for Model-100 Ballot Styles (.AIS file)

Begin from the Election Selection Tool screen, by clicking on **Create New Election**. Select the ballot type from the drop-down list. Next, fill in all the required fields to set up your new election. Click on **Create New Election Database**. AIMS will create the template for your new election. Next, the AIMS election Wizard will come up and prompt you as to what step you want to complete next. Assuming you have located all the required files from ES&S, you may now Import Vendor Election Data. Once you click on Do This Step Now, the Unity Database Import screen will appear. By clicking on **Add AIS File(s)**, you will be able to browse through the different folders on your computer to locate the proper AIS file or files. AIMS will search the containing directory for the rest of the files required. There must at least be corresponding .EFF and .EDF files. Some of the ballot text used by Unity may be contained in special text files. These text files use the extensions .ETF and .EXT. Any text files that contain ballot text should be placed in the same folder as the .EDF file. If required files are not found, the user is prompted for them. If .ELF files are present, AIMS will attempt to pull in any correctly linked translations available in these files. Any languages found will be automatically added to the AIMS Election as a language requiring labels. If the files from Unity are bundled in .ZIP format, use the pull down menu in the Browse window to select .ZIP. Selecting the .ZIP file will automatically un-bundle it to a temporary folder. You will then be able to select an AIS file from the new folder.

If you are aware of what ballot size is being used, you should use the corresponding drop down menu to pick the ballot size. If you are unaware, AIMS will change the ballot size to the corresponding type it believes the ballots are.

If there are Straight-Party Races in this election, the “**Straight-Party Races**” Checkbox is selected.

If Straight-Party Races do exist on this ballot, the location of the Straight-Party Race Ovals/Arrows is indicated by depressing one of the **Column 1**, **Column 2**, **Column 3** buttons, and entering the Y-position of the first Straight Party Oval (arrow). (Refer to the picture of a Sample Ballot below.)



On the Unity Database Import screen:



1. Select the appropriate Election Ballot Type. If the ballot contains a straight party race, fill in the checkbox and choose the column the straight party race is located in. On the following page is a sample Ballot showing the Straight Party Oval/Arrow positions.
2. Make sure the Standard format option is selected. Use the Add AIS Files(s)... button to open a browser window. Find the .AIS file needed to import. Alternately, find the .ZIP bundle that contains the files needed. See opening paragraph in 5.3.1.1.
3. If AIMS is unable to find all the additional required files after loading the .AIS file, the user will be prompted for the location of any missing files.
4. Click **Import!** to start the Automatic Data Load Process.

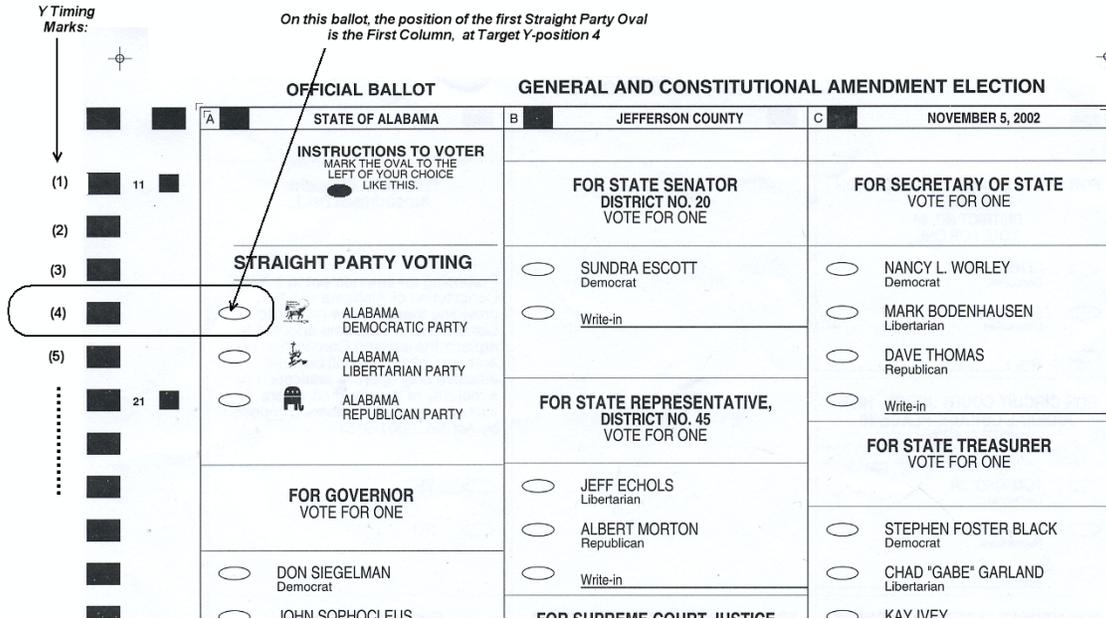


Caution:

All previous data will be overwritten by this process.

5. Click **“Yes”** to confirm.
6. The message **Done!** confirms that the file loaded successfully.

Sample Ballot showing position of Straight Party Oval:

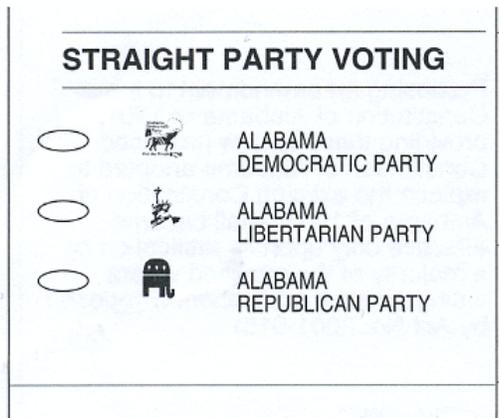


The figure above shows a sample ballot with a Straight Party, illustrating the position of the first Straight Party Oval.

Note:

For **Unity M100 Straight Parties**, AIMS assumes that all parties have the same number of lines (there is an equal distance between the ovals) as in the sample ballot above. If the straight party ovals are not equidistant, the oval positions cannot be imported but must be entered manually.

Straight-Parties have the same number of lines:



Straight Parties do NOT have the same number of lines:



Using the IFC-only Imports Options

Some jurisdictions not using the Unity software may only have the .EFC file available. In this case, it may be desirable to use the option to import using the IFC radial button. This allows import to occur using only the .EFC file. If the import is a Straight Party election, then in addition to supplying the column that contains the Straight Party race, the user must also provide the Straight Party Rowsize. The Straight Party Rowsize is the number of rows between Straight Party candidates in the Straight Party race. If the ovals are next to each other, this value is '1'. If the number of rows is inconsistent between candidates in the Straight Party race, then the oval locations will import incorrectly and will have to be corrected manually.

Note:

IFC- only imports are incapable of importing the full data contained in the election. This feature is only meant to assist manual entry of ballots. All text labels and oval locations need to be checked manually and corrected if necessary.

5.3.1.2 Importing ES&S Unity Data for Optech Ballot Styles

AIMS is capable of importing Optech style ballots generated with Unity 2.4.3. If this is the first election you are creating in AIMS, and you are using the ES&S Unity Election System, locate the files supplied by ES&S.

Begin from the Election Selection Tool screen, by clicking on **Create New Election**. Select the ballot type from the drop-down list. Next, fill in all the required fields to set up your new election. Click on **Create New Election Database**. AIMS will create the template for your new election. Next, the AIMS election Wizard will come up and prompt you as to what step you want to complete next. Assuming you have located all the required files from ES&S, you may now Import Vendor Election Data. Once you click on Do This Step Now, the Unity Database Import screen will appear. By clicking on **Add OPT File(s)** you will be able to browse through the different folders on your computer to locate the proper .OPT file or files. AIMS will search that directory for the rest of the files required. The minimum additional files required are the .EFF, .EFC, and .EDF files. Some of the ballot text used by Unity may be contained in special text files. These text files use the extensions .ETF and .EXT. Any text files that contain ballot text should be placed in the same folder as the .EDF file.

If AIMS cannot locate the .EFF, .EFC or .EDF file that match the .OPT file, the user is prompted to provide the location of the missing file.

If you are aware of what ballot size is being used, (1 column, 2 column, or 3 column Optech), you should use the corresponding drop down menu to pick the ballot size. If you are unaware, AIMS will attempt to change the ballot size to the corresponding type it believes the ballots are.

If there are Straight-Party Races in the election, the “**Straight-Party Races Used**” checkbox is selected and the location of the Straight-Party Race Arrows is indicated by depressing one of the **Left Edge**, **2nd Col**, **3rd Col**, or **Right Edge** buttons.

The box target type is not supported by the AutoMARK Voter Assist Terminal.

On the Unity Database Import screen:



1. Select the appropriate Election Ballot Type. If the ballot contains a straight party race, fill in the checkbox and choose the column the straight party race is located in.
2. Make sure the Standard format option is selected. Point to the **Unity Import file** – “Filename”.OPT
Click on the **Add OPT File(s)...** button to display a standard interface window to locate the file.
3. If AIMS is unable to find all the additional required files after loading the .OPT file, the user will be prompted for the location of any missing files.
4. Click **Import!** to start the Automatic Data Load Process.

**Caution:**

All previous data will be overwritten by this process.

5. Click **“Yes”** to confirm.
6. The message **Done!** confirms that the file loaded successfully.

Using the IFC-only Imports Options

Some jurisdictions not using the Unity software may only have the .EFC file available. In this case, it may be desirable to use the option to import using the IFC-only checkbox. This allows import to occur using only the .EFC file

Note:

IFC- only imports are incapable of importing the full data contained in the election. This feature is only meant to assist manual entry of ballots. All text labels and oval locations need to be checked manually and corrected if necessary.

5.3.1.3 Importing ES&S Unity Data for Expo ballot styles

AIMS is capable of importing Expo ballot styles that are in the landscape format. If this is the first election you are creating in AIMS, and you are using the ES&S Unity Election System, locate .EML file created using Unity.

Begin from the Election Selection Tool screen, by clicking on **Create New Election**. Select the specific Expo ballot type from the drop-down list. Next, fill in all the required fields to set up your new election. Choose a folder to store any potential audio files in by using the *Browse...* button.

Click on **Create New Election Database**. AIMS will create the template for your new election. Next, the AIMS election Wizard will come up and prompt you as to what step you want to complete next. Assuming you have located all the required files from ES&S, you may now Import Vendor Election Data. Once you click on Do This Step Now next to **#4**, the Unity Database Import screen will appear. Choose the XML format option. By clicking on **Select an EML File...** you will be able to browse through the different folders on your computer to locate the proper .EML file.

Unity Database Import

Ballot Layout

Ballot Type: ES&S M100 19" 56 rows (Expo)

Does this election have straight-party races?

Which column is the straight party race located in?

Column 1 Column 2 Column 3

Which row is the first straight-party race target located in? 0

Import Format Options

Standard XML IFC Straight Party Rowsize? 1

EML File To Be Imported

Import File Details

Select an EML File...

Clear EML File Selection

Import!

Close

On the Unity Database Import screen:



- a. Select the appropriate Election Ballot Type.
- b. Make sure the Standard format option is selected. Point to the **Unity Import file** – “Filename”.EML
Click on the **Select an EML File...** button to display a standard interface window to locate the file.
- c. Once the .EML file is located it may take a few minutes to validate the file.
- d. Click **Import!** to start the Automatic Data Load Process.



Caution:

All previous data will be overwritten by this process.

- e. Click **“Yes”** to confirm.
- f. The message **Done!** confirms that the file loaded successfully.

5.3.2 Importing Diebold GEMS Data

Users of AIMS have the option of importing data directly from the GEMS Election Database. Doing this means that you do not have to re-enter election data, which has already been entered into GEMS. The import process is straightforward and completely automated.

If you are using the Diebold GEMS Election System, you will need your GEMS database (MDB file). This file should be available from whoever set up your election in GEMS.

Then complete the following steps.

From the Election Menu:



1. Select **Import**.
2. Select **Vendor Election Data**
3. The GEMS Database Import form displays.

The screenshot shows the 'GEMS Database Import' dialog box. At the top, there's a 'GEMS Database File' field with a 'Browse...' button and an 'Import' button. The file path is 'C:\Paul\State Certifications\Florida\DESI\import mdb\miami springs municipal election CARDS CREATED.mdb'. Below this are 'Split Ballot Naming Options' with radio buttons for 'Precinct + Split + Party*', 'Precinct + Party', 'Split + Party', and 'Card ID + Sequence # / Precinct'. A note states: '*When the Precinct name is included in the Split name, only the Split name will be used. Note also: Party names are excluded for Non-partisan ballots.' There are also 'Languages Available' and 'Languages Selected For Import' lists with navigation buttons. A 'Close' button is at the bottom right.

To start the data load process:

Using the **Browse...** function, point to the GEMS Election Database (MDB) File.

Select the Ballot Style Naming Options. This option will determine the format of the names giving to the unique ballots that are imported. A Ballot Style consists of a ballot linked to a Style Key and are unique.

The choices are:

Precinct + Split + Party

The Precinct Name is combined with the Split name and the Party assigned to the ballot. If The Precinct name is included in the Split name, only the Split name is used. Party names are excluded for Non-Partisan ballots.

Precinct + Party

Setting Up a New Election

The Split name is not used unless the Precinct name is included in the Split name. Party names are excluded for Non-Partisan ballots.

Split + Party

Precinct Name is not used. Party names are excluded for Non-Partisan ballots.

Card ID + Sequence #/Precinct

Card ID number and Sequence number if the Election is set up 'By Precinct', Precinct number if set up 'By Precinct'. Party names are excluded for Non-Partisan ballots. This selection is useful for 'By Sequence' elections that need every precinct loaded onto one Compact Flash card

Select the languages that will be imported from the GEMS database. The available languages will be listed in the left text box. Use the double arrows to select or deselect all languages for import. Use the single arrows to select or deselect one language at a time.

Click the *Display Advanced Language Selection Options* if you desire to see all the language options as they appear in the GEMS database.

If you try to import languages that have not been selected in AIMS you will get a message asking if you wish to add those languages to the election.

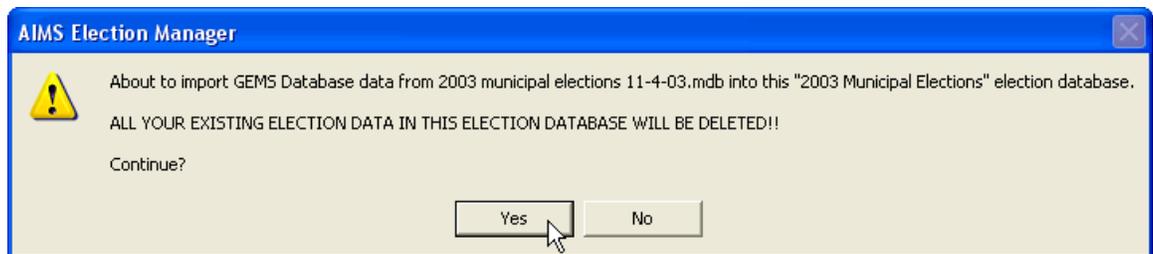


Note:

When importing text, AIMS places text separated by a Carriage Return into a new label. Due to this, it cannot be guaranteed that labels imported from other languages will match up to the English labels exactly. Therefore, any translations imported in this manner are not placed in the AIMS translation archive. If a language has extra labels, blank labels will be created in the other languages in the election.

Click the **Import** button.

Click **Yes** to start the import process.



Caution:

All previous data will be overwritten by this process. It is advisable to back up your current database prior to processing this step.

Click **Yes** to confirm the import process.

The message **Done!** indicates that the database file loaded successfully. Click **OK**.

Setting Up a New Election

The system returns you to the GEMS Database Import form.

The screenshot shows the 'GEMS Database Import' window. At the top, there is a title bar with the text 'GEMS Database Import' and a close button. Below the title bar, there is a section for 'GEMS Database File' with a 'Browse...' button and a text field containing the file path: 'C:\Paul\State Certifications\Florida\DESI\import mdb\miami springs municipal election CARDS CREATED.mdb'. To the right of this section is an 'Import' button. Below the file path, there are two main sections: 'Split Ballot Naming Options' and 'Import Progress'. The 'Split Ballot Naming Options' section contains four radio buttons: 'Precinct + Split + Party*' (which is selected), 'Precinct + Party', 'Split + Party', and 'Card ID + Sequence # / Precinct'. Below these options is a note: '*When the Precinct name is included in the Split name, only the Split name will be used.' and another note: 'Note also: Party names are excluded for Non-partisan ballots.' The 'Import Progress' section contains the text 'File selected.' Below these sections, there are two list boxes: 'Languages Available' (which is empty) and 'Languages Selected For Import' (which contains 'English', 'Spanish', and 'Creole'). Between these list boxes are four arrow buttons: '>>', '>', '<', and '<<'. At the bottom left, there is a checkbox labeled 'Display Advanced Language Selection Options' which is unchecked. At the bottom right, there is a 'Close' button.

4. Close the GEMS Import Database Import form and return to the Election Summary Screen. You will see that Steps 4 – 12 will have been completed.

5.4 Creating a New Election Manually

Tools are available in AIMS to create your election database manually as opposed to importing the data. These are the same basic tools that you use to edit the database after it has been automatically created by AIMS.

Here are the steps to follow when manually creating an election database:

1. Create the Election Database
 - Where to start: From Election Menu select New.
Follow detailed instructions in Section 4.4
2. Adjust Machine Settings
 - Where to start: From Election Menu select Machine Settings
Follow detailed instructions in Section 7.1.3
3. Pick Election Languages
 - Where to start: From Election Menu select Languages
Follow detailed instructions in Section 7.1.2
4. Set up Groups
 - Where to start: From Edit Menu select Groups.
Follow detailed instructions in Section 12.2
5. Precinct information
 - Where to start: From Edit Menu select Precincts.
Follow detailed instructions in Chapter 9.
6. Split information
 - Where to start: From Edit Menu select Precincts.
Follow detailed instructions in Chapter 9.
7. Define races and candidates
 - Where to start: From Edit Menu select Races.
Follow detailed instructions in Chapter 10.
8. Associate races with ballots
 - Where to start: From Edit Menu select Ballots.
Follow detailed instructions in Chapter 11.
9. Locate ovals/arrows on ballots
 - Where to start: From Edit Menu select Ballots.
Follow detailed instructions in Chapter 11.
10. Associate ballots with splits
 - Where to start: From Edit Menu select Ballots.
Follow detailed instructions in Chapter 11.

11. Bar codes for split ballot

- Where to start: From Edit Menu select Split/Ballot Associations. Follow detailed instructions in Chapter 12, section 12.3.3.

12. Text translations

- Where to start: From the Election Menu, select Import >> Text Translations (if you have a file of text translations from a previous election.) Text translations can also be added or edited for individual headers and labels. See more details in Section 8.

13. Audio .WAV files

- Where to start: From Edit Menu select Translations Archive. Follow detailed instructions in Chapter 12, section 12.4.

5.5 Setting Up An Open Primary

An open primary is a primary election where races from multiple parties may appear on the same ballot, however, the voter is only allowed to vote in races associated with one party. For example, the voter may not vote in both a Republican race and a Democrat race. However, all voters can vote in any non-partisan races.

When a voter inserts an open primary ballot into the AutoMARK Voter Assist Terminal, all races will be visible. He or she can move through the ballot from top down and see races from all parties. However, once the voter has selected a candidate in one party race, races for all of the other parties will no longer be visible.

The AutoMARK VAT recognizes a ballot as being an Open Primary if any of the races are associated with a Group (party). For an Open Primary ballot, candidates should NOT be associated with a group (party) except on the Preference Race or the Navigation Race if applicable. Note that this same logic is used for Recall/Retain ballots, which is why the AutoMARK VAT does not support a Recall/Retain question on an Open Primary.

Also see Section **10.5** Setting up a Preference Race and Section **10.6** Setting up a Navigation Race.

6 Previewing Ballots

The Preview function assists in the election database creation and editing process. This function allows you to view ballots as they will appear on the Automark Voter Assist Terminal prior to exporting AIMS data to the flash memory card. Candidate selections may be made, but *ballots are not marked in preview mode.*

6.1 Previewing a Ballot Style

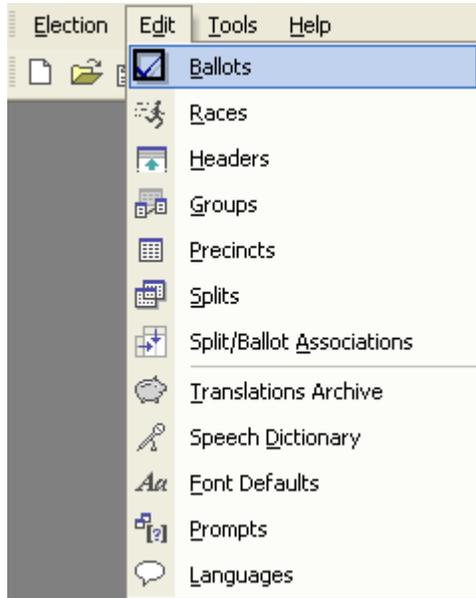
6.1.1 Selecting the Preview Function

The Preview function is available from the **Ballots Viewer**.

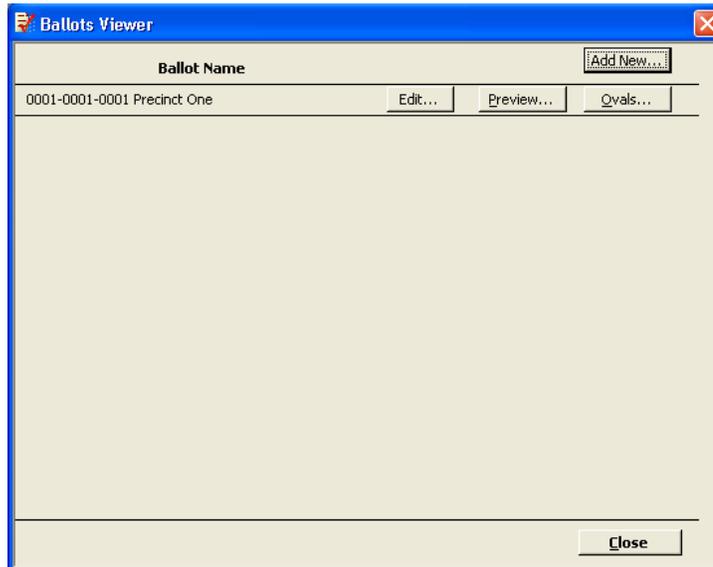
To navigate to the **Ballots Viewer**



1. Select Ballots from the Edit Menu on the menu bar.



2. The Ballots Viewer appears.

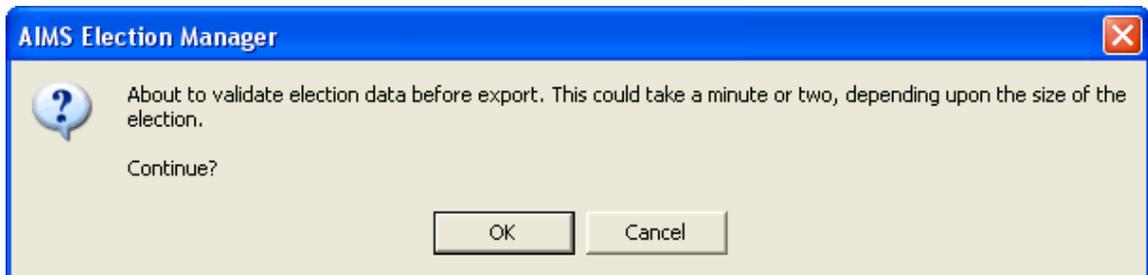


To preview a ballot:

3. Click the **Preview** button to the right of the ballot you want to preview.

An informational message appears, informing you that the data will be validated before the ballot appears:

4. Click **OK** to continue.



Note:

AIMS jumps out to a PC version of the VAT GUI module to display the ballot screens as they will appear on the VAT.

If AIMS detects one or more errors in the data, AIMS will automatically display error messages with links that take you to the forms that contain the errors. Processing stops at this point until the errors are resolved. For help in troubleshooting these errors, see the Troubleshooting Guide in Section 17.2.

6.1.2 Navigating in Preview Mode

Preview Mode gives you a good idea of how your election will appear on the Voter Assist Terminal. The size of your monitor will affect how preview appears. Viewing the election in Preview Mode allows you to identify any problems before bringing the election database over to the VAT. Once you identify the problems, the database can be edited using AIMS edit tools.

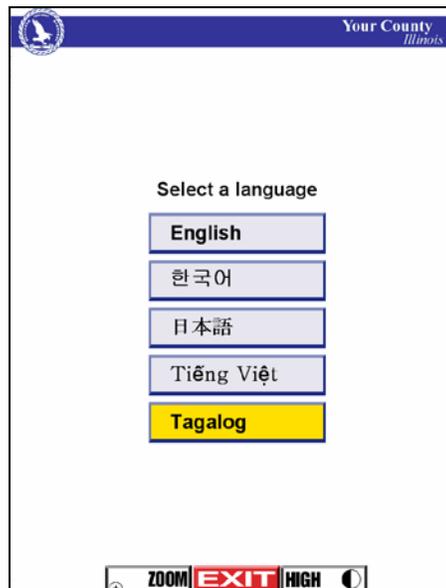
To navigate the preview:

The “Insert Ballot” message appears temporarily, and then advances to the next screen.

Note:

A ballot *cannot* be inserted on the AIMS PC.

1. If additional languages have been selected, the Language Selection screen appears next.



2. Select **a language**. AIMS automatically advances to the next screen.

Note:

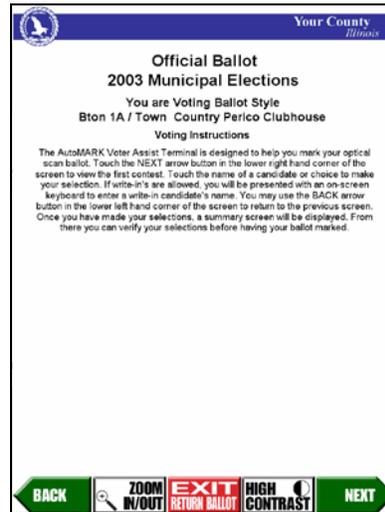
Some fonts may not appear correctly on the Preview screens. If an Asian Language is not displayed correctly, you may need to install Asian fonts to your PC. See Section 6.2 for details.

Note:

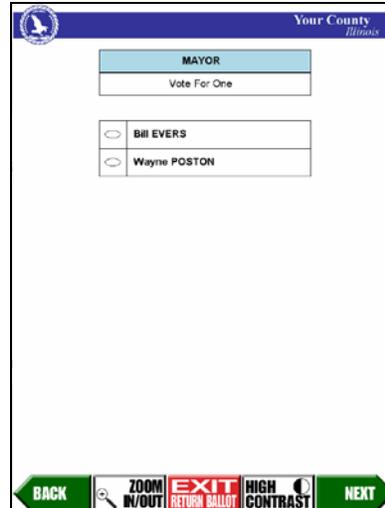
To hear the audio, double click the Volume Icon on your WINDOWS XP Status bar or from your WINDOWS control panel. Increase the Wave Volume in the Volume Control window.

Note:

Unless you are using a very large monitor with a height of 1024 pixels, the preview will show a shorter screen than on the actual VAT. In most cases, the information will scroll as needed. On the language selection screen, the buttons are a fixed size, and it is possible to exceed the available space on your monitor. The languages will always be selectable by scrolling with the arrow keys and selecting with the Enter key. Always test on an actual VAT to judge the final appearance of your election.



3. The **Election Title, Ballot Style Name**, and voting instructions appear on the Ballot Instructions screen.
4. Click the **NEXT** arrow to advance.

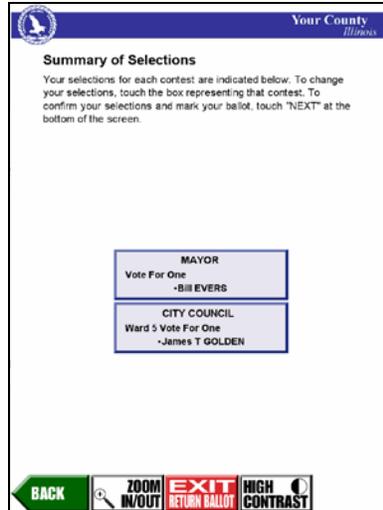


5. The first race appears. Select a candidate on the voting screen. Click **NEXT** to advance.
6. To go back to review a previous race, click **BACK**.
7. To enter a write-in candidate, click the oval next to “write-in”, and a graphical key-pad will appear, where the letters for the write-in candidate can be selected.

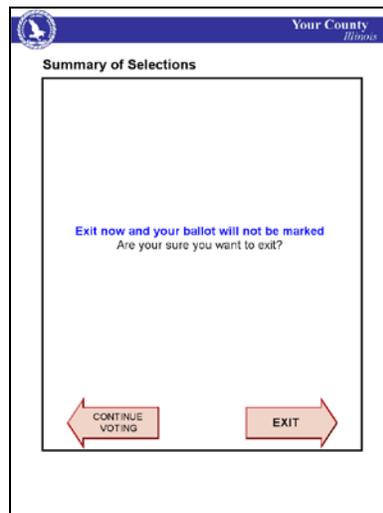
Note

The number of characters allowed for a write-in is 28 characters when previewing the ballot in AIMS. However, on the actual VAT, the number of characters might be limited to the space available on the ballot. If concerned about the length of any write-in names, please test on the actual VAT.

8. When all candidate selections have been made, the Summary screen appears.



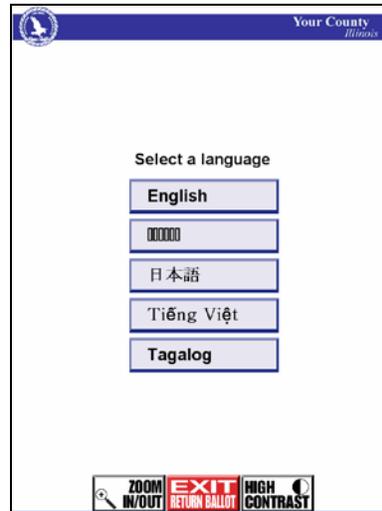
9. To return to the AIMS program, click **Exit**.



10. Double click **Exit** to return to AIMS.

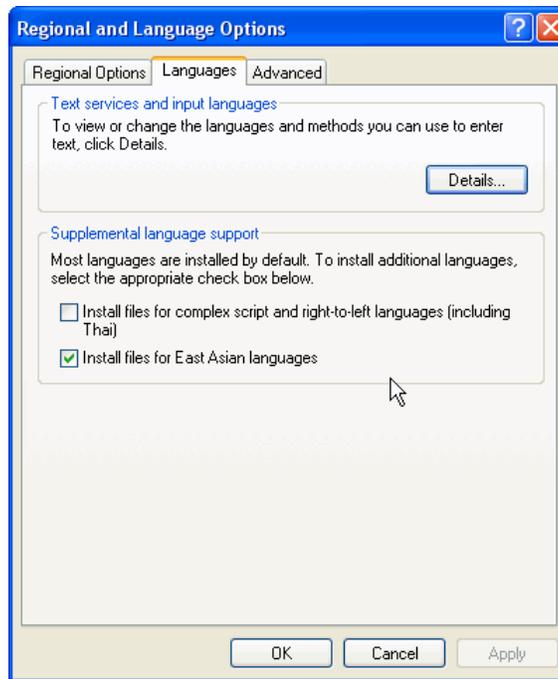
6.2 Installing Asian Fonts

If your preview does not display an Asian Language correctly, for example,



you will need to install the East Asian fonts which are provided to you on your Windows XP Installation CD.

1. Click **Start**.
2. Point to **Settings**.
3. Click **Control Panel**.
4. Then double-click **Regional and Language Options**.
5. Click the **Languages tab**.
6. Under Supplemental Languages, select **Install files for East Asian Languages**, and click **OK**.



You will be prompted to put in your Windows XP Installation CD, and will be guided through the remainder of the installation.

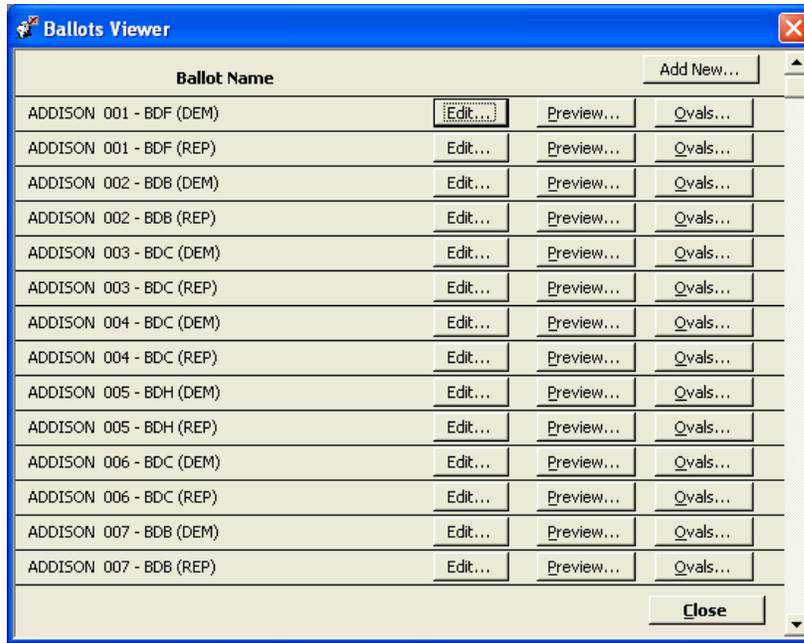
6.3 Previewing Oval Placement

Ovals or arrows must be correctly placed so that the VAT can accurately mark the ballot once candidate selections are made. Next, preview the placement of voting ovals or arrows.

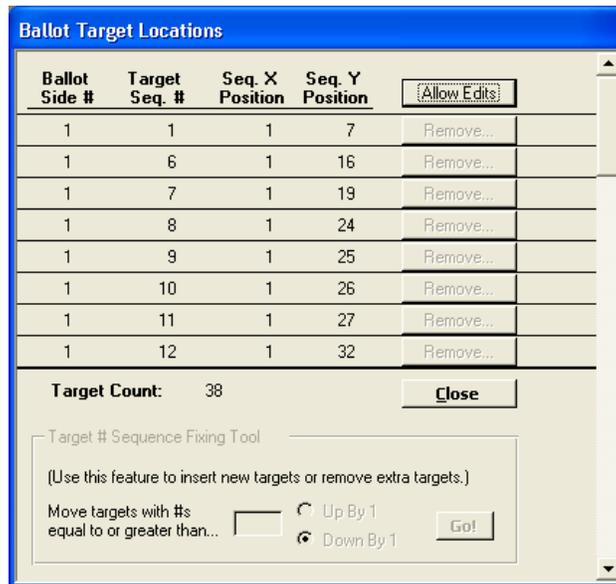
To preview oval or arrow placements from the Ballots Viewer:



1. Click the **Ovals** button next to the Ballot Style you want to view.



The Ballot Target Locations form appears:



This form indicates the X and Y co-ordinates of the ballot oval or arrow vote areas on the ballot. See section 11 – Editing Ballots, for more information about editing ballot target locations.

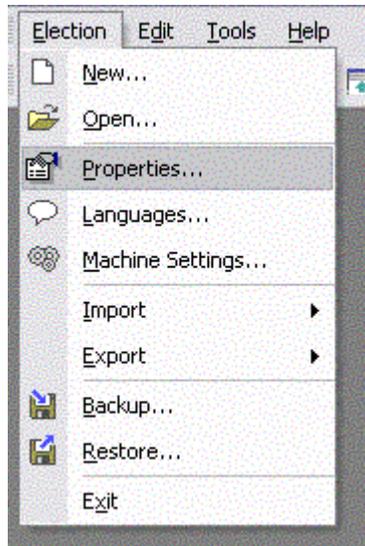
This page intentionally blank.

7 Editing Election Information

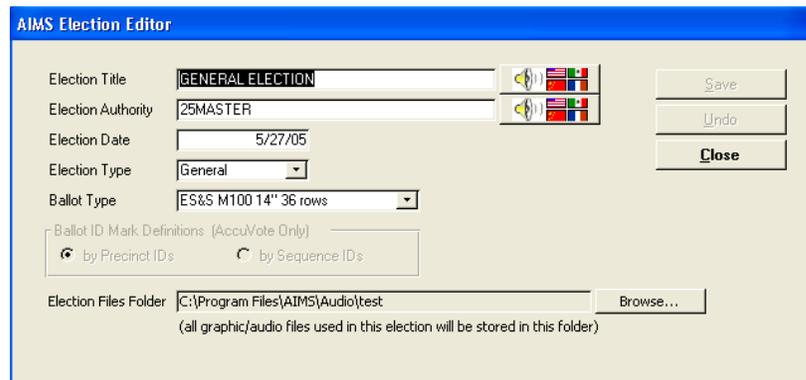
7.1 Introduction

Basic election demographic (property) information is edited on the AIMS Election Editor form.

To open the AIMS Election Editor: Select **Properties** from the Election Menu on the menu bar.



The AIMS Election Editor opens:

A screenshot of the AIMS Election Editor form. The form has a blue title bar and contains the following fields and controls:

- Election Title: Text box containing 'GENERAL ELECTION' with a speaker icon and a flag icon to its right.
- Election Authority: Text box containing '25MASTER' with a speaker icon and a flag icon to its right.
- Election Date: Text box containing '5/27/05'.
- Election Type: Dropdown menu set to 'General'.
- Ballot Type: Dropdown menu set to 'ES&S M100 14" 36 rows'.
- Ballot ID Mark Definitions (AccuVote Only): Radio buttons for 'by Precinct IDs' (selected) and 'by Sequence IDs'.
- Election Files Folder: Text box containing 'C:\Program Files\AIMS\Audio\test' with a 'Browse...' button to its right. Below the text box is the note: '(all graphic/audio files used in this election will be stored in this folder)'. To the right of the form are three buttons: 'Save', 'Undo', and 'Close'.

7.1.1 AIMS Election Editor

Use this form to add and edit the basic election information in the database.

7.1.1.1 To edit the Election Authority text, Election Title text, and the Date (date of the election):



Click the field to edit.

Type the information.

Click **Save**.

- The Election Type and Ballot Type may be edited via a drop down list that allows only certain appropriate responses in the selection box. You may only have one choice. Click Save to save your changes.
- The **Election Files Folder** can be changed by clicking the *Browse...* button. Any audio files created or linked to prior to this change need to be moved from the old folder to the new one.
- If a change is made in error, click **Undo** to reverse all changes since the last Save.

7.1.1.2 Election Authority Translations

To edit the Election Authority language translation information for each language in this election:



1. Click the Speaker/Flag button:



The Election Authority Translations form appears:

Language	Title	Phonetic	Use This For All Languages?	Audio File Selected?	
English	25MASTER	25MASTER	Yes	No	<input type="button" value="Add New..."/>
					<input type="button" value="Edit..."/>

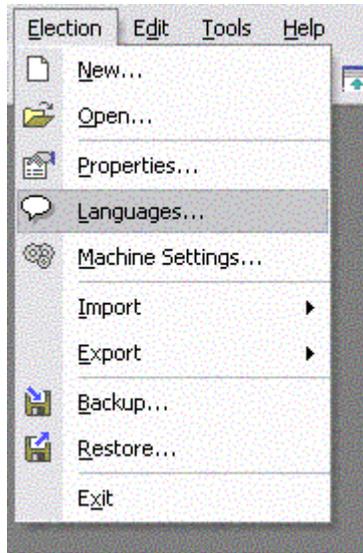
2. Click the **Add New** button on the Election Authority Translations form to add a new language translation for the Election Authority. The Add New Translation form will appear. See Section 8 for more information.
3. Click the **Delete Non-English Translations** button to delete all the non-English translations (currently in this election) for the Election Authority.
4. Click the **Auto-Populate Non-English Translations** button to automatically add translations for the Election Authority if such translations have previously been entered into Aims.
5. To change an existing translation, click the **Edit** button next to the language to be edited. The **Edit Translation** Form appears. See Section 8 for more information.

7.1.2 Election Languages Editor

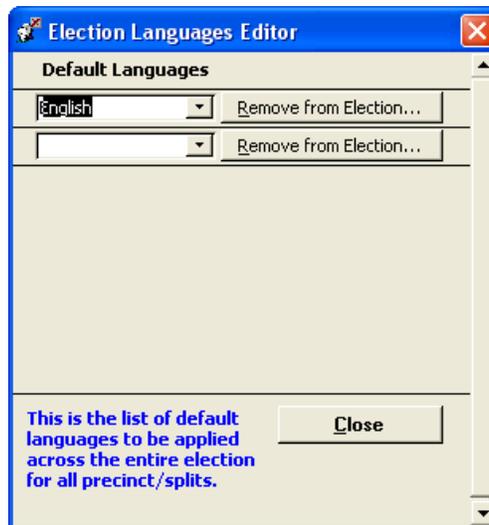
The Election Languages Editor form is used to globally define all the languages that will be used for every ballot in the election. The language selected will be added to every ballot. A language may be deleted from a specific ballot. Use this form to edit the languages provided across the entire election.

7.1.2.1 To select the Default Languages form:

Select **Languages** from the Election Menu on the menu bar.



The Election Languages Editor appears:



7.1.2.2 Add a Language

To add a language:



1. Click the **drop-down arrow** in the next available blank row.
Select a language from the list.
Click **Yes** to confirm the selection.

7.1.2.3 Delete a Language

A language (except English) may be deleted.

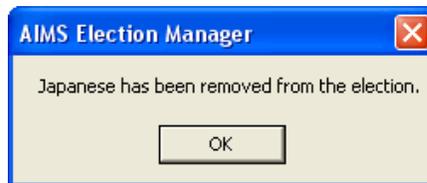
To delete a language from the election:



1. Click the **Remove from Election** button next to the language in the list.



2. Click **Yes** to confirm the deletion.



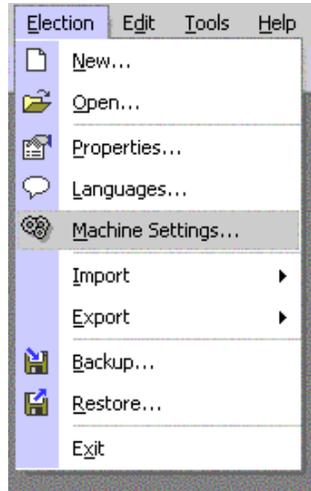
A final confirmation of the deletion appears.

7.1.3 Machine Settings Form

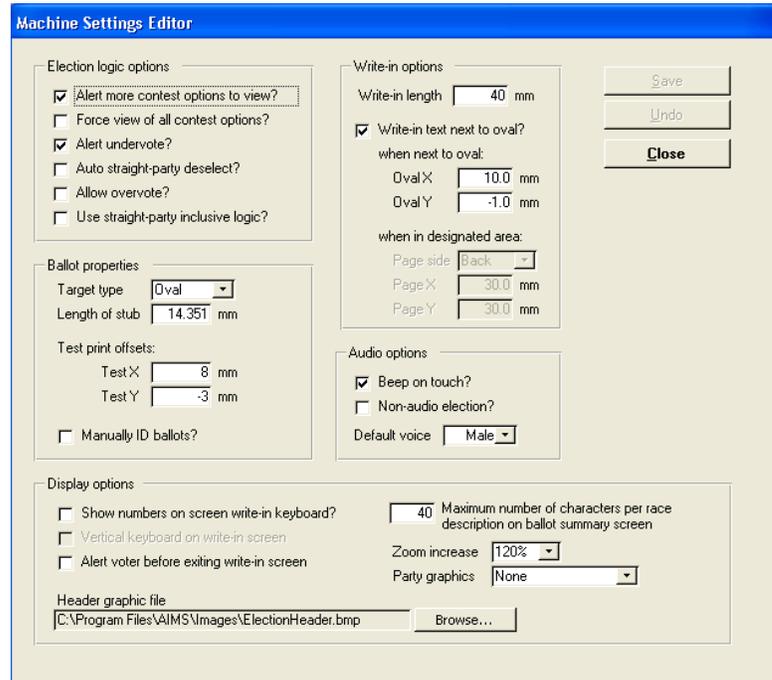
Use this form to select the way in which the Automark Voter Assist Terminal (VAT) behaves, the way the ballots are displayed and marked on the VAT, and the location of the graphic files used by the system.

To open the AIMS Machine Settings Manager:

Select **Machine Settings** from the Election Menu on the menu bar.



The Machine Settings Manager opens:



7.1.3.1 Default voice

The *Default voice* setting controls the Eloquence Speech Synthesizer voice. Valid entries are Male and Female.

Note

The default setting is Male.

7.1.3.2 Zoom increase

The *Zoom increase* controls the size of the text displayed on the VAT when the Zoom button is pressed. The maximum zoom size setting is 200% (100% over normal).

Note

The default for this field is 120% (20% over normal). Due to minimum and maximum size restrictions defined by the Federal Election Commission in the Voting System Standards, changing this field may have a limited effect.

7.1.3.3 Maximum number of characters...

This field controls the maximum number of characters that appear on the Summary screen.

Note

The default for this field is 100.

7.1.3.4 Beep on Touch?

When this field is checked, the Automark VAT beeps when a voter touches the keypad to vote.

7.1.3.5 Alert more contest options to view?

When this field is checked, the Automark VAT will alert the voter that the screen must be scrolled if there is more text to view/read.

7.1.3.6 Force view of all contest options?

When this field is checked, the Automark VAT will not advance if there is more text to view/read.

Note

The *Alert more...* and *Force view...* fields are mutually exclusive. Both cannot be selected for an election, however, they both may be unselected for an election.

7.1.3.7 Manually ID Ballots?

The software usually identifies the ballot automatically when it is

inserted into the Automark VAT. This field overrides the automatic default setting and indicates that during this election, ballots will be identified by an election worker when the ballot is inserted into the VAT.

7.1.3.8 Alert Undervote?

This setting causes an alert message to appear when the voter has not selected the full number of candidates allowed for any given race.

7.1.3.9 Non-Audio Election?

This field controls the audio for the entire election. When checked, audio files will not be required during export. Files that do exist will be played and text to speech will still function normally.

7.1.3.10 Auto straight-party deselect?

This field controls the logic that will be used in Straight Party ballots. When selected, a candidate selection made in a race that already has automatically selected candidates due to a Straight Party selection causes all of the automatic selections to become deselected. If this option is not selected, the Straight Party candidates need to be deselected manually before new candidate selections can be made.

7.1.3.11 Target Type

The Target Type should almost always be left at Oval. Choices are:

- Oval
- Arrow
- Square
- X

Note

The target type is informational to the user and represents a setting in Unity. The VAT will always print an oval mark with Model-100 ballots.

7.1.3.12 Party Graphics Usage

Note

In order for graphics to appear next to candidate names during preview mode or on the Voter Assist Terminal, the candidates must be associated with a group/party. The graphics are assigned to groups, not individual candidates.

Selections are:

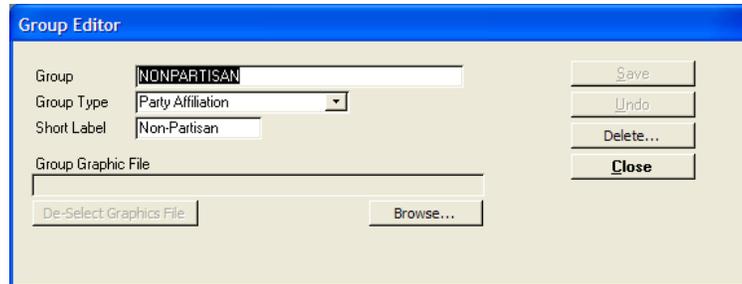
- None
- Straight Party Only

-Graphics assigned to a particular party affiliation will appear in the Straight Party race only. See Section **12.2 Groups Editor**.

- All Party Candidates

-Graphics assigned to a particular party affiliation will appear in the Straight Party race and all subsequent partisan races.

Assigning a party to a group/party takes place in the Group Editor. Use the Browse... button to locate the proper .JPG or .BMP file.



Below is an example showing the Straight Party Race



<input type="radio"/>		REPUBLICAN
<input type="radio"/>		DEMOCRATIC
<input type="radio"/>		LIBERTARIAN

7.1.3.13 Write-in text next to oval?

When checked, the *Write-in text...* setting indicates that write-in information is to be placed next to the oval or arrow on the ballot. This setting is always ON for M100 ballots.

Note: This setting is also always on for Optech users.

Always measure with a ruler and do a test ballot print to ensure that the Oval X, Oval Y and Write-in length values do not result in write-ins that overlap existing text or interfere with valid voting locations. Please see Section 5.5.4 of the AutoMARK Jurisdiction Guide AQS-13-5061-003-R for information on how to do a test ballot print.

Note

On some ballot styles, the write-in selections are printed next to the corresponding ovals or arrows. On other ballot styles, the write-in selections are to be printed in a separate area on the ballot.

7.1.3.14 Oval X

This field indicates the distance in mm from the X axis of the oval or arrow where the write-in information is to be placed on the ballot. (The distance to the right (+) or left (-) from the center of the oval (or arrow)). Expo (landscape) ballots should be viewed in portrait orientation for this measurement.

7.1.3.15 Oval Y

This field indicates the distance in mm from the Y axis of the oval or arrow where the write-in information is to be placed on the ballot. (The distance up (+) or down (-) from the center of the oval (or arrow)). Expo (landscape) ballots should be viewed in portrait orientation for this measurement.

7.1.3.16 Page side

If the Write-by Oval option is not selected, then the Write-in Location Side is active. This setting indicates which side of the ballot write-in information is to be placed. Drop down choices are Front or Back. Please note that this is a rarely used feature.

7.1.3.17 Page X

Page X indicates the location in mm of the top left corner of the first write-in space. (The distance from the top left corner of the ballot.) This value should never be less than 0 or it will not be a valid location on the page. This value should never exceed 248 mm or it will not be a valid location on the page for even the widest ballot type. This value must be carefully chosen and measured with a ruler on an actual printed ballot to ensure that any printed write-ins do not overlap text on the ballot or interfere with valid voting locations. Please note that this is rarely used functionality

7.1.3.18 Page Y

Page Y indicates the location in mm of the top left corner of the first write-in space. (The write-in space is Y mm down from the top left corner of the ballot.) This value should never be less than 0 or it will not be a valid location on the page. This value should never exceed 560

mm or it will not be a valid location on the page for even the longest ballot type. This value must be carefully chosen and measured with a ruler on an actual printed ballot to ensure that any printed write-ins do not overlap text on the ballot or interfere with valid voting locations. Please note that this is rarely used functionality

7.1.3.19 Write-in length

This field indicates the length in mm of the space for the write-in name. This value, along with the Oval X and Oval Y values, should always be checked against a printed ballot to ensure that write-in text is never printed close to a valid oval or arrow location or on top of printed text. If necessary, measure the available space on the printed ballot with a ruler to ensure that there is enough room.

7.1.3.20 Length of stub

This field indicates the length in mm of the stub portion (top) of the ballot before the first timing marks. In most cases, the default value will work for the chosen ballot type. If there is an unusual amount of white space at the top or bottom of the ballot and the VAT is unable to recognize the ballot on insertion, this value may have to be increased. The amount of white space should be measured with a ruler and added to the default value in the text box.

Note

The AutoMARK VAT does not currently support ballots with removable stubs unless the stubs have been removed prior to insertion.

7.1.3.21 Test X Offset

The Test Offset fields (X and Y) are used to offset the candidate names when printing a test ballot, so that they do not over-print the pre-printed names on the ballot.

Test X Offset specifies the x-axis offset distance in mm from the center of the oval/arrow (The distance to the right or left from the center of the oval/arrow.) Expo (landscape) ballots should be viewed in portrait orientation for this measurement.

7.1.3.22 Test Y Offset

Test Y Offset specifies the y-axis offset distance in mm from the center of the oval/arrow. (The distance up or down from the center of the oval/arrow.) Expo (landscape) ballots should be viewed in portrait orientation for this measurement.

7.1.3.23 Header graphic file

This field gives the path of the graphic file used on the top of the ballot. This file must be a 768 pixel by 79 pixel BMP graphic file.

7.1.3.24 Allow overvote?

Selecting this option will make the system provide an overvote warning but will not prevent an overvote in a race.

7.1.3.25 Use straight-party inclusive logic?

Selecting this option enables inclusive logic for straight-party ballots. Inclusive straight party states that even though the voter has marked an oval in a particular race, the system will still attempt to apply the straight party rules to that race. The system will give a vote to all political candidates in the race who are affiliated with the straight party choice provided that this does not cause an over-vote in the race.

7.1.3.26 Show numbers on screen write-in keyboard?

Provides numeric keys when voting for a write-in candidate.

7.1.3.27 Alert voter before exiting write-in screen

Selecting this option causes a pop-up and audio alert to occur when the voter is exiting the write-in screen.

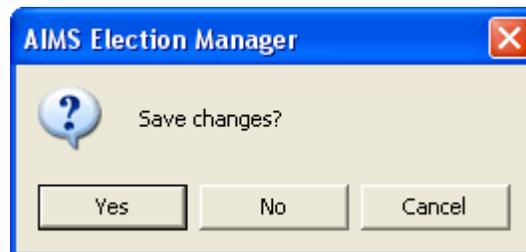
7.1.3.28 Vertical keyboard on write-in screen

This option is grayed out and is not functional in the current version of AIMS.

7.1.3.29 Save, Undo, Close

1. Click **Save** to keep any setting changes.
2. Click **Undo** to restore the settings to what they were when you entered (or SAVED).
3. Click **Close** to exit the Machine Settings Editor.

If you click **Close** after you have made changes, but you have not saved them, you will be asked if the changes should be saved or discarded:



8

Adding/Editing Translations

There are a number of places within AIMS where translations for a phrase may be added or edited. You will use the forms described in this section when adding or editing a translation for the Election Title, the Election Authority, a Header Label, a Race Label, or a Candidate Label. To export all needed translations to an excel file please see section 14.4.

8.1 Adding a New Translation

1. Click the **Add New** button.

The Add New Translation form opens:

The screenshot shows the 'Add New Translation' form. It includes a 'Language' dropdown menu, a checkbox for 'Use This Translation For All Non-English Language Translations?', a 'Translation Text' text area with a 'Copy Text to Phonetic' button, a 'Character Count: 0' label, and a 'Zoom...' button. Below this is a 'Translation Phonetic' text area with a 'Zoom...' button and a speaker icon. A checkbox labeled 'DO NOT READ PHONETIC TEXT OR TRANSLATION TEXT' is present with a tooltip. At the bottom, there is an 'Audio File' section with a 'Browse...' button, a 'Deselect Audio File' button, a 'Record New / Edit' button, and a 'Use This WAV file For Entire Label Group' button.

2. From the **Language** drop-down select the language.
3. Enter the translation text. This text must match the language selected in the drop-down.
4. Enter the **Translation Phonetic** text (to change the way the speech synthesizer pronounces the text - . See Section 16 – Guide for Entering Symbolic Phonetic

Adding/Editing Translations

Pronunciation for information about entering pronunciation.), or use the **Copy Text to Phonetic** button to copy the text directly down.

5. **Check** the box for *Use This Translation For All Non-English Translations* if desired. This option is only available when editing the English label. If this box is checked, the English Translation Text and Phonetic labels will be used for all the languages available in the election.
6. **Push** the **Play**  button to listen to the pronunciation of the text.
7. To **cause** the Speech Synthesizer to bypass reading this text, check the **“Do not read phonetic text or translation text”** box.
8. To select an Audio File for the translation, use the **Browse** button to locate and select the file.
9. Click the **Record New/Edit** button to create or edit the Audio File. (See Section 8.3 for more information.)
10. **Push** the Audio File **Play**  button to listen.
11. Click **Close** to continue.

8.2 Editing an Existing Translation

Edit Translation

Language Spanish

Use This Translation For All Non-English Language Translations?

Translation Text Copy Text to Phonetic

Vote por uno

Character Count: 12 Zoom...

Translation Phonetic

Character Count: 0 Zoom...

DO NOT "READ" PHONETIC TEXT OR TRANSLATION TEXT

If this checkbox is not checked, Translation/Phonetic Text will be read aloud by speech synthesis unless an audio file exists. (If an audio file has been selected it will always be played.)

Audio File Information

Audio File Browse... Deselect Audio File Record New / Edit Use This WAV file For Entire Label Group

Save Undo Delete... Close Copy English

The **Edit Translation** form allows the following:

- Change Translation text
- Change Phonetic text
- Override the Voice Synthesizer **Note:** If a Audio file (.WAV) is assigned to the label, the synthesized speech will be overridden. (See Section **8.3** for more information.)
- Select or record new audio file (See Section **8.3** for more information.)
- View the translation text or the phonetic text in a larger text field (Zoom button)

To copy the current Language Text to the Phonetic Text:



1. Click **Copy** Text to Phonetic.
2. Click **Save**.
3. To reverse your changes *before* saving, click **Undo**.
4. To close the form, click **Close**.
5. To delete the current selected language translation, click **Delete**.

Note

If you attempt to edit a translation and reassign it to a language that already has an existing translation for that label, you will receive the following error message:



Please edit the existing translation for the other language directly.

8.3 Adding / Editing an Audio File

Note

When recording Audio files or when having them recorded professionally ensure that there is not excessive silence at the beginning and end of the recording.

Ensure the volume of recording matches the volume of other .WAV files in the system to negate the need for the voter to constantly adjust the volume during the voting process.

Windows XP Professional comes with Sound Recorder software which can be used to record a new audio file for a new translation, or to replace a current audio file. Your PC must have a sound card and speakers, and a microphone installed.

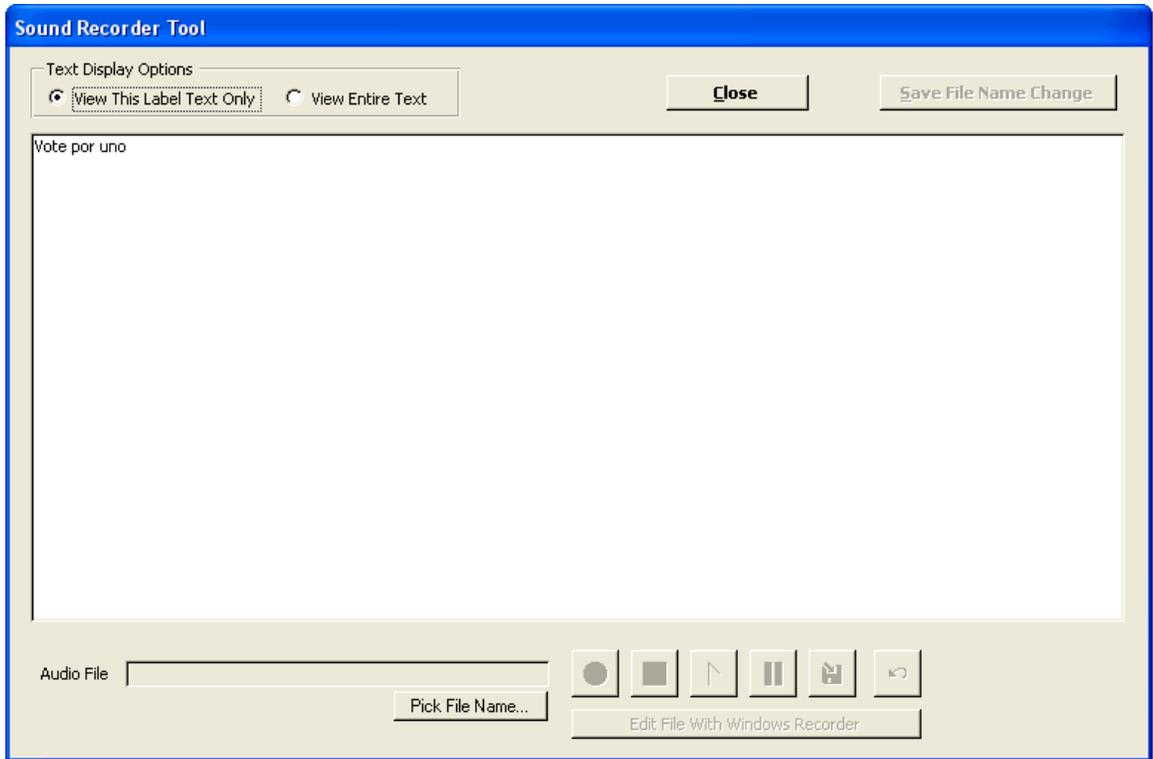
Audio files end with the suffix .wav.

8.3.1 Installing Your Microphone

Microphones vary greatly in design and purpose. Consult the microphone manual for hardware and software specifics; however, most models install in a similar fashion.

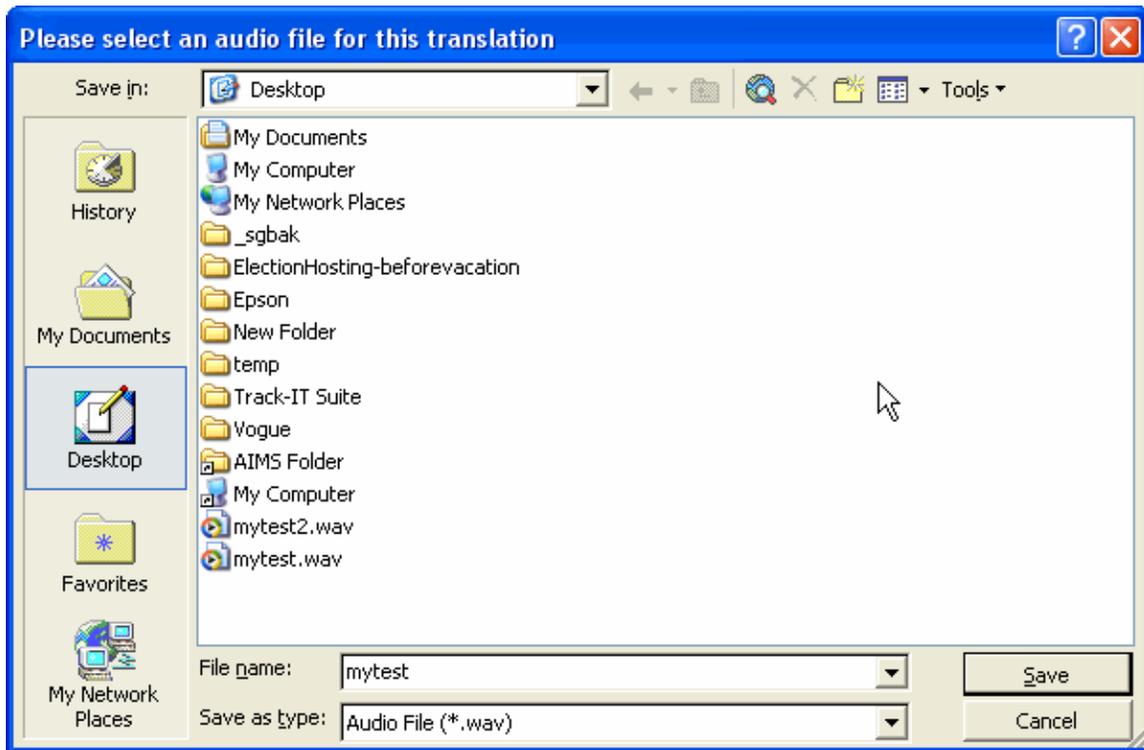
1. Locate the sound connections and connect the microphone jack to the computer. Most computers use an internal sound card and often the connections will be in the back of the system.
2. These will be a series of connections the same size and diameter as the microphone jack. One will be labeled as the microphone connection, either with a small icon that looks like a microphone or explicitly labeled as such.
3. Plug the microphone into that connection.
4. On the Edit Translation Form, click the **Record New / Edit button**.

The Sound Recorder Tool screen appears:



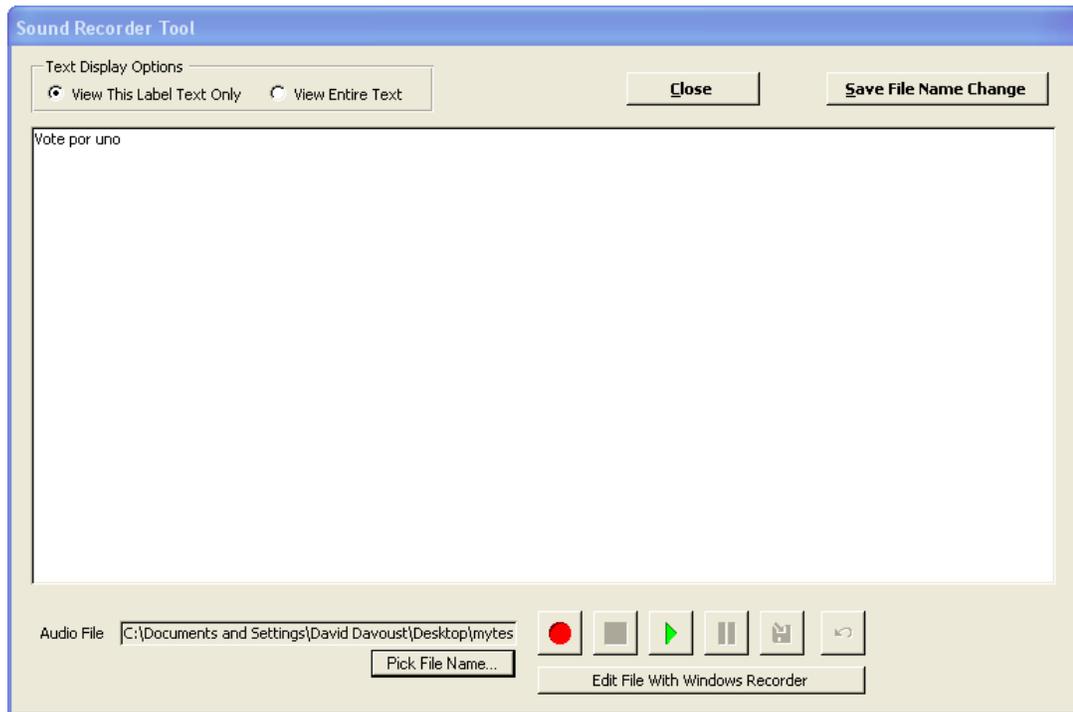
5. Click the **Pick File Name** button on the **Sound Recorder Tool** screen.

The Please select an audio file for this translation screen appears:



6. If you are editing an existing file, use this screen to select that file, and then click **Save**. If you are selecting files that have previously been created, you may wish to have a native speaker of the language present to verify that .WAV files match the translated text.
7. If you are creating a new file, select a file location and enter a name for the new .wav file which you will create.
8. Click the **Save** button.

The **Sound Recorder Tool** Screen appears:



8.3.2 Text Display Options

If the Race (or Candidate...) has multiple labels, you can enter/edit an audio file for just one of them by selecting **View This Label Text Only**. Or, you can enter/edit an audio file for all of them by selecting **View Entire Text**.

The Sound Recorder buttons appear on the bottom of this screen:



From left to right, the buttons cause the recorder to **Start, Stop, Play, Pause, Save, Undo**.

The buttons will be enabled/disabled when appropriate.

1. Record a phrase by pressing the **Start** button and speak into the microphone.
2. Click the **Stop** button when finished.
3. Press the **Play** button to listen to the recorded phrase.
4. Press the **Save** button when finished.
5. Next, in order to make sure the phrase is recorded in the correct format, click the **Edit File with Windows Recorder** button.

The **Windows Sound Recorder** screen appears:

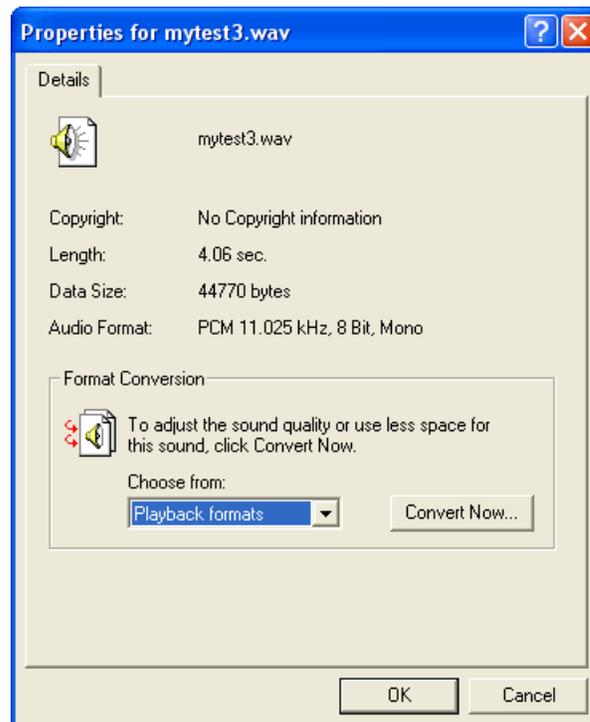


6. Click **File, Properties**:



The Properties screen shows the Audio Format of the file.

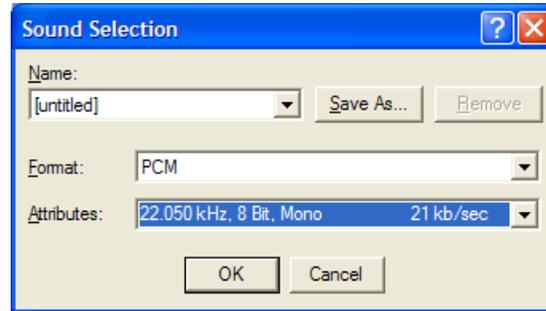
7. The necessary Audio Format is: PCM 22kHz 8 Bit, Mono.
8. To convert to this format, In the **Properties** screen for the new .wav file, under Format Conversion, select Choose from: **Playback Formats** and Click **Convert Now**:



The **Sound Selection** form appears:

9. Select:

- Name: [Untitled]
- Format: **PCM**
- Attributes: 22.050 kHz, 8 Bit, Mono 21 kb/sec



10. When finished, click **OK**.

11. You will be back at the **Sound Recorder** screen. Click **File, Save**.

12. At this point you will again see the **Sound Recorder Tool** Screen.

13. The last step is to click the **Save File Name Change** button.

8.3.3 Audio Files for Prompts

NOTE – if you need to edit the audio file for one of the *prompts* translations, the name of the file must remain the same.

When creating a new file for a foreign language audio prompt, the file name must have the format such as:

PromptViet26.wav

The file name must begin with “Prompt”, followed by the Language, followed by the prompt number.

8.4 Using the Translations Viewer

There is an option to AIMS that allows you to see all the labels in the Election in a single window called the Translations Viewer. This option can be selected by clicking on **Edit → Translations**.

Adding/Editing Translations

The Translations Viewer form appears:

Label Text	Label Seq.	Candidate Description	Race Description	Edit...
ABRAHAM LINCOLN	1	Candidate 20 (NP)	PAST PRESIDENT	Translation Label Object
AGAINST the issue and sales of general obligation bonds.	1	NO (NP)	question 2	Translation Label Object
ALEXANDER CALDER	1	Candidate 20 (NP)	MINISTER OF ART	Translation Label Object
ANDREW WYETH	1	Candidate 10 (NP)	MINISTER OF ART	Translation Label Object
CARDINALS	1	Candidate 30 (NP)	BASEBALL	Translation Label Object
CARL SANDBURG	1	Candidate 10 (NP)	AUTHORS	Translation Label Object
CONAN O'BRIEN	1	Candidate 30 (NP)	LATE NIGHT	Translation Label Object
CUBS	1	Candidate 10 (NP)	BASEBALL	Translation Label Object
DAVID LETTERMAN	1	Candidate 10 (NP)	LATE NIGHT	Translation Label Object
DWIGHT D. EISENHOWER	1	Candidate 40 (NP)	PAST PRESIDENT	Translation Label Object
ERNEST HEMINGWAY	1	Candidate 40 (NP)	AUTHORS	Translation Label Object
FDR the issue and sale of general obligation bonds.	1	YES (NP)	question 2	Translation Label Object
FRANKLIN D. ROOSEVELT	1	Candidate 30 (NP)	PAST PRESIDENT	Translation Label Object
JAY LENO	1	Candidate 20 (NP)	LATE NIGHT	Translation Label Object

You have several radial button options under Translations Category:

- All** - Displays all the labels in the Election
- Headers** - Displays all the labels available in the Headers editor
- Races** - Displays all the labels available in the Races Editor
- Race Summary Text** - Displays all the labels used on the summary screen (if any have been created, previewing automatically generates missing summary text)
- Candidates** - Displays all labels available in the Candidate Editor
- Split Ballots** - Displays all labels used as the Ballot name and presented to the voter on the Instruction screen while voting

There are three options available for each entry:

- Translation** - Opens the Edit Translation screen for the English label
- Label** - Opens the Label Editing Tool with access to all translations
- Object** - Opens the source Editor for the label

The first letter filter has a pull-down menu that causes the screen to only display the labels starting with that letter. Press **Clear Filter** to remove the effects of the filter. The Language filter has pull-down menu that chooses which language appears.

Hint

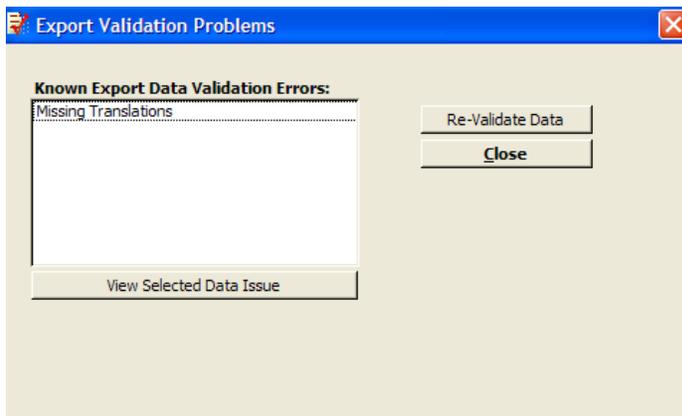
Using the *Translations Viewer* with the *Candidates* radial button option will bring up the list of all candidate labels in the election. By clicking the **Translation** button next to each entry, the phonetic pronunciation of each candidate in the election can be checked and corrected.

8.5 Using the Missing Translations Correction Tool

Note

Missing Translations can also be corrected by exporting missing translations to an Excel file, filling in the missing translations, and then importing the Excel file. Please see Section 14.4 for more information.

After performing a data validation in a multi-language election by using menu option *Election->Export->Perform Data Validation...* or attempting to preview one of the ballot styles, there may be an Export Data Validation Error due to missing translations.



Click on the *Missing Translations* error to highlight and then click **View Selected Data Issue** to open the *Missing Translations Correction Tool*.

Adding/Editing Translations

Text	Language Needed	Copy English	Make English Universal		
A PROPOSAL TO AMEND THE STATE CONSTIT...	Chinese	<input type="checkbox"/>	<input type="checkbox"/>	Edit Translations	View Source Item
A PROPOSAL TO AUTHORIZE BONDS FOR COU...	Chinese	<input type="checkbox"/>	<input type="checkbox"/>	Edit Translations	View Source Item
A REFERENDUM TO AMEND CERTAIN SECTION...	Chinese	<input type="checkbox"/>	<input type="checkbox"/>	Edit Translations	View Source Item
and	Chinese	<input type="checkbox"/>	<input type="checkbox"/>	Edit Translations	View Source Item
and	Chinese	<input type="checkbox"/>	<input type="checkbox"/>	Edit Translations	View Source Item
and	Chinese	<input type="checkbox"/>	<input type="checkbox"/>	Edit Translations	View Source Item
CANDIDATE 1	Chinese	<input type="checkbox"/>	<input type="checkbox"/>	Edit Translations	View Source Item
CANDIDATE 2	Chinese	<input type="checkbox"/>	<input type="checkbox"/>	Edit Translations	View Source Item
CANDIDATE 3	Chinese	<input type="checkbox"/>	<input type="checkbox"/>	Edit Translations	View Source Item
CANDIDATE 4	Chinese	<input type="checkbox"/>	<input type="checkbox"/>	Edit Translations	View Source Item
CANDIDATE 5	Chinese	<input type="checkbox"/>	<input type="checkbox"/>	Edit Translations	View Source Item
CANDIDATE 6	Chinese	<input type="checkbox"/>	<input type="checkbox"/>	Edit Translations	View Source Item
COUNTY ATTORNEY	Chinese	<input type="checkbox"/>	<input type="checkbox"/>	Edit Translations	View Source Item
COUNTY ATTORNEY FOUR Year Term Vote f...	Chinese	<input type="checkbox"/>	<input type="checkbox"/>	Edit Translations	View Source Item

The *Missing Translations Correction Tool* shows a list of all the labels that are missing and which language is needed. Use the **Refresh Issues List** button at any time to get rid of any corrected line items. Use the **Close** button to exit the form.

Label Type Filter

Click on the radial buttons to only display that type of label in the field below. Options are: *All*, *Election Title / Authority*, *Split Ballots*, *Headers*, *Races*, *Race Summary Text*, and *Candidates*.

Copy English checkboxes

Click the checkbox next to any label where you want to copy the English label to the missing language label. Use the **Check All** button to check all the checkboxes. Use the **Apply Checked Off Change Requests** button to initiate the action for all the checked labels. **Note:** This option is normally only used to create placeholder labels in the new language. The non-English language synthesizer will sound odd trying to pronounce English words.

Make English Universal checkboxes

Click the checkbox next to any label where you want to use the English label and also the English voice synthesizer instead of providing a non-English label. Use the **Check All** button to check all the checkboxes. Use the **Apply Checked Off Change Requests** button to initiate the action for all the checked labels. **Note:** This option is often used for candidate names where using English language pronunciation makes sense.

Edit Translations button

Click this button next to any label for which you wish to be taken to the Race Label Translations screen for that label. See Section **8.2** for how to use this screen.

View Source Item button

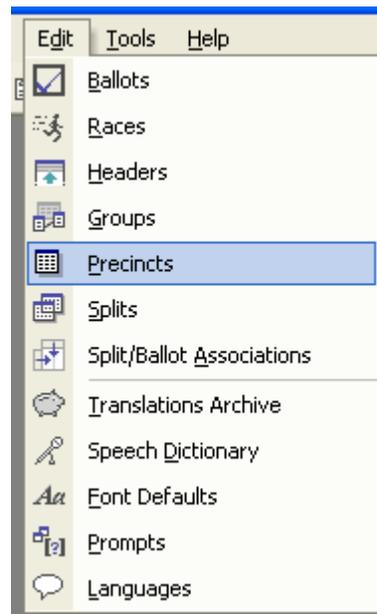
Click this button next to any label you want to see in context. For example, clicking this button for a *Races* label will open the *Race Editor* that contains that label.

9 Editing Precincts

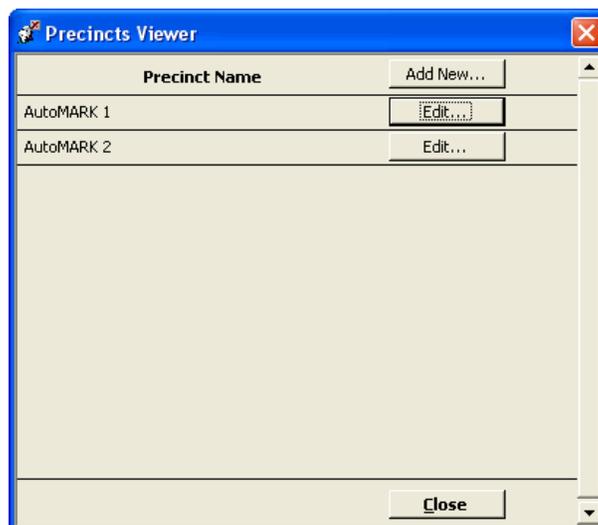
The **Precincts Viewer** lists the precincts that have been defined for the current election. This viewer is used to navigate to the **Precinct Editor** form where precinct information may be changed.

To display the **Precincts Viewer**:

1. Select **Precincts** from the Edit Menu on the menu bar.



The Precincts Viewer appears:



Editing Precincts

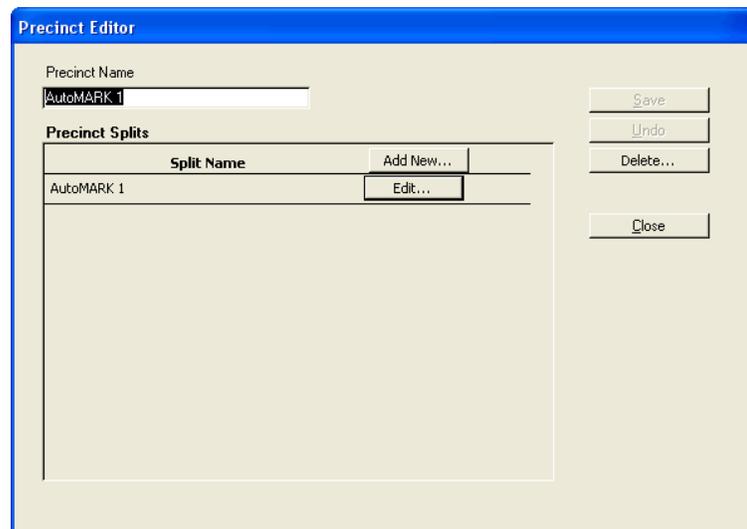
2. To add a precinct to an election: Click **Add New**.
A blank **Precinct Editor** appears.
3. To edit an individual precinct: Click the **Edit button** next to the precinct name.
The **Precinct Editor** for the selected precinct appears.

9.1 Precinct Editor

This form is used to maintain precinct information including the splits associated with a precinct.

As in previous forms, the Precinct Editor can:

- Save all changes made.
- Undo (reverse) changes not yet saved.
- Delete a precinct and all of the associated splits.



The screenshot shows a window titled "Precinct Editor" with a blue header. Inside the window, there is a text input field for "Precinct Name" containing "AutoMARK 1". Below this is a section titled "Precinct Splits" which contains a table with one row: "AutoMARK 1". To the right of the table are buttons for "Add New...", "Edit...", "Delete...", "Save", "Undo", and "Close".

Split Name
AutoMARK 1

9.2 New Precincts

To define a new precinct, the precinct name must first be entered and saved. Then splits may be added.

To add a precinct or to change a precinct that a split is under:



1. Enter the Precinct Name.
2. Click **Save**.

This will cause the first split to be created (with the same name as the precinct). At this point that first split can be edited, and more splits can be added.

Note

If a precinct does not have any splits, then the entire precinct is the first split.

9.3 Splits

To edit a Split:



Click the **Edit button** to the right of the Split.

The Precinct's Splits form appears.

The following functions can be performed for each Split:

- Edit the name of the Split

- Delete this Split from the precinct
- Pick Ballots for this Split
- Add/delete a language for this Split

9.3.1 Ballots Associated With a Split

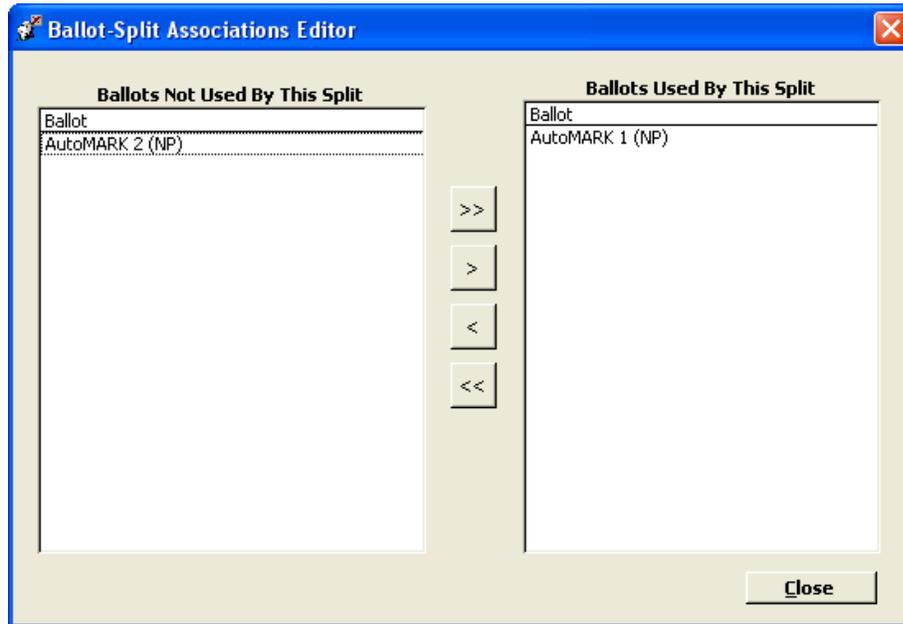
Note

If you are following the Wizard in AIMS and are setting up *Precincts and Splits*, you will not be able to associate Ballots with splits until the ballots are created in step #9

To display a list of all ballot styles:

1. Click the **Pick Ballots** button.

The Ballot-Split Associations Editor form appears:



Ballot styles used by this split are listed in the column on the right.

To associate a ballot with this split:



2. Select the **ballot style** from the list on the left.
3. Click the **right arrow** button (>).
4. The ballot style will appear at the end of the list of **Ballots Used By This Split**.

Additional functionality:

- Select a number of rows in a series by clicking the first row, holding down the shift key, and clicking on the last row.
- Select a number of rows (not in a series) by clicking the first row, holding down the Ctrl key, and clicking on the additional rows to select.
- Associate all remaining ballot styles with the split by clicking the double left arrow (<<).
- Remove a single ballot style from its association with the split by selecting the ballot style in the list on the left and clicking the right arrow (>).
- Remove all ballot styles from their association with the split by clicking on the double right arrow (>>).

9.3.2 Add / Delete a Language for the selected Split

The languages associated with the selected Split are listed on the right side of the form. By default, all languages added to the election as a whole (Default Languages tab) are listed here. Any languages that you add to this form will apply to this split only.

To add a language to this split:



1. Click the **drop-down** arrow in the next available blank row.
2. Select a **language** from the drop-down list.

You can delete a language from an individual ballot after it has been globally added.

To delete a language from a Split:



1. Click the **Remove** button next to the Split Language.
2. Click **Yes** to confirm the delete.

9.4 Vote Centers (Diebold Accuvote ballots only)

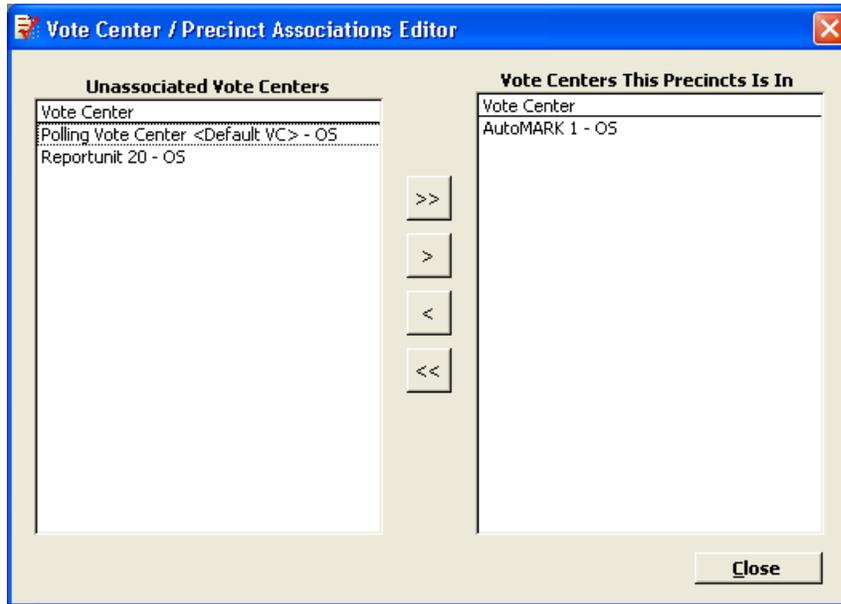
To edit a Vote Center:

Editing Precincts



1. Click the *Vote Centers...* button to the right of the Precinct Editor form.

The Vote Center / Precinct Associations Editor form appears:



The Precinct can be assigned to one or more Vote Centers.

2. Use the single arrows to assign one Vote Center at a time to the Precinct. (>) (<).
3. Use the double arrows to assign all the Vote Centers at once. (>>) (<<)

Note

If the data has been imported, any Vote Centers that have been set up in the GEMs software will be brought into AIMS. If the election is set up to be by Sequence, data is exported from AIMS by Vote Center.

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10 Editing Races

10.1 Terminology Used:

The following terms are used when adding/editing Races. Refer to the figure below to see where these objects are located on a sample ballot.

10.1.1 Race Header

- A Race Header is a section of text that is printed on a ballot above the candidates for a race.
- Individual lines of a Race Header are called Header Labels
- Each Race Header may or may not appear on a particular ballot style.
- Race Headers are printed in the same order on all ballot styles.
- Race Headers generally, but not always, describe the series of races that will follow it. (Example: National, State, Local, etc.)
- A series of races usually, but not always, follow each header (Example: Following the National Header are the races for President, Senator, and Congressional Representative; following the Local Header is the race for Mayor)

10.1.2 Race Label(s)

On the AIMS Race Editor form, this is shown as “Race Description (Seen on Ballot)”

- Race Labels are sections of text printed on a ballot that describe the race.
- Race Labels for a race appear below the Race Header, and above the race candidates.
- A race may have one or more labels (individual lines) that appear with it on the ballot. Example:

- FOR STATE BOARD OF EDUCATION MEMBER
DISTRICT NO. 04
VOTE FOR ONE
- If the race has more than one label, the label sequence will always be the same.
- Each race may or may not appear on a particular ballot style

10.1.3 Candidates

- A candidate is an option associated with a race.
- A candidate is often, but not always, a person who is running for the position the race represents.
- For the purpose of this system, when the race is a question requiring a “Yes” or “No” response (Example: A request for the approval of a tax, or a question about the retention of a judge) the candidates would be “Yes” and “No”.

Sample Ballot

**OFFICIAL BALLOT
DEMONSTRATION ELECTION**

COUNTY CLERK'S NAME

AutoMARK 1

YOUR COUNTY, STATE

To vote, darken the oval to the LEFT of your choice, like this . To cast a write-in, use the space provided and write the candidate's name in that space. For specific information, contact the county clerk's office. If you tear, spoil, deface or erroneously mark this ballot, return it to the voting booth.

PAST PRESIDENT	
FOR FAVORITE PAST PRESIDENT (Vote for One)	FOR FAVORITE PAST PRESIDENT (Vote for One)
<input type="radio"/> THOMAS JEFFERSON <input type="radio"/> ABRAHAM LINCOLN <input type="radio"/> FRANKLIN D. ROOSEVELT <input type="radio"/> DWIGHT D. EISENHOWER <input type="radio"/> JOHN F. KENNEDY <input type="radio"/> Write-in _____	<input type="radio"/> CARL S. <input type="radio"/> NELSON <input type="radio"/> MAYA A. <input type="radio"/> ERNEST <input type="radio"/> Write-in _____ <input type="radio"/> Write-in _____
BASEBALL TEAM	
FOR FAVORITE BASEBALL TEAM (Vote for One)	
<input type="radio"/> CUBS <input type="radio"/> WHITE SOX <input type="radio"/> CARDINALS <input type="radio"/> Write-in _____	<input type="radio"/> ANDREI <input type="radio"/> ALEXANDER <input type="radio"/> Write-in _____

Race Header →

Race Labels →

Candidates →

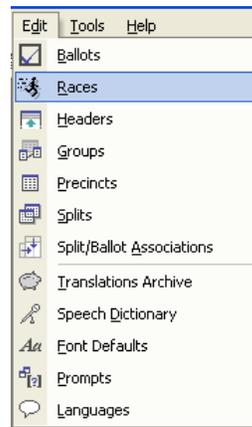
10.2 The Races Viewer

The Races Viewer form displays the races that have been defined in the current election. This form is also used to navigate to the Race Editor for entering changes to a race. Information about each of the races in the current election is captured once, and then associated with the appropriate ballots in the election.

To open the Races Viewer form:



1. Select **Races** from the Edit Menu on the menu bar.



The Races Viewer form appears:

Header	Race Description	Review Required	Add New...
FEDERAL OFFICES	PRESIDENT AND VICE PRESIDENT	No	Edit...
FEDERAL OFFICES	UNITED STATES REPRESENTATIVE	No	Edit...
STATE OFFICES	STATE REPRESENTATIVE	Yes	Edit...
COUNTY OFFICES	COUNTY AUDITOR	No	Edit...
COUNTY OFFICES	COUNTY SHERIFF	No	Edit...
TOWNSHIP OFFICES	TOWNSHIP TRUSTEE	No	Edit...
BLANK HEADER	REGIONAL LIBRARY TRUSTEE	No	Edit...
COUNTY OFFICES	COUNTY PUBLIC HOSPITAL TRUSTEE	No	Edit...
COUNTY OFFICES	COUNTY PUBLIC HOSPITAL TRUSTEE - 9	No	Edit...
BLANK HEADER	SOIL AND WATER CONSERVATION DISTRICT COMMISSIONER	No	Edit...
BLANK HEADER	COUNTY AGRICULTURAL EXTENSION COUNCIL	No	Edit...
TOWNSHIP OFFICES	TOWNSHIP TRUSTEE - 12	No	Edit...
TOWNSHIP OFFICES	TOWNSHIP CLERK	No	Edit...
TOWNSHIP OFFICES	TOWNSHIP TRUSTEE - 14	No	Edit...

When completed, this form displays all of the races currently available in the election with their headers and labels.

2. If a problem exists in the data for a race, the system will display a “**Yes**” in the Review Required column. Each race with a problem must be reviewed, and all “Review Required” entries must be “**No**” before any data can be exported for use in an election.
3. If Review Required is “**Yes**” for a particular race, click the **Edit** button next to that race to view the Race Editor (see next section) which will give details.
4. The **View Only Races Requiring Review** button will change the display to include only those races that must be reviewed.
5. The **Ignore Default Header Race Review Issues** button will allow the ballots to be previewed even when some of the Headers are blank.

10.3 New Races

To add a new race to an election:



1. Click the **Add New** button on the **Races Viewer** Screen.

A blank **Race Editor** screen appears:

2. Enter the Race Description, Race Header and Race Label(s) information.

10.4 Editing a Race – Using the Race Editor

To edit a race: Click the **Edit** button to the right of the desired race on the **Races Viewer** form.

The **Race Editor** form appears:

The Race Editor form is divided into several sections:

- Race Description:** A text field containing "BEST AUTOMOBILE MANUFACTURER".
- Race Header:** A dropdown menu and an "Edit" button.
- Race Labels:** A table with columns "Seq." and "Text". It contains two entries: "1 BEST AUTOMOBILE MANUFACTURER" and "2 (Vote For ONE)".
- Race Candidates:** A table with columns "Candidate Description" and "Default Seq. *". It lists candidates: BMW (1), MERCEDES (2), GENERAL MOTORS (3), HONDA (4), FERRARI (5), JAGUAR (6), FORD (7), and VOLVO (8). Each row has an "Edit..." button.
- Race Group Information:** A dropdown menu set to "NONPARTISAN", with "Force Group?" and "New Group..." options.
- Buttons:** "Save", "Undo", "Delete Race...", "Edit Summary Text...", "Review Race Issues", "Add This Navigation Race to all Ballots", and "Close".
- Checkboxes:** "Straight-Ticket Race?", "Straight-Ticket Applies?", "Team Write-In?", "Massachusetts Group?", "Write-In Count", "Vote-For Count", and "Vote-For Exact?".
- Input Fields:** "Apply Default Sequence" and "Add New...".

Note

You will not be able to click the *Add New* buttons until text has been added to the text field located to the left of the button.

The **Race Editor** is the most complex form in AIMS. It defines all of the information about the race, including the candidates that are running.

Note

Sometimes, when the data that has been imported from Unity is incorrect, the text labels for **Headers**, **Race Labels**, and **Race Candidates** can be wrong or include Non-English text. Please see section 10.4.2 to fix Race Headers, section 10.4.3 to fix Race Labels, and section 10.4.4 to fix Race Candidates.

10.4.1 Editing the Race Description

- The Race Description is a short identifier used within AIMS to describe each Race. You will see this Race Description on the **Races Viewer** Form and will use

it when selecting a Race to edit. (It does not appear on the ballot).

To change the Race Description:



1. Click in the **Short Description** field.

On the Race Editor form, this field is labeled “Race Description (Seen only within AIMS. Don’t confuse this with the Race Summary Text setting)”

2. Type the short description.

Note

The Race Description is limited to 255 characters.

10.4.2 Race Header

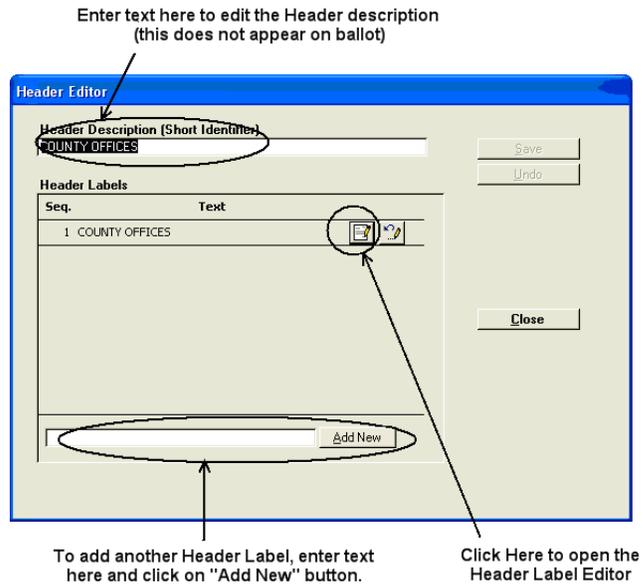
The following functions are available:

- Select an existing header from the drop-down list (on the **Race Editor** Form)
- Edit a Race Header

To edit a Race Header:



1. Click the Edit button (next to the Race Header).
2. The Header Editor appears.



Note

You will not be able to click the *Add New* button until text has been added to the text field located to the left of the button.

Note

You can also navigate to the Header Editor by selecting **Headers** from the **Edit Menu** on the menu bar.

10.4.2.1 Header Editor

- Edit the Short Header Description
- Add new Header Label Lines
- Save changes
- Undo changes

Note

Do not use carriage returns in Header Labels. If a line break is desired, add a new Header Label line as described below.

To add new Header Label lines:



1. Enter the text on the blank line (at the bottom of the form).
2. Click the **Add New** button.

To append text to the *previous* Header Label line:

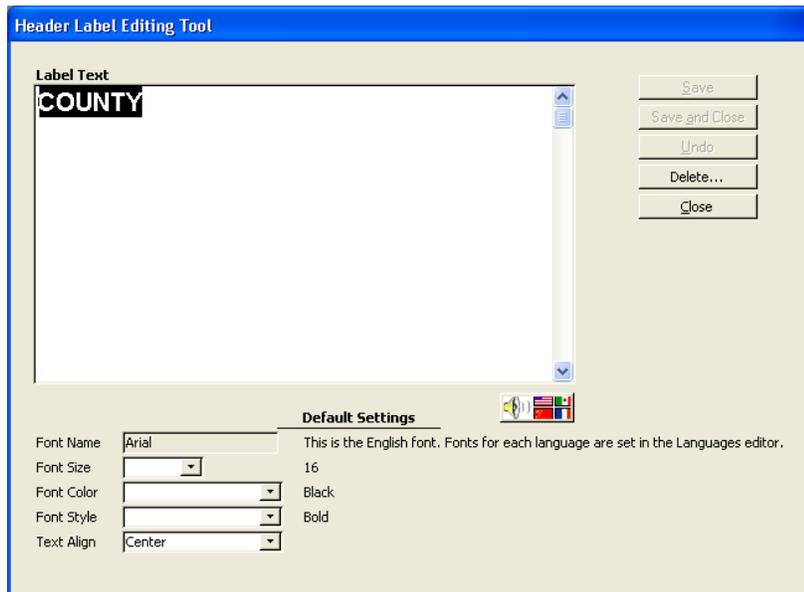


1. Click the **second button** to the right of the Header Label. 
2. The Header Label will be appended to the Header Label in the line above.

To edit the appearance of the Header Label(s):



3. Click the **first button** to the right of the Header Label. 
- The Header Label Editing Tool appears.



The **Header Label Editing Tool** allows the following changes:

4. Edit the text
5. Change the font size

6. Change the font color
7. Change the font style
8. Choose Center, Left, Right justification

To open the **Header Label Translations** form:



9. Click the button under the Label Text scroll box.
10. The Header Label Translation form appears.



Language	Title	Phonetic	Use This For All Languages?	Audio File Selected?	
English	COUNTY OFFICES	COUNTY OFFICES	No	No	<input type="button" value="Add New..."/> <input type="button" value="Edit..."/>

Use this form to edit or add new language text for the Header Label.

10.4.2.2 Label Translations

1. To add a new translation for the Header Label, click the **Add New** button. This will open the **Add New Translation Form** (described in Section 8.1).
2. To edit a translation for the Header Label, click the **Edit** button. This will open the **Edit Translation form** (described in Section 8.2).
3. Click the **Delete Non-English Translations** button to delete all the non-English translations (currently in this election) for the Header Label.
4. Click the **Auto-Populate Non-English Translations** button to automatically add translations for the Header Label (if such translations have previously been entered into Aims).
5. To add a *new* Race Header select **Headers** from the Edit Menu on the menu bar (see Section 12.1).

10.4.3 Race Labels

Race Labels are maintained in a similar fashion as the Race Header Labels.

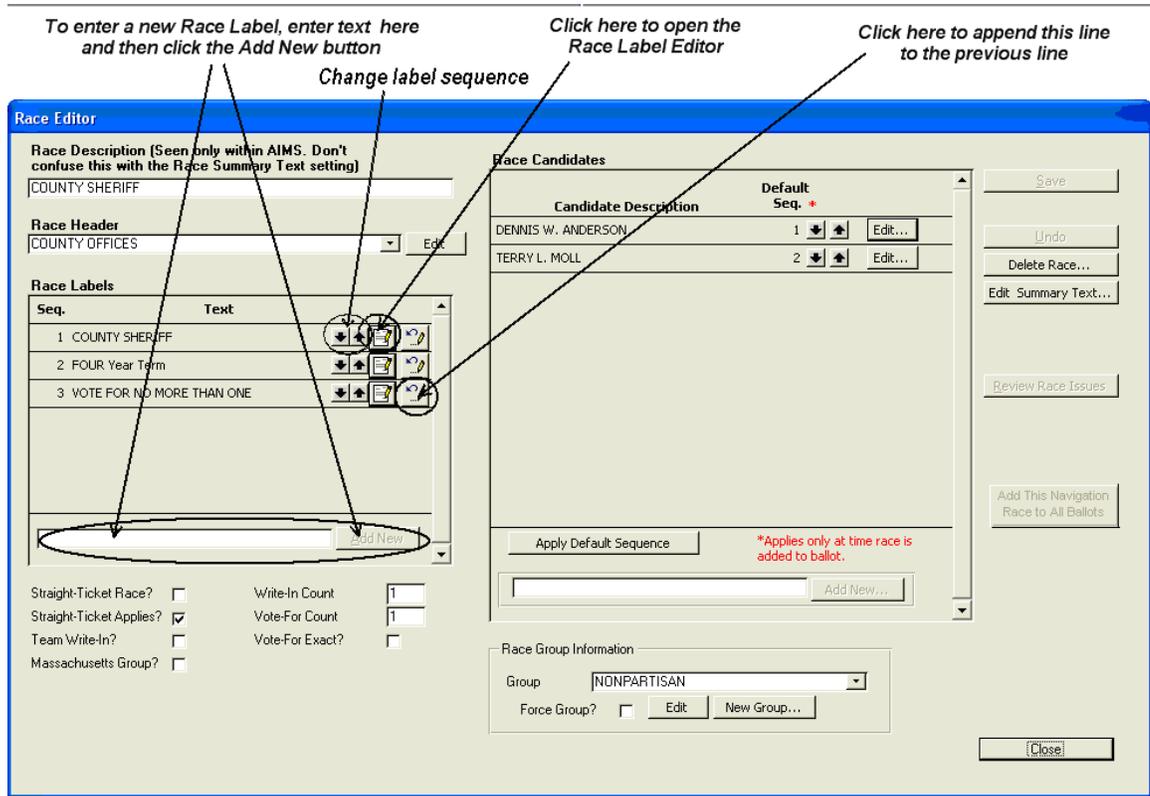
- New Race labels may be added
- A Race label may be edited
- A Race label may be appended to an existing label
- Race labels can be moved up and down in the sequence by using the “move-up” or “move-down” arrow button next to the candidate. See figure below.
- Race label can be assigned to be a ‘Footer’ by checking the *Use Label as Race Footer* checkbox. This will cause the label to appear underneath the candidate selections. In the audio, the footer labels will be read immediately following the main race labels.

Note

Do not use carriage returns in Race Labels. If a line break is desired, add a new Race Label line.

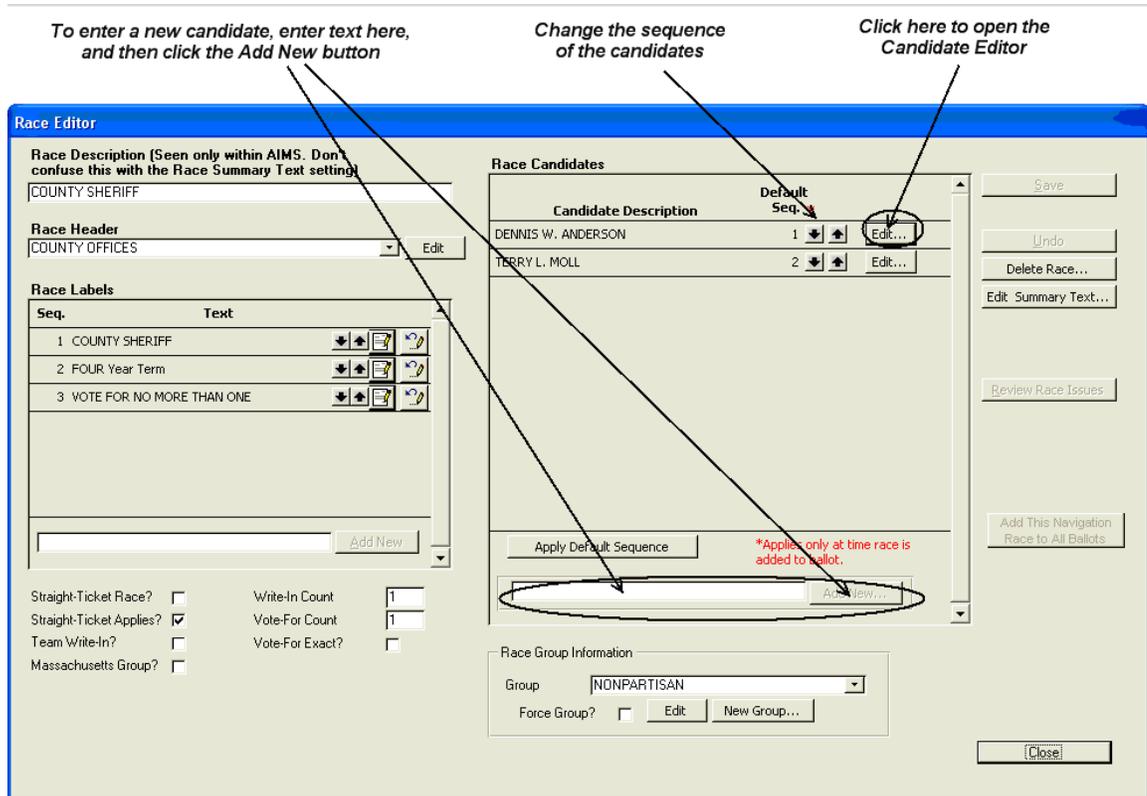
Hint

If many labels need to be deleted at once, the following method is a quick way to do it. Merge the labels using the append button. Edit the newly merged label using the edit button and then delete the merged label.



10.4.4 Race Candidates

Candidates for a particular Race can be added or edited via the **Races Editor**. In addition, the sequence of candidates (the order in which they appear) can be changed.



10.4.4.1 Apply Default Sequence

This provides a way to set the sequence of candidates for this race and apply it to all ballots including this race. When this button is clicked, a confirmation screen will display, "About to apply this sequence to every ballot that includes this race. Continue?" User can select Yes or No.

10.4.4.2 To enter a new candidate

Enter text in the box as indicated above, and click the **Add New** button.

10.4.4.3 To change the sequence of candidates

Click the "move-up" or "move-down" arrow button next to the candidate. (See figure above.) However, the sequence of candidates for this race will not be changed on all the ballots unless you also click the Apply Default Sequence button. (See section 10.4.4.1 above). Note that the sequence of candidates can be changed on an individual ballot through the Ballot Editor. (See Section 11.1).

10.4.4.4 To edit an existing candidate on the ballot:



1. Click the Edit button next to the candidate's name.

Candidate Editor

Description: Dennis W. Anderson

Primary Group: DEMOCRATIC

Unique Person ID: Dennis W. Anderson

Disabled on Ballot: (if checked, voter will not be able to select this candidate -- there will be no oval to click on)

Seq.	Text
1	DENNIS W. ANDERSON
2	DEMOCRATIC PARTY

Annotations:

- To assign this candidate to more than one Group, click here. (points to Groups... button)
- To assign this candidate label to a Unique Person ID, click here. (points to Persons... button)
- Cross-party endorsement options (points to Groups... button)
- Click here to append this line to the previous line. (points to Add New button)
- To add a new Candidate Label, enter text here and click on the Add New button. (points to Add New button)
- Click here to open the Candidate Label Editing Tool. (points to the table)

2. The Candidate Editor appears.
3. Enter the Candidate **Description**.
4. Select the **Primary Group** from the drop-down (if it applies). Additional groups for Cross-Party endorsement can be entered by pressing the **Groups...** button
5. If cross-party endorsement is supported by listing the same candidate multiple times, you may have to assign the candidate a Unique Person ID by clicking on the **Persons...** button. (See Section **10.4.5** below)
6. To add a new candidate label, enter text and click the **Add New** button.

7. Click the **Text Edit Icon**  to change the Candidate Label Text.
8. Save, or Undo, and Close the form when you are done.

Note

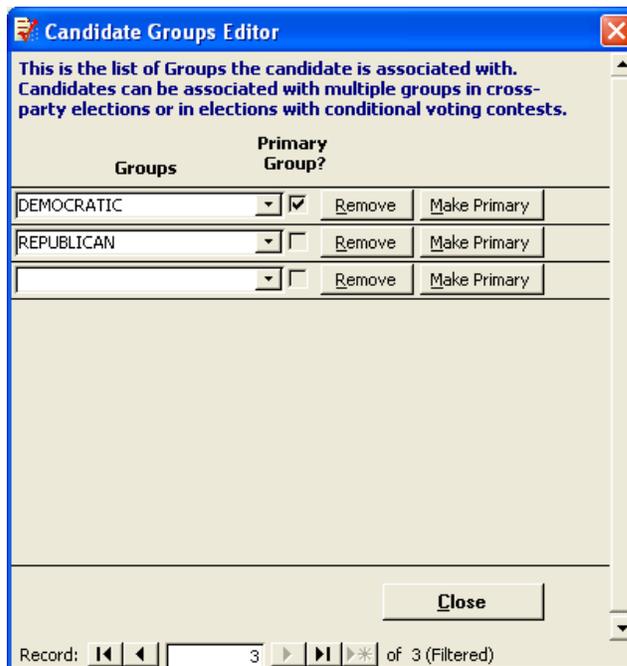
The **Disabled on Ballot** checkbox allows you to place candidate names on the ballot, but not allow voters to vote for this candidate. This is often used when a “candidate” is used to indicate a “no candidate filed.”

10.4.5 Cross-Party Endorsement

The AutoMARK VAT supports two ways of handling Cross-Party endorsement of candidates. Cross-Party endorsement is when more than one political group or party has endorsed a candidate for office. Straight Party ballots are especially affected by this because candidate votes are affected by political party selections made at the start of the ballot.

10.4.5.1 Cross-Party Endorsement using the Groups... button.

The more common method of Cross-Party endorsement has the candidate listed only one time on the ballot. If the candidate is supported by two political parties, for example the Republican and Democrat parties, both groups must be assigned to the candidate. This can be accomplished by using the Groups... button in the Candidate Editor screen. Please see Section 10.4.4.4 above.

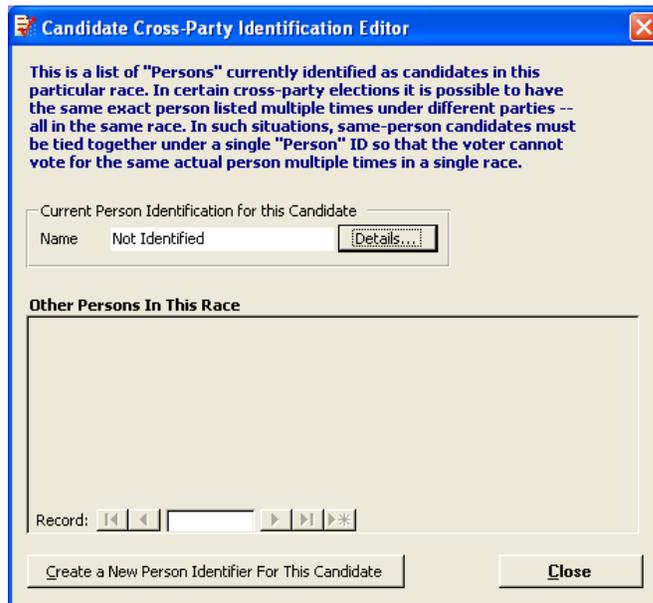


1. Assign the candidate to additional groups using the pull down menus.

2. If you wish to remove one of the groups, click the **Remove** button.
3. If you wish to change the group that is the primary group, click the **Make Primary** button. (Making a group the primary group displays that group on the Candidate Editor screen, but has no affect on the VAT)
4. Click **Close** to continue.

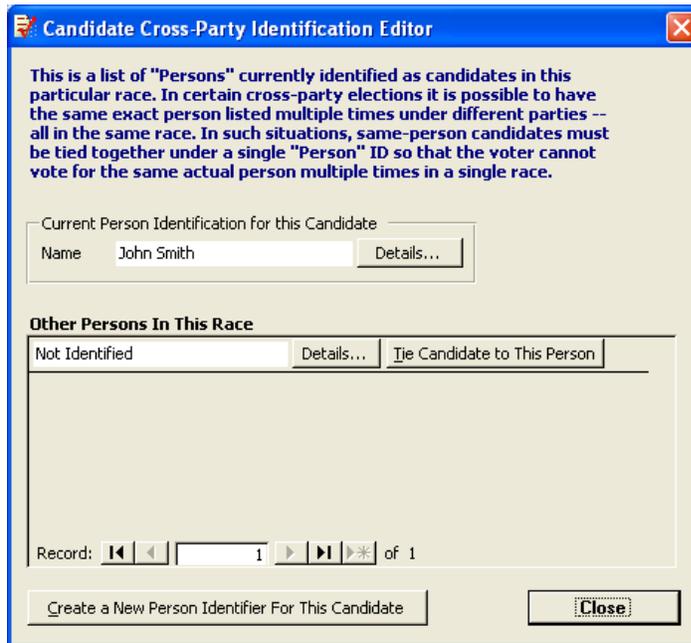
10.4.5.2 Cross-Party Endorsement using the Unique Person ID

A less common method of Cross-Party endorsement is to have the same candidate listed multiple times on the ballot. If the candidate is supported by two political parties, for example the Republican and Democrat Parties, the candidate will appear on the ballot twice. If the candidate appears more than once on the ballot, they should be assigned to the same Unique Person ID to prevent voters from voting for the same person more than once.



1. If the first instance of the candidate has not yet been assigned a Unique Person ID, then press the button, **Create a New Person Identifier For This Candidate**, and press **Yes** to continue.
2. If other Unique Person IDs exist in the race, then they will appear under **Other Persons in This Race**. Click Tie Candidate to This person to tie the current candidate to a different Unique ID.
3. When done, click **Close**.

4. If this is the second or more instance of the candidate, then simply click the Tie Candidate to This person button located next to the appropriate person in the **Other Persons In This Race** box.
5. To remove the Unique ID affiliation for the candidate, click the **Tie Candidate to This Person** button located next to the Not Identified option.



10.4.6 Straight-Ticket Race?

When this checkbox is selected, the race will be treated as a straight-party race. Candidates for such a race should be, for example, Republican or Democrat, etc.

To identify this race as a straight-party race: Click the **checkbox** next to Straight-Ticket Race.

This checkbox is also used in ballots that are Open Primaries with Party Preference, and Recall/Retain type races.

10.4.7 Straight Ticket Applies?

If checked, the race is identified as a partisan race with candidate choices that will be affected by the choices made in the Straight-Ticket race.

This flag is also used to identify races affected by a Party-Preference or navigation race in an open primary ballot or a race affected by a Recall/Retain race.

Note

If the race is part of a Straight Party ballot and affected by selections in the Straight-Ticket race, then no partisan group can have a number of candidates greater than the Vote-For Count of the race.

10.4.8 Team Write-In?

If checked, the race is identified as containing Team Write-ins. These are Write-ins that contain room for two lines and where two names are expected to be written in. When checked, the voter will be presented with two write-in screens when entering a write-in enabling them to enter two names. These candidate names will be printed one over the other on the paper ballot.

10.4.9 Massachusetts Group?

This functionality is for use in the state of Massachusetts only.

10.4.10 Write-In Count

Indicates how many write-ins are permitted for the race.

10.4.11 Vote-For Count

Indicates how many votes can be cast for the race.

10.4.12 Vote for Exact?

If this is checked, the voter is not allowed to “Under-vote”- he must vote for either zero or the full “Vote For Count”

10.4.13 Race Merge Tool

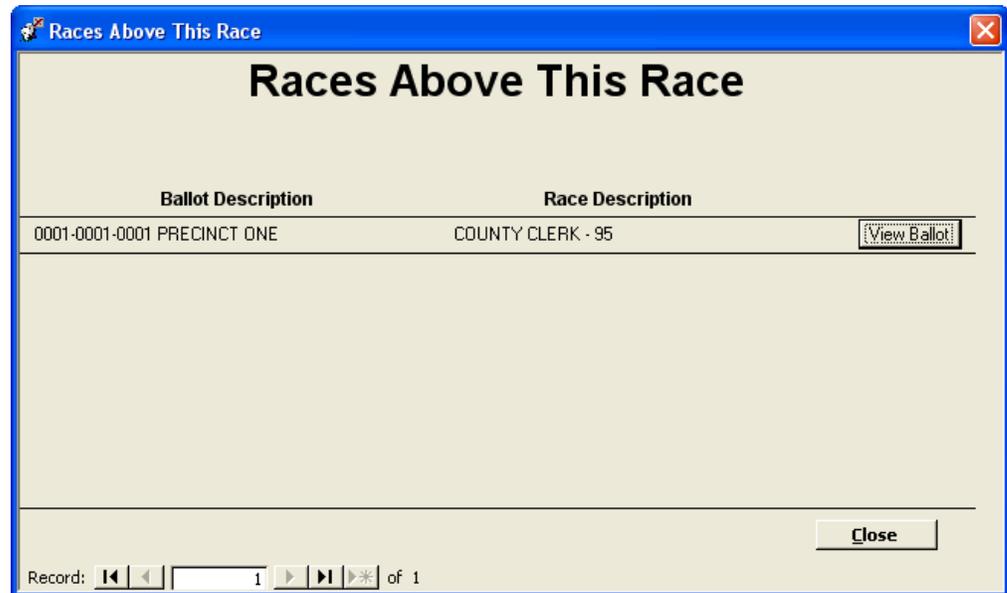
This functionality is occasionally useful for Diebold Accuvote ballots. If the current “Race” is functioning as a header to another race located visually below it, (or as a footer to another race located visually above it) on each ballot in which it appears, click the Make Footer/Make Header checkbox to manage the race data appropriately. Functioning as a header or footer means that the race consists of nothing but Race Labels and has no candidates. The race must be consistently above or below the same race in all the ballots of the election to be able to use the Race Merge Tool. This tool will simply take the Race Labels and append them to the race located adjacent to the Footer/Header race.

To view the Race in the context in which it appears:



1. Click **View Races Above This Race** or **View Races Below This Race**.

The selected races will appear along with the ballot styles:

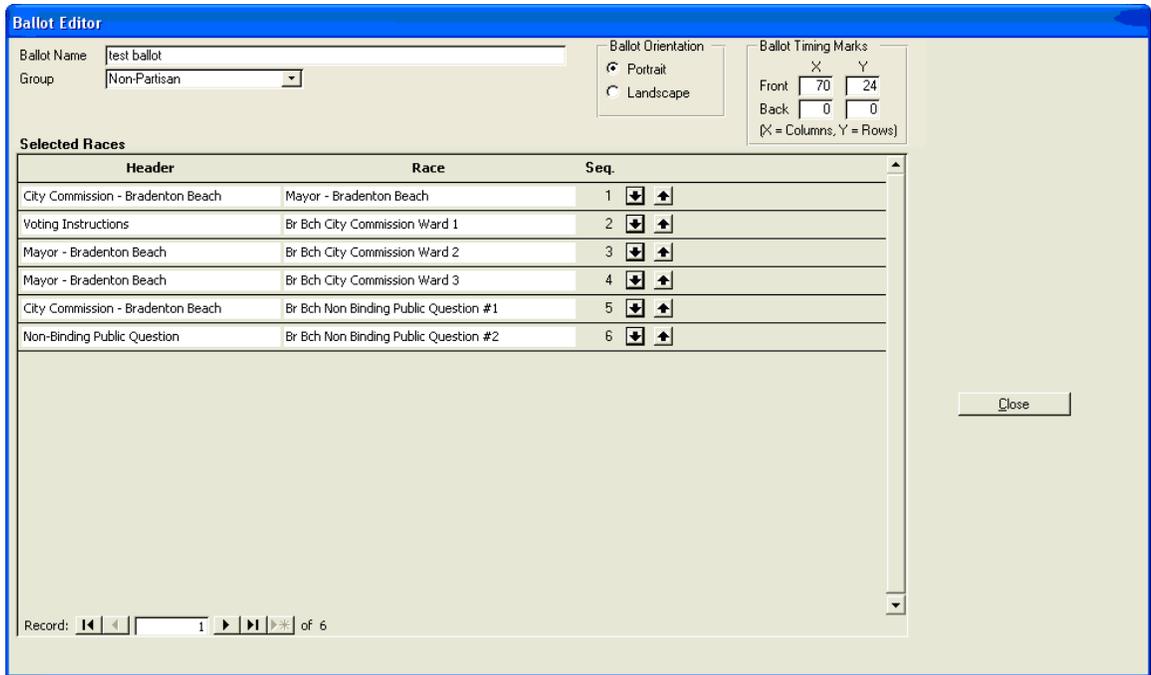


To view the ballot style with all races shown in their correct sequence:



2. Click the **View Ballot** button.

The **Ballot Editor** appears.



3. See Section 11.1 for information about the **Ballot Editor**.

10.4.14 Edit Summary Text

The Summary Text is what appears for each race on the Summary Screen (on the VAT) when a voter has made all his selections. The summary text is limited to the number of characters which was set in the machine settings (Race Summary Chars max). If the race summary text for a particular race was truncated in the middle of a word, you may wish to enter different text to appear on the Summary Screen.

1. Click the **Edit Summary Text** button on the **Race Editor** Screen to Add or Edit Summary Text translations.

The **Edit Race Short Summary Text Translations** screen appears:

Language	Title	Phonetic	Use This For All Languages?	Audio File Selected?
Add New...				

- Click the **Add New** button to add a new summary text translation. The next screen to appear will be the **Race Text Translation Warning**:

fdlgRaceTextTransWarning : Form

Please Note: Once you create a short-text label for a race, it never changes or goes away until you modify or remove it yourself. If you do not provide a race short-text translation, however, the system will automatically generate one for each race by concatenating labels together and then truncating the result.

Language

This warns you that if the race label is subsequently changed, the race summary text will not automatically be changed. (Upon Export, the summary text you have entered will be exported.)

- Select the desired language, and click **OK**. This will bring up the **Edit Translation** Screen.

Editing Races

Edit Translation

Language: English

Use This Translation For All Non-English Language Translations?

Translation Text: GOVERNOR FOUR Year Term VOTE FOR ONE

Character Count: 36

Translation Phonetic:

Character Count: 0

DO NOT "READ" PHONETIC TEXT OR TRANSLATION TEXT
If this checkbox is not checked, Translation/Phonetic Text will be read aloud by speech synthesis unless an audio file exists. (If an audio file has been selected it will always be played.)

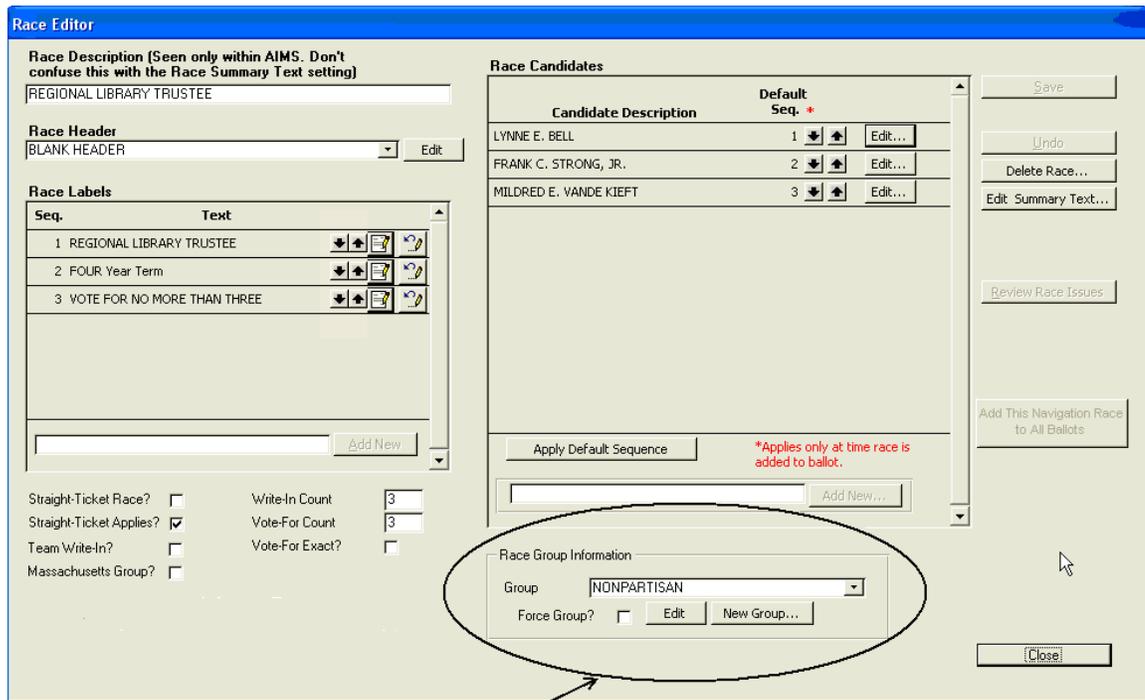
Audio File Information:

Audio File: [Empty]

Buttons: Save, Undo, Delete..., Close, Copy English, Copy Text to Phonetic, Get Entire Race Text By Concatenating All Labels, Zoom..., Deselect Audio File, Record New / Edit, Use This WAV file For Entire Label Group, Browse...

4. If this race has multiple labels, you may click the **Get Entire Race by Concatenating all Labels** button if desired.
5. Enter the text and click **Save**. You may also enter the phonetic pronunciation and select or record a new audio file.

10.4.15 Race Group Information



Race Group Information

Each race can be non-partisan, or it can be associated with a particular group, such as a political party (Democrat, Republican, ...) or it can be associated with a conditional question group.

In AIMS, this is called the Race Group, and is set by selecting the appropriate group from the **Group** drop-down selection box.

1. When entering a **party preference** race, you must associate the party with each race (set the “associated group”).
2. **Force Group?** If this box is checked, this race appears to the voter only if he has selected the associated group
3. A new group can be added by clicking on the **New Group...** button. This will display a blank **Group Editor** Form. See Section 12.2 for more information about adding a new group.
4. To Edit a group, click the **Edit** button, this will also open the **Group Editor** Form. See Section 12.2 for more information about editing a group.

Note

If the race is a Universal Primary Candidate (UPC) race, then the Group should be changed to NONPARTISAN. This will allow the race to be displayed on the VAT even if the party affiliation does not match the party of the Closed Primary ballot.

10.5 Setting up a Preference Race Manually

Some Jurisdictions include a preference race at the beginning of an Open Primary ballot. The preference race lists the parties available on the ballot and allows the voter to first indicate which party he or she plans to vote for. On the AutoMARK Voter Assist Terminal, once the voter makes a selection in the preference race, all other party races other than the party selected will no longer be visible. The preference race prints on the ballot in the same way as any other race.

If you are using the Import feature from your ballot preparation software, then the preference race should already be set properly. To set it up manually, do the following:

1. For each ballot, create a new race to serve as the Preference Race and input the appropriate instructions in the label. Make sure that this race does not have a group associated with it (non-partisan).
2. Add one candidate for each party on the ballot.
3. Assign the appropriate party to each candidate.
4. From the Race Editor screen, click the **Straight-Ticket Race** checkbox.
5. For all other party races on the ballot, go to the race screen and select the checkbox **Straight-Ticket Applies** checkbox.

10.6 Setting Up a Navigation Race

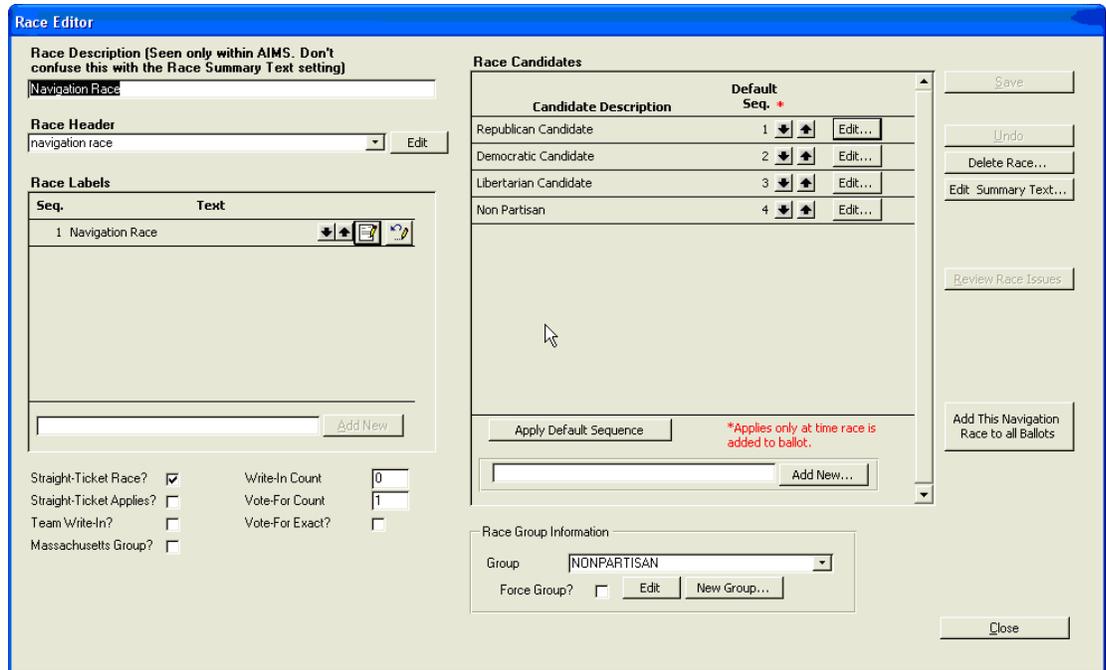
For Jurisdictions that do not use a preference race, but would still like to offer the ease of selecting a party at the beginning of the AutoMARK VAT selection process, you may set up a Navigation Race. A Navigation Race does NOT appear on the printed ballot. It is only used for on-screen navigation. It will display the parties available on the ballot. When the voter makes a selection in the Navigation Race, the VAT will then display the races for that party as well as the non-partisan races.

To set up a Navigation Race, after all ballots have been set up within AIMS, do the following:

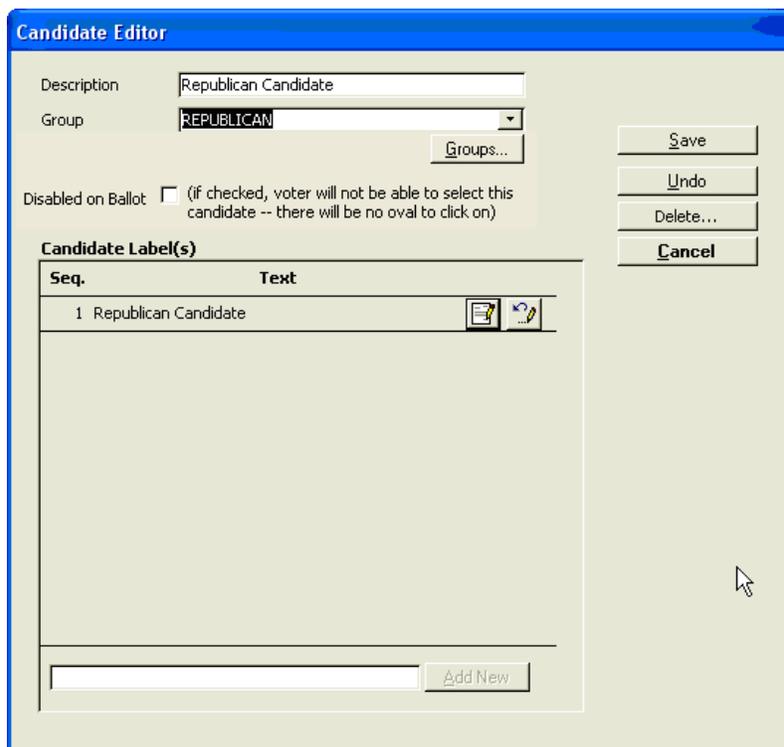
1. Create a new race to serve as the Navigation race and input the appropriate instructions in the label. Make sure that this race does not have a group associated with it (non-partisan).
2. Add one candidate for each group in the election (including non-partisan). (Candidates are added on the **Race Editor** screen.)

Note

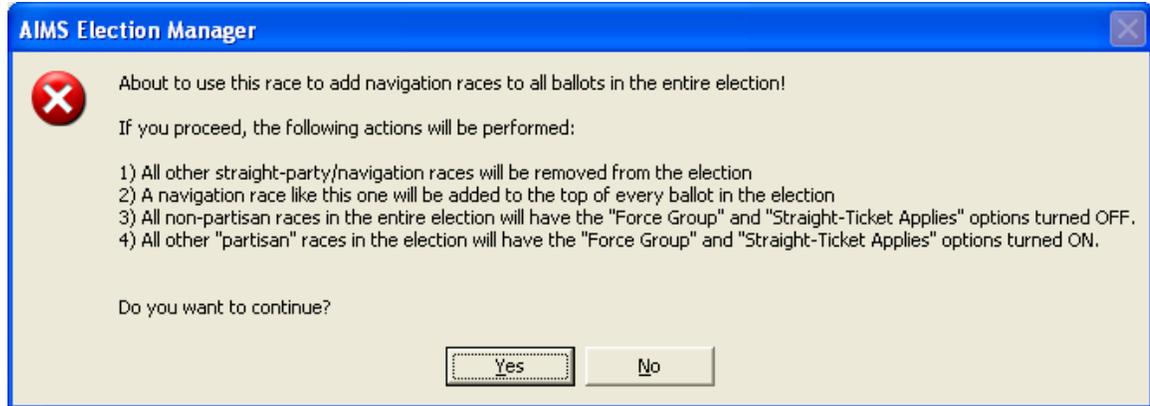
Every group in the election needs a corresponding candidate entry. Groups that are not being used need to be deleted. See Section 12.2 for information on using the **Group Editor**.



3. Assign the appropriate party (group) to each candidate. (This is done on the **Candidate Editor** screen – see below)
4. Click the **Disabled on Ballot** checkbox for each candidate. (This is what keeps the candidate from printing. Normally, the option also keeps the voter from making the candidate selection, however in a Navigation race the party candidates will be selectable, just not printable.)



5. From the **Race Editor** screen, click the **Straight-Ticket Race** flag.
6. The **Add This Navigation Race to All Ballots** button will become active on the right side of the race screen. Clicking this button will add the Navigation Race to the top of all existing ballots. Note that this is a "smart feature." Although your master navigation race includes all possible parties in the election, the Navigation Race on each ballot will only include the parties that appear on that ballot. This feature will also mark all partisan races with the **Straight-Ticket Applies** checkbox and with the **Force Group** checkbox. These settings tell the VAT that the Navigation race should control those races. The **Force Group** checkbox means that the partisan races will not appear at all until a party has been selected on the Navigation Race.

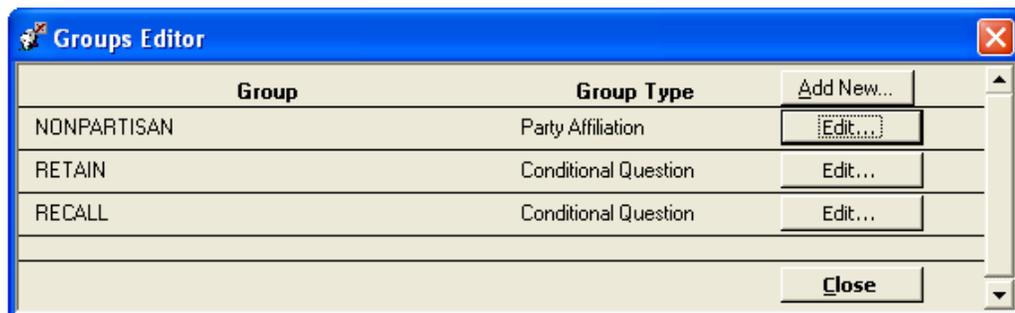


10.7 Setting Up a Recall/Retain Race

It is possible to set up a conditional race that is dependent on the selection made in the previous race. An example of this is an election where an elected official is being subjected to a recall vote. Voters that choose to recall the official are able to vote in the subsequent race for replacement candidates.

The following steps will set up the logic for an example Recall/Retain Race.

1. Use the Groups Editor to set up two new groups. One group is designated as **RECALL** to represent voters that wish to recall the elected official. The other group is designated as **RETAIN** to represent voters that wish to keep the elected official. See Section 12.2 for details on how to use the Groups Editor.



- The group types for these two new groups should be set to Conditional Question.

Group Editor

Group: RETAIN

Group Type: Conditional Question

Short Label: RET

Group Graphic File: [Empty]

Buttons: Save, Undo, Delete..., Close

Buttons: De-Select Graphics File, Browse...

- Set up the Recall/Retain race. See Section 10.4 for details about editing a race.

Race Editor

Race Description [Seen only within AIMS. Don't confuse this with the Race Summary Text setting]
RECALL Elected Official

Race Header
BLANK HEADER

Race Labels

Seq.	Text
1	RECALL Elected Official

Race Candidates

Candidate Description	Default Seq. *
YES - Recall Elected Official	1
NO - Don't Recall Elected Official	2

Race Group Information

Group: NONPARTISAN

Force Group? Edit New Group...

Buttons: Save, Undo, Delete Race..., Edit Summary Text..., Review Race Issues, Add This Navigation Race to all Ballots, Close

Text: *Applies only at time race is added to ballot.

- Notice that the *Straight-Ticket Race?* check-box is checked.
- The *YES- Recall Elected Official* and *No- Don't Recall Elected Official* Race Candidates need to be assigned to the groups created in step 1.

Editing Races

Candidate Editor

Description:

Primary Group:

Disabled on Ballot: (if checked, voter will not be able to select this candidate -- there will be no oval to click on)

Candidate Label(s)

Seq.	Text
1	YES - Recall Elected Official

Add New

Candidate Editor

Description:

Primary Group:

Disabled on Ballot: (if checked, voter will not be able to select this candidate -- there will be no oval to click on)

Candidate Label(s)

Seq.	Text
1	NO - Don't Recall Elected Official

Add New

- Set up the race that contains the replacement candidates.

Race Editor

Race Description [Seen only within AIMS. Don't confuse this with the Race Summary Text setting]

Race Header
 Edit

Race Labels

Seq.	Text
1	REPLACEMENT CANDIDATES
2	Vote For One

Add New

Straight-Ticket Race? Write-In Count
 Straight-Ticket Applies? Vote-For Count
 Team Write-In? Vote-For Exact?
 Massachusetts Group?

Race Candidates

Candidate Description	Default Seq. *
Replacement Candidate 1	1
Replacement Candidate 2	2
Replacement Candidate 3	3

Apply Default Sequence *Applies only at time race is added to ballot.

Add New...

Race Group Information

Group: Edit New Group...

Force Group?

- This race has the *Straight-Ticket Applies?* check-box checked. The Race Group Information section has the Group set to RECALL and the *Force Group?* Checkbox is checked. The force group function keeps the race from being accessible if no selection is made in the Recall/Retain race.

Note

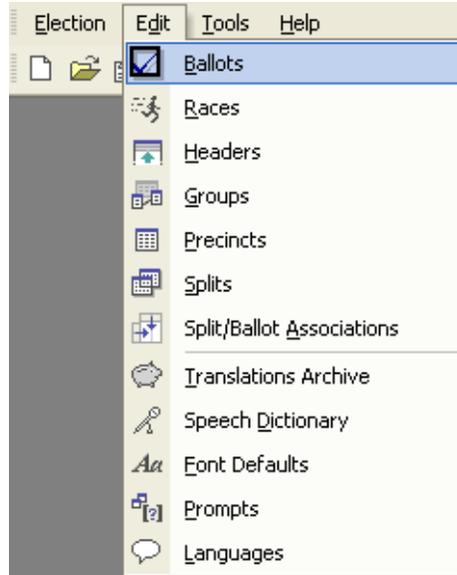
It is not possible to set up Recall/Retain type functionality in a Straight-Party or Open Primary with Party Preference ballot due to the overlapping logic.

11 Editing Ballots

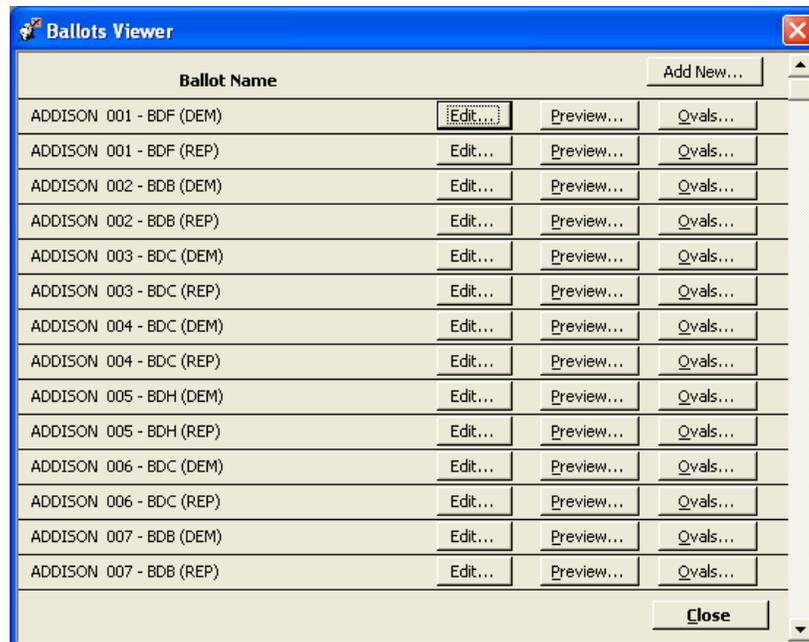
The **Ballots Viewer** form is used to maintain ballot information and navigate to the **Ballot Editor**.

To open the **Ballot Viewer** form:

1. Select **Ballots** from the Edit Menu on the menu bar.



The **Ballot Viewer** appears, showing all Ballot Styles defined in the current election:



2. To add a new ballot to the election, Click the **Add New** button.

A blank **Ballot Editor** form appears. (Described in Section 11.1)

The following functions are available for each Ballot Style:

- Edit – Edit the Ballot Style... Opens the **Ballot Editor**.
- Preview – Preview the Ballot Style... Opens the Windows version of the VAT GUI (graphical user interface) for previewing the ballots as they will appear on the VAT. See Section 6 – Previewing Ballots, for detailed information.
- Ovals – Review the Placement of Ovals (Arrows)... Opens the **Ballot Target Locations** form for previewing the X & Y coordinate locations of all the ballot targets (ovals/arrows) on each ballot.

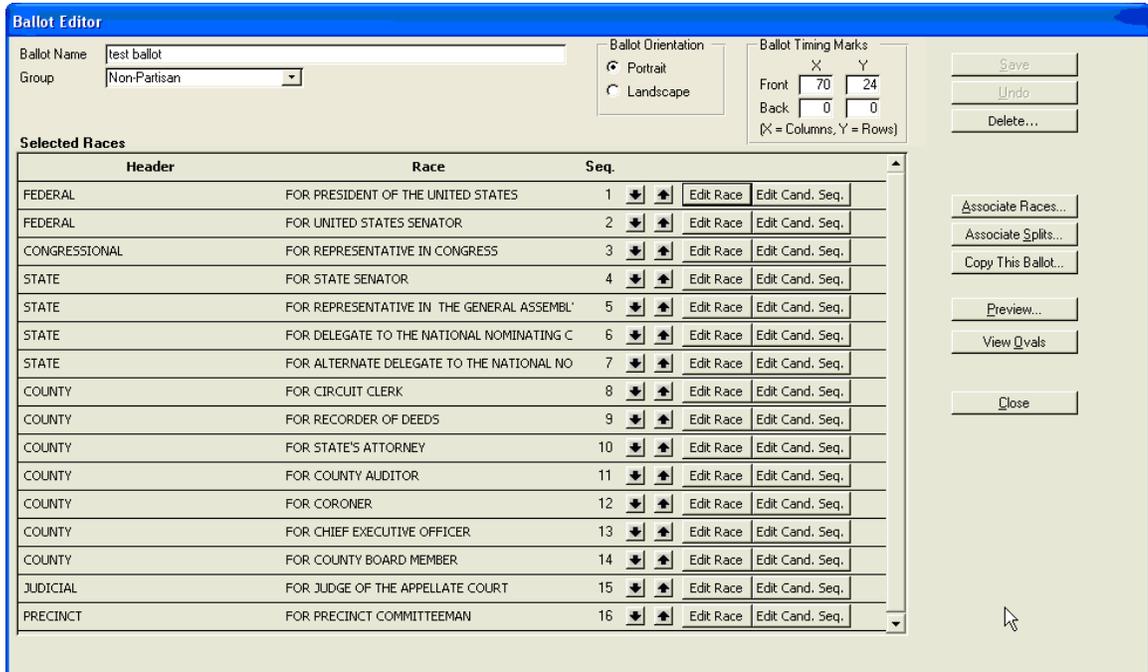
Note

The term **ballot targets** refer to the places where the ballot is marked. **ES&S M100 ballots:** Some use ovals and others use arrows to mark these locations.

ES&S Optech ballots: Use an **arrow-like** graphic to mark the locations.

Diebold GEMS ballots: use an **oval** graphic to mark the locations.

11.1 Ballot Editor



The following edit functions may be performed from the **Ballot Editor**:

Edit Functions

- Edit Ballot Style Name
- Edit Group association
- Edit Race information
- Edit candidate sequence (listing on the ballot)
- Edit Ballot/Split association
- Edit Ballot/Race association
- Edit X & Y Timing Marks
- Edit Ballot Orientation

Note

The X & Y Timing Marks are unique to the size and shape of the current ballot style – they are used to describe the locations of the ballot targets (ovals/arrows) on the ballot. See the sample ballots below:

Note

Landscape mode Ballot Orientation is not a commonly used feature.

File Functions

- Save Ballot Style
- Undo all changes made since the last Save
- Delete Ballot Style
- Copy Ballot Style – See Section 11.4.

Preview Functions

- Preview a ballot
- Review Ballot Target (ovals/arrows) locations

11.1.1 Ballot Name

To edit the Ballot Name, simply enter/change the text in the Ballot Name box on the Ballot Editor.

Note

The Ballot Name is limited to 255 characters.

11.1.2 Group

Select the Group Association for this ballot from the drop-down list.

11.1.3 Edit Candidate Sequence

1. To edit the sequence of candidates in a race (for this ballot only), click the **Edit Cand. Seq.** button next to the race (on the **Ballot Editor** screen – see picture above.)

The **Candidate Sequence Editor** screen appears:



2. Click the Up and Down arrows to re-arrange the sequence of candidates for this race. Note that this will not change the sequence of candidates for this race for all ballots – only for the ballot you are editing.

11.1.4 X & Y Timing Marks

The number of X timing marks and the number of Y timing marks on the front and the back of the ballot style are entered via the **Ballot Editor**. See the sample ballots below:

This M-100 Ballot has 3 X-Timing Marks

ELECTION DATE
COUNTY NAME, STATE
PRECINCT 1

Clerks Signature
County Clerk

INSTRUCTIONS TO VOTERS: To vote complete the oval to the LEFT of your choice, like this (●). To cast a write-in vote, complete the oval to the LEFT of the blank space provided and print the candidate's name in that space. For specific information, refer to the card of instructions posted in the voting booth. If you tear, soil, deface or erroneously mark this ballot, return it to the Election Judge and obtain another.

BEST AUTOMOBILE MANUFACTURER Vote For ONE	BEST VOCAL ARTIST Vote For Not More Than TWO
<input type="radio"/> BMW	<input type="radio"/> FRANK SINATRA
<input type="radio"/> MERCEDES	<input type="radio"/> ELVIS
<input type="radio"/> GENERAL MOTORS	<input type="radio"/> PATSY CLINE
<input type="radio"/> HONDA	<input type="radio"/> JANIS JOPLIN
<input type="radio"/> FERRARI	<input type="radio"/> BUDDY HOLLY
<input type="radio"/> JAGUAR	<input type="radio"/> BARRY WHITE
<input type="radio"/> FORD	<input type="radio"/> BILLIE HOLIDAY
<input type="radio"/> VOLVO	<input type="radio"/> STEVIE RAY VAUGHAN
<input type="radio"/> Write-in	<input type="radio"/> "MAMA" CASS ELLIOT
	<input type="radio"/> Write-in
	<input type="radio"/> Write-in

BEST ICE-CREAM FLAVOR
Vote For ONE

<input type="radio"/> CHOCOLATE
<input type="radio"/> STRAWBERRY
<input type="radio"/> VANILLA
<input type="radio"/> Write-in

Typ 01 Seq 0001 Spl 01
7.1.0.0.1/011000

On this M-100 ballot, there are 36 Y-Timing Marks

Sample M-100 Ballot, showing Timing Marks

24 23 The Expo ballot has 24 Y..... 2 1
 ↓ ↓ timing marks. ↓ ↓

1
2
3
↓ ↓ ↓

.....

On this Expo ballot there are 70 X timing marks.

.....

69
70
↓ ↓

Sample Expo Ballot (Landscape), showing Timing Marks

The Optech Ballot counts the columns as the X Timing Marks - this 3-column ballot would have 3 entered for the number of X Timing Marks.

The Optech Ballot has no Y timing marks, and would have "0" entered for the number of Y Timing Marks



EAGLE / OPTECH IV-C

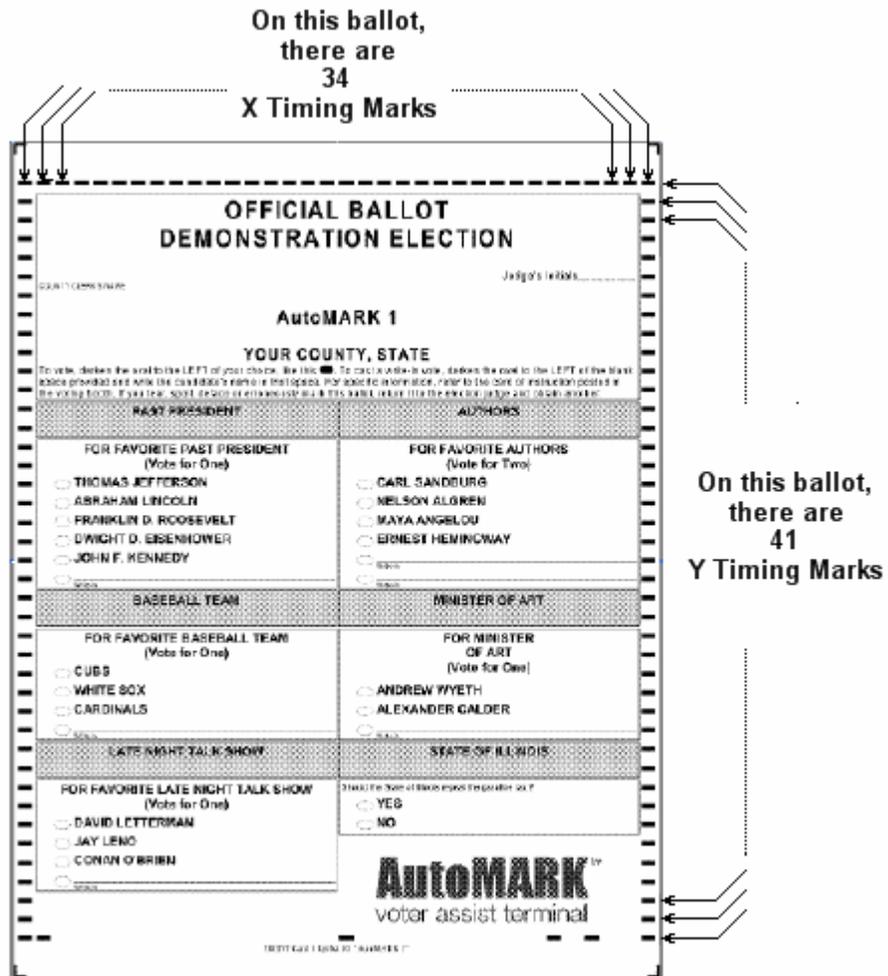
Famous Names / 100

Demonstration Ballot

TO VOTE: Complete the arrow(s) ← pointing to your choice(s), like this
Mark with a #2 pencil or marking pen provided (NO RED INK).

STRAIGHT PARTY	STATE OFFICES	NONPARTISAN OFFICES
<p style="font-size: x-small; margin: 0;">To vote a Straight Party Ticket, complete the arrow pointing to the Party of your choice.</p> <p style="margin: 5px 0;">STRAIGHT PARTY <small>(Vote for ONE)</small></p> <p style="margin: 5px 0;">VIRGINIA PARTY ←</p> <p style="margin: 5px 0;">OHIO PARTY ←</p> <p style="margin: 5px 0;">OREGON PARTY ←</p> <p style="margin: 5px 0;">NEW YORK PARTY ←</p> <p style="margin: 5px 0;">PRESIDENT AND VICE PRESIDENT <small>(Vote for ONE)</small></p> <p style="margin: 5px 0;">ZACHARY TAYLOR and MILLARD FILLMORE VIRGINIA ←</p> <p style="margin: 5px 0;">BENJAMIN HARRISON and ADLAI E. STEVENSON OHIO ←</p> <p style="margin: 5px 0;">CHESTER A. ARTHUR and THOMAS A. HENDRICKS OREGON ←</p> <p style="margin: 5px 0;">THEODORE ROOSEVELT and CHARLES W. FAIRBANKS NEW YORK ←</p> <p style="margin: 5px 0;">U.S. SENATOR <small>(Vote for ONE)</small></p> <p style="margin: 5px 0;">EVERETT DIRKSEN VIRGINIA ←</p> <p style="margin: 5px 0;">CHARLES CURTIS OHIO ←</p> <p style="margin: 5px 0;">JOHN HANCOCK OREGON ←</p> <p style="margin: 5px 0;">NELSON W. ALDRICH NEW YORK ←</p> <p style="margin: 5px 0;">U.S. REPRESENTATIVE <small>(Vote for ONE)</small></p> <p style="margin: 5px 0;">WILLIAM B. WILSON VIRGINIA ←</p> <p style="margin: 5px 0;">ROBERT LAFOLLETTE OHIO ←</p> <p style="margin: 5px 0;">W. C. REDFIELD OREGON ←</p>	<p style="margin: 5px 0;">STATE SENATOR 37th DISTRICT <small>(Vote for ONE)</small></p> <p style="margin: 5px 0;">FLORENCE NIGHTINGALE VIRGINIA ←</p> <p style="margin: 5px 0;">ANDREW CARNEGIE OHIO ←</p> <p style="margin: 5px 0;">FRANCIS SCOTT KEY OREGON ←</p> <p style="margin: 5px 0;">WILLIAM R. HEARST NEW YORK ←</p> <p style="margin: 5px 0;">MEMBER OF STATE LEGISLATURE 3rd DISTRICT <small>(Vote for ONE)</small></p> <p style="margin: 5px 0;">SUSAN B. ANTHONY VIRGINIA ←</p> <p style="margin: 5px 0;">MAMIE EISENHOWER OHIO ←</p> <p style="margin: 5px 0;">ELEANOR ROOSEVELT OREGON ←</p> <p style="margin: 5px 0;">DOLLY MADISON NEW YORK ←</p> <p style="margin: 5px 0;">STATE TREASURER <small>(Vote for ONE)</small></p> <p style="margin: 5px 0;">CORNELIUS VANDERBILT VIRGINIA ←</p> <p style="margin: 5px 0;">J. PAUL GETTY OHIO ←</p> <p style="margin: 5px 0;">JOHN D. ROCKEFELLER OREGON ←</p> <p style="margin: 5px 0;">JOHN P. MORGAN NEW YORK ←</p> <p style="margin: 5px 0;">ASSOCIATE JUSTICE of the SUPREME COURT <small>(Vote for ONE)</small></p> <p style="margin: 5px 0;">LEARNED HAND VIRGINIA ←</p> <p style="margin: 5px 0;">CLARENCE DARROW OHIO ←</p> <p style="margin: 5px 0;">JOHN MARSHALL OREGON ←</p> <p style="margin: 5px 0;">JOHN JAY NEW YORK ←</p>	<p style="margin: 5px 0;">BOARD OF EDUCATION <small>(Vote for ONE)</small></p> <p style="margin: 5px 0;">BOOKER T. WASHINGTON ←</p> <p style="margin: 5px 0;">ALBERT EINSTEIN ←</p> <p style="margin: 5px 0;">THOMAS A. EDISON ←</p> <p style="margin: 5px 0;">HELEN KELLER ←</p> <p style="margin: 5px 0;">JOHN DEWEY ←</p> <p style="margin: 5px 0;">DIRECTOR OF RECREATION <small>(Vote for TWO)</small></p> <p style="margin: 5px 0;">LEROY 'SATCHEL' PAIGE ←</p> <p style="margin: 5px 0;">HAROLD 'RED' GRANGE ←</p> <p style="margin: 5px 0;">JOHN WEISSMULLER ←</p> <p style="margin: 5px 0;">KNUTE ROCKNE ←</p> <p style="margin: 5px 0;">WILLIAM DEMPSEY ←</p> <p style="margin: 5px 0;">GEORGE RUTH ←</p> <p style="margin: 5px 0;">MILDRED ZAHARIAS ←</p> <p style="margin: 5px 0;">Micky Mouse ←</p> <p style="margin: 5px 0;">Donald Duck ←</p> <p style="margin: 5px 0;">DIRECTOR OF ENTERTAINMENT <small>(Vote for THREE)</small></p> <p style="margin: 5px 0;">CAROLE LOMBARD ←</p> <p style="margin: 5px 0;">GEORGE JESSEL ←</p> <p style="margin: 5px 0;">BILLY ROSE ←</p> <p style="margin: 5px 0;">KATHRYN SMITH ←</p> <p style="margin: 5px 0;">ISADORA DUNCAN ←</p> <p style="margin: 5px 0;">EDWARD ELLINGTON ←</p>

Sample Optech Ballot, showing Timing Marks



Sample Diebold GEMS Ballot – to illustrate X and Y Timing Marks

Note

For the ballots currently supported by the VAT, the X value will never be less than 0 or larger than 34. The Y value will never be less than 0 or larger than 90.



WARNING

Having incorrect X and Y values for the ballot being scanned by the VAT will result in the ballot not being recognized in the system.

11.1.5 Re-sequence Races

As previously described in other chapters, races and candidates may be re-sequenced within a ballot style:



1. Click the **Up** or **Down arrow** buttons.
2. Each click will move the race up or down a single spot at a time.
3. Repeat this action until the races are in the desired sequence to match the printed ballot.

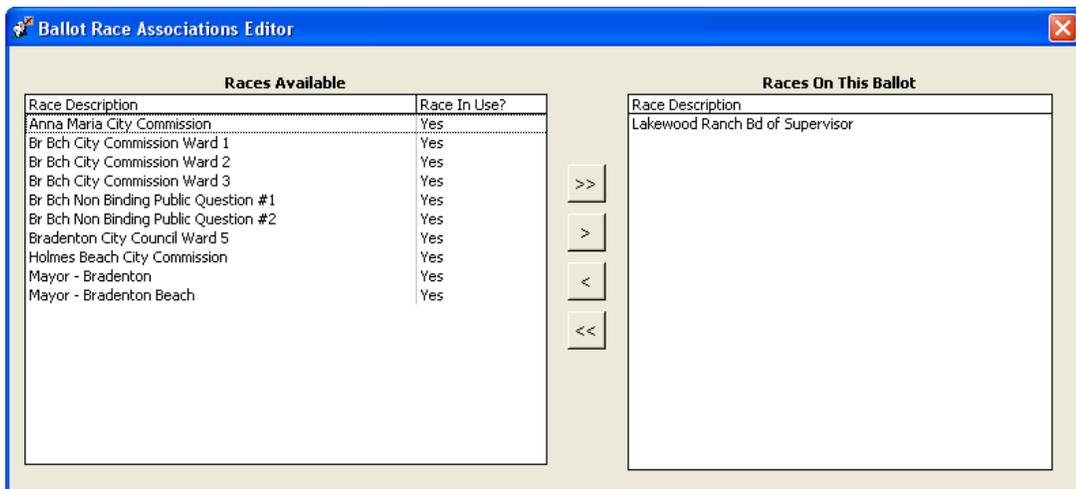
11.1.6 Associate Races with a Ballot Style

To associate races with a Ballot Style selected:



1. Click the **Associate Races** button.

The Ballot Race Associations Editor appears.



2. All association type forms function in a similar manner:
3. All races available are listed in the column on the left.
4. Races included on the ballot selected are listed in the column on the right. To associate a particular race with the selected ballot:



1. Select the **Race** from the list of available races on the left.
2. Click the **right arrow >** button.
3. The race appears in the List of Races Included in this Ballot.

To unassociated a race from the selected ballot:



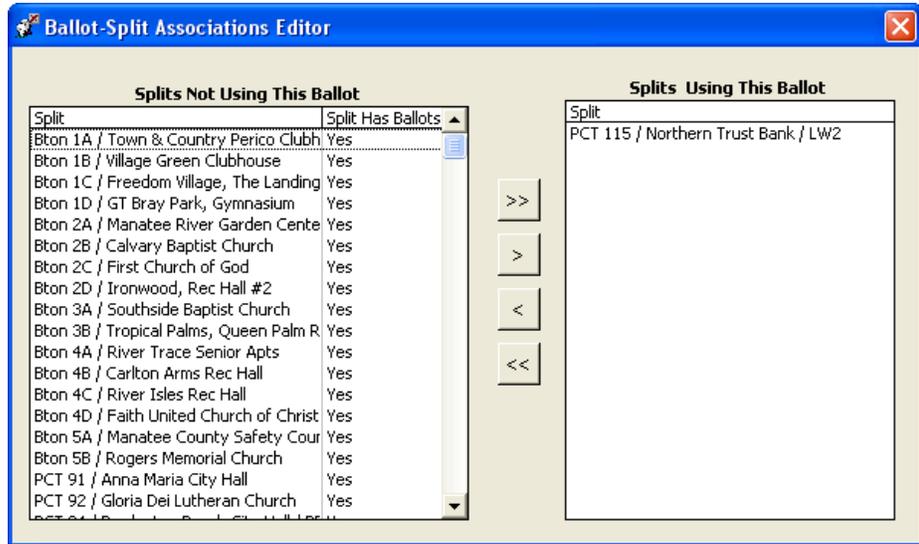
1. Select the **Race** from the list on the right (Races On This Ballot).
2. Click the **left arrow <** button.
3. The race is unassociated from this ballot.

11.1.7 Associate Splits with a Ballot Style

To associate a split with the Ballot Style selected:



1. Click the **Associate Splits** button.
2. The Ballot-Split Associations Editor appears.



To associate a split with the selected ballot style:



1. Select the **Split** from the list on the left.
2. Click the **right arrow >** button.
3. The Split appears in the list of Splits That Will Use This Ballot.

To un-associate a Split from the selected ballot style:



1. Select the **Split** from the list on the right (Splits Using This Ballot).
2. Click the **left arrow <** button.
3. The Split is moved to the left (Splits Not Using This Ballot).

11.2 Preview Ballots

Click the **Preview** button to see how the ballot will appear on the VAT. See Section 6 – Previewing Ballots, for more information about this feature.

Note

The Preview option will not be available until all data validation errors are addressed in AIMS. Using the preview option first performs a *Data Validation* as in step #16 of the Wizard

11.3 View Ovals

The **View Ovals** button on the **Ballot Editor** opens the **Ballot Target Locations** form, which is used to edit the location of every Ballot Target (oval/arrow) via its X & Y coordinate location on a ballot.

This form has two states: A “Locked” state, and an “Allow Editing” state. Click the **Allow Edits** toggle button to make changes. (The button will now display “Lock Down”.) When you are satisfied, click the **Lock Down** button to prevent further changes. (The button will now display “Allow Edits”.) Oval locations are entered in the order that they appear on the ballot. The oval or arrow locations for the first race that the voter will be considering are entered first.

Editing Ballots

Ballot Target Locations

Ballot Side #	Target Seq. #	Seq. X Position	Seq. Y Position	
1	1	3	17	Remove... <input type="button" value="Lock Down"/>
1	2	3	18	Remove...
1	3	3	19	Remove...
1	4	3	20	Remove...
1	5	3	21	Remove...
1	6	3	22	Remove...
1	7	3	27	Remove...
1	8	3	28	Remove...

Target Count: 29

Target # Sequence Fixing Tool

(Use this feature to insert new targets or remove extra targets.)

Move targets with #s equal to or greater than... Up By 1 Down By 1

Ballot Target Locations

Ballot Side #	Target Seq. #	Seq. X Position	Seq. Y Position	
1	1	3	17	Remove... <input type="button" value="Allow Edits"/>
1	2	3	18	Remove...
1	3	3	19	Remove...
1	4	3	20	Remove...
1	5	3	21	Remove...
1	6	3	22	Remove...
1	7	3	27	Remove...
1	8	3	28	Remove...

Target Count: 29

Target # Sequence Fixing Tool

(Use this feature to insert new targets or remove extra targets.)

Move targets with #s equal to or greater than... Up By 1 Down By 1

Note

On this form the front of the ballot is designated as Ballot Side # 1, while the back is designated as Ballot Side # 2. Putting values other than 1 or 2 in these positions will result in the ballot not being recognized when inserted into the AutoMARK VAT.

11.3.1 Optech Ballot Target Locations

On an Optech ballot, the Seq. X Position indicates the column number:

0, 1, 2, 3 on the front and 4, 5, 6, 7 on the back.

**EAGLE / OPTECH IV-C
Famous Names / 100
Demonstration Ballot**

TO VOTE: Complete the arrow(s) ← pointing to your choice(s), like this →
Mark with a #2 pencil or marking pen provided (NO RED INK).

Seq. Y Pos.	Seq. X Pos. 0	Seq. X Pos. 1	Seq. X Pos. 2	Seq. X Pos. 3
1	STRAIGHT PARTY			BOARD OF EDUCATION
2	VIRGINIA PARTY	FLORENCE NIGHTINGALE	ANDREW CARNEGIE	BOOKER T. WASHINGTON
3	OHIO PARTY	FRANCIS SCOTT KEY	WILLIAM R. HEARST	ALBERT EINSTEIN
4	OREGON PARTY	MEMBER OF STATE LEGISLATURE 3rd DISTRICT	MEMBER OF STATE LEGISLATURE 3rd DISTRICT	THOMAS A. EDISON
5	ZACHARY TAYLOR and MILLARD FILLMORE	SARAN B. ANTHONY	AMIE EISENHOWER	HELEN KELLER
6	BENJAMIN HARRISON and ADOLPH STEVENSON	ELEANOR ROOSEVELT	DOLLY MADISON	JOHN DEWEY
	CHESTER A. ARTHUR and THOMAS A. HENDRICKS	STATE TREASURER	CORNELIUS VANDERBILT	DIRECTOR OF RECREATION
	THEODORE ROOSEVELT and CHARLES W. FAIRBANKS	J. PAUL GETTY	JOHN D. ROCKEFELLER	LEPOY 'SATCHEL' PAIGE
	U.S. SENATOR	JOHN P. MORGAN	ASSOCIATE JUSTICE of the SUPREME COURT	HAROLD 'RED' GRANGE
	EVERETT DIRKSEN	LEARNED HAND	CLARENCE DARROW	JOHN WEISSMULLER
	CHARLES CURTIS	U.S. REPRESENTATIVE		KNUTE ROCKNE
	JOHN HANCOCK			WILLIAM DEMPSEY
	NELSON W. ALDRICH			GEORGE RUTH
				MILDRED ZAHARIAS
				Micky Mouse
				Donald Duck
				DIRECTOR OF ENTERTAINMENT
				CAROLE LOMBARD
				GEORGE JESSEL
				BILLY ROSE
				KATHRYN SMITH
				ISADORA DUNCAN

The Seq. Y Position is simply the count from the top target in that column.

The position of this ballot target is:
Seq. X Pos. = 1
Seq. Y Pos. = 5

11.3.2 Example Optech Ballot Showing Ballot Target location.

Editing Ballots

On an M-100 ballot, the Seq. X Position corresponds to the X-Timing Mark, and the Seq. Y Position corresponds to the Y-Timing Mark.

X-Timing Marks 1 2 3

Y-Timing Marks (numbered from top to bottom)

The Seq. Y Position corresponds to the Y Timing Mark

The position of this oval is:
Seq X Pos. = 2
Seq Y Pos. = 14

The ballot form includes the following sections:

- ELECTION DATE**
- COUNTY NAME, STATE**
- PRECINCT 1**
- Clerks Signature**
- County Clerk**
- INSTRUCTIONS TO VOTERS:** To vote complete the oval to the LEFT of your choice, like this (●). To cast a write-in vote, complete the oval to the LEFT of the blank space provided and print the candidate's name in that space. For specific information, refer to the card of instructions posted in the voting booth. If you tear, soil, deface or erroneously mark this ballot, return it to the Election Judge and obtain another.
- BEST AUTOMOBILE MANUFACTURER** (Vote For ONE)
 - BMW
 - MERCEDES
 - GENERAL MOTORS
 - HONDA
 - FERRARI
 - JAGUAR
 - FORD
 - VOLVO
 - Write-in
- BEST VOCAL ARTIST** (Vote For Not More Than TWO)
 - FRANK SINATRA
 - ELVIS
 - PATSY CLINE
 - JANIS JOPLIN
 - BUDDY HOLLY
 - BARRY WHITE
 - BILLIE HOLIDAY
 - STEVIE RAY VAUGHAN
 - "MAMA" CASS ELLIOT
 - Write-in
 - Write-in
- BEST ICE-CREAM FLAVOR** (Vote For ONE)
 - CHOCOLATE
 - STRAWBERRY
 - VANILLA
 - Write-in

The target location is marked with an oval on the 'BARRY WHITE' line in the 'BEST VOCAL ARTIST' section, corresponding to X-Timing Mark 2 and Y-Timing Mark 14.

11.3.3 M-100 Ballot Target Locations

Example M-100 Ballot Showing Ballot Target Location

Ballot Target Locations				
Ballot Side #	Target Seq. #	Seq. X Position	Seq. Y Position	Lock Down
1	1	6	5	Remove...
1	2	8	5	Remove...
1	3	10	5	Remove...
1	4	12	5	Remove...
1	5	14	5	Remove...
1	6	16	5	Remove...
1	7	6	7	Remove...
1	8	8	7	Remove...

The First 8 Ballot Target Locations from the Above Expo Ballot

To edit the location of Ballot Target (oval or arrow):



1. Click the **Allow Edits** button. (it will now display “**Lock Down**”)
2. Edit the Ballot side #, Target Seq #, Seq. X position, or Seq. Y position.
3. When edits are complete, click the **Lock-Down** toggle button to prevent further edits.
4. Close form.

To delete a Ballot Target (oval or arrow):



1. Click the **Allow Edits** button. (it will now display “**Lock Down**”)
2. Select the **Remove** button next to the row.
3. Click **Yes** on the confirmation message: Delete this ballot target?
4. To re-sequence the numbers, choose the **Target Seq.** number right after the one you deleted. Enter that number into the box at the bottom, select “Up by 1” and click **Go**.
5. When edits are complete, click the **Lock-Down** toggle button to prevent further edits.
6. Close the form.

To insert a Ballot Target (oval or arrow):



1. Click the **Allow Edits** button. (it will now display “**Lock Down**”)
2. Determine where in the sequence the Ballot Target (oval) should appear. This is top-down on the ballot. Type this number into the box at the bottom, select “**Down by 1**” and click **Go**.
3. Enter the new Ballot Target (oval or arrow) information in the open boxes below the other Ballot Target (oval or arrow) positions. (The rows will re-sort after you close the window.)
4. When edits are complete, click the **Lock-Down** toggle button to prevent further edits.
5. Close the form.

11.3.6 Maximum Number of Potentially Active Voting Positions

The number of potentially active voting positions for each ballot style is directly limited by the number of voting positions that fits onto the physical ballot and can be read by the corresponding tabulator. Below is a table describing the limitations of each type of tabulator.

Model 100/650 (3 Ovals per Inch)

Ballot length	Number of positions	Columns	Total positions
14" Ballot	36 oval positions per column	6 columns	216 total positions
17" Ballot	45 oval positions per column	6 columns	270 total positions
19" Ballot	51 oval positions per column	6 columns	306 total positions

Model 100/650 (4 Ovals per Inch)

Ballot length	Number of positions	Columns	Total positions
11" Ballot	36 oval positions per column	6 columns	216 total positions
14" Ballot	48 oval positions per column	6 columns	288 total positions
17" Ballot	60 oval positions per column	6 columns	360 total positions
19" Ballot	68 oval positions per column	6 columns	408 total positions

Model 100/650 (17" x 41 rows)

Ballot length	Number of positions	Columns	Total positions
17" Ballot	41 oval positions per column	6 columns	246 total positions

DS200

	3 Column	4 Column	12 Column
11-inch Ballot	5.0 mm row = 300 6.5 mm row = 228 8.0 mm row = 186	5.0 mm row = 400 6.5 mm row = 304 8.0 mm row = 248	5.0 mm row = 1200 6.5 mm row = 912 8.0 mm row = 744
14-inch Ballot	5.0 mm row = 390 6.5 mm row = 300 8.0 mm row = 246	5.0 mm row = 520 6.5 mm row = 400 8.0 mm row = 328	5.0 mm row = 1560 6.5 mm row = 1200 8.0 mm row = 984
17-inch Ballot	5.0 mm row = 486 6.5 mm row = 372 8.0 mm row = 300	5.0 mm row = 648 6.5 mm row = 496 8.0 mm row = 400	5.0 mm row = 1944 6.5 mm row = 1488 8.0 mm row = 1200
19-inch Ballot	5.0 mm row = 546 6.5 mm row = 420 8.0 mm row = 336	5.0 mm row = 728 6.5 mm row = 560 8.0 mm row = 448	5.0 mm row = 2184 6.5 mm row = 1680 8.0 mm row = 1344

Optech IVC Target Limitations

Ballot length Limits	Max Columns	Total positions
12" (minimum length)	6 columns	360 total positions
18" (maximum length)	6 columns	576 total positions

Optech Eagle Target Limitations

Ballot length Limits	Max Columns	Total positions
14" (minimum length)	6 columns	432 total positions
22" (maximum length)	6 columns	720 total positions

Formula for determining Optech paper voting target limits follows:

Ballot length – 2" (header and footer) x 6 (maximum density of arrows) x 6 (number of columns) = Maximum voting positions

11.4 Copy Ballot...

The copy ballot functionality is accessible from the menu **Tools -> Copy Ballot...** and from the Ballot Editor form by pushing the **Copy this ballot...** button. Please see Section 11.1 for more information on the Ballot Editor form. The *Copy Ballot...* function allows you to copy one of your existing ballots and assign it to an existing split, assign it to a new split under an existing precinct, or assign it to a new precinct under a new split.

When you go to the menu option the following form appears.

Ballot Copier Tool

Step #1: Provide a suffix for ballot & split names
Name Suffix This text will be appended to the name of the new ballot (and the new split, if any)

Step #2: Select a Source Ballot To Copy From...
Ballot Name

Step #3: Pick a destination for the copied ballot... (Choose from one of the following 3 options)

Option #1: Add copied ballot to an existing split in an existing precinct.
Split Name

Option #2: Create a new split under an existing Precinct and add copied ballot to the new split.
Precinct

Option #3: Create a new precinct and add copied ballot to the 1st (and only) split in the new precinct.
Precinct Name

Step #4: Copy and Place New Ballot

1. **Step #1** is to provide a **Name Suffix**. This will guarantee that the ballot or split name that is created will be unique. The names can always be changed later.
2. **Step #2** is to choose which ballot you want to copy by using the pull down menu.
3. **Step #3** is to **choose** the destination for the newly copied ballot. There are three options.

4. **Option #1-** This **option** will add the new ballot to an existing split. See Section 9.3 for more information on splits.
5. **Option #2 -** This **option** allows you to add the ballot to an existing Precinct. Choose the Precinct you want to add the new ballot too using the pull down menu. See Section 9 for more information on precincts. The split name will be generated for you using the suffix.
6. **Option #3-** This **option** will create a new precinct and a new split and will add the ballot to the newly created split. Please provide a name for the new Precinct in the text box.
7. Once one of the options has been chosen, press the button **Step #4: Copy and Place New Ballot** to complete the copy function. The new ballot will have identical races, candidates and oval or arrow locations to the copied ballot. It will not have a unique bar code assigned to it. See Section 12.3.3 Split Ballot Associations for more information about assigning a unique bar code.

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12 Additional Edits

In addition to precincts, ballots, and races, the Edit Menu gives you the ability to edit all other data in the election database. Additional editing functions include the ability to edit:

- Headers
- Groups
- Splits
- Split/Ballot Associations
- Translations Archive
- Speech Dictionary
- Font Defaults
- Prompts
- Languages

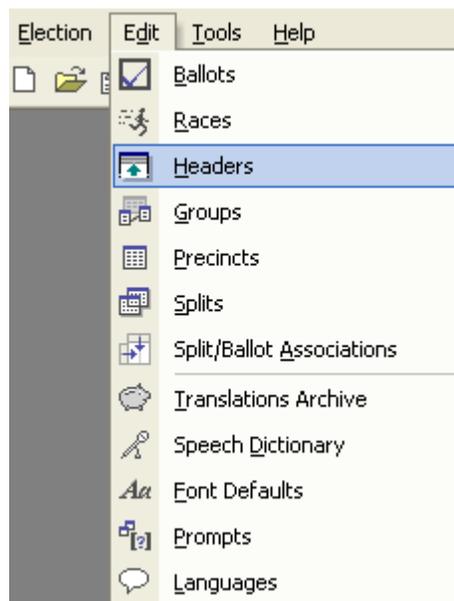
12.1 Headers Editor

The **Headers Editor** is used to maintain race header information.

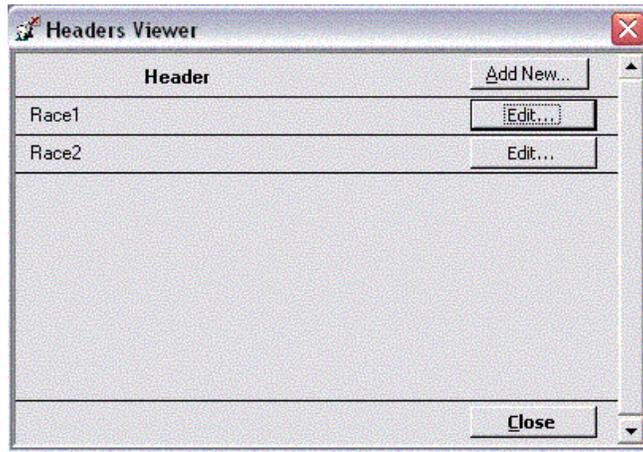
To navigate to the **Headers Editor**:



1. Select **Headers** from the Edit Menu on the menu bar.



The **Headers Viewer** appears.

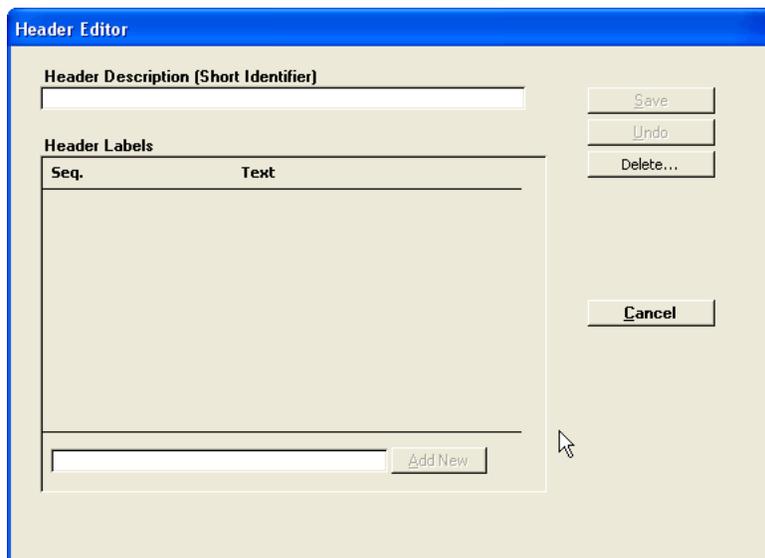


To create a **NEW** header,:



1. Click the **Add New** button on the **Headers Viewer** form.

A blank **Header Editor** form appears.



5. Enter the header description and click **Save**. This will automatically create a first Header Label (identical to the Header Description.) The header labels can now be edited or added as described in section 10.4.210.4.2.

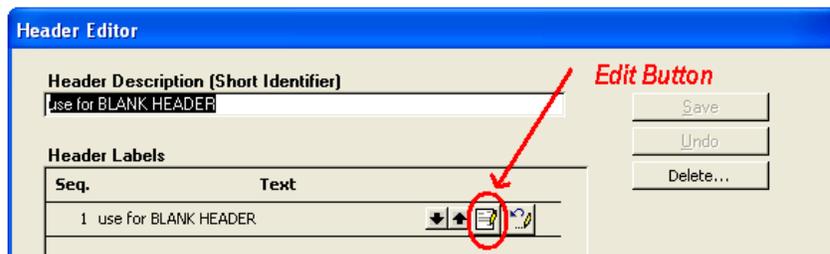
Note

The Header Description is limited to 255 characters.

To Create a **Blank** Header

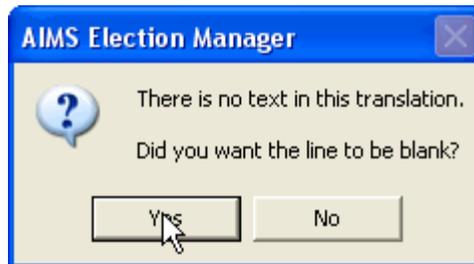


1. Create a new header as described above, using anything for the header description. You may want to choose something descriptive such as 'Blank Header'. The first header label will be created when you click **Save** (same text as in your header description).
6. Click the edit button next to the first header label. The Header Label editing Tool will appear.



7. Select the label text, and clear it using the delete key on your keyboard (not the delete button on the form). Then click the **Save** button.

You will be asked:

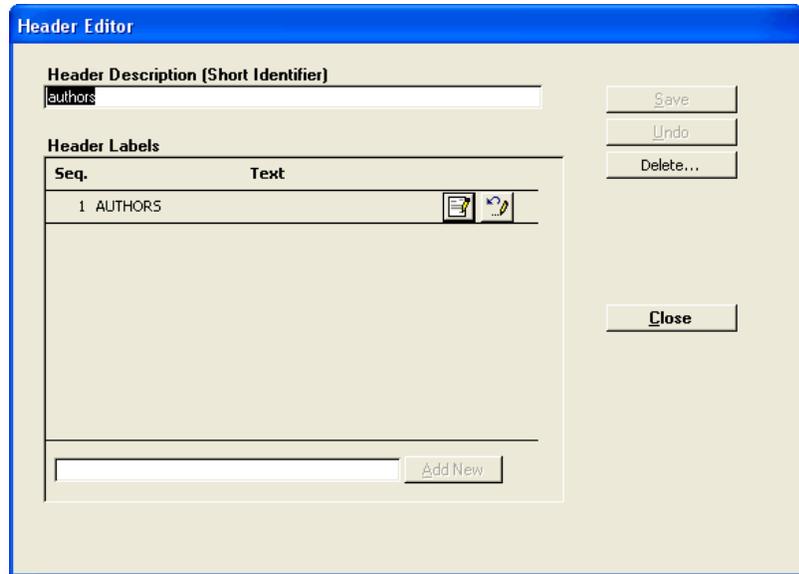


8. Click **Yes** and then **Close** the Editing Tool.

To **edit** a Header:



1. Click **Edit** next to the header name on the **Headers Viewer** form.
9. The **Header Editor** form appears.



10. To use the Header Editor, follow the steps listed in Section 10.4.2.1 Header Editor

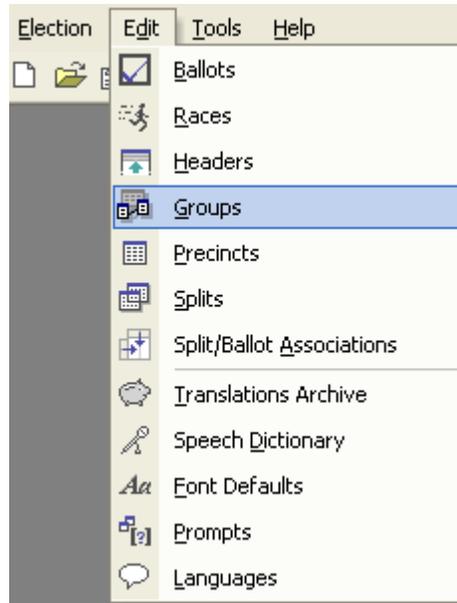
12.2 Groups Editor

The Groups Editor is used to maintain election groups (parties).

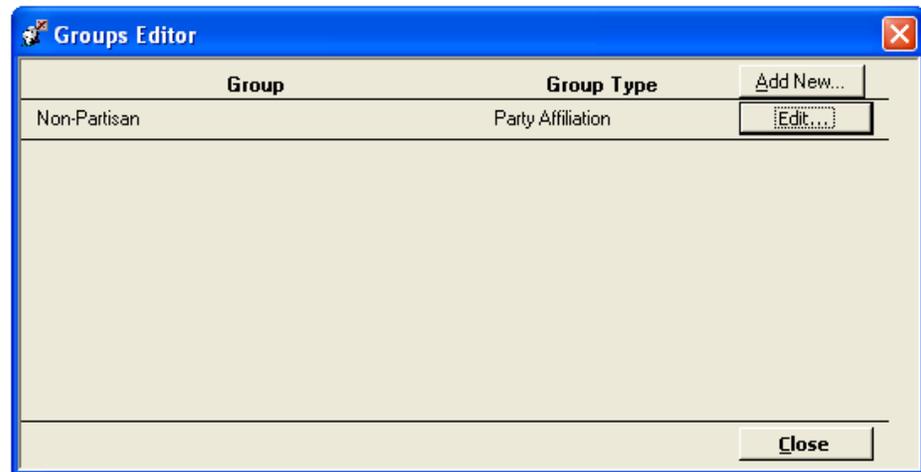
To open the Groups Editor:



1. Select **Groups** from the Edit Menu on the menu bar.



The **Groups Editor** appears.

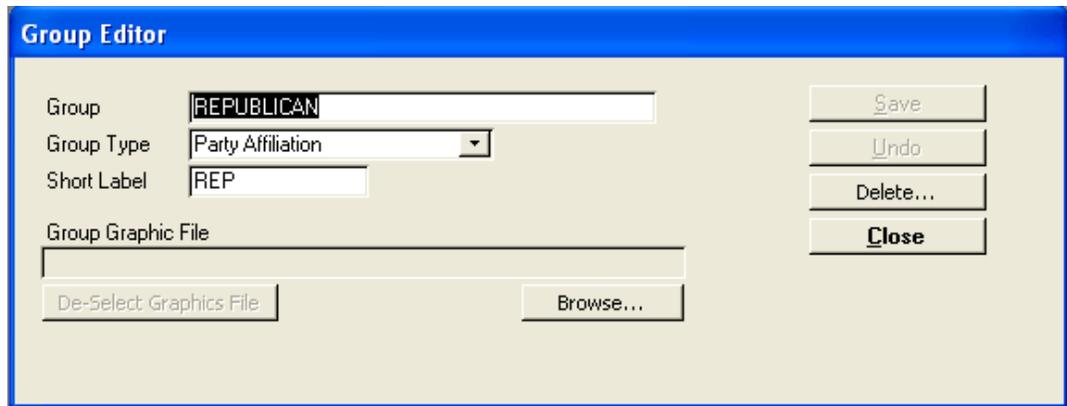


12.2.1 To edit a Group:



1. Click **Edit** next to the Group you want to edit.

The **Group Editor** form appears.



Group Editor

Group:

Group Type:

Short Label:

Group Graphic File:

2. Group: Update by entering new text in the box.
3. Group Type: Select from drop down list, either,
 4. Party Affiliation
 5. Conditional Question
(A Conditional Question Group Type is used to present alternate sets of races to a voter depending upon whether he/she selects yes or no to a particular question.)
6. Short Label: Change or enter by entering new text in the box.
7. Use browse to select a group graphic. The graphic file may be a BMP or JPG that is 30 pixels high by 40 pixels wide. This graphic will appear next to candidates associated with this group.
8. To delete a Group, click **Delete**.
9. Select Save, Undo, Cancel, or Delete.

12.2.2 To add a new Group:



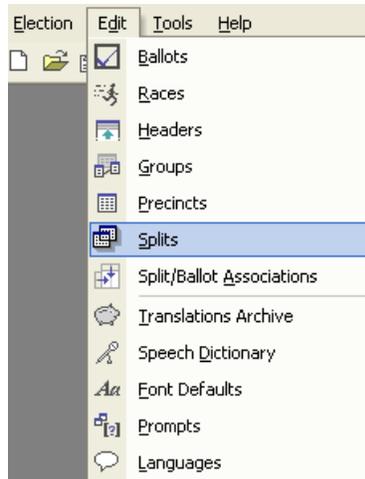
1. Click **Add New** on the **Groups Editor** form.
2. A blank **Group Editor** form appears.
3. Complete the form.
4. Select Save, Undo, Cancel, or Delete..

12.3 Splits Editor

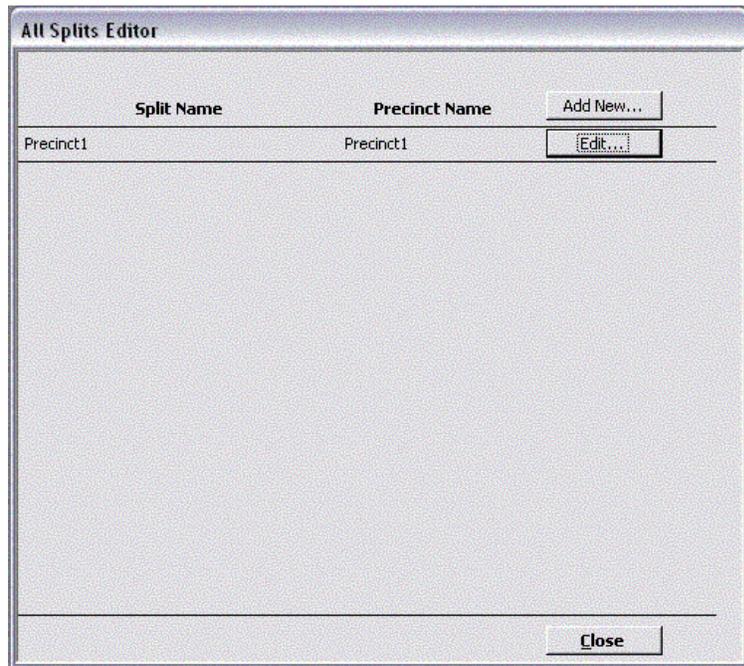
To open the **All Splits Editor**:



1. Select **Splits** from the Edit Menu on the menu bar.



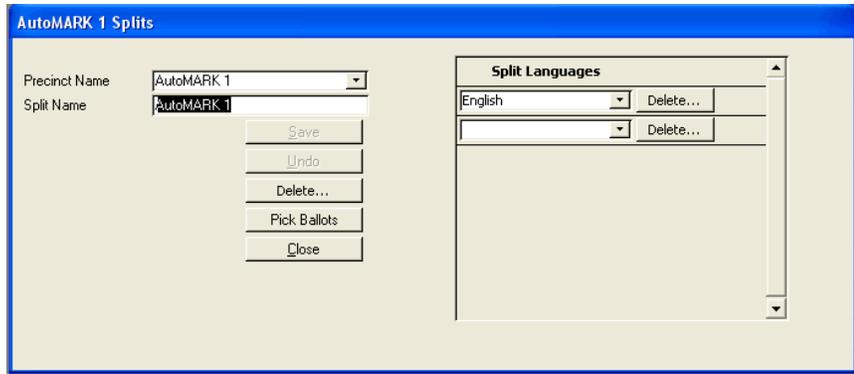
11. The All Splits Editor appears.



12.3.1 To edit a Split:



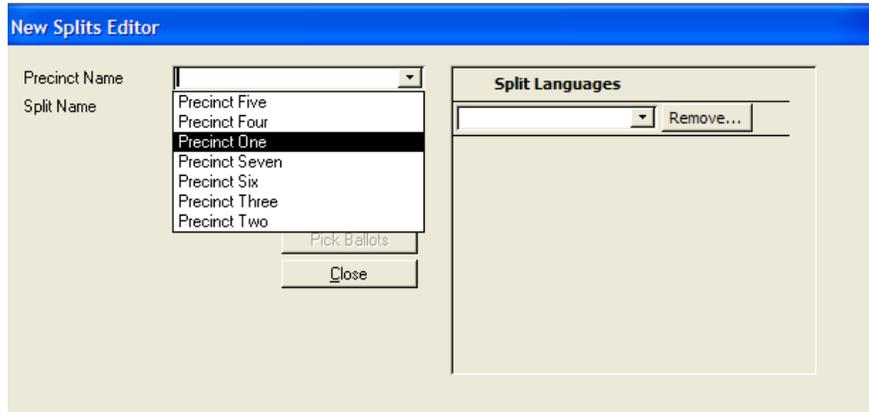
1. Click the **Edit** button next to the Split Name.
2. The **Splits** form opens.



For details on editing a Split, follow the steps listed in Section 9.3 Splits.

12.3.2 To Add a New Split

1. To add a New Split to the currently selected Precinct, click the **Add New** button on the **All Splits Editor**.
2. The *New Splits Editor* appears. Select the *Precinct Name* you want to add the split to from the pull down menu. Type the name of the Split into the *Split Name* field.



3. Click on the down arrow under Split Languages. If the election has languages besides English defined as default languages these languages will be populated in this column at this time. Click the Remove... button next to any language that is not desired in this split.

Note

The Save button will be disabled during the creation of a new split. Clicking on the Close button will result in the creation of the new split.

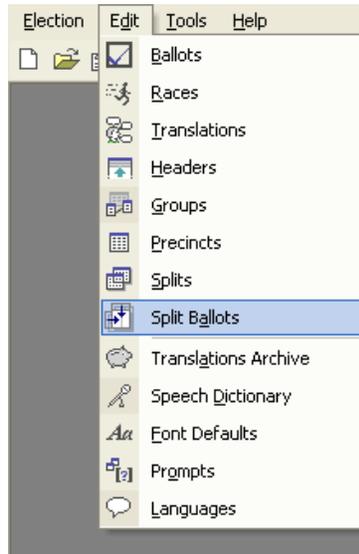
12.3.3 Split Ballots Manager

The Split Ballots Manager facilitates the manual creation of a ballot format.

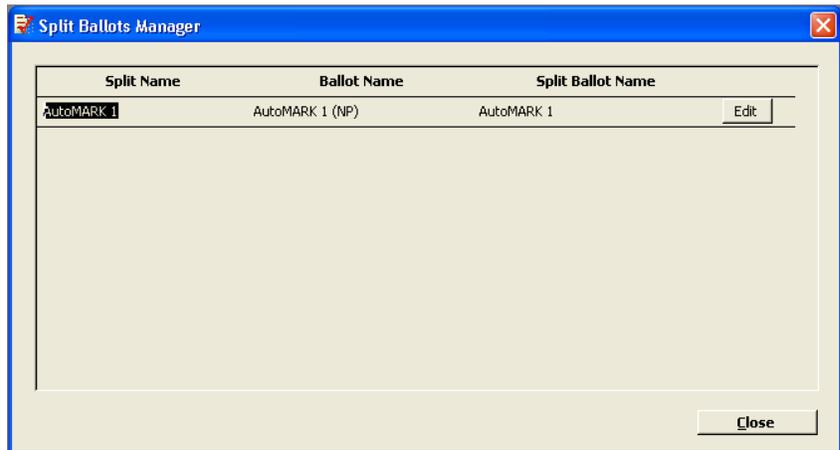
To open the Split/Ballot Manager:



1. Select **Split Ballots** from the Edit Menu on the menu bar.



The Split Ballots Manager appears:



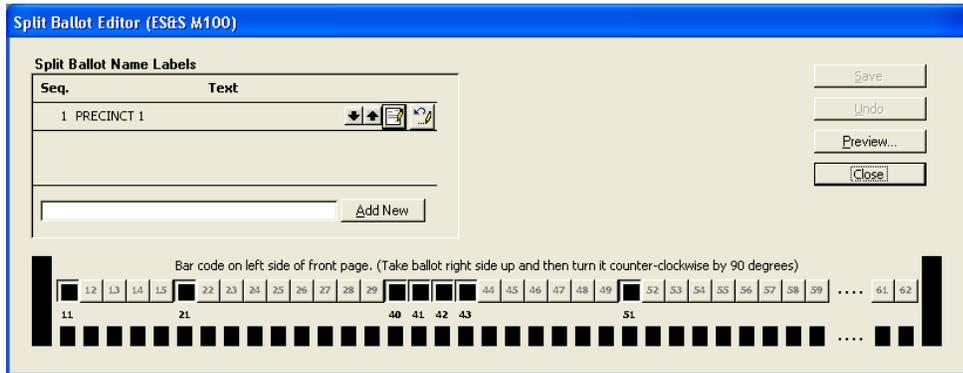
To edit a particular ballot:



1. Click **Edit** in the row of the split you want to edit.

The Split Ballot Editor appears: This form looks different, depending on the ballot type (ES&S Unity M100, ES&S Unity Optech, or Diebold GEMS,)

Split Ballot Editor for ES&S M100 and Expo Ballots



For the ES&S M100 style ballots, the bar code is on the left side of the front page, and the bars are numbered on the ballot as shown above. If you take the ballot right side up and turn it counter-clockwise by 90 degrees, you will see the one-to-one correspondence to the toggle keys on this form. For ES&S Expo style ballots, the bar code is at the bottom when viewing the ballot in landscape. The bar code is represented as plus-sized timing marks. The style key bar code can be entered into this form by depressing the toggle keys corresponding to the bar code printed on the ballot.

Note

ES&S ballot style number 840 and each multiple of 840, requires a manual update to the code channel. Manually toggle code boxes 40, 41, 42, 43 and 55 to the off position and set positions 46, 47, 48 and 54 to "on." The only position that is not changed is position 49. The following code boxes should be activated in the corrected Code Channel for Sequence 840: 11, 21, 46, 47, 48, 49, and 54.

Split Ballot Editor for ES&S Optech Ballots

Split Ballot Editor (ES&S Optech)

Split Ballot Name Labels

Seq.	Text
1	PRECINCT 1

Buttons: Save, Undo, Preview..., Close

Add New

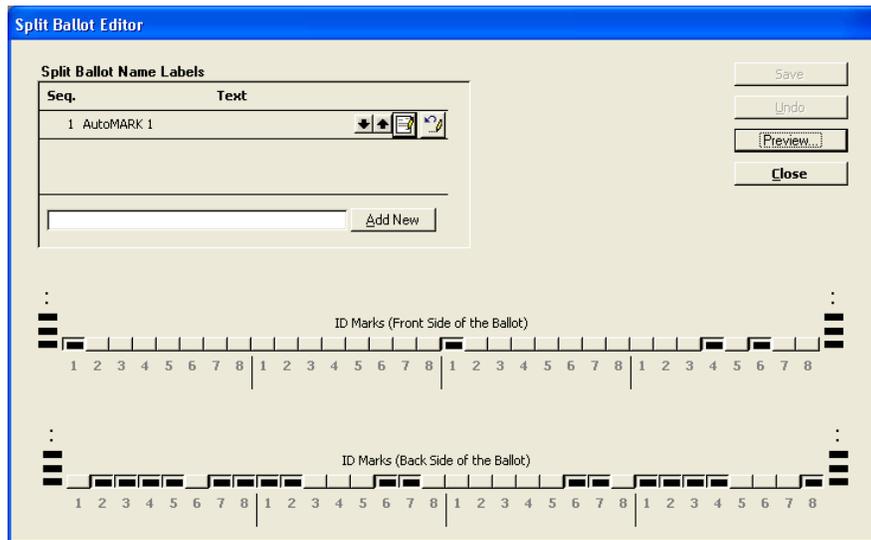
Split Ballot Bar Code / Code Channel

Upper Left-Hand Side

Upper Right-Hand Side

The ES&S Optech ballots have the style bar code printed on the upper left and the upper right corners of the ballot (front only). Just like the Diebold ballot, the style keys have a one-to-one relationship with the ballot bar code as printed on the ballot. The style key can be entered into the form by depressing the toggle keys corresponding to the bar code on the printed ballot.

Split Ballot Editor for Diebold Ballots



The Diebold Split Ballot Editor allows you to enter the ballot format by indicating the style key for the front and back sides of the ballot.

The actual ballot has a bar code printed on the bottom of the front, and a different bar code printed on the bottom of the back. These bars line up with the X timing marks. The style keys on the form have a one-to-one relationship with the bar codes printed on the bottom of the ballot. The style key can be entered into the form by depressing the toggle keys corresponding to the bars of the bar code.

(Note – the leftmost bar on the bottom of the ballot and rightmost bar on the bottom of the ballot are *not* part of the bar code -- they are Y Timing Marks.)

The Split Ballot Name Labels section contains the label that will appear to the voter on the instruction screen. See Section 8 on how to add or edit translations for this label.

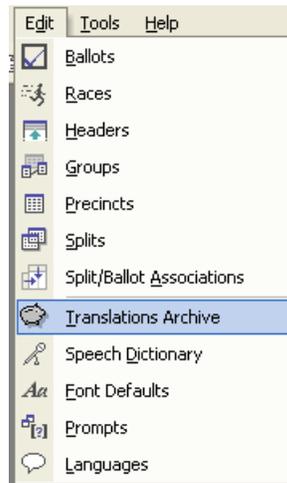
12.4 Translations Archive

The Translations Archive stores and edits frequently used English phrases and their translations for use in future elections. Once a phrase has been translated, AIMS will store the translation in the archive. If that same phrase is imported, the translation will be “looked up” from the archive. See also Section 13.3.

To open the Translations Archive:



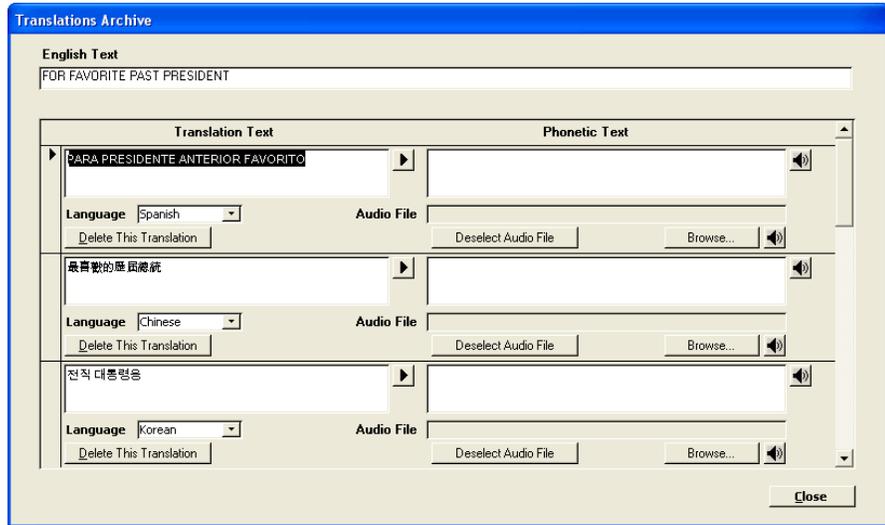
1. Select **Translations Archive** from the Edit Menu on the menu bar.



The Translations Archive form appears:

2. Click **Edit** next to the line of text to be edited.

Translations Archive		
English Translation Text		
(Vote for One)	Edit	Delete
(Vote for Two)	Edit	Delete
AGAINST the issue and sales of genera...	Edit	Delete
AUTHORS	Edit	Delete
BASEBALL TEAM	Edit	Delete
Demonstration Election	Edit	Delete
Do you favor a National Lottery admin...	Edit	Delete
FOR FAVORITE AUTHORS	Edit	Delete
FOR FAVORITE BASEBALL TEAM	Edit	Delete
FOR FAVORITE LATE NIGHT TALK SHOW	Edit	Delete
FOR FAVORITE PAST PRESIDENT	Edit	Delete
FOR MINISTER	Edit	Delete
FOR the issue and sale of general obl...	Edit	Delete
LATE NIGHT TALK SHOW	Edit	Delete
MINISTER OF ART	Edit	Delete
		Close



- Using the Translations Archive form, translated text, phonetic text and audio .wav files may be edited for each English text phrase archived. For information regarding phonetic text, see Section 16 - Guide for Entering Symbolic Phonetic Pronunciation .

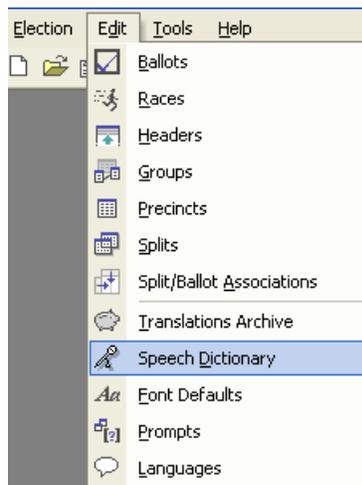
12.5 Speech Dictionary

The Speech Dictionary is used to edit the text phonetically to produce more accurate sounding audio translations. The Data Dictionary Text to Phonetic tool allows you to select a language and edit both the text and the phonetic text for that language.

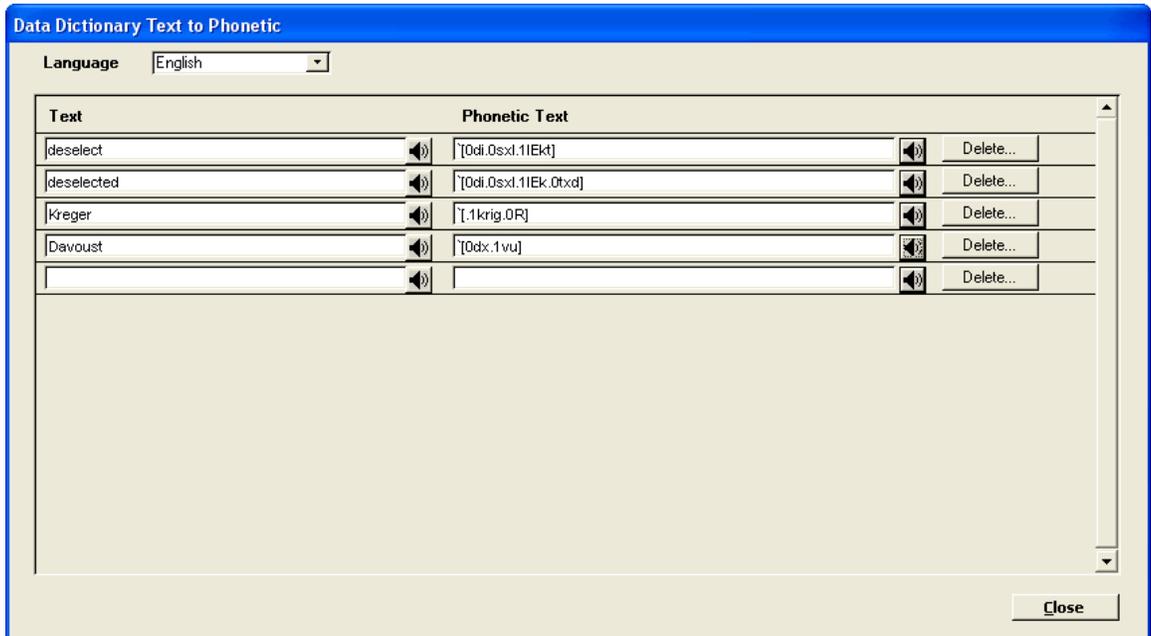
To select the Data Dictionary Text to Phonetic form:



- Select **Speech Dictionary** from the Edit Menu on the menu bar.



The Data Dictionary Text to Phonetic form appears.



- The Data Dictionary allows editing of both text and phonetic text in the Data Dictionary. The audio pronunciation of the text can be played as well. For information about entering phonetic text, see Section 16 - Guide for Entering Symbolic Phonetic Pronunciation.

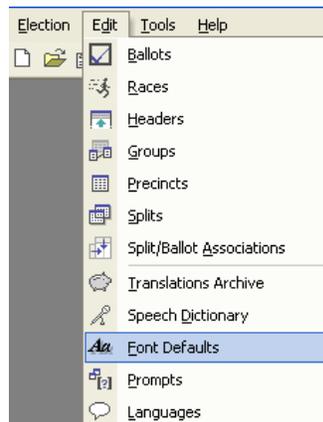
12.6 Font Defaults

The Fonts Default Manager is used to maintain the fonts and the font attributes used for the label text on the ballot. Each label with its corresponding font is listed individually.

To open the Font Defaults Manager:

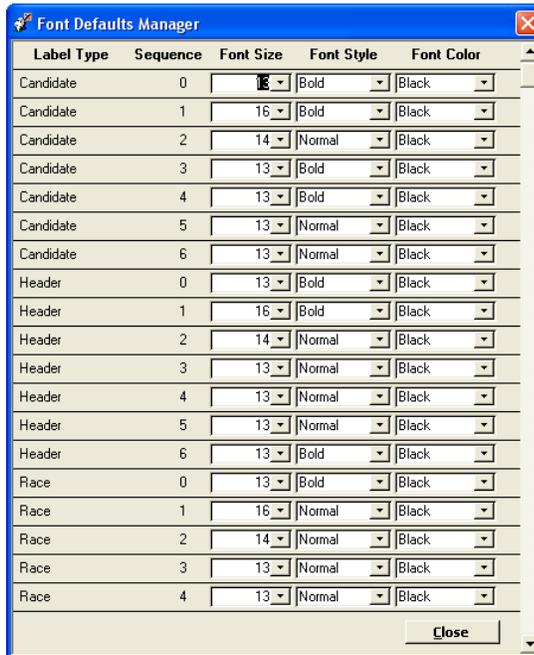


- Select **Font Defaults** from the Edit Menu on the menu bar.



Additional Edits

The Font Defaults Manager appears.



- The Font Defaults Manager give you total control over the font size, font style and color for all label text displayed on the ballot. The font size, style, and color are edited by selecting new choices from the drop-down lists. These are default values and can be overridden on the individual candidate, header or race. Sequence 0 indicates any entries beyond six. Note: Due to Federally mandated maximum and minimum displayed font sizes, the Font Size option will be limited in effect.

12.7 Prompts

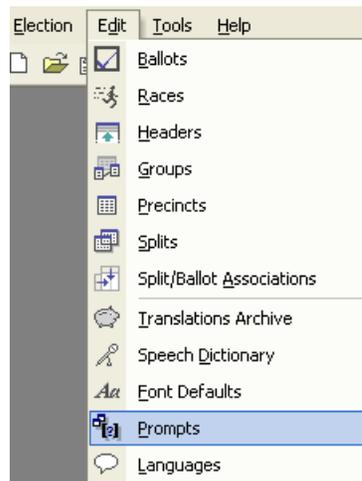
The Voter Assist Terminal uses both audio and visual prompts to cue the voter about the next action required or the existence of an error situation.

The Prompts Viewer identifies, appears, and pronounces all of the system prompts used on the VAT.

To open the Prompts Viewer:



1. Select **Prompts** from the Edit Menu on the menu bar.



The **Prompts Viewer** appears:

Prompt ID	Prompt Description	Prompt Screen	Prompt Type	
1	Please Insert Ballot (Note that alternate languages are sr	Multiple	Text	Edit Prompt
2	Please Insert Ballot	Insert Ballot	Audio	Edit Prompt
3	Keypad Triangle key Screen ON	Multiple	Audio	Edit Prompt
4	Keypad Triangle key Screen OFF	Multiple	Audio	Edit Prompt
5	Exit screen message	Exit screen	Text	Edit Prompt
6	Exit screen message - 2nd line	Exit screen	Text	Edit Prompt
7	Exit screen audio 1	Exit screen	Audio	Edit Prompt
8	Exit screen audio when any other key is pressed	Exit screen	Audio	Edit Prompt
9	Message when exiting without marking ballot	Exit Thank You screen	Text	Edit Prompt
10	Audio when exiting without marking ballot	Exit Thank You screen	Audio	Edit Prompt
11	Left button on exit screen that causes it to cancel the exit	Exit screen	Text	Edit Prompt
12	Paper Jam Screen message	Error - Paper Jam Screen	Text	Edit Prompt
13	Paper Jam Screen - Audio	Print Ballot Screen	Audio	Edit Prompt
14	Ballot not readable	Error - ballot not readable	Text	Edit Prompt
15	Ballot not readable - audio	Error - ballot not readable audio	Audio	Edit Prompt

The Prompts Viewer displays each prompt, the prompt ID, and the type of prompt (text or audio).

To edit a particular prompt:



2. Click the **Edit Prompt** button in the row of the prompt you want to edit.

The **Prompt Editor** appears:

Prompt Editor

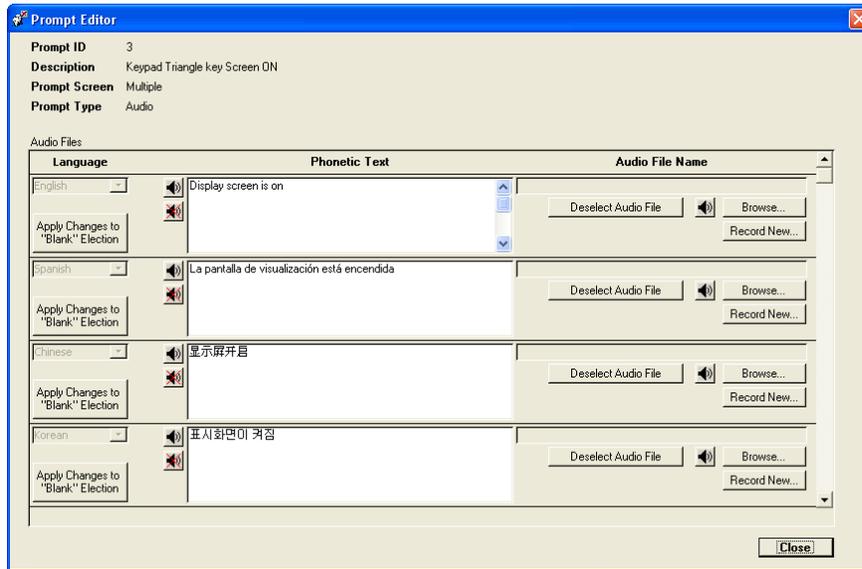
Prompt ID: 1
 Description: Please Insert Ballot (Note that alternate languages are small
 Prompt Screen: Multiple
 Prompt Type: Text

Font Style: Bold
 Font Color: Black

Phonetic Translations

Language	Font Size	Prompt Text
English	24	Please Insert Your Ballot
Spanish	24	Inserte su papeleta de votación
Chinese	24	请插入您的选票
Korean	24	귀하의 투표용지를 넣으시기 바랍니다.

Prompt Editor for a Text Prompt



Prompt Editor for an Audio Prompt

3. The **Prompt** Editor allows you to edit how the prompt appears on the VAT (text) or how the prompt message is pronounced (audio).
4. For a text prompt, the font style and color is selected from drop down lists located in the upper right corner of the form.
5. For an audio prompt, the audio file can be selected, or a new file can be recorded.
6. Each prompt and its translations have been preloaded to the system. Each language, the size of the prompt text, and the text may be edited on this form.
7. To apply the change to a new, upcoming election, click the **Apply Changes to “Blank” Election** button located in each language row.

12.7.1 Changing Prompts for Multiple Page Ballots

For ballots that contain more than one ballot, prompts 26 and 77 should be altered to better instruct the voter.

Audio Prompt 26: Voting Instructions Subhead and Text Body Audio

Audio Prompt 77: Thank you Audio

Recommended text:

For ballots with one page, here is the recommended English, Spanish, and Creole Text for Prompt 26:

English:

Voting Instructions. The AutoMARK Voter Assist Terminal is designed to help you mark your optical scan ballot. This system will guide you through each contest in the ballot and

present each choice. Once you have made your selections, you can review your selections and then choose to have your ballot marked. Your ballot will then be returned to you to be deposited into a ballot box. The keypad on your right is used to interact with the AutoMARK and to make your selections. You will find four arrow keys and a center select button. In addition to the arrow keys, there are four vertical keys to the right of the arrow keys. The bottom toggle key will adjust audio volume. The next toggle key will adjust the speed of the synthesized speech. The round button will repeat the last spoken phrase, and the top diamond key will turn the display screen on or off for privacy. Pressing the right arrow key will move to the next contest. Pressing the left arrow key will move to the previous contest. Pressing the down arrow key will move to the next candidate or choice within a contest. Pressing the up arrow key will move to the previous candidate. When you hear the name of the candidate or choice that you wish to select, press the square select key in the center of the arrow keys. If you need additional assistance, please alert an election official. To exit without marking your ballot, press the diamond-shaped screen button four times in a row. Press the right arrow key now to hear the first contest. Press the round repeat key to hear these instructions again.

Spanish:

Instrucciones de la votación. El Terminal de ayuda al votante AutoMARK está diseñado para ayudarlo a marcar su papeleta escaneada. Este sistema lo guiará a través de cada elección en la papeleta y le presentará todas las opciones. Luego de realizar sus selecciones, puede revisarlas y marcar su papeleta. Se le devolverá la papeleta para que la deposite en un ánfora de votación. El teclado a su derecha se emplea para interactuar con AutoMARK y realizar sus selecciones. Verá que hay cuatro teclas de flecha y un botón central de selección. Además de las teclas de flecha, hay cuatro teclas verticales a la derecha de las flechas. La tecla de conmutación de la parte baja ajusta el volumen de audio. La siguiente tecla de conmutación ajusta la velocidad de la voz sintetizada. El botón redondo repetirá la última frase hablada, y la tecla triangular superior encenderá o apagará la pantalla para proteger su privacidad. Al presionar la tecla flecha derecha se moverá a la siguiente elección. Al presionar la tecla flecha izquierda se moverá a la anterior elección. Al presionar la tecla flecha abajo se moverá al siguiente candidato u opción dentro de la elección. Al presionar la tecla flecha arriba se moverá al anterior candidato. Cuando escuche el nombre del candidato u opción que desea seleccionar, presione la tecla cuadrada de selección en el medio de las teclas de flecha. Si necesita ayuda, contacte con un funcionario del proceso de votación. Para salir sin marcar su papeleta, presione la tecla triangular en la pantalla 4 veces seguidas. Presione la tecla de flecha derecha para continuar a la siguiente pantalla.

Creole:

Enstriksyon pou Vote. Tèminal AutoMARK pou Asiste Elektè deziyen pou ede w make bilten ou nan yon eskanè optik. Sistèm sa a ap gide w nan chak pòs elektoral epi l ap prezante chak chwa. Depi w fin fè chwa ou yo, ou kapab revize yo pou w decide make bilten ou. Answit, bilten w ap retounen vin jwenn ou pou w depoze li nan yon bwat bilten. Klavye ki adwat ou a sèvi pou kominike avèk AutoMARK epi pou fè chwa ou yo. W ap jwenn kat (4) touch flèch ak yon bouton pou chwazi nan sant lan. Anplis touch flèch yo, gen kat (4) flèch vètikal adwat touch flèch yo. Touch dòfèlkot ki anba a ap ajiste volim odyo a. Pwochen touch dòfèlkot la ap ajiste vitès pawòl sentetik la. Bouton won an ap repete dènye fraz ki di a, epi touch dyaman anwo a ap limen oswa etenn ekran an pou konfidansyalite. Lè w peze touch flèch adwat la, l ap deplase pou li ale nan pwochen pòs elektoral la. Lè w peze touch flèch agòch la, l ap deplase pou li ale nan pòs elektoral ki anvan an. Lè w peze touch flèch desann nan, l ap deplase pou li ale nan pwochen kandida a oswa nan chwa ki nan yon pòs elektoral. Lè w peze touch flèch monte a, l ap deplase pou li ale nan kandida ki anvan an. Lè w tande non kandida a oswa chwa ou vle fè a, peze touch chwazi ki gen fòm kare a nan sant touch flèch yo. Si w bezwen plis asistans, tanpri fè yon moun ki reskonsab eleksyon an konnen sa san pèdi tan. Pou sòti

san w pa make okenn bilten, peze bouton ekran ki gen fòm dyaman kat (4) fwa youn apre lòt.

Peze touch flèch adwat la pou kounye a pou w tande premye pòs elektoral la. Peze touch repete ki won an pou w tande enstriksyon sa yo ankò.

For Creole, click on the **Browse** button underneath the *Audio File Name* section. Make sure the selected file is PromptCre26.wav.

For ballots with more than one page, here is the recommended English, Spanish, and Creole Text for Prompt 26.

English:

Voting Instructions. The AutoMARK Voter Assist Terminal is designed to help you mark your optical scan ballot. This system will guide you through each contest in the ballot and pre-empt each choice. Once you have made your selections, you can review your selections and then choose to have your ballot marked. Your ballot will then be returned to you to be deposited into a ballot box. Please note that your ballot is composed of more than one ballot sheet. If you are unsure as to whether you have received all of your ballot sheets, please contact a poll worker immediately. The keypad on your right is used to interact with the AutoMARK and to make your selections. You will find four arrow keys and a center select button. In addition to the arrow keys, there are four vertical keys to the right of the arrow keys. The bottom toggle key will adjust audio volume. The next toggle key will adjust the speed of the synthesized speech. The round button will repeat the last spoken phrase, and the top diamond key will turn the display screen on or off for privacy. Pressing the right arrow key will move to the next contest. Pressing the left arrow key will move to the previous contest. Pressing the down arrow key will move to the next candidate or choice within a contest. Pressing the up arrow key will move to the previous candidate. When you hear the name of the candidate or choice that you wish to select, press the square select key in the center of the arrow keys. If you need additional assistance, please alert an election official. To exit without marking your ballot, press the diamond-shaped screen button four times in a row. Press the right arrow key now to hear the first contest. Press the round repeat key to hear these instructions again.

Spanish:

Instrucciones de la votación. El Terminal de ayuda al votante AutoMARK está diseñado para ayudarlo a marcar su papeleta escaneada. Este sistema lo guiará a través de cada elección en la papeleta y le presentará todas las opciones. Luego de realizar sus selecciones, puede revisarlas y marcar su papeleta. Se le devolverá la papeleta para que la deposite en un ánfora de votación. Por favor note que su votación es compuesta de más de una hoja de votación. Si usted está inseguro en la cantidad de balotas que ha recibido, por favor comuníquese con un funcionario de elección inmediatamente. El teclado a su derecha se emplea para interactuar con AutoMARK y realizar sus selecciones. Verá que hay cuatro teclas de flecha y un botón central de selección. Además de las teclas de flecha, hay cuatro teclas verticales a la derecha de las flechas. La tecla de conmutación de la parte baja ajusta el volumen de audio. La siguiente tecla de conmutación ajusta la velocidad de la voz sintetizada. El botón redondo repetirá la última frase hablada, y la tecla triangular superior encenderá o apagará la pantalla para proteger su privacidad. Al presionar la tecla flecha derecha se moverá a la siguiente

elección. Al presionar la tecla flecha izquierda se moverá a la anterior elección. Al presionar la tecla flecha abajo se moverá al siguiente candidato u opción dentro de la elección. Al presionar la tecla flecha arriba se moverá al anterior candidato. Cuando escuche el nombre del candidato u opción que desea seleccionar, presione la tecla cuadrada de selección en el medio de las teclas de flecha. Si necesita ayuda, contacte con un funcionario del proceso de votación. Para salir sin marcar su papeleta, presione la tecla triangular en la pantalla 4 veces seguidas. Presione la tecla de flecha derecha para continuar a la siguiente pantalla.

Creole:

Enstriksyon pou Vote. Tèminal AutoMARK pou Asiste Elektè deziyen pou ede w make bilten ou nan yon eskanè optik. Sistèm sa a ap gide w nan chak pòs elektoral epi l ap prezante chak chwa. Depi w fin fè chwa ou yo, ou kapab revize yo pou w deside make bilten ou. Tanpri remake bilten ou a genyen ladan plis pase yon bilten vòt. Si w pa sèten ou resevwa tout bilten vòt ou yo, tanpri kontakte yon anplwaye eleksyon an imedyatman pou sa. Answit, bilten w ap retounen vin jwenn ou pou w depoze li nan yon bwat bilten. Klavye ki adwat ou a sèvi pou kominike avèk AutoMARK epi pou fè chwa ou yo. W ap jwenn kat (4) touch flèch ak yon bouton pou chwazi nan sant lan. Anplis touch flèch yo, gen kat (4) flèch vètikal adwat touch flèch yo. Touch dòfèlkot ki anba a ap ajiste volim odyo a. Pwochen touch dòfèlkot la ap ajiste vitès pawòl sentetik la. Bouton won an ap repete dènye fraz ki di a, epi touch dyaman anwo a ap limen oswa etenn ekran an pou konfidansyalite. Lè w peze touch flèch adwat la, l ap deplase pou li ale nan pwochen pòs elektoral la. Lè w peze touch flèch agòch la, l ap deplase pou li ale nan pòs elektoral ki anvan an. Lè w peze touch flèch desann nan, l ap deplase pou li ale nan pwochen kandida a oswa nan chwa ki nan yon pòs elektoral. Lè w peze touch flèch monte a, l ap deplase pou li ale nan kandida ki anvan an. Lè w tande non kandida a oswa chwa ou vle fè a, peze touch chwazi ki gen fòm kare a nan sant touch flèch yo. Si w bezwen plis asistans, tanpri fè yon moun ki reskonsab eleksyon an konnen sa san pèdi tan. Pou sòti san w pa make okenn bilten, peze bouton ekran ki gen fòm dyaman kat (4) fwa youn apre lòt.

Peze touch flèch adwat la pou kounye a pou w tande premye pòs elektoral la. Peze touch repete ki won an pou w tande enstriksyon sa yo ankò.

For Creole, click on the **Browse** button underneath the *Audio File Name* section. Make sure the selected file is PromptCre26_FL.wav.

Recommended text:

For ballots with one page, here is the recommended English, Spanish, and Creole Text for Prompt 77:

English:

Thank you for using the AutoMARK Voter Assist Terminal. Please remove your ballot and deposit it into the tabulator or ballot box. If you need assistance, please alert an election official.

Spanish:

Gracias por utilizar el Terminal de ayuda al votante AutoMARK. Retire su papeleta de votación marcada y deposítela en un tabulador o en un ánfora de votación. Si necesita ayuda, contacte con un funcionario del proceso de votación.

Creole:

Mèsi paske w itilize AutoMARK Voter Assist Terminal. Tanpri retire bilten make w la epi depoze li nan yon tabilatris oswa nan yon bwat bilten. Si w bezwen asistans, tanpri fè yon moun ki responsab eleksyon an konnen sa san pèdi tan.

For Creole, click on the **Browse** button underneath the *Audio File Name* section. Make sure the selected file is PromptCre77.wav.

For ballots with more than one page, here is the recommended English, Spanish, and Creole Text for Prompt 77.

English:

After removing your ballot, you may continue your voting session by inserting any one of the unmarked ballot sheets or you may insert a marked ballot sheet for a review of your votes on that ballot sheet. If it is your intent to stop voting at this time, and you have not voted on all the ballot sheets, then you have on or more races and/or measures with no votes marked. If you choose not to mark these ballot sheets and choose to cast your unmarked ballot sheets, then you are confirming your intent to undervote the races or measures contained on those unmarked ballot sheets. Thank you for using the ES&S AutoMARK voter assist terminal. Please remove your ballot sheet. When you have completed marking all your ballot sheets, deposit the ballot sheets one at a time into the optical scanner. Thank you for using the ES&S AutoMARK voter assist terminal. Please remove your ballot and deposit it into the optical scanner.

Spanish:

Después de retirar su balota, usted puede continuar su sesión electoral usando cualquiera de las hojas que no se ha marcado o puede revisar sus votos metiendo su balota marcada. Si es su intención parar de votar, y no ha votado en todas las hojas de votación, entonces usted no ha completamente votado esta elección. Si usted decide no marcar estas balotas y decide tabular estas mismas balotas, entonces usted esta confirmando su intención de votar menos de las carreras presentadas en esta elección o en las medidas contenidas en las hojas que decidió no marcar. Gracias por utilizar la máquina ES&S AutoMARK. Por favor retire su balota. Cuando usted ha completamente marcado todas sus hojas de votación, deposite sus balotas una por una en una tabuladora óptica. Gracias por utilizar la máquina ES&S AutoMARK. Por favor retire su balota y depositarla en una tabuladora óptica.

Creole:

Tanpri remake bilten ou a genyen ladan plis pase yon bilten vòt. Si w pa sèten ou resevwa tout bilten vòt ou yo, tanpri kontakte yon anplwaye eleksyon an imedyatman pou sa. Apre w fin retire bilten ou, ou kapab kontinye sesyon vòt ou. Pou fè sa, lage nenpòt nan bilten vòt ou ki poko make a oswa tou ou kapab lage yon bilten vòt ou make pou revize vòt ou fè yo. Si w gen entansyon sispann vote nan moman sa a, epi ou pa make sou tout bilten vòt la, ou gen youn oswa plizyè kous elektoral ki pa gen vòt ki make. Si w chwazi pou pa make bilten vòt sa yo epi ou chwazi pou lage bilten vòt ki pa make, sa vle di ou konfime entansyon ou pou pa vote pou kous elektoral yo. Mèsi paske ou itilize tèminal ES&S AutoMark pou ede elektè vote. Tanpri retire bilten vòt ou. Lè w fin make tout bilten vòt ou yo, depoze youn alafwa nan eskanè optik la. Mèsi paske w itilize tèminal ES&S AutoMark pou ede elektè yo vote. Tanpri retire bilten ou epi depoze li nan eskanè optik la. Peze touch flèch adwat la pou kounye a pou w tande premye pòs elektoral la. Peze touch repete ki won an pou w tande enstriksyon sa yo ankò.

For Creole, click on the **Browse** button underneath the *Audio File Name* section. Make sure the selected file is PromptCre77_FL.wav.

12.8 Languages

The Language Editor is used to maintain the languages used in the election. AIMS includes support for nine languages: English, Spanish, Traditional Mandarin Chinese, Cantonese Chinese, Korean, Japanese, Vietnamese, Tagalog, and Haitian Creole. Five of these (English, Spanish, Chinese, Korean and Japanese) are supported by text to speech audio. For these languages, the AutoMARK VAT will speak all imported text. Vietnamese, Tagalog, Cantonese Chinese and Haitian Creole audio is provided by the use of recorded Wave files. Wave files can also be used for any of the other languages if a jurisdiction prefers recorded sound instead of text to speech.

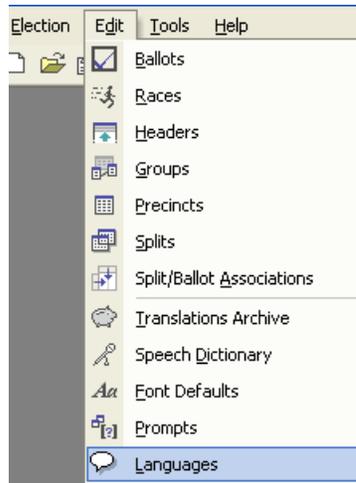
The Languages Editor performs the following functions:

- Modifies the native language
- Modifies the Phonetic Language
- Changes the default speed
- Changes the default font
- Changes the language sequence

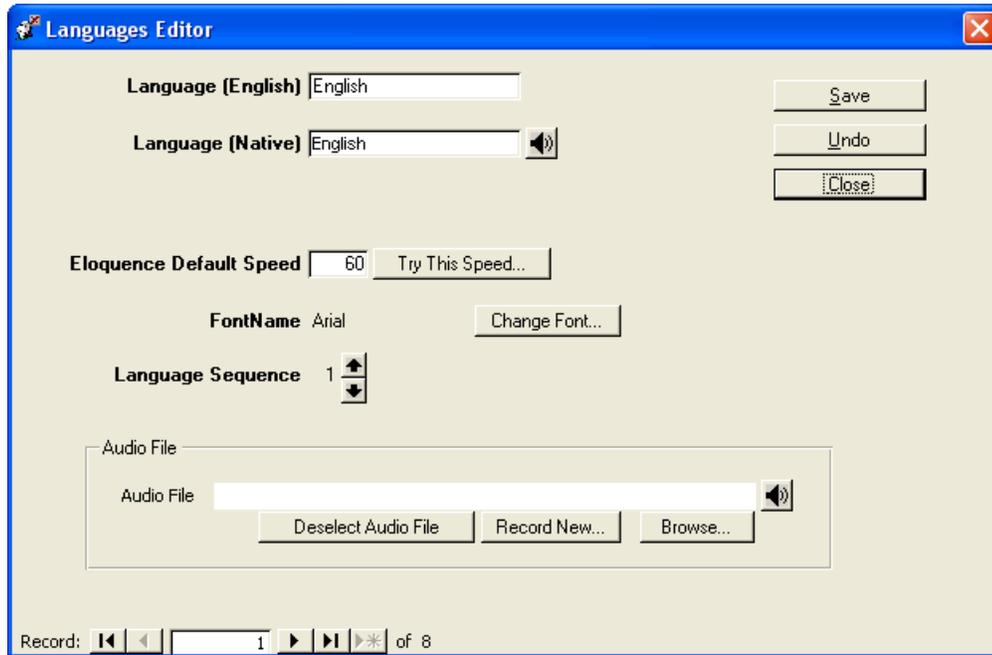
To edit a language:



1. Select **Languages** from the Edit Menu on the menu bar.



The Languages Editor appears.



The Languages Editor specifies the languages and how they appear visually and audibly in an election.

The following edits are allowed:

- Default speed for the pronunciation
- Font
- Audio play or record a new pronunciation of each language

To select a language on the Languages Editor form:



1. At the bottom of the form, click the right arrow to go to the next language.
2. Continue to click until the language you want to select appears.
3. Phonetics for text to speech or Audio .WAV files may be edited on this screen.
4. NOTE: The prompt 87 “Loading your Language Text”, may be in English for some languages. The prompt will need to be edited to appear in the language of the voter.

13 System Maintenance

The Tool Menu gives you the ability to set defaults and control certain global functionality in AIMS. These tools give you total control of many aspects of AIMS including backing up and restoring the database, as well as loading a new version of the software when it is released.

13.1 Backing up/Restoring the AIMS Database

Disaster recovery and secondary security measures are handled through the AIMS Backup/restore procedure. The AIMS database should be backed up on a regular basis throughout the creation process. Backup files should be dated and stored accordingly.

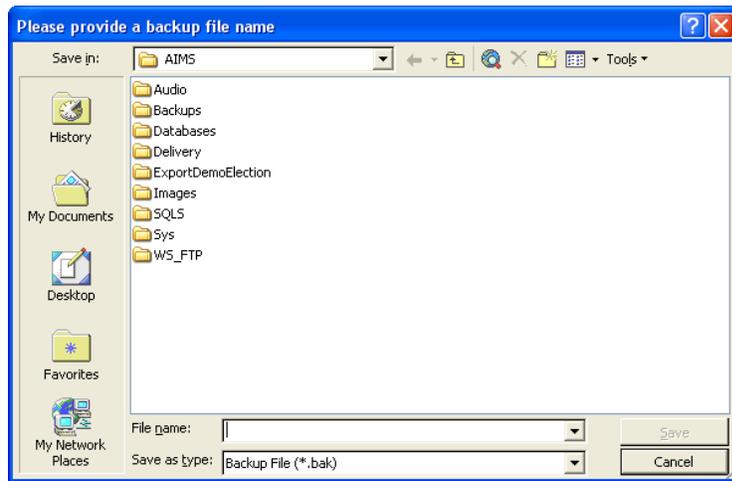
To backup the AIMS database:



1. Select **Backup** from the Election menu on the menu bar.



2. Select the folder and **enter the filename** of the file backup.



WARNING:

When backing up files prior to uninstalling/reinstalling AIMS, do NOT select the default AIMS folder as the backup location. The AIMS folder is deleted during the uninstall/reinstall procedure.

3. For security purposes, enter your password twice.



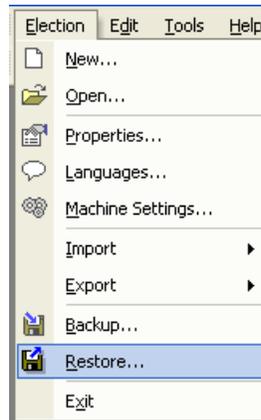
Note

If the election contains any labels that link to .WAV files, these files are not included with the backup. The audio folder containing the .WAV files should be kept with the backup file.

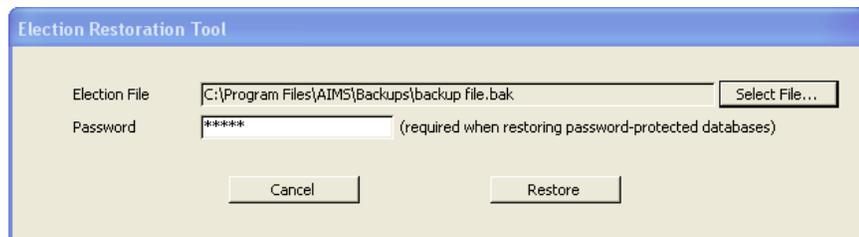
To restore the AIMS database:



4. Select **Restore** from the Election menu on the menu bar.



5. **Browse** for the filename.
6. For **security** purposes, **enter your password**.
7. **Click Restore**.



13.2 Installing an Upgraded AIMS Data File

At times an upgraded AIMS Data Template may be made available and will be shipped to all current users. (Not to be confused with a complete installation package.) The AIMS Upgrade Tool is used to load the new software to your system.



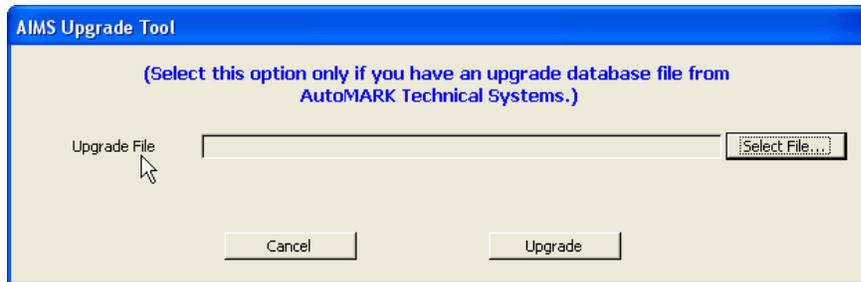
To navigate to the AIMS Upgrade Tool:

1. Select **Install AIMS Upgrade** from the Tool Menu on the menu bar.

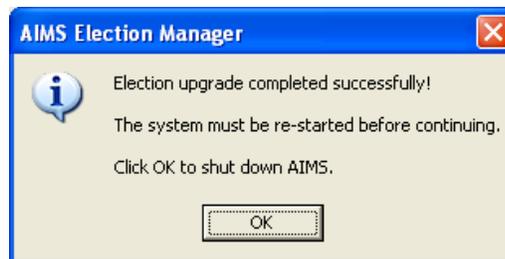


The AIMS Upgrade Tool appears.

2. Enter the **Upgrade file name** (full path). Use the Select File button to browse for the file. The file will be called *AIMSTemplate.bak*.



3. **Click Upgrade.**



4. **Click OK** to shut down AIMS

13.3 Using the Global Translations Manager

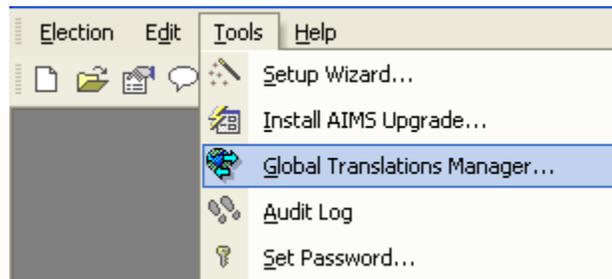
The Global Translations Manager gives you the ability to globally manage the translations used in an election. As this is a global function, proceed with caution. Your actions will affect the entire election.

The Global Translations Manager allows four types of edits. Checkboxes are used to determine the types of labels the edits will apply to:

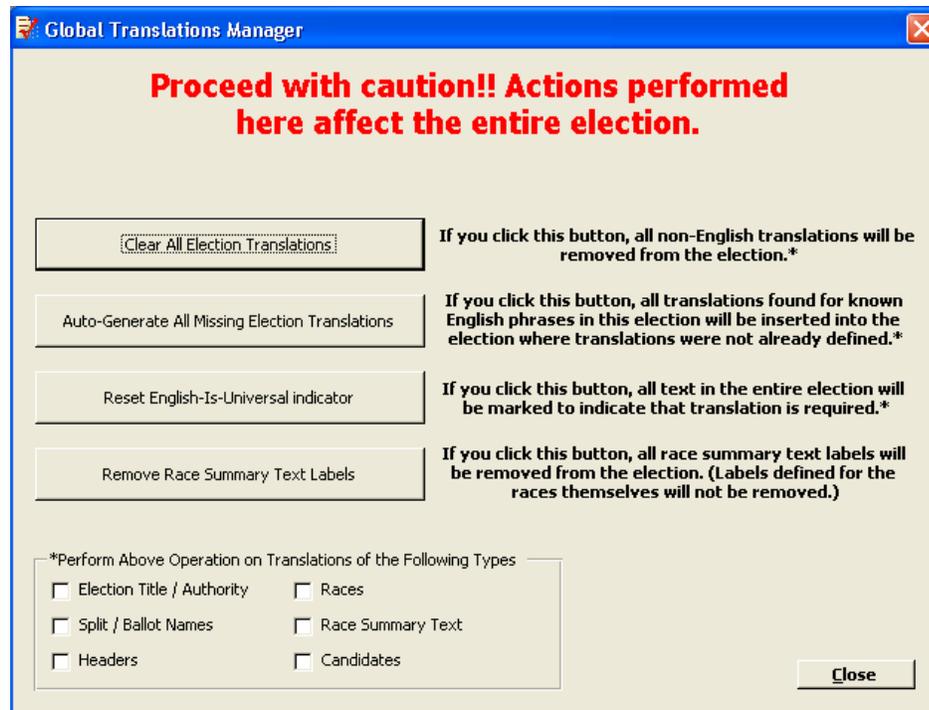
- Remove all non-English translations from an election.
- Insert translations for known English phrases where translations do not currently exist. These translations come from the Translations Archive. See Section 12.3 for more information about the Translations Archive.
- Remove the 'English is Universal' selection from every label in the election.
- Remove all Summary Text labels that have been created for the election.

To navigate to the Global Translations Manager form:

1. Select **Global Translations Manager** from the Tool Menu on the menu bar.



The Global Translations Manager form appears.



13.4 The Audit Log

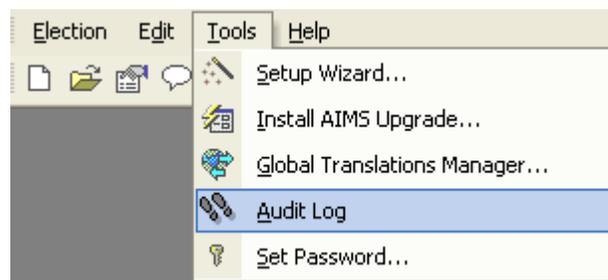
The Audit Log allows users to view and print audit records created during the preparation and modification of the ballots in the current election. Every action is tracked and recorded by AIMS.

Note

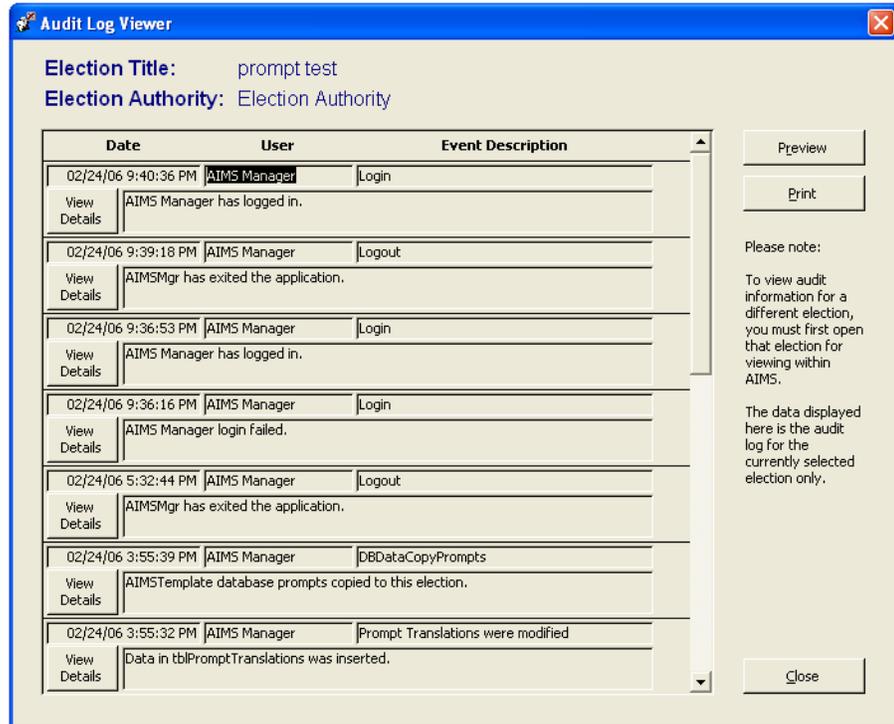
The Audit Log information is specific to the election that is currently open in AIMS. The Audit Log information is stored with the election. If the Election is deleted, the Audit Log will be lost unless the election has been backed up. See Section 13.1 *Backing up/Restoring the AIMS Database*

To view the Audit Log:

2. Select **Audit Log** from the Tool Menu on the menu bar.



The Audit Log Viewer appears.



The Audit Log provides an audit trail of all events that occurred during the setup of an election. It records and displays the date, username, and a description of each event.

- Using the buttons at the top of the form, the events may be previewed onscreen or printed. Click the **View Details** buttons for more details on the events.
- Using this print functionality, a hard copy of the Audit Log may be printed and stored for future reference should a question arise about the events surrounding a particular election.

Note

The print functionality will only print out a high level list of the events logged. If more detail is required the election must be opened in AIMS and the **View Details** button for the specific event must be clicked.

13.4.1 Interpreting the Audit Log

The following table shows the possible events which may be recorded in the Audit Log, and a brief explanation of what was probably happening when that event occurred.

Audit Log Event	Details
AIMS Error	An unexpected error has occurred. This message will give details of location where error occurred, the error number and description, and in some cases, an extra sentence stating the likely cause of the error.
ApplyDefaultRaceSeqsGlobally	Race candidates re-ordered to default in all ballots
AudioFileCreate	A new audio file was added to the database
AudioFileEdit	An audio file already in the database was edited
BallotDelete	Ballot was deleted
BallotOvalDelete	A ballot oval or arrow was deleted
BallotOvalsClear	All ballot oval or arrow information was cleared from the ballot (and splits)
BallotOvalsClearAll	All ballot oval or arrow information was cleared from the entire election
BallotOvalsCreate	An oval/arrow or ovals/arrows were added to the ballot
BallotRaceRemove	A race (or all races) were removed from a ballot
BallotRaceSeqMoveDown	A ballot/race was moved down in the sequence
BallotRaceSeqMoveUp	A ballot/race was moved up in the sequence
BallotUpdate	The X or Y timing Marks on a ballot are edited
CandDefaultSeqMove	Candidate sequence was changed
CandidateCreate	A new candidate was created
CandidateDelete	A Candidate was deleted
CandidatesDeleteAll	All candidates were deleted
CandSeqMove	Candidate sequence was moved
CreateRaceShortText	Created race Auto-Summary text
DataDictDelete	A Data dictionary record was deleted
DBBackup	A database was backed up
DBDataCopyDataDict	Data dictionary items were copied from the specified database over to this database
DBDataCopyPrompts	Prompts were copied from another database to this one.
DBDataCopyScanInfo	Ballot-scan information was copied from the specified database over to this database
DBDataCopyTransArchive	Data dictionary items were copied from the specified database over to this database. Deletes dictionary items from this database before doing so.
DBDataPastePrompts	Database prompts copied from this election to the Template
DBDelete	An election was deleted
DBLogin	When user logs in, his login name and password are checked against values in login table
DBLoginDoorSet	User password was changed
ElectionDetailsUpdate	The election authority or date were updated
ElectionLangDelete	A language was removed from the election
ExportPFAdd	A precinct (or all precincts) were added to the list for export
ExportPFRemove	A precinct was removed from the export list

System Maintenance

Audit Log Event	Details
ExportPFTablesClearAll	All the precinct filter tables are cleared
ExportPFTablesGenerate	Part of Precinct export process
GroupDelete	A Group was deleted
HeaderCreate	A new Header was created
HeaderDelete	A Header was deleted
IGClearTables	All temp tables holding GEMS raw import data were cleared.
IGImport	Performed full GEMS Diebold election Import
IGImportBallotRaces	Imported GEMS Diebold Ballot/Race associations
IGImportBallots	GEMS Diebold ballots were imported
IGImportCandidates	Imported GEMS Diebold Candidates
IGImportGroups	Groups data imported from GEMS
IGImportHeaders	Imported GEMS Diebold Headers
IGImportPrecincts	Imported GEMS Diebold Precincts
IGImportRaces	Imported GEMS Diebold Races
IGImportSplitBallots	Imported GEMS Diebold Split/Ballot associations
IGImportSplitBallotsStyleCode	Established GEMS Diebold Split/Ballot Style Codes
IGImportSplits	GEMS Diebold splits were imported
IGPreImportDataFix	When importing GEMS data, headers, races, and candidates are renamed if necessary to make all labels unique
IUImport	Performed full Unity election import
LabelCreate	A label was created
LabelDelete	A Label was deleted
LabelGrpFirstWAVCoversAll	Made 1st label in group the *only* label that reads aloud
LangSeqMove	Language sequence is changed.
login	User has logged into Aims
logout	User has logged out of Aims
MergeLabelLineUp	Two labels were merged
PrecinctDelete	A precinct was deleted
PromptsImportCheck	Prompts Import Data Inspection performed a verification procedure is performed when prompts are imported
PromptTransCreate	Prompt translation created/modified
PromptTranslationApply	Changes to a prompt translation were saved to the template
RaceDelete	A race was deleted
RacesDeleteAll	Deleted all races
RaceSummaryTextClear	System was cleared of automatic shortened summary race text
RaceSummaryTextReGen	Regenerated automatic Race Summary Text fields
ScanRestore	Restored archived scan data to local election
ScanSave	Archived scan data to backup tables
SplitBallotAdd	A ballot was added to all splits
SplitBallotRemove	A split was removed, or a ballot or all ballots were removed from a split, or a split was disassociated from all ballots, or a ballot was removed from all splits the message explains the exact nature of the event.
SplitBallotUpdate	Updated Split/Ballot scan information
SplitDelete	A split was deleted
SysClearTables	Tables with election data were cleared.
tblAudio	Audio file was added, deleted, or changed
tblBallotCandSeqs	Ballot Candidate Sequence was added, deleted, or changed

Audit Log Event	Details
tblBallotOvals	Ballot Oval or arrow was added, deleted, or changed
tblBallotRaces	Race/ballot association was added, deleted, or changed
tblBallots	Ballot was added, deleted, or changed
tblCandidates	Candidate was added, deleted, or changed, or sequence changed
tblDataDictionary	Data Dictionary item was added, deleted, or changed
tblElectionLangs	Election language was added, deleted, or changed
tblElections	Election was added, deleted, or changed
tblGroups	Group was added, deleted, or changed
tblGroupTypes	Group type was added, deleted or changed
tblHeaders	Header was added, deleted, or changed
tblLabels	Label was added, deleted, or changed
tblLanguages	Language was added, deleted, or changed
tblPrecincts	Precinct was added, deleted, or changed
tblPrompts	Prompt was added, deleted, or changed
tblPromptTranslations	Prompt Translation was added, deleted, or changed
tblRaceReview	Race was reviewed
tblRaces	Race was added, deleted, or changed
tblSplitBallots	Split Ballot was added, deleted, or changed
tblSplitLangs	Split Language was added, deleted, or changed
tblSplits	Split was added, deleted, or changed
tblTranslations	Translation was added, deleted, or changed
TransArchiveAdd	A translation was added or updated
TransExportGenerate	Required translations were exported
TransGrpTransClearAll	All non-English translations were removed from the election
TransGrpTransPopAll	Auto-populated all non-English translations for entire election
TransGrpTransPopOne	NonEnglish Traslations were autopopulated for a translation group
ValidateAudio	Audio/phonetic validation performed
ValidateBallotBarCodes	Bar code validation was performed
ValidateBallotTimingMarks	Ballot timing marks validation was performed
ValidateExport	Full export validation performed
ValidateFileNames	File name validations performed
ValidateTranslations	Translation completeness validation performed
ValTransMassCheckOff	Mass checkoff of user-specified items ("Copy English" or "English is Universal" flags) was performed
ValTransMassCheckOffOne	User checked off "Copy English" or "English is Universal"
ValTransMissingBulkUpdate	User checked off "Copy English" or "English is Universal" for bulk update

13.5 Password Manager

For security purposes, it may be necessary to change passwords from time to time.

To change a password:



1. Verify you have entered an election database.
2. Select **Set Password** from the Tool Menu on the menu bar.



The Password Modification Tool opens:

3. Enter the old password.
4. Enter a new password.
5. Enter the **new password** again to confirm.
6. Click the Change button.



WARNING

The old password must be entered correctly for the system to accept a new password.

To gain access to the system, the password must be typed exactly as originally entered.

Note

Passwords are limited to 128 characters. You will be warned if your password exceeds this limit.



14 Exporting Data

The Export function in AIMS performs several purposes. From here you can navigate to:

- Export the current election data (the election that is selected) to a flash memory card
- Export the current election data to a file on your computer's hard drive
- Copy the election data from a file on your hard drive to a flash memory card
- Export the text that requires translation to an Excel spreadsheet
- Validate the current election data prior to exporting

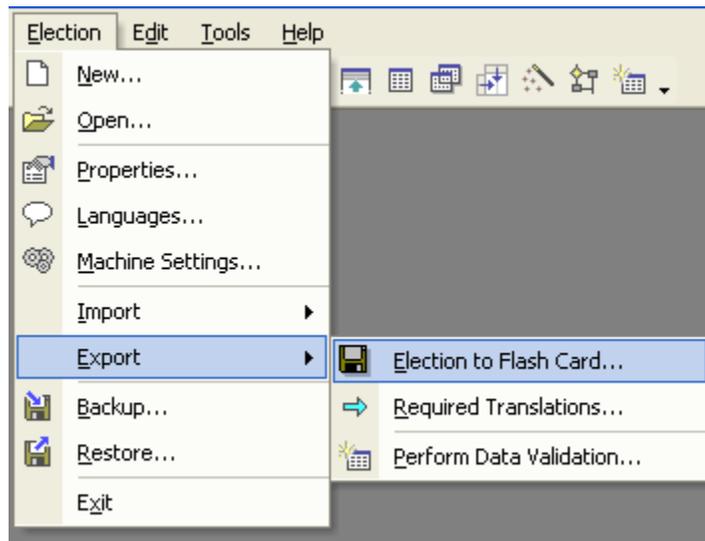
14.1 Exporting Data to the Flash Memory Card

After all precinct, race, and ballot data has been entered/imported, edited and previewed, the data is ready to be exported to a flash memory card. The Flash Memory Card is the device that provides a secured transfer of the election database information to the Voter Assist Terminal (VAT).

Navigating to the Export Routine

From the Election Menu:

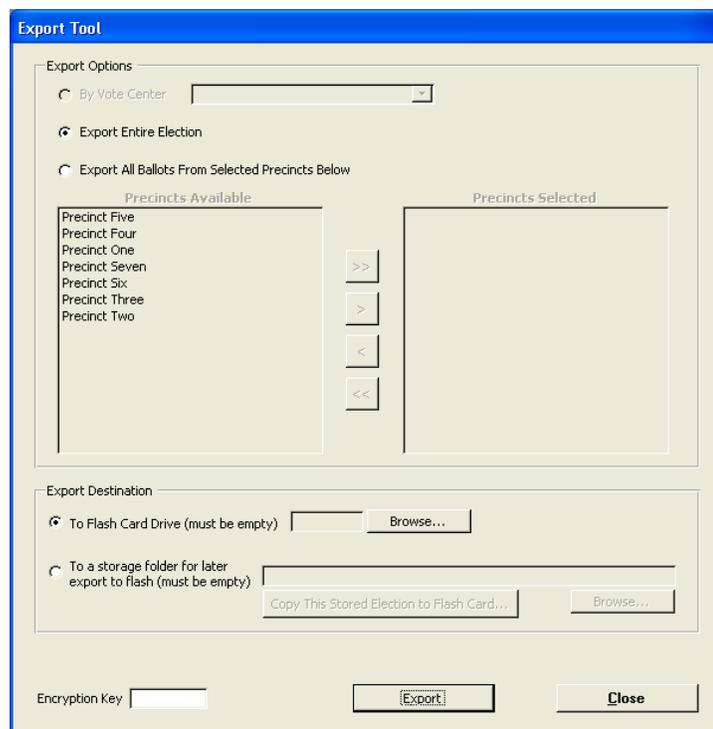
1. Select **Export >>Election to Flash Card** from the Election Menu on the menu bar.



- The data will first go through a validation process.



- Click OK to continue.
- If the system detects one or more errors in the data, AIMS will automatically display error messages with links that take you to the appropriate forms to repair the errors. Processing stops at this point until the errors are resolved. For help in troubleshooting these errors, see the Troubleshooting Guide in Section 17.
- Data may also be manually validated prior to exporting. See section 14.5 in this chapter.
- If the validation completes successfully, the **Export Tool** Screen will appear:



On the **Export Tool**, select the **Export Options**. The choices are:

- To export an entire election, select Export Entire Election.
- Otherwise select Export All Ballots From Selected Precincts Below. Use the right arrow to select the Precinct(s) to be exported.

Exporting Data

Next, select the **Export Destination**. The choices are:

1. To a **blank flash card**, or to an **empty folder on the hard drive** (for later export to a flash card).

Note

When exporting to a folder on your hard drive, be sure to choose an existing *empty* folder.

2. **Enter an encryption key:**
The encryption key must be all numeric eight (8) digits long.

Note

The encryption key is an important security measure that provides a level of protection from malicious tampering. The key that is entered here must be remembered and kept secure. This numeric key is entered into the Voter Assist Terminal keypad when you are previewing the election data or ready to use the Voter Assist Terminal on Election Day.

3. **Click Export.**



4. To **continue**, click **Yes**.

When the export successfully completes, the following message appears:



5. **Click OK.**

14.2 Copying a Stored Election to a Flash Memory Card

In the case where you have exported election data to a storage folder on your hard drive (as shown in the previous section) you can later copy this data to a flash memory card.

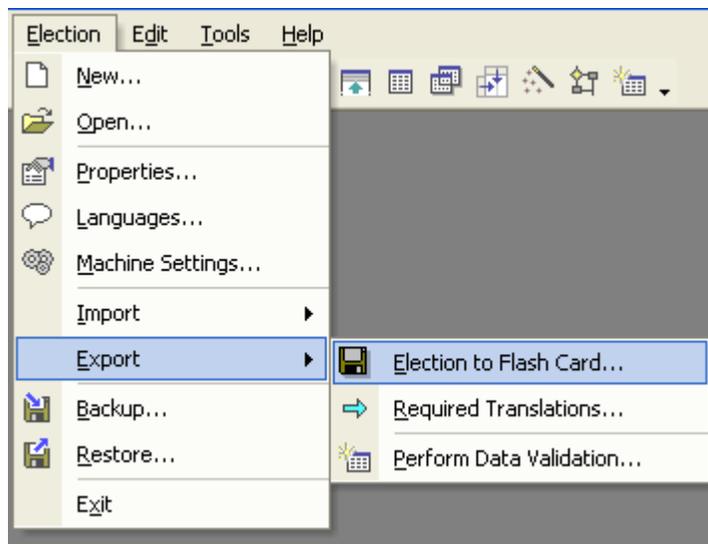
You can do this by simply using the Windows file manager, to copy data from the location on your hard drive to the flash memory disk, or by using the **Export Tool**.

Note

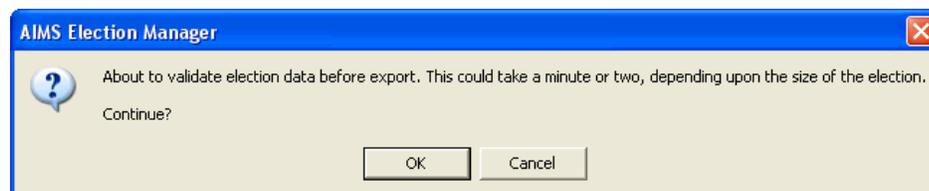
If you modify any election files manually, (outside of AIMS), the VAT will not accept the data.

To use the Export Tool,
From the **Election Menu**:

1. Select **Export >>Election to Flash Card** from the Election Menu on the menu bar.

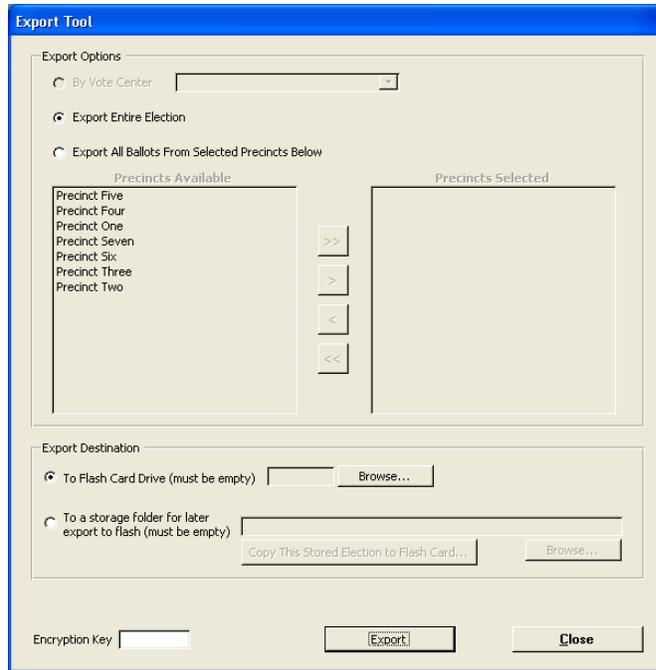


2. The **AIMS Election Manager** will go through the validation of the current election. (This may not be the same election you will be exporting to the flash card – but must be free of validation errors in order to proceed.)



3. Click **OK** to continue.

If the system detects one or more errors in the data, AIMS will automatically display error messages with links that take you to the appropriate forms to repair the errors. Processing stops at this point until the errors are resolved. For help in troubleshooting these errors, see the Troubleshooting Guide in Section 17.2. (Remember – this is not the data which you will be exporting to a flash card, so if possible select an election with no validation problems.)



4. On the **Export Tool** screen, for the **Export Options**, it does not matter which choice is selected.
5. For **Export** Destination, first select the option To a storage folder for later export...
6. Click the **Browse** button to locate the folder on your hard drive where you previously exported the election data.
7. Click the Copy the Stored Election to Flash Card button.

The following screen appears:



The flash card must be empty, with no folders or data on it.

8. Click OK.

When the file transfer is complete, you will receive the confirmation:



9. If you wish to copy the files to another flash card, you may do so by clicking OK. Click Cancel when finished.

14.3 Previewing data on the VAT

After election data is written to the flash memory card, the card is installed in the Voter Assist Terminal (VAT) for test ballot print and verification.

See the AutoMARK Jurisdiction Guide for instructions on test print on the VAT.

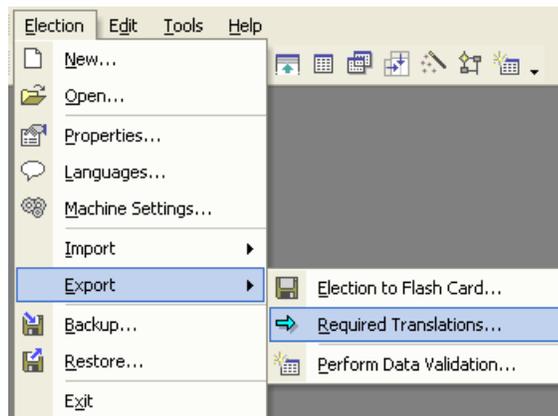
14.4 Exporting Required Translations

The Translations Export function allows you to export the text that requires language translation to a Microsoft Excel file. This spreadsheet format provides a convenient way of transferring text to another computer for translation. Once translated, the AIMS Import function handles the integration of translated text back into the election database format.

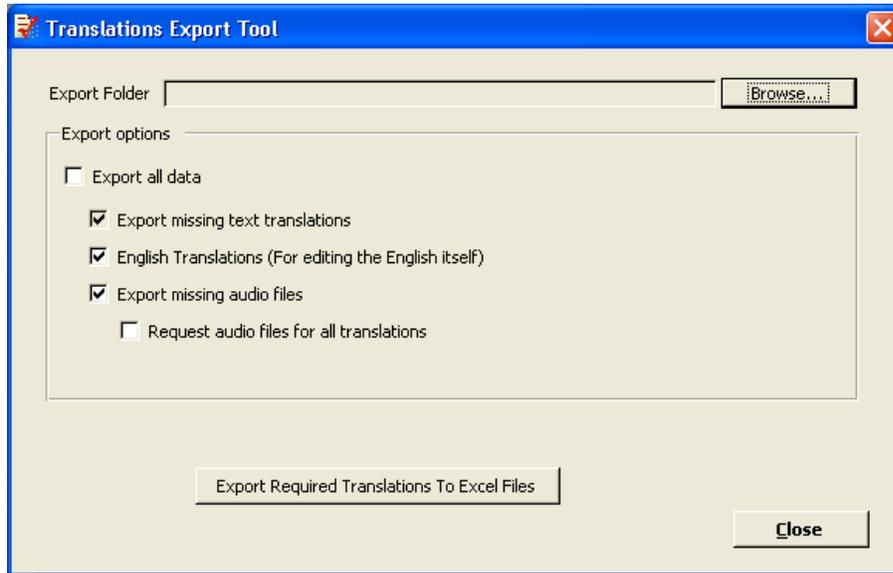
To navigate to the Translations Export Routine:

From the Election Menu:

1. Select **Export>> Required Translations** from the Election Menu on the menu bar.



The Translations Export Tool opens:



2. Use the **Browse** button to access the standard Windows search technique to locate a folder to save the Excel file.
3. The following Export options are available:

Export all data will export all the labels in the election even if they already have text translations and attached audio files.

Export missing text translations is required and will export all text labels with missing translations of languages chosen for the election.

English Translations (For editing the English itself) creates an English version of the export file that allows you to change the English labels themselves.

Export missing audio files exports missing translations from .WAV file based languages that have translations but no audio files linked to them.

Request audio files for all translations gives the user the opportunity to provide .WAV files for labels that would normally be handled through synthesized speech.

4. After choosing options click Export Translations Required to Excel Files.
5. The Done! Message indicates successful completion of this function.

Note

If no text files requiring translation exist, the message “No election translations needed at the moment” appears.

Note

Excel is not included with AIMS. However, it is a common file format for communicating with translation companies.

Note

If an error is found in the translations entered into the Excel file after the file has been imported, the Excel document can be corrected and imported again to correct the translation in the election.

Hint

Candidate names may not require translations or .WAV files if it is acceptable to have candidate names read in English by the synthesizer.

14.4.1 Explanation of exported translations Excel Sheet

Sample Excel Image:

	A	B	C	D	E	F	G	H	I	J
1	TransGrp1	LangID	Language Name	Label Type	English Is Universal	Translation Text	New Translation	Audio File Name	Audio File Exists	Audio File Required
2		0	TestRow	n/a	n/a	DO NOT DELETE	DO NOT DELETE	n/a	n/a	n/a
3	638	11	Creole	Race	No	(Vote for one)			No	Yes
4	642	11	Creole	Race	No	(Vote for one)			No	Yes
5	646	11	Creole	Race	No	(Vote for one)			No	Yes
6	650	11	Creole	Race	No	(Vote for one)			No	Yes
7	654	11	Creole	Race	No	(Vote for one)			No	Yes
8	658	11	Creole	Race	No	(Vote for one)			No	Yes
9	480	11	Creole	Race	No	114TH HOUSE DISTRICT			No	Yes
10	494	11	Creole	Race	No	119TH HOUSE DISTRICT			No	Yes
11	547	11	Creole	Race	No	11TH JUDICIAL CIRCUIT			No	Yes
12	414	11	Creole	Race	No	11TH JUDICIAL CIRCUIT			No	Yes
13	611	11	Creole	Race	No	11TH JUDICIAL CIRCUIT			No	Yes
14	543	11	Creole	Race	No	18TH CONGRESSIONAL DISTRICT			No	Yes
15	585	11	Creole	Race	No	39TH SENATORIAL DISTRICT			No	Yes

Column A: A unique identifier for the label.

Column B: A unique identifier for the language requiring translation.

Column C: The language the new translations should be provided in.

Column D: This informs the user what category the label is included in. Label can be Race labels, Header labels, Candidate labels, etc...

Column E: This informs the user that the English label is currently being used for all languages. This column can be modified between No and Yes. The flags will be set appropriately during importation of the Excel file. The English labels must already exist for this setting to take affect. There are not always English labels for Summary Text labels. See section 10.4.14 for more information on Summary Text labels.

Column F: This column contains the text labels requiring translation.

Column G: This column is where the user or translation company needs to place the translation of the text in column F.

Column H: This column is where the user can provide the filename of a .WAV audio recording of the translation. This should be in the format *Filename.WAV*. Any .WAV files that are in the same directory as the Excel file when it is imported, will be automatically linked up in AIMS. Please see Chapter 8.3 *Adding/Editing an Audio File*.

Column I: This column informs the user whether there is already an audio file linked to the translation in AIMS.

Column J: This column informs the user that the language is a .WAV file based language and audio files are needed for the labels.

Only columns E,G and H should be altered by the user. Care should be taken not to alter the formatting of the excel file or delete anything from the other columns.

The following macro might be helpful when using the Excel file. The macro should be run after selecting column H to highlight it. After the macro is run, the filenames provided in the column will become hyperlinks to the files provided the files are located in the same directory as the Excel file. Please see the Excel documentation for using macros.

Option Explicit

Public Sub FixAudioHyperlink()

' **Description: This little routine will convert references to audio files**
' **into hyperlinks so that if you click on the cell, the audio file**
' **plays (if it exists). This is an optional tool which AIMS users**
' **are free to use or not use as they see fit. Use or failure to use**
' **this code will not directly affect AIMS either way.**

Dim rng As Range

Dim cell As Range

Dim strCellText

Set rng = Application.Selection

' **if you have selected the column with audio files, this loop**

' **goes through each cell and converts real audio file references**

' **into hyperlinks.**

For Each cell In rng.Cells

strCellText = cell.Value

If Left(strCellText, 1) = "" Then

strCellText = Right(strCellText, Len(strCellText) - 1)

End If

If strCellText <> "" _

And strCellText <> "Audio File Name" _

And strCellText <> "n/a" Then

cell.Value = strCellText

rng.Hyperlinks.Add cell, strCellText

End If

Next cell

End Sub

Hint

Using the macro to hyperlink the audio file names provides an easy way to check the audio files. Simply click in the hyperlink to play the .WAV file using the system default player.

Hint

When creating audio files to use with the election, prefix the filenames with the LangID number to help keep track. e.g. 11-description.WAV

14.5 Validating Data Prior to Exporting

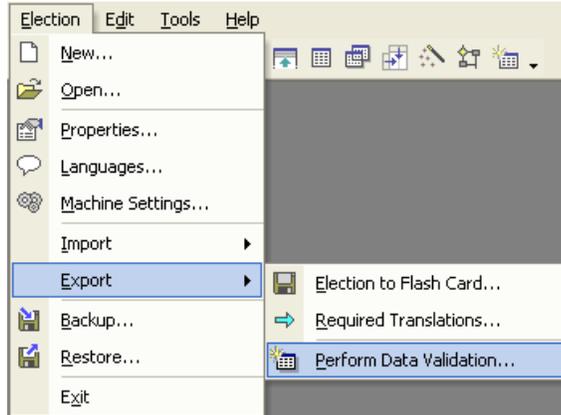
The Validation Routine determines if there are any data issues that must be resolved before the data can be exported to a Flash Memory Card. If data issues exist, a list of

problems is generated and displayed. The list dialog box also provides a navigation function that takes you directly to the form to correct the problem.

To navigate to the Validation Routine:

From the Election Menu

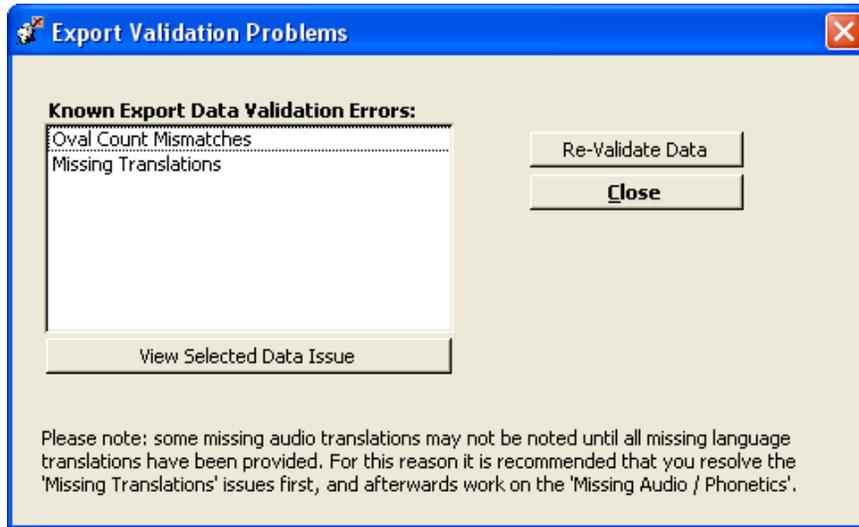
1. Select **Export>> Perform Data Validation** from the Election Menu on the menu bar.



2. To ensure that the error list is up-to-date: To the message “List of errors may need refreshing. Re-run validation?” Click **Yes**.



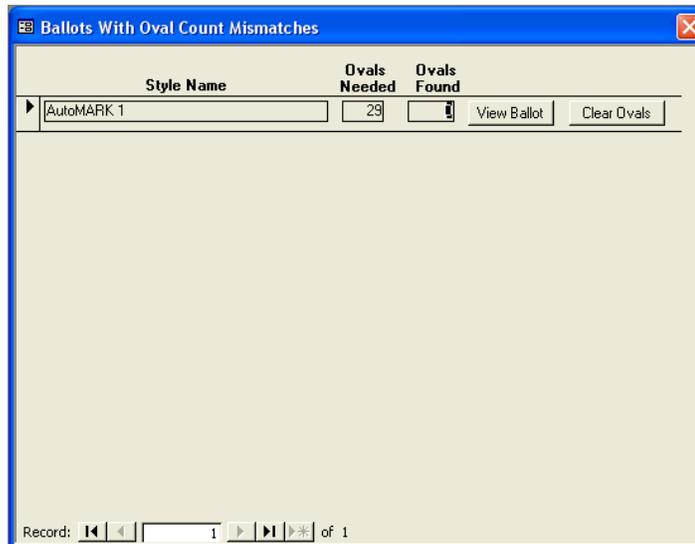
Export Validation Problems screen appears.



To view the issue:



1. Select the **issue**.
2. Click View Selected Data Issue.
3. The appropriate form opens.



The Ballots with Oval Count Mismatches form gives details about:

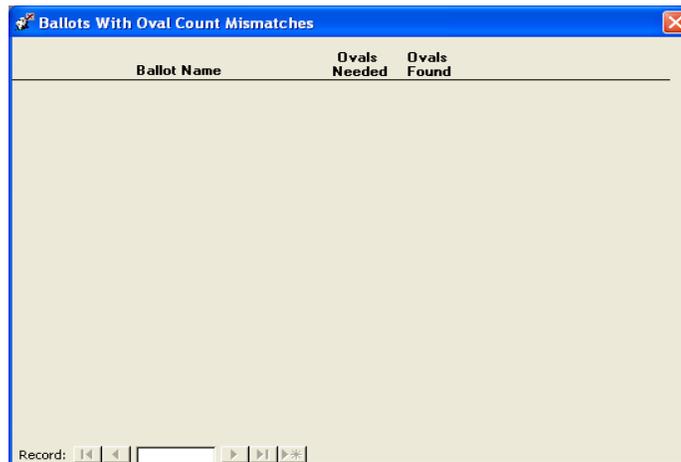
- The Style Name of the ballot
- The number of Ballot Targets (ovals or arrows) needed

- The number of Ballot Targets (ovals or arrows) found

4. To view the ballot from this form: Click **View Ballot**.
5. To erase all ovals or arrows and code channels/bar codes associated with the ballot: Click **Clear Ovals**.



Once all the issues in the form are resolved, the form appears blank:



6. Press the red X to close the form.
You will be returned to the *Export Validation Problems* form.
7. Press *Re-Validate Data* to refresh the list of *Known Export Data Validation Errors*:
8. Once all errors have been corrected, the list will be empty. Press the **Close** button.

For more information on resolving data issues, refer to the Troubleshooting Guide in Section 17 of this manual.

15 Importing Data

The Import routine in AIMS performs several functions in addition to importing election data generated by the ES&S and Diebold election systems which were discussed in Chapter 5.

The import function also imports:

- Text Translations
- AIMS Election Data

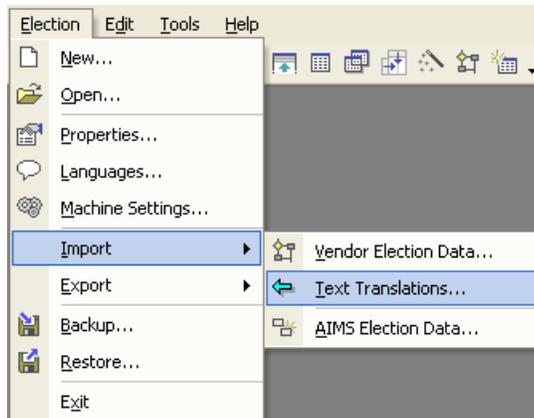
15.1 Importing Text Translations

This import function takes the Excel spreadsheet that you previously exported from AIMS (see Chapter 14), and imports the translated text that has been entered into it. AIMS integrates that text into the AIMS Election Database, creating a seamless transition from spreadsheet to database.

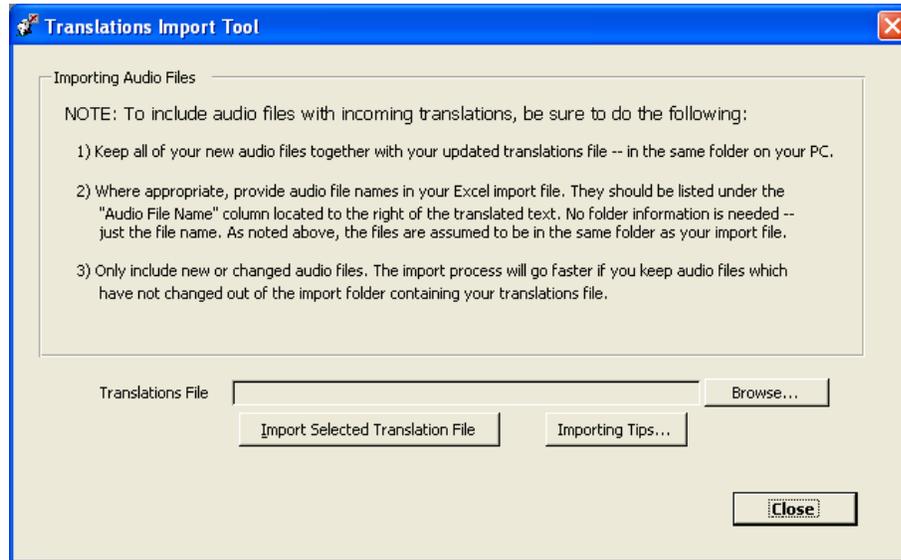
To display the Translation Import form

From the Election Menu:

1. Select **Import>>Text Translations** from the Election Menu on the menu bar.



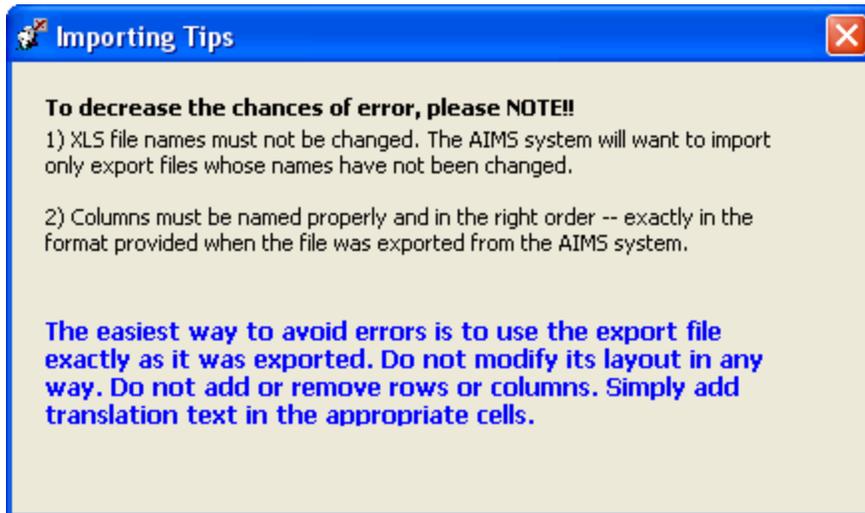
The Translations Import form appears.



2. Use the standard Windows Browse button to locate the Excel file to be imported.
3. When the file is selected, click Import Selected Translation File to start the import process.

Note

For tips on importing completed translations into AIMS, click the Importing Tips button. (See below for a printout of these tips).



15.2 Importing AIMS Election Data

This function allows the user to copy the data dictionary and/or the system prompts from a previous election to the current election.

Note

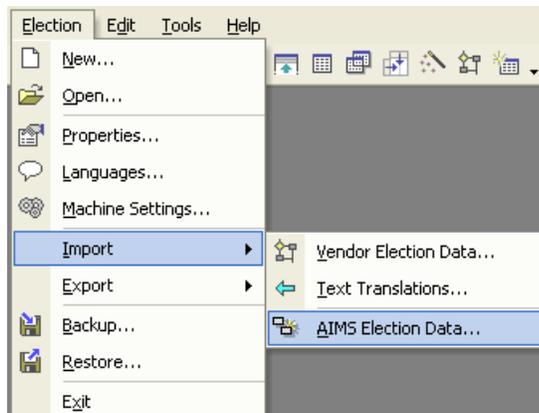
The data dictionary refers to the Speech Dictionary accessible through the menu by clicking on Edit -> Speech Dictionary. See Section 12.5 for more information about the Speech Dictionary.

To open the Election Copy utility

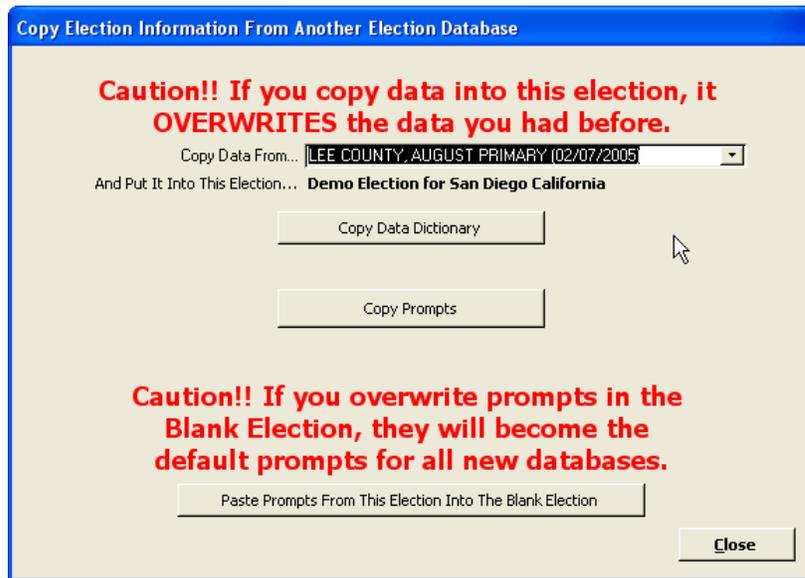
From the **Election** Menu:



1. Select **Import>>AIMS Election Data** from the Election Menu on the menu bar.



- The Copy Election Information from another Election Database form opens.



- In the **Copy Data From** drop-down field, select the file to copy from.

Note

The data will be copied into the current election.

- Click **Copy Data Dictionary** to copy the ballot information from the selected election to the current election.
- Click **Copy Prompts** to copy the System Prompts from the selected election to the current election.
- If **desired**, click **Paste Prompts From This Election Into the Blank Election**. This will make them the default prompts for all new databases.
- Confirmation** is given when a function is completed.

16 Guide for Entering Symbolic Phonetic Pronunciation

AIMS uses a text-to-speech synthesizer (ETI-Eloquence) to produce some of the audio for the Voter Assist Terminal. When words are not automatically pronounced as desired by the synthesizer, the phonetic text can be entered into the Data Dictionary. (See Section 12.5). This section explains the notation used to alter the pronunciation of a word.

16.1 ECI Annotations¹

An annotation consists of a backquote (`) followed immediately by a string of characters. For example:

`vs5	Use a speaking rate of 5.
`4	Put very heavy emphasis (level 4) on the following word.
`ts2	Pronounce all characters individually by name.

Each annotation must be preceded by at least one unit of white space.

16.2 Selecting a Language

In order to use an annotation or tag for a language or dialect, you must have installed the text-to-speech engine for that language and dialect. For example, you must install the Standard German text-to-speech engine in order for the German annotation or tag to work. The text-to-speech engines which are installed in AIMS are English, Spanish, Chinese, Japanese and Korean.

_ If you hear the text being pronounced using the accent of the previously active language, then the language of the text has not been installed.

_ If you get an error message, then the language you want to hear has probably been installed incorrectly.

Selecting a language changes only the language, not the voice characteristics. The last selected voice characteristics remain in effect.

The ECI language annotation begins with `l (backquote lowercase L), followed by a decimal number specifying the language and dialect. If you specify a language/dialect combination that does not exist, (e.g., `l2.3), then the annotation is ignored.

¹ Information for this section was taken from the ETI-Eloquence SDK Reference Manual

The following table shows the ECI language annotations for the languages supported by AIMS.

ECI Annotation	Language or Dialect
`11.0	English
`12.1	Spanish
`16.0	Chinese
`18.0	Japanese
`110.0	Korean

16.3 SPRs

A Symbolic Phonetic Representation (SPR) is the phonetic spelling used by ETI-Eloquence² to represent the pronunciation of a single word.

An SPR represents the sounds of the word, how these sounds are divided into syllables, and which syllables receive stress.

SPR Form

An SPR consists of a sequence of allowable SPR symbols for a given language, enclosed in square brackets [] and preceded by a backquote character ` . For example, the following are valid SPRs in English:

though `[.1Do]

shocking `[.1Sa.0kIG]

A period signals the beginning of a new syllable, the digits 1 and 0 indicate the stress level of the syllables, and the letters D, o, S, a, k, I, and G represent specific English speech sounds. An SPR entry which does not follow the requirements is invalid, and is spelled out character by character.

Syllable Boundaries

A period is used to mark the beginning of each syllable in the SPR output generated by ETI-Eloquence. However, periods are optional in SPR input in all languages, and won't have any effect on the way the word is syllabified by the text-to-speech rules

Syllable Stress, Tone, and Accent

Stress, tone, and accent are properties of the syllable, and they affect the pronunciation of words in specific languages. In SPRs, this information is represented by digits. This section contains general information on the use of these digits in the SPR; for information specific to individual languages, refer to the appropriate section in "SPR Tables" in section 16.4

² Information for this section was taken from the [ETI-Eloquence SDK Reference Manual](#)

Guide for Entering Symbolic Phonetic Pronunciation

The table below indicates which features are relevant to each supported language.

Language	Stress	Tone	Accent
Mandarin Chinese	X	X	
US English	X		
Japanese			X
Korean			
Mexican Spanish	X		

Note that Korean does not use stress, tone, or accent in SPRs.

The stress, tone, or accent marker should be within the syllable's boundaries but always to the left of the vowel of the syllable.

If you do not know where the syllable boundaries in a word like construction are located, any of the following SPRs will correctly place the primary stress on the vowel in bold type:

"construction"

`[kXn1str**H**kSXn]

`[kXns1tr**H**kSXn]

`[kXn1str**H**kSXn]

`[kXns1tr**H**kSXn]

See the sections on Mandarin Chinese (16.4.3) and Japanese (16.4.2) SPRs for details on indicating stress, tone, and accent in these languages.

Stress

Syllables can be marked for stress with the digits 1, 2, or 0, for primary stress, secondary stress, and no stress, respectively. Some languages do not use secondary stress and thus do not accept the use of the digit 2 in SPRs; see sections on specific languages below. If a one-syllable word does not have an explicit stress marking, the syllable will be assumed to have primary stress. If a word has more than one syllable, at least one of these syllables must be marked for primary stress, or the SPR will be considered invalid and will be read out character by character. Other syllables can be marked with either secondary or no stress; syllables that are not marked are assumed to have no stress.

Speech Sound Symbols

Each language uses its own inventory of SPR symbols for representing the speech sounds of that language. The section "SPR Tables" contains tables of valid SPR symbols for the sounds of each language, with examples of words in which each sound occurs. Letters are case-sensitive, so 'e' and 'E' represent two different sounds. Two-character symbols must be contained in single quotes; for example, German heim '[h'aj'm]'. SPRs containing sound symbols that are not allowable in the current language is considered invalid, and spelled out character by character.

The sounds of every language have specific distributional patterns within that language. For example, in all dialects of English, the sound [G] of sing ``[.1sIG]` does not occur at the beginning of a word. Other American English sounds that have a particularly narrow distribution are the glottal stop [ʔ], the flap [F], and the syllabic nasal [N]. (See “American English SPRs” – section 16.4.1). If you enter a sound symbol in a context where it does not normally occur, the resulting speech may sound unnatural. ETI-Eloquence applies a sophisticated set of linguistic rules to its input to reflect the processes by which sounds change in specific contexts in natural language. For example, in American English, the sound [t] of write ``[.1r1Yt]` is pronounced as a flap[F] in writer ``[.1rY.0FR]`. SPR input undergoes these modifications just as ordinary input text does. In this example, whether you enter ``[.1rY.0tR]` or ``[.1rY.0FR]`, the output of the program is the same.

16.4 SPR Tables

The following tables show the inventory of allowable SPR symbols in each ETIEloquence language/dialect. Each sound symbol is accompanied by examples showing typical spellings of the sound in actual words, with the letters representing the given sound underlined>. (Due to dialectal differences, the examples may not always match your pronunciation.) Remarks specific to SPRs in individual languages are also included in the appropriate sections. Refer to “SPR Form” for general guidelines on creating and using SPRs.

16.4.1 American English SPRs

Regular Vowels

The following table includes the symbols for regular vowels.

American English Symbol	Example Words
a	father, lot
A	back, had
e	cake, pain
E	hedge, let
i	see, speak, believe
l	pick, ill
o	both, oak
c	law, cough
u	zoo, truth
U	took, put
H	but, mug, son
R	butter, hurt

Diphthongs

The following table includes the symbols for diphthongs.

American English Symbol	Example Words
O	toil, boy
W	out, cow
Y	life, fine

Reduced Vowels

The following table includes the symbols for reduced vowels.

American English Symbol	Example Words
x	sofa, alone, suppose, tedious, America
X	roses, connect, melody, symphony, hinted

Consonants

The following table includes the symbols for consonants.

American English Symbol	Example Words
b	bad, sob
p	pit, rip
d	dip, had
t	tip, pet
g	good, bug
k	kill, cat, make, back
D	this, breathe
T	thing, Beth
v	vase, save
f	field, if, graph
z	zip, phase
s	seal, miss, ceiling
Z	treasure, garage
S	ship, wish
J	Jane, huge
C	chip, witch, nature
h	hot, hero

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m	man, hum, summer
n	never, sun, winner
G	sing, finger
r	borrow, rake
l	low, hall
w	wear, quick
y	yes, Virginia
? ("glottal stop")	kitten, Latin
F ("flap")	writer, fiddle
N ("syllabic n")	button, satin, eaten, burden
M ("syllabic m")	hmm

Syllable Stress

The following table includes the symbols for syllable stress.

1	primary stress (most prominent stress in the word)
2	secondary stress
0	no stress

Syllable Boundary

The following table includes the symbol for a syllable boundary.

.	(period) beginning of a syllable
---	----------------------------------

16.4.2 Japanese SPRs

Vowels

The following table includes the symbols for vowels.

Japanese Symbol	Example Words
a	sake, haba
A	maaku, meekaa
e	te, suteru
E	keisatsu, heisei
i	ima, miru
I	ii, atarashii
o	hodo, soba
O	koujou, oozei
u	fuyu, sushi
U	kyuushuu, yuumei

Consonants

The following table includes the symbols for consonants.

Japanese Symbol	Example Words
b	kabi, chiba
p	shimpai, kappa
d	mada, deru
t	toki, atta
g	tamago, jitusgyou
k	kakaru, sakka
f	gifu, futatsu
z	mizu, zasshi
s	sakana, issei
S	shima, isshou
'ts'	tsunami, tatsu, ittsu
'dZ'	jibun, meiji
'tS'	chizu, machi, micchaku
h	haba, iroha, hima, zehi, hyouban
m	maru, sama

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n	nori, hana
N	shimbun, gengo, insatsu, jin
r	ryokan, kiru
y	yoru, toyota, kyoukai
w	wareware, awa

Accent

In Japanese SPRs, the digits 1 and 0 are used to indicate the presence or absence of an accent on a specific syllable. When a syllable is accented, there is a sharp drop in pitch between it and the following syllable. For example, in `[1ma.0ku.0ra]` the first syllable is accented, resulting in a sharp drop in pitch between the first and second syllables of the word, while in `[.0sa.0ka.0na]` there is no accented syllable and no pitch drop. An unmarked syllable is assumed to be unaccented, so the first example could also be represented as `[.1ma.ku.ra]`. The digit should occur within the boundaries of a syllable, and before the syllable's vowel.

1	accented syllable
0	unaccented syllable

16.4.3 Mandarin Chinese SPRs

The Mandarin Chinese engine interprets SPRs of both American English and Mandarin Chinese words. To distinguish them, Mandarin Chinese SPRs words must include a + (plus sign) immediately inside the left square bracket, as in `[+t4By2aG]`. SPRs of American English words do not include the plus sign, and use the symbols outlined in “American English SPRs”.

Vowels

The following table includes the symbols for vowels.

Mandarin Chinese Symbol	Example Words
a	ba4, zhua1, shuang3
A	ban1, xian4, kan1
e	pei2, lei4
E	jie2, nian4
i	bi3, qi1, yi4
l	Yin1, ying2, jin4
o	bo3, mo4, po1
O	pou2, lou4
u	bu1, wu3, ru4
U	dong2, nong4, jiong1
V	che1, re4
@	dun1, er4
R	chi4, zhi2, shi1, ri4
C	ci3, zi4, si2
B	pai2, lai4
W	pao2, lao3
H	xue3, quan2, jue2
Y	yu2, xun1, nuu3

Consonants

The following table includes the symbols for consonants.

Mandarin Chinese Symbol	Example Words
p	po1, piao4, pin2
b	bo2, biao3, bin4
t	ta1, tiao2, ting4
D	zi3, zai4, zuan2
T	ci4, cai2, ceng1
d	da2, diao4, ding1
C	chen4, che1, chuang2
q	qi1, qian3, qiong1
j	ji2, jian1, jiong1
k	kai4, ku1, kuang2
g	gai2, gu1, guang3
f	fa1, feng4, fu2
v	vie
s	san1, song4, sun1
S	she4, sheng2, shao3
r	rou4, ri1, run4
Z	zhe1, zhen2, zhuang3
x	xia4, xiao3, xue2
h	he4, hong2, hua1
m	ma1, miu2, ming3
n	na3, niu2, duan4, zen1
G	bang1, rang2, nong2
l	le4, liang2, lu1
y	ye4, yong2, ying1
w	wang2, duo1, nuan2

Tone

Chinese SPRs indicate the tone of a syllable by placing a digit 0-4 within the boundaries of a syllable, to the left of the vowel. For example, `[+m3a]` and `[+3ma]` are both valid representations of a tone 3 syllable. If no tone is marked, the syllable is assigned neutral tone.

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The following table shows the symbols used to indicate tone, and their value:

0	neutral tone
1	tone 1
2	tone 2
3	tone 3
4	tone 4

Syllable Stress

To indicate syllable stress, an additional digit 0-3 may be placed immediately to the right of the tone digit. For example, in `[+11Anf43aG]`, the second syllable has tone 4 and stress level 3. A single digit is always interpreted as a tone value rather than a stress value. For example, in `[+33da2ji]`, the 2 indicates tone rather than stress. If stress is unmarked, the syllable is assigned 0 stress if it has 0 tone, and 1 stress if it has non-zero tone.

The following table shows the symbols used to indicate syllable stress, and their value.

1	primary stress (most prominent stress in the word)
2	secondary stress
3	tertiary stress
0	unstressed syllable

16.4.4 Korean SPRs

Vowels

The following table includes the symbols for vowels.

Korean Symbol	Example Words
a	아기 (agi), 아름답다 (arUmdap'tt'a)
A	애매하다 (AmAhada), 애수 (Asu)
e	에누리 (enuri), 에탄올 (e'th'anol)
E	어머니 (EmEni), 어깨 (E'kk'A)
i	이마 (ima), 이기다 (igida)
I	의사 (Isa), 의자 (Ija)
o	오누이 (onui), 오래 (orA)
O	외우다 (Ouda), 외가 (Oga)
u	우리 (uri), 우마차 (uma'ch'a)
U	으깨다 (U'kk'Ada), 음양

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Consonants

Korean Symbol	Example Words
y	요리사 (yorisa), 여자 (yEja)
w	왕 (wa'ng'), 왕성하다 (wa'ng'sE'ng'hada)
h	학교 (hak'kk'yo), 후진하다 (huJinhada)
k	가까이 (ka'kk'ai), 개각 (kAgak)

The following table includes the symbols for consonants.

Korean Symbol	Example Words
g	여기 (yEgi), 오감 (ogam)
'kk'	까마귀 ('kk'amagwi), 까치 ('kk'a'ch'i)
'kh'	칼 ('kh'al), 캐다 ('kh'Ada)
t	달 (tal), 도마 (toma)
d	반달 (pandal), 다도해 (tadohA)
'tt'	때때로 ('tt'A'tt'Aro), 감독 (ka'ng'tt'uk)
'th'	태극 ('th'AgUk), 많다 (man'th'a)
p	바위 (pawi), 벌써 (pyEp'SS'i)
b	곰바위 (kombawi), 이불 (ibul)
'pp'	빠르다 (pp'arUda), 뽕비 (pom'pp'i)
'ph'	푼돈 ('ph'un'tt'on), 분포 (pun'ph'o)
c	자리 (cari), 주기 (cugi)
J	잠자리 (camJari), 이자 (ija)
'cc'	짜증내다 ('cc'aJU'ng'nAda), 일주 (il'cc'u)
'ch'	처가 ('ch'Ega, 피붙이 ('ph'ibu'ch'i)
s	사람 (saram), 서울 (sEul)
S	시원하다 (StwEnhada), 점심 (cEmSim)
'ss'	쏘가리 (ss'ogari), 국수 (kuk'ss'u)
'SS'	씨암탉 ('SS'lam'th'ak), 벌써 (pyEp'SS'i)
m	마음 (maUm), 앞니 (amni)
n	나 (na), 낫잎 ('kk'onnip)

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Korean Symbol	Example Words
'ng'	잉어 (i'ng'E), 강둑 (ka'ng'tt'uk)
l	말 (mal), 신라 (Silla)
r	루비 (rubi), 가리다 (karida)

16.4.5 Mexican Spanish SPRs

Vowels

The following table includes the symbols for vowels.

Mexican Spanish Symbol	Example Words
a	agua
e	este
i	igual
o	oso
u	uve

Consonants

The following table includes the symbols for consonants.

Mexican Spanish Symbol	Example Words
b	basta, hubo
p	parte, apagar
d	dar, nada
t	toma, atar
g	goma, haga
k	coger, irak
L	milla, llueve
f	flaco, afuera
z	mismo, desde
s	si, casa
S	Washington, sh ampoo [foreign words only)
R	ropa, perro
C	coche, ch ico
j	jota, g ente
m	mano, am or
n	no, mano
N	España
r	arena, pero

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l	loco, algo
y	oigo, tiesto
w	fuera, deuda

Syllable Stress

The following table includes the symbols for syllable stress.

1	primary stress (most prominent stress in the word)
0	no stress

Syllable Boundary

The following table includes the symbol for a syllable boundary.

.	(period) beginning of a syllable
---	----------------------------------

16.5 Additional ECI Annotations

Annotations are special codes placed in text to customize the speech output generated by ETI-Eloquence.

An annotation consists of a backquote (`) followed immediately by a string of characters. For example:

`vs5	Use a speaking rate of 5.
`4	Put very heavy emphasis (level 4) on the following word.
`ts2	Pronounce all characters individually by name.

Each annotation must be preceded by at least one unit of white space.

Modifying Word Emphasis and Tone

Each word in an utterance is pronounced with a level of emphasis relative to other words in the utterance. You can override the default emphasis patterns by placing a tag or annotation before the word you want to modify.

ECI Annotation	Description
`00	Reduced emphasis
`0	No emphasis
`1	Normal emphasis
`2	Added emphasis
`3	Heavy emphasis
`4	Very heavy emphasis

Emphasis level 1, or normal emphasis, is the default level of emphasis for a content word, and emphasis level 00 is the default emphasis for a function word. The last content word in an intonation phrase (the nuclear accent) receives emphasis level 2, unless you annotate the utterance to change the default pattern.

Reduced Emphasis

The reduced emphasis annotation can be used to reduce a word to a function word.

No Emphasis

When two words form a single compound word (as in wet suit in the example below), the second word receives less emphasis than the first. The no-emphasis tag or annotation is used to achieve this effect.

Example: He wore a wet suit to work because his umbrella broke.

Normal Emphasis

The normal-emphasis annotation can be used to mark a word like can (in sentence (b)) as a content word rather than a function word.

- (a) Eating fat **can** make you fat.
- (b) You're going to need a very fat **can** to hold all those peaches.
- (c) You'll need that fat **can**.

While this annotation is used to assign normal emphasis to a word that would otherwise receive no emphasis, the word still receives the nuclear accent in appropriate contexts, as in sentence (c). You can use the added-emphasis tag or annotation to shift the nuclear accent of the phrase to another word.

Added Emphasis

Typically, the last content word in an intonational phrase receives emphasis level 2 automatically. Sometimes, however, it is more appropriate for this emphasis to fall earlier in the phrase. The added-emphasis annotation can be used to mark words in this way. Note that this causes all subsequent words to be de-emphasized.

Heavy Emphasis and Very Heavy Emphasis

To give added emphasis to a word, you can increase the emphasis level. Note that setting the emphasis level to 4 also causes all preceding words to be de-emphasized. The higher levels of emphasis are also useful in contradicting a previous statement or expressing incredulity.

Assigning Tones to Words

This feature is supported only in American and British English.

Use the following annotations to assign tones to words.

ECI Annotation	Description
`al	Low Tone
`ah	High Tone (this is the default for content words)
`af	Falling Tone
`ar	Rising Tone
`as	Scooped Tone

Modifying Phrase-Final Intonation

Use the following annotations to modify phrase-final intonation:

ECI Annotation	Description
`%	Small pitch rise at the end of the phrase. (English only)
`%%	Continuation rise at the end of the phrase and low pitch on the nuclear accented word of the phrase. (English only)
`%%%	Flat, high pitch at the end of the phrase. (English only)
`/	Large pitch fall, as at the end of a paragraph. More perceived finality than at the end of a sentence.

The phrase annotations must be immediately followed by the punctuation ending the intonational phrase: either a period, comma, exclamation point, question mark, colon, or semicolon. If the required punctuation is missing, the annotation is ignored.

Adding Pauses

You can use the pause annotation to:

- _ Modify the pause length created by punctuation symbols.
- _ Insert pauses between words where there is no punctuation.

Use the following annotation to create a pause.

ECI Annotation	Description
`pN	Create a pause N milliseconds long. The maximum length for a single pause tag or annotation is 327670 milliseconds

Inserting pauses can be useful for synthesizing the hesitations that occur in natural speech:

Character Spelling Modes

Use the following annotations to set the character spelling mode:

ECI Annotation	Description
`ts0	No special interpretation (default setting).
`ts1	Pronounce only alphanumeric characters by name.
`ts2	Pronounce all characters individually by name.
`ts3	Pronounce alphabetic characters according to the International Radio Alphabet. Supported in English only.

Pronouncing Numbers and Years

Use the following annotations to pronounce four-digit sequences as either numbers or years. (This distinction is relevant only in English).

ECI Annotation	Description
`ty0	Pronounce 4-digit numbers as "nonyears."
`ty1	Pronounce 4 digit numbers as "years" (default setting).

17 Solving Problems

17.1 Reporting Errors

Any hardware or software anomalies should be reported to ES&S. For contact information, please see Section 1.9 *Technical Support*.

17.2 Troubleshooting Guide

17.2.1 Export Validation Problems

Select an Issue and click **View Selected Data Issue**. AIMS will take you to the form that is the source of the problem.

Error Type	Probable Cause	Solution
Oval Count Mismatches	There is at least one ballot with a scanned Ballot Target (oval or arrow) count that did not match the candidate count on the ballot.	Ensure that all candidates (including write-ins) have a corresponding Ballot Target (oval or arrow) on the ballot.
Tildes in Translations	There is at least one race with tildes in the text. Tildes (~) are not permitted in the translation text.	Delete all tildes.
Missing Translations	There is at least one language translation missing in the data.	Enter the translation or select Use This Translation for All Non-English Language Translations on the Edit Translation form. If it is desirable to have the translation read by the English speech synthesizer, such as with Candidate names, then the <i>Make English Universal</i> checkbox can be selected.
Missing Audio/Phonetics	There is at least one translation requiring an audio file or phonetic text.	Enter phonetic text, select Copy Text to Phonetic, or enter filename of audio file on the Edit Translation form. See Section 8.3 <i>Adding / Editing an Audio File</i> .

Error Type	Probable Cause	Solution
Missing Prompt Translations	There is at least one prompt translation missing in the data.	Edit the prompt translations via the System Maintenance Tool>>Data Editors>>Prompts Viewer>>Prompt Editor.
Ballots with no Races	There is at least one ballot containing no race(s).	Navigate to the ballot and select the races that apply.
Bad File Names	There is a reference to a translation filename that doesn't exist.	A translation file may have been deleted. Remove or fix the reference to the file.
Some Races Still Require Review	There is at least one race that requires review.	The Races Viewer form indicates the race(s) that need to be reviewed.
No Votable Ballots to Export	Some ballots have not been associated with a split.	Use the "Associate Races with a Ballot Style" form to associate a ballot with a split.
Some Split-Ballot Bar Codes Not Set	Some Split-Ballots are missing bar codes.	From the Ballot Names Editor, click Edit button next to the ballot name. Use toggle buttons to set the ballot's bar code.
Some Ballot Timing Marks Not Set	Some X, Y timing marks have not been set on a particular ballot.	Use the Ballot Editor to specify the number of X & Y timing marks on the ballot.

17.2.2 System Errors

Condition	What to Do
System functions improperly.	Terminate the program and reboot.
Election data fails to open properly.	Restore that election from a previous backup file, if possible.
AIMS fails to start properly.	Reboot the entire system.

17.3 AIMS Error Codes

17.3.1 MS Access Error Codes

Error

Code Description

2420 Syntax error in number.

2421 Syntax error in date.

2422 Syntax error in string.

2423 Invalid use of '!', '!', or '()'.

2424 Unknown name.

2425 Unknown function name.

2426 Function is not available in expressions.

2427 Object has no value.

2428 Invalid arguments used with domain function.

2429 In operator without ()).

2430 Between operator without And.

2431 Syntax error (missing operator).

2432 Syntax error (comma).

2433 Syntax error.

2434 Syntax error (missing operator).

2435 Extra).

2436 Missing),], or Item.

2437 Invalid use of vertical bars.

2438 Syntax error.

2439 Wrong number of arguments used with function.

- 2440 IIF function without ().
- 2442 Invalid use of parentheses.
- 2443 Invalid use of Is operator.
- 2445 Expression too complex.
- 2446 Out of memory during calculation.
- 2447 Invalid use of '.', '!', or '()'.
- 2448 Cannot set value.
- 3000 Reserved error <Item>; there is no message for this error.
- 3001 Invalid argument.
- 3002 Could not start session.
- 3003 Could not start transaction; too many transactions already nested.
- 3005 <Database name> is not a valid database name.
- 3006 Database <name> is exclusively locked.
- 3007 Cannot open library database <name>.
- 3008 The table <name> is already opened exclusively by another user, or it is already open through the user interface and cannot be manipulated programmatically.
- 3009 You tried to lock table <table> while opening it, but the table cannot be locked because it is currently in use. Wait a moment, and then try the operation again.
- 3010 Table <name> already exists.
- 3011 The Microsoft Jet database engine could not find the object <name>. Make sure the object exists and that you spell its name and the path name correctly.
- 3012 Object <name> already exists.
- 3013 Could not rename installable ISAM file.

3014 Cannot open any more tables.

3015 Index not found.

3016 Field will not fit in record.

3017 The size of a field is too long.

3018 Could not find field.

3019 Operation invalid without a current index.

3020 Update or CancelUpdate without AddNew or Edit.

3021 No current record.

3022 The changes you requested to the table were not successful because they would create duplicate values in the index, primary key, or relationship. Change the data in the field or fields that contain duplicate data, remove the index, or redefine the index to permit duplicate entries and try again.

3023 AddNew or Edit already used.

3024 Could not find file <name>.

3025 Cannot open any more files.

3026 Not enough space on disk.

3027 Cannot update. Database or object is read-only.

3028 Cannot start your application. The workgroup information file is missing or opened exclusively by another user.

3029 Not a valid account name or password.

3030 <Account name> is not a valid account name.

3031 Not a valid password.

3032 Cannot perform this operation.

3033 You do not have the necessary permissions to use the <name> object. Have your system administrator or the person who created this object establish the appropriate permissions for you.

3034 You tried to commit or rollback a transaction without first beginning a transaction.

3036 Database has reached maximum size.

3037 Cannot open any more tables or queries.

3039 Could not create index; too many indexes already defined.

3040 Disk I/O error during read.

3041 Cannot open a database created with a previous version of your application.

3042 Out of MS-DOS file handles.

3043 Disk or network error.

3044 <Path> is not a valid path. Make sure that the path name is spelled correctly and that you are connected to the server on which the file resides.

3045 Could not use <name>; file already in use.

3046 Could not save; currently locked by another user.

3047 Record is too large.

3048 Cannot open any more databases.

3049 Cannot open database <name>. It may not be a database that your application recognizes, or the file may be corrupt.

3050 Could not lock file.

3051 The Microsoft Jet database engine cannot open the file <name>. It is already opened exclusively by another user, or you need permission to view its data.

3052 File sharing lock count exceeded. Increase MaxLocksPerFile registry entry.

3053 Too many client tasks.

3054 Too many Memo, OLE, or Hyperlink Object fields.

- 3055 Not a valid file name.
- 3056 Could not repair this database.
- 3057 Operation not supported on linked tables.
- 3058 Index or primary key cannot contain a Null value.
- 3059 Operation canceled by user.
- 3060 Wrong data type for parameter <parameter>.
- 3061 Too few parameters. Expected <number>.
- 3062 Duplicate output alias <name>.
- 3063 Duplicate output destination <name>.
- 3064 Cannot open action query <name>.
- 3065 Cannot execute a select query.
- 3066 Query must have at least one destination field.
- 3067 Query input must contain at least one table or query.
- 3068 Not a valid alias name.
- 3069 The action query <name> cannot be used as a row source.
- 3070 The Microsoft Jet database engine does not recognize <name> as a valid field name or expression.
- 3071 This expression is typed incorrectly, or it is too complex to be evaluated. For example, a numeric expression may contain too many complicated elements. Try simplifying the expression by assigning parts of the expression to variables.
- 3072 There was a type mismatch when creating a table validation rule or a CHECK constraint on a column.
- 3073 Operation must use an updatable query.
- 3074 Cannot repeat table name <name> in FROM clause.

- 3075 <Message> in query expression <expression>.
- 3076 <Name> in criteria expression.
- 3077 <Message> in expression.
- 3078 The Microsoft Jet database engine cannot find the input table or query <name>. Make sure it exists and that its name is spelled correctly.
- 3079 The specified field <field> could refer to more than one table listed in the FROM clause of your SQL statement.
- 3080 Joined table <name> not listed in FROM clause.
- 3081 Cannot join more than one table with the same name <name>.
- 3082 JOIN operation <operation> refers to a field that is not in one of the joined tables.
- 3083 Cannot use internal report query.
- 3084 Cannot insert data with action query.
- 3085 Undefined function <name> in expression.
- 3086 Could not delete from specified tables.
- 3087 Too many expressions in GROUP BY clause.
- 3088 Too many expressions in ORDER BY clause.
- 3089 Too many expressions in DISTINCT output.
- 3090 Resultant table not allowed to have more than one AutoNumber field.
- 3091 HAVING clause <name> without grouping or aggregation.
- 3092 Cannot use HAVING clause in TRANSFORM statement.
- 3093 ORDER BY clause <clause> conflicts with DISTINCT.
- 3094 ORDER BY clause <clause> conflicts with GROUP BY clause.
- 3095 Cannot have aggregate function in expression <expression>.

- 3096 Cannot have aggregate function in WHERE clause <clause>.
- 3097 Cannot have aggregate function in ORDER BY clause <clause>.
- 3098 Cannot have aggregate function in GROUP BY clause <clause>.
- 3099 Cannot have aggregate function in JOIN operation <operation>.
- 3100 Cannot set field <name> in join key to Null.
- 3101 The Microsoft Jet database engine cannot find a record in the table <name> with key matching field(s) <name>.
- 3102 Circular reference caused by <query reference>.
- 3103 Circular reference caused by alias <name> in query definition's SELECT list.
- 3104 Cannot specify fixed column heading <value> in a crosstab query more than once.
- 3105 Missing destination field name in SELECT INTO statement <statement>.
- 3106 Missing destination field name in UPDATE statement <statement>.
- 3107 Record(s) cannot be added; no insert permission on <name>.
- 3108 Record(s) cannot be edited; no update permission on <name>.
- 3109 Record(s) cannot be deleted; no delete permission on <name>.
- 3110 Could not read definitions; no read definitions permission for table or query <name>.
- 3111 Could not create; no modify design permission for table or query <name>.
- 3112 Record(s) cannot be read; no read permission on <name>.
- 3113 Cannot update <field name>; field not updatable.
- 3114 Cannot include Memo, OLE, or Hyperlink Object when you select unique values <statement>.
- 3115 Cannot have Memo, OLE, or Hyperlink Object fields in aggregate

argument <statement>.

3116 Cannot have Memo, OLE, or Hyperlink Object fields in criteria <criteria> for aggregate function.

3117 Cannot sort on Memo, OLE, or Hyperlink Object <clause>.

3118 Cannot join on Memo, OLE, or Hyperlink Object <name>.

3119 Cannot group on Memo, OLE, or Hyperlink Object <clause>.

3120 Cannot group on fields selected with '*' <table name>.

3121 Cannot group on fields selected with '*'.

3122 You tried to execute a query that does not include the specified expression <name> as part of an aggregate function.

3123 Cannot use '*' in crosstab query.

3124 Cannot input from internal report query <name>.

3125 <Name> is not a valid name. Make sure that it does not include invalid characters or punctuation and that it is not too long.

3126 Invalid bracketing of name <name>.

3127 The INSERT INTO statement contains the following unknown field name: <field name>. Make sure you have typed the name correctly, and try the operation again.

3128 Specify the table containing the records you want to delete.

3129 Invalid SQL statement; expected 'DELETE', 'INSERT', 'PROCEDURE', 'SELECT', or 'UPDATE'.

3130 Syntax error in DELETE statement.

3131 Syntax error in FROM clause.

3132 Syntax error in GROUP BY clause.

3133 Syntax error in HAVING clause.

3134 Syntax error in INSERT INTO statement.

- 3135 Syntax error in JOIN operation.
- 3136 The LEVEL clause includes a reserved word or argument that is misspelled or missing, or the punctuation is incorrect.
- 3137 Missing semicolon (;) at end of SQL statement.
- 3138 Syntax error in ORDER BY clause.
- 3139 Syntax error in PARAMETER clause.
- 3140 Syntax error in PROCEDURE clause.
- 3141 The SELECT statement includes a reserved word or an argument name that is misspelled or missing, or the punctuation is incorrect.
- 3142 Characters found after end of SQL statement.
- 3143 Syntax error in TRANSFORM statement.
- 3144 Syntax error in UPDATE statement.
- 3145 Syntax error in WHERE clause.
- 3146 ODBC – call failed.
- 3151 ODBC – connection to <name> failed.
- 3154 ODBC – could not find DLL <name>.
- 3155 ODBC – insert on a linked table <table> failed.
- 3156 ODBC – delete on a linked table <table> failed.
- 3157 ODBC – update on a linked table <table> failed.
- 3158 Could not save record; currently locked by another user.
- 3159 Not a valid bookmark.
- 3160 Table is not open.
- 3161 Could not decrypt file.
- 3162 You tried to assign the Null value to a variable that is not a Variant data type.

3163 The field is too small to accept the amount of data you attempted to add. Try inserting or pasting less data.

3164 Field cannot be updated.

3165 Could not open .inf file.

3166 Cannot locate the requested Xbase memo file.

3167 Record is deleted.

3168 Invalid .inf file.

3169 The Microsoft Jet database engine could not execute the SQL statement because it contains a field that has an invalid data type.

3170 Could not find installable ISAM.

3171 Could not find network path or user name.

3172 Could not open Paradox.net.

3173 Could not open table 'MSysAccounts' in the workgroup information file.

3174 Could not open table 'MSysGroups' in the workgroup information file.

3175 Date is out of range or is in an invalid format.

3176 Could not open file <name>.

3177 Not a valid table name.

3179 Encountered unexpected end of file.

3180 Could not write to file <name>.

3181 Invalid range.

3182 Invalid file format.

3183 Not enough space on temporary disk.

3184 Could not execute query; could not find linked table.

3185 SELECT INTO on a remote database tried to produce too many fields.

3186 Could not save; currently locked by user <name> on machine <name>.

3187 Could not read; currently locked by user <name> on machine <name>.

3188 Could not update; currently locked by another session on this machine.

3189 Table <name> is exclusively locked by user <name> on machine <name>.

3190 Too many fields defined.

3191 Cannot define field more than once.

3192 Could not find output table <name>.

3196 The database <database name> is already in use by another person or process. When the database is available, try the operation again.

3197 The Microsoft Jet database engine stopped the process because you and another user are attempting to change the same data at the same time.

3198 Could not start session. Too many sessions already active.

3199 Could not find reference.

3200 The record cannot be deleted or changed because table <name> includes related records.

3201 You cannot add or change a record because a related record is required in table <name>.

3202 Could not save; currently locked by another user.

3203 Subqueries cannot be used in the expression <expression>.

3204 Database already exists.

3205 Too many crosstab column headers <value>.

- 3206 Cannot create a relationship between a field and itself.
- 3207 Operation not supported on a Paradox table with no primary key.
- 3208 Invalid Deleted setting in the Xbase key of the Windows Registry.
- 3210 The connection string is too long.
- 3211 The database engine could not lock table <name> because it is already in use by another person or process.
- 3212 Could not lock table <name>; currently in use by user <name> on machine <name>.
- 3213 Invalid Date setting in the Xbase key of the Windows Registry.
- 3214 Invalid Mark setting in the Xbase key of the Windows Registry.
- 3216 Parameter <name> specified where a table name is required.
- 3217 Parameter <name> specified where a database name is required.
- 3218 Could not update; currently locked.
- 3219 Invalid operation.
- 3220 Incorrect collating sequence.
- 3222 Query cannot contain a Database parameter.
- 3223 <Parameter name> is invalid because it is too long or contains invalid characters.
- 3227 Invalid Century setting in the Xbase key of the Windows Registry.
- 3228 Selected collating sequence not supported by the operating system.
- 3230 Out-of-date Paradox lock file.
- 3231 ODBC – field would be too long; data truncated.
- 3232 ODBC – could not create table.
- 3234 ODBC – remote query timeout expired.
- 3235 ODBC – data type not supported on server.

- 3238 ODBC – data out of range.
- 3239 Too many active users.
- 3242 Invalid reference in SELECT statement.
- 3243 None of the import field names match fields in the appended table.
- 3244 Cannot import password-protected spreadsheet.
- 3245 Could not parse field names from the first row of the import table.
- 3246 Operation not supported in transactions.
- 3247 ODBC – linked table definition has changed.
- 3248 Invalid NetworkAccess setting in the Windows Registry.
- 3249 Invalid PageTimeout setting in the Windows Registry.
- 3250 Could not build key.
- 3251 Operation is not supported for this type of object.
- 3252 Cannot open a form whose underlying query contains a user-defined function that attempts to set or get the form's RecordsetClone property.
- 3254 ODBC – Cannot lock all records.
- 3256 Index file not found.
- 3257 Syntax error in WITH OWNERACCESS OPTION declaration.
- 3258 The SQL statement could not be executed because it contains ambiguous outer joins. To force one of the joins to be performed first, create a separate query that performs the first join and then include that query in your SQL statement.
- 3259 Invalid field data type.
- 3260 Could not update; currently locked by user <name> on machine <name>.
- 3261 Table <name> is exclusively locked by user <name> on machine <name>.

3262 Could not lock table.

3263 Invalid Database object.

3264 No field defined – cannot append TableDef or Index.

3265 Item not found in this collection.

3266 Cannot append a Field that is already a part of a Fields collection.

3267 Property can be set only when the Field is part of a Recordset object's Fields collection.

3268 Cannot set this property once the object is part of a collection.

3269 Cannot append an Index that is already a part of an Indexes collection.

3270 Property not found.

3271 Invalid property value.

3272 Object is not a collection.

3273 Method not applicable for this object.

3274 External table is not in the expected format.

3275 Unexpected error from external database driver <error number>.

3276 Invalid database object reference.

3277 Cannot have more than 10 fields in an index.

3278 The Microsoft Jet database engine has not been initialized.

3279 The Microsoft Jet database engine has already been initialized.

3280 Cannot delete a field that is part of an index or is needed by the system.

3281 Cannot delete this index or table. It is either the current index or is used in a relationship.

3282 Operation not supported on a table that contains data.

- 3283 Primary key already exists.
- 3284 Index already exists.
- 3285 Invalid index definition.
- 3286 Format of memo file does not match specified external database format.
- 3287 Cannot create index on the given field.
- 3288 Paradox index is not primary.
- 3289 Syntax error in CONSTRAINT clause.
- 3290 Syntax error in CREATE TABLE statement.
- 3291 Syntax error in CREATE INDEX statement.
- 3292 Syntax error in field definition.
- 3293 Syntax error in ALTER TABLE statement.
- 3294 Syntax error in DROP INDEX statement.
- 3295 Syntax error in DROP TABLE or DROP INDEX.
- 3296 Join expression not supported.
- 3297 Could not import table or query. No records found, or all records contain errors.
- 3298 There are several tables with that name. Please specify owner in the format 'owner.table'.
- 3299 ODBC Specification Conformance Error <message>. Report this error to the developer of your application.
- 3300 Cannot create a relationship.
- 3301 Cannot perform this operation; features in this version are not available in databases with older formats.
- 3302 Cannot change a rule while the rules for this table are in use.

- 3303 Cannot delete this field. It is part of one or more relationships.
- 3304 You must enter a personal identifier (PID) consisting of at least 4 and no more than 20 characters and digits.
- 3305 Invalid connection string in pass-through query.
- 3306 You have written a subquery that can return more than one field without using the EXISTS reserved word in the main query's FROM clause. Revise the SELECT statement of the subquery to request only one field.
- 3307 The number of columns in the two selected tables or queries of a union query do not match.
- 3308 Invalid TOP argument in select query.
- 3309 Property value is too large.
- 3310 This property is not supported for external data sources or for databases created with a previous version of Microsoft Jet.
- 3311 Property specified already exists.
- 3312 Validation rules and default values cannot be placed on system or linked tables.
- 3313 Cannot place this validation expression on this field.
- 3314 The field <name> cannot contain a Null value because the Required property for this field is set to True. Enter a value in this field.
- 3315 Field <name> cannot be a zero-length string.
- 3316 <Table-level validation text>.
- 3317 One or more values are prohibited by the validation rule <rule> set for <name>. Enter a value that the expression for this field can accept.
- 3318 Values specified in a TOP clause are not allowed in delete queries or reports.
- 3319 Syntax error in union query.
- 3320 <Error> in table-level validation expression.

- 3321 No database specified in connection string or IN clause.
- 3322 Crosstab query contains one or more invalid fixed column headings.
- 3323 The query cannot be used as a row source.
- 3324 The query is a DDL query and cannot be used as a row source.
- 3325 Pass-through query with ReturnsRecords property set to True did not return any records.
- 3326 This result set is not updateable.
- 3327 Field <name> is based on an expression and cannot be edited.
- 3328 Table <name> is read-only.
- 3329 Record in table <name> was deleted by another user.
- 3330 Record in table <name> is locked by another user.
- 3331 To make changes to this field, first save the record.
- 3332 Cannot enter value into blank field on 'one' side of outer join.
- 3333 Records in table <name> would have no record on the 'one' side.
- 3334 Can be present only in version 1.0 format.
- 3337 Invalid DataCodePage option in initialization setting.
- 3340 Query <name> is corrupt.
- 3341 The current field must match the join key <name> in the table that serves as the 'one' side of one-to-many relationship. Enter a record in the 'one' side table with the desired key value, and then make the entry with the desired join key in the 'many-only' table.
- 3342 Invalid Memo, OLE, or Hyperlink Object in subquery <name>.
- 3343 Unrecognized database format <filename>.
- 3344 The database engine does not recognize either the field <name> in a validation expression, or the default value in the table <name>.
- 3345 Unknown or invalid field reference <name>.

3346 Number of query values and destination fields are not the same.

3347 Cannot add record(s); primary key for table <name> not in result set.

3348 Cannot add records(s); join key of table <name> not in result set.

3349 Numeric field overflow.

3350 Object is invalid for operation.

3351 The ORDER BY expression <expression> includes fields that are not selected by the query. Only those fields requested in the first query can be included in an ORDER BY expression.

3352 No destination field name in INSERT INTO statement <statement>.

3354 At most one record can be returned by this subquery.

3355 Syntax error in default value.

3356 You attempted to open a database that is already opened exclusively by user <name> on machine <name>. Try again when the database is available.

3357 This query is not a properly formed data-definition query.

3358 Cannot open the Microsoft Jet engine workgroup information file.

3359 Pass-through query must contain at least one character.

3360 Query is too complex.

3361 Unions not allowed in a subquery.

3362 Single-row update/delete affected more than one row of a linked table. Unique index contains duplicate values.

3363 Record(s) cannot be added; no corresponding record on the 'one' side.

3364 Cannot use Memo, OLE, or Hyperlink Object field <name> in the SELECT clause of a union query.

3365 Cannot set this property for remote objects.

3366 Cannot append a relation with no fields defined.

3367 Cannot append. An object with that name already exists in the collection.

3368 Relationship must be on the same number of fields with the same data types.

3370 Cannot modify the design of table <name>. It is in a read-only database.

3371 Cannot find table or constraint.

3372 No such index <name> on table <name>.

3373 Cannot create relationship. Referenced table <name> does not have a primary key.

3374 The specified fields are not uniquely indexed in table <name>.

3375 Table <name> already has an index named <name>.

3376 Table <name> does not exist.

3377 No such relationship <name> on table <name>.

3378 There is already a relationship named <name> in the current database.

3379 Cannot create relationships to enforce referential integrity. Existing data in table <name> violates referential integrity rules in table <name>.

3380 Field <name> already exists in table <name>.

3381 There is no field named <name> in table <name>.

3382 Size of field <name> is too long.

3383 Cannot delete field <name>. It is part of one or more relationships.

3384 Cannot delete a built-in property.

3385 User-defined properties do not support a Null value.

3386 Property <name> must be set before using this method.

3388 Unknown function <name> in validation expression or default value on <name>.

3389 Query support unavailable.

3390 Account name already exists.

3393 Cannot perform join, group, sort, or indexed restriction. A value being searched or sorted on is too long.

3394 Cannot save property; property is a schema property.

3396 Cannot perform cascading operation. Since related records exist in table <name>, referential integrity rules would be violated.

3397 Cannot perform cascading operation. There must be a related record in table <name>.

3398 Cannot perform cascading operation. It would result in a null key in table <name>.

3399 Cannot perform cascading operation. It would result in a duplicate key in table <name>.

3400 Cannot perform cascading operation. It would result in two updates to field <name> in table <name>.

3401 Cannot perform cascading operation. It would cause field <name> to become Null, which is not allowed.

3402 Cannot perform cascading operation. It would cause field <name> to become a zero-length string, which is not allowed.

3403 Cannot perform cascading operation: <validation text>.

3404 Cannot perform cascading operation. The value entered is prohibited by the validation rule <rule> set for <name>.

3405 Error <error text> in validation rule.

3406 The expression you are trying to use for the DefaultValue property is invalid because <error text>. Use a valid expression to set this property.

3407 The server's MSysConf table exists, but is in an incorrect format. Contact your system administrator.

- 3408 Too many FastFind Sessions were invoked.
- 3409 Invalid field name <name> in definition of index or relationship.
- 3411 Invalid entry. Cannot perform cascading operation in table <name> because the value entered is too large for field <name>.
- 3412 Cannot perform cascading update on the table because it is currently in use by another user.
- 3413 Cannot perform cascading operation on table <name> because it is currently in use by user <name> on machine <name>.
- 3414 Cannot perform cascading operation on table <name> because it is currently in use.
- 3415 Zero-length string is valid only in a Text or Memo field.
- 3416 <reserved error alert>
- 3417 An action query cannot be used as a row source.
- 3418 Cannot open <tablename>. Another user has the table open using a different network control file or locking style.
- 3419 Cannot open this Paradox 4.x or 5.x table because ParadoxNetStyle is set to 3.x in the Windows Registry.
- 3420 Object is invalid or no longer set.
- 3421 Data type conversion error.
- 3422 Cannot modify table structure. Another user has the table open.
- 3423 You cannot use ODBC to import from, export to, or link an external Microsoft Jet or ISAM database table to your database.
- 3424 Cannot create database because the locale is invalid.
- 3428 A problem occurred in your database. Correct the problem by repairing and compacting the database.
- 3429 Incompatible version of an installable ISAM.
- 3430 While loading the Microsoft Excel installable ISAM, OLE was unable to initialize.

- 3431 This is not a Microsoft Excel 5.0 file.
- 3432 Error opening a Microsoft Excel 5.0 file.
- 3433 Invalid setting in Excel key of the Engines section of the Windows Registry.
- 3434 Cannot expand named range.
- 3435 Cannot delete spreadsheet cells.
- 3436 Failure creating file.
- 3437 Spreadsheet is full.
- 3438 The data being exported does not match the format described in the Schema.ini file.
- 3439 You attempted to link or import a Microsoft Word mail merge file. Although you can export such files, you cannot link or import them.
- 3440 An attempt was made to import or link an empty text file. To import or link a text file, the file must contain data.
- 3441 Text file specification field separator matches decimal separator or text delimiter.
- 3442 In the text file specification <name>, the <name> option is invalid.
- 3443 The fixed-width specification <name> contains no column widths.
- 3444 In the fixed width specification <name>, column <column> does not specify a width.
- 3445 Incorrect version of the DLL file <name> was found.
- 3446 Jet VBA file (VBAJET.dll for 16-bit versions, or VBAJET32.dll for 32-bit versions) is missing. Try reinstalling the application that returned the error.
- 3447 The Jet VBA file (VBAJET.dll for 16-bit versions, or VBAJET32.dll for 32-bit versions) failed to initialize when called. Try reinstalling the application that returned the error.
- 3448 A call to an OLE system function was not successful. Try reinstalling

the application that returned the error.

3449 No country code found in the connection string.

3450 Syntax error in query. Incomplete query clause.

3451 Illegal reference in query.

3452 You cannot make changes to the design of the database at this replica.

3453 You cannot establish or maintain an enforced relationship between a replicated table and a local table.

3455 Cannot make the database replicable.

3456 Cannot make the <name> object in <name> container replicable.

3457 You cannot set the KeepLocal property for an object that is already replicated.

3458 The KeepLocal property cannot be set on a database; it can be set only on the objects in a database.

3459 After a database has been replicated, you cannot remove the replication features from the database.

3460 The operation you attempted conflicts with an existing operation involving this member of the replica set.

3461 The replication property you are attempting to set or delete is read-only and cannot be changed.

3462 Failure to load a DLL.

3463 Cannot find the .dll <name>.

3464 Data type mismatch in criteria expression.

3465 The disk drive you are attempting to access is unreadable.

3468 Access was denied while accessing dropbox folder <name>.

3469 The disk for dropbox folder <name> is full.

3470 Disk failure accessing dropbox folder <name>.

- 3471 Failure to write to the Synchronizer log file.
- 3472 Disk full for path <name>.
- 3473 Disk failure while accessing log file <name>.
- 3474 Cannot open the log file <name> for writing.
- 3475 Sharing violation while attempting to open log file <name> in Deny Write mode.
- 3476 Invalid dropbox path <name>.
- 3477 Dropbox address <name> is syntactically invalid.
- 3478 The replica is not a partial replica.
- 3479 Cannot designate a partial replica as the Design Master for the replica set.
- 3480 The relationship <name> in the partial filter expression is invalid.
- 3481 The table name <name> in the partial filter expression is invalid.
- 3482 The filter expression for the partial replica is invalid.
- 3483 The password supplied for the dropbox folder <name> is invalid.
- 3484 The password used by the Synchronizer to write to a destination dropbox folder is invalid.
- 3485 The object cannot be replicated because the database is not replicated.
- 3486 You cannot add a second Replication ID AutoNumber field to a table.
- 3487 The database you are attempting to replicate cannot be converted.
- 3488 The value specified is not a ReplicaID for any member in the replica set.
- 3489 The object specified cannot be replicated because it is missing a necessary resource.

3490 Cannot create a new replica because the <name> object in <name> container could not be replicated.

3491 The database must be opened in exclusive mode before it can be replicated.

3492 The synchronization failed because a design change could not be applied to one of the replicas.

3493 Cannot set the specified Registry parameter for the Synchronizer.

3494 Unable to retrieve the specified Registry parameter for the Synchronizer.

3495 There are no scheduled synchronizations between the two Synchronizers.

3496 Replication Manager cannot find the ExchangeID in the MSysExchangeLog table.

3497 Unable to set a schedule for the Synchronizer.

3499 Cannot retrieve the full path information for a member of the replica set.

3500 You cannot specify two different Synchronizers to manage the same replica.

3502 The Design Master or replica is not being managed by a Synchronizer.

3503 The Synchronizer's Registry has no value set for the key you queried.

3504 The Synchronizer ID does not match an existing ID in the MSysTranspAddress table.

3505 You attempted to delete or get information about a partial filter that does not exist in MsysFilters.

3506 The Synchronizer is unable to open the Synchronizer log.

3507 Failure writing to the Synchronizer log.

3508 There is no active transport for the Synchronizer.

3509 Could not find a valid transport for this Synchronizer.

3510 The member of the replica set you are attempting to synchronize is currently being used in another synchronization.

3512 Failed to read the dropbox folder.

3513 Failed to write to the dropbox folder.

3514 Synchronizer could not find any scheduled or on-demand synchronizations to process.

3515 The Microsoft Jet database engine could not read the system clock on your computer.

3516 Destination synchronizer is not configured to support indirect synchronization, and the destination replica is unavailable for direct synchronization.

3517 Synchronizer could not find any messages to process.

3518 Could not find Synchronizer in the MSysTranspAddress table.

3519 Failed to send a message.

3520 The replica name or ID does not match a currently managed member of the replica set.

3521 Two members of the replica set cannot be synchronized because there is no common point to start the synchronization.

3522 Synchronizer cannot find the record of a specific synchronization in the MSysExchangeLog table.

3523 Synchronizer cannot find a specific version number in the MSysSchChange table.

3524 The history of design changes in the replica does not match the history in the Design Master.

3525 Synchronizer could not access the message database.

3526 The name selected for the system object is already in use.

3527 The Synchronizer or Replication Manager could not find the system object.

3528 There is no new data in shared memory for the Synchronizer or Replication Manager to read.

3529 The Synchronizer or Replication Manager found unread data in the shared memory. The existing data will be overwritten.

3530 The Synchronizer is already serving a client.

3531 The wait period for an event has timed out.

3532 Synchronizer could not be initialized.

3533 The system object used by a process still exists after the process has stopped.

3534 Synchronizer looked for a system event but did not find one to report to the client.

3535 Client has asked the Synchronizer to terminate operation.

3536 Synchronizer received an invalid message for a member of the replica set that it manages.

3537 The Synchronizer's client is no longer present and cannot be notified.

3538 Cannot initialize Synchronizer because there are too many applications running.

3539 A system error has occurred or your swap file has reached its limit.

3540 Your swap file has reached its limit or is corrupted.

3541 Synchronizer could not be shut down properly and is still active.

3542 Process stopped when attempting to terminate Synchronizer client.

3543 Synchronizer has not been set up.

3544 Synchronizer is already running.

3545 The two replicas you are attempting to synchronize are from different replica sets.

3546 The type of synchronization you are attempting is not valid.

3547 Synchronizer could not find a replica from the correct set to complete the synchronization.

3548 GUIDs do not match or the requested GUID could not be found.

3549 The file name you provided is too long.

3550 There is no index on the GUID column.

3551 Unable to delete the specified Registry parameter for the Synchronizer.

3552 The size of the Registry parameter exceeds the maximum allowed.

3553 The GUID could not be created.

3555 All valid nicknames for replicas are already in use.

3556 Invalid path for destination dropbox folder.

3557 Invalid address for destination dropbox folder.

3558 Disk I/O error at destination dropbox folder.

3559 Failure to write because destination disk is full.

3560 The two members of the replica set you are attempting to synchronize have the same ReplicaID.

3561 The two members of the replica set you are attempting to synchronize are both Design Masters.

3562 Access denied at destination dropbox folder.

3563 Fatal error accessing a local dropbox folder.

3564 Synchronizer cannot find the source file for messages.

3565 There is a sharing violation in the source dropbox folder because the message database is open in another application.

3566 Network I/O error.

3567 Message in dropbox folder belongs to the wrong Synchronizer.

3568 Synchronizer could not delete a file.

3569 This member of the replica set has been logically removed from the set and is no longer available.

3570 The filters defining a partial replica are out of sych with each other.

3571 The attempt to set a column in a partial replica violated a rule governing partial replicas.

3572 A disk I/O error occurred while reading or writing to the TEMP directory.

3573 The directory you queried for a list of replicas is not a managed directory.

3574 The ReplicalD for this member of the replica set was reassigned during a move or copy procedure.

3575 The disk drive you are attempting to write to is full.

3576 The database you are attempting to open is already in use by another application.

3577 Cannot update replication system column.

3578 Failure to replicate database; cannot determine whether the database is open in exclusive mode.

3579 Could not create replication system tables needed to make the database replicable.

3580 Could not add rows needed to make the database replicable.

3581 Cannot open replication system table <name> because the table is already in use.

3582 Cannot make a new replica because the <name> object in <name> container could not be made replicable.

3583 Cannot make the <name> object in <name> container replicable.

3584 Insufficient memory to complete operation.

3585 Cannot replicate the table; the number of columns exceeds the maximum allowed.

- 3586 Syntax error in partial filter expression on table <name>.
- 3587 Invalid expression in the ReplicaFilter property.
- 3588 Error when evaluating the partial filter expression.
- 3589 The partial filter expression contains an unknown function.
- 3590 Violates the rules for partial replicas.
- 3591 Log file path <name> is invalid.
- 3592 You cannot replicate a password-protected database or set password protection on a replicated database.
- 3593 You cannot change the data master attribute for the replica set.
- 3594 You cannot change the data master attribute for the replica set. It allows data changes only at the Design Master.
- 3595 The system tables in your replica are no longer reliable and the replica should not be used.
- 3600 Aggregation expressions cannot use GUIDs.
- 3605 Synchronizing with a non-replicated database is not allowed. The <name> database is not a Design Master or replica.
- 3607 The replication property you are attempting to delete is read-only and cannot be removed.
- 3608 Record length is too long for an indexed Paradox table.
- 3609 No unique index found for the referenced field of the primary table.
- 3610 Same table <table> referenced as both the source and destination in a make-table query.
- 3611 Cannot execute data definition statements on linked data sources.
- 3612 Multi-level GROUP BY clause is not allowed in a subquery.
- 3613 Cannot create a relationship on linked ODBC tables.
- 3614 GUID not allowed in Find method criteria expression.

- 3615 Type mismatch in JOIN expression.
- 3616 Updating data in a linked table is not supported by this ISAM.
- 3617 Deleting data in a linked table is not supported by this ISAM.
- 3618 Exceptions table could not be created on import/export.
- 3619 Records could not be added to exceptions table.
- 3620 The connection for viewing your linked Microsoft Excel worksheet was lost.
- 3621 Cannot change password on a shared open database.
- 3622 You must use the dbSeeChanges option with OpenRecordset when accessing a SQL Server table that has an IDENTITY column.
- 3623 Cannot access the FoxPro 3.0 bound DBF file <filename>.
- 3624 Could not read the record; currently locked by another user.
- 3625 The text file specification <name> does not exist. You cannot import, export, or link using the specification.
- 3626 The operation failed. There are too many indexes on table <name>. Delete some of the indexes on the table and try the operation again.
- 3627 Cannot find the executable file for the Synchronizer (mstran40.exe).
- 3628 Partner replica is not managed by a Synchronizer.
- 3629 Synchronizer <name> is also using the same File System dropbox <name>.
- 3630 Synchronizer <name> is also using the same File System dropbox <name>.
- 3631 Invalid table name in filter.
- 3632 Internet Transport not enabled on the remote Synchronizer.
- 3633 Cannot load DLL <name>.
- 3634 Cannot create a replica using a partial replica.

- 3635 Cannot create partial replica of a system database.
- 3636 Cannot populate the replica or change the replica's filter because the replica has conflicts or data errors.
- 3637 Cannot use the crosstab of a non-fixed column as a subquery.
- 3638 A Source Controlled database cannot be made replicable.
- 3639 Cannot create a replica of a System database.
- 3640 The fetch buffer was too small for the amount of data you requested.
- 3641 There are fewer records remaining in the Recordset than you requested.
- 3642 A cancel was performed on the operation.
- 3643 One of the records in the Recordset was deleted by another process.
- 3645 One of the binding parameters is incorrect.
- 3646 The specified row length is shorter than the sum of the column lengths.
- 3647 A column requested is not being returned to the Recordset.
- 3648 Cannot synchronize a partial replica with another partial replica.
- 3649 The language-specific code page was not specified or could not be found.
- 3650 Either the Internet is very slow or there is some problem in the replication manager setup on the internet server machine.
- 3651 Invalid Internet address.
- 3652 Internet login failure.
- 3653 Internet not set up.
- 3656 Error in evaluating a partial expression.
- 3657 Error in evaluating the Boolean filter expression for table <name>.

- 3658 Binary column <name> cannot be used in a Boolean filter.
- 3659 Relationship <name> is unenforced. Relationship in a partial filter expression must be enforced.
- 3660 Requested exchange failed because <description>.
- 3661 Requested exchange failed because <description>.
- 3663 This operation requires a different cursor library.
- 3664 An asynchronous OpenConnection call is not yet complete; you cannot yet reference the returned connection object until it is complete.
- 3665 You cannot modify the replication system object <name>.
- 3666 You cannot modify the replication system object <name>.
- 3667 A different operation is preventing this operation from being executed.
- 3668 Cannot perform this operation because there is no active connection.
- 3672 Failed to load RDOCURS.DLL
- 3673 This table contains cells that are outside the range of cells defined in this spreadsheet.
- 3674 Internet dll (wininet.dll) could not be found or loaded.
- 3675 Failure to read from an internet handle. Try the operation again.
- 3676 Failure to write to an internet handle. Try the operation again.
- 3677 Failure to execute the HTTP request to start the internet synchronizer or the internet server. Use Replication Manager to configure internet synchronizer on the internet server.
- 3678 Failure to connect to the FTP service on the internet server. Make sure that FTP service is running properly on the server and supports anonymous connections.
- 3679 Failure to open file using FTP service. Make Sure that FTP dropbox has read permission.

3680 Failure in getting a file from the server using FTP. Make sure that FTP dropbox has read permissions.

3681 Failure in putting a file to the server using FTP. Make sure that FTP dropbox has write permissions.

3682 Failure to delete a file on the server using FTP. Make sure that FTP dropbox has read and write permissions.

3683 Internet synchronizer exited unexpectedly on the server. Look at the partner replica exchange history on the internet server to figure out the problem.

3684 There is no suitable replica with which to exchange.

3685 Invalid HTTP address.

3686 Invalid replica path or name.

3689 Invalid SQL syntax - expected token: Privileges.

3700 Invalid precision for decimal data type.

3701 Invalid scale for decimal data type.

3702 The width of a Unicode text column must be an even number of bytes.

3703 Operation not supported on replicable databases that have not been converted to the current version.

3704 You attempted to open a database that is already opened by user <name> on machine <name>. Try again when the database is available.

3705 Cannot make the <name> table replicable - too many columns.

3706 Cannot make the <name> table replicable - too many indexes.

3707 The cascading options for the new reference conflict with existing reference <name>.

3708 Syntax error in Transaction statement. Expected TRANSACTION, WORK, or nothing.

3709 The search key was not found in any record.

3710 MAPI folder or address book not found.

3711 Recovered replicable data. This row was recovered from a corrupted replicable database. Verify that the record contents are correct and then reinsert the record, or delete the conflict record.

3713 Update/update conflict. Another replica also updated this record. This record lost the conflict. Either resubmit your update or delete this conflict record.

3714 Locked table. This record could not be applied during synchronization since the table was locked by another user. Resubmit this conflict record.

3715 Unique key violation. This record has the same key value as another record, whereas only unique values are permitted. Either change the key value in this conflict record or the winning record and then resubmit this record, or delete this conflict record.

3716 TLV violation. This record contains a field value that does not meet the table level validation constraint. Either update the field value that is violating the validation rule and then resubmit this conflict record, or delete this conflict record.

3717 Delete/RI conflict. The primary key record has been deleted by another replica, therefore this referencing record has been rejected. Either create a new primary key record that satisfies the referential integrity constraint and then resubmit your update, or delete this conflict record.

3718 Update/RI conflict. The primary key record has been updated by another replica, therefore this referencing record has been rejected. Either create a new primary key record that satisfies the referential integrity constraint, modify the foreign key value in this conflict record to match a valid primary key value and then resubmit your update, or delete this conflict record.

3719 Foreign key violation resulting from an invalid primary key record that was involved in a replication conflict. Either create a new primary key record that satisfies the referential integrity constraint, modify the foreign key value in this conflict record to match a valid primary key value and then resubmit this conflict record, or delete this conflict record.

3720 Cannot change field <name>. It is part of one or more relationships.

3721 Invalid SQL syntax - expected CONSTRAINT name.

3722 Invalid SQL syntax - expected token: DEFAULT.

3723 Invalid SQL syntax - expected token: COMPRESSION to follow WITH.

3724 Invalid SQL syntax - expected token: UPDATE or DELETE.

3725 Invalid SQL syntax - expected token: CASCADE, SET NULL, or NO ACTION.

3726 Invalid SQL syntax - expected token: NULL.

3727 Invalid SQL syntax - only one update rule and/or one delete rule allowed.

3728 Invalid SQL syntax - expected token: AS.

3729 Invalid SQL syntax - expected token: SELECT.

3730 VIEW cannot contain a parameter.

3731 The number of aliases specified shall be the same as the number of output columns.

3732 Expected query name after EXECUTE.

3733 The database has been placed in a state by an unknown user that prevents it from being opened or locked.

3734 The database has been placed in a state by user <name> on machine <name> that prevents it from being opened or locked.

3736 Update/delete conflict. This updated record was deleted at another replica. Either reinsert this conflict record or delete it.

3737 Cannot create this type of replica from the given source replica.

3738 Local or Anonymous replicas must synch only to their designated hub replica.

3740 Cannot add a new column to conflict table <name>. Delete obsolete columns and compact the database.

3741 Invalid partner synchronizer. Local or anonymous replica must synchronize with designated hub replica.

- 3742 An internet function has timed out.
- 3743 Replica has not been synchronized within the replica set retention period.
- 3745 The combined length of Internet Server Name, HTTP Share name, and FTP alias name should not be greater than 252 characters.
- 3746 Syntax error in query. Parameter value.
- 3747 Parameter has no default value.
- 3748 Parameter <name> has no default value.
- 3749 The object is not a stored procedure.
- 3750 Object <name> is not a stored procedure.
- 3751 Requested row locking, but DB is in page lock mode.
- 3752 Requested page locking, but DB is in row lock mode.
- 3753 Cannot create replica of a Jet SQL replica.
- 3754 Cannot delete from a Prevent Deletes Replica.
- 3755 CHECK Constraint <name> does not exist.
- 3756 CHECK constraint <name> already exists.
- 3757 The Jet sorting DLLs could not be loaded properly.
- 3758 Scaling of decimal value resulted in data truncation.
- 3759 Scaling of decimal value resulted in data truncation.
- 3760 Scaling of decimal value resulted in data overflow.
- 3761 The decimal field's precision is too small to accept the numeric you attempted to add.
- 3762 Invalid SQL syntax - expected token: ACTION.
- 3763 Concurrent schema changes caused the create replica operation to fail. Try again.

3765 Syntax error in CHECK CONSTRAINT clause.

3766 Only simple SELECT queries are allowed in VIEWS.

3767 Table <name> could not be made replicable because it could not be opened exclusively.

3768 FastFind cannot search on non-column references.

3769 Conflict tables cannot be renamed.

3770 Counter definition not in valid range.

3771 Local or Anonymous replicas cannot be made the Design Master.

3772 Without Administrator permission, replica priority must be in the range 0 - <number>.

3773 Cannot delete one or more objects: <name>.

3775 Unable to load Jet SQL Server Reconciler - MSRPJT40.dll

3777 Illegal Operation performed on a Jet SQL Server Replica.

3778 The Jet database is wrong or missing for this SQL/Jet replica set.

3779 Unable to change Column Level Tracking Property on objects that are already replicable.

3780 Invalid SQL syntax - expected a view name.

3781 Invalid SQL syntax - expected a procedure name.

3784 Database is already replicable.

3785 Invalid SQL syntax - expected token: Database.

3786 Invalid SQL syntax - expected a database privilege such as CREATEDB or CONNECT.

3787 This operation is not allowed in subqueries.

3788 Cannot create an index on this MAPI folder/address book.

3789 Illegal column-level constraint.

3798 CHECK constraints are not allowed on replicable databases.

3799 Could not find field <name>.

3800 <Name> is not an index in this table.

3801 The object <name> cannot be used in a CHECK constraint clause.

3802 Error evaluating <name> CHECK constraint. <Additional information.>

3803 DDL cannot be completed on this table because it is referenced by constraint <name> on table <name>.

3804 There are no MAPI clients installed on this machine. Install a MAPI client, such as Outlook, on this machine.

3805 Check constraints on table <name> will not be transferred to this table. Check constraints can only be created via SQL DDL statements.

3806 Cannot set multiple NULL, NOT NULL attributes.

3807 Query <name> contains an ambiguous column name that is conflicting with the correlation (alias) name <name>. Either fully qualify the column name or change the correlation (alias) name.

3808 Need a version 4.x or greater format system database to perform this operation.

17.3.2 SQL Server (MSDE) Error Codes

Error	Severity	Description (Message Text)
2001	10	Cannot use duplicate parameter names. Parameter name '%.*ls' listed more than once.
2004	16	Procedure '%.*ls' has already been created with group number %d. Create procedure with an unused group number.
2007	11	Cannot add rows to sysdepends for the current stored procedure because it depends on the missing object '%.*ls'. The stored procedure will still be created.
2008	16	The object '%.*ls' is not a procedure so you cannot create another procedure under that group name.
2009	10	Procedure '%.*ls' was created despite delayed name resolution warnings (if any).
2010	16	Cannot perform alter on '%.*ls' because it is an incompatible object type.
2011	16	Index hints cannot be specified within a schema-bound object.
2012	16	User-defined variables cannot be declared within a schema-bound object.
2106	11	Cannot create a trigger on table '%.*ls', because this table does not exist in database '%.*ls'.
2108	16	Cannot create a trigger on table '%.*ls' because you can only create a trigger on a table in the current database.
2110	16	Cannot alter trigger '%.*ls' for table '%.*ls' because this trigger does not belong to this table.
2111	16	Cannot %s trigger '%.*ls' for %S_MSG '%.*ls' because an INSTEAD OF %s trigger already exists.
2112	16	Cannot %s trigger '%.*ls' for view '%.*ls' because it is defined with the CHECK OPTION.
2113	16	Cannot %s INSTEAD OF DELETE or UPDATE TRIGGER '%.*ls' on table '%.*ls' because the table has a FOREIGN KEY with cascaded DELETE or UPDATE.
2114	16	Column '%.*ls' cannot be used in an IF UPDATE clause because it is a computed column.
2501	16	Could not find a table or object named '%.*ls'. Check sysobjects.
2502	16	Could not start transaction.

Error	Severity	Description (Message Text)
2503	10	Successfully deleted the physical file '%ls'.
2504	16	Could not delete the physical file '%ls'. The DeleteFile system function returned error %ls.
2505	16	The device '%.*ls' does not exist. Use sp_helpdevice to show available devices.
2506	16	Could not find a table or object name '%.*ls' in database '%.*ls'.
2511	16	Table error: Object ID %d, Index ID %d. Keys out of order on page %S_PGID, slots %d and %d.
2512	16	Table error: Object ID %d, Index ID %d. Duplicate keys on page %S_PGID slot %d and page %S_PGID slot %d.
2513	16	Table error: Object ID %ld (object '%.*ls') does not match between '%.*ls' and '%.*ls'.
2514	16	Table error: Data type %ld (type '%.*ls') does not match between '%.*ls' and '%.*ls'.
2515	16	Page %S_PGID, object ID %d, index ID %d has been modified but is not marked modified in the differential backup bitmap.
2516	16	The differential bitmap was invalidated for database %.*ls. A full database backup is required before a differential backup can be performed.
2517	16	The minimally logged operation status has been turned on for database %.*ls. Rerun backup log operations to ensure that all data has been secured.
2519	16	Unable to process table %.*ls because filegroup %.*ls is invalid.
2520	16	Could not find database '%.*ls'. Check sysdatabases.
2521	16	Could not find database ID %d. Check sysdatabases.
2522	16	Unable to process index %.*ls of table %.*ls because filegroup %.*ls is invalid.
2523	16	Filegroup %.*ls is invalid.
2524	16	Unable to process table %.*ls because filegroup %.*ls is offline.
2525	16	Database file %.*ls is offline.
2526	16	Incorrect DBCC statement. Check the documentation for the correct DBCC syntax and options.

Error	Severity	Description (Message Text)
2527	16	Unable to process index %.*Is of table %.*Is because filegroup %.*Is is offline.
2528	10	DBCC execution completed. If DBCC printed error messages, contact your system administrator.
2529	16	Filegroup %.*Is is offline.
2530	16	Secondary index entries were missing or did not match the data in the table. Use the WITH TABLOCK option and run the command again to display the failing records.
2531	16	Table error: Object ID %d, index ID %d B-tree level mismatch, page %S_PGID. Level %d does not match level %d from previous %S_PGID.
2532	16	DBCC SHRINKFILE could not shrink file %ls. Log files are not supported.
2533	16	Table error: Page %S_PGID allocated to object ID %d, index ID %d was not seen. Page may be invalid or have incorrect object ID information in its header.
2534	16	Table error: Page %S_PGID with object ID %d, index ID %d in its header is allocated by another object.
2535	16	Table error: Page %S_PGID is allocated to object ID %d, index ID %d, not to object ID %d, index ID %d found in page header.
2536	10	DBCC results for '%.*Is'.
2537	16	Table error: Object ID %d, index ID %d, page %S_PGID, row %d. Record check (%hs) failed. Values are %ld and %ld.
2538	10	File %d. Number of extents = %ld, used pages = %ld, reserved pages = %ld.
2539	10	Total number of extents = %ld, used pages = %ld, reserved pages = %ld in this database.
2540	10	The system cannot self repair this error.
2541	10	DBCC UPDATEUSAGE: sysindexes row updated for table '%.*Is' (index ID %ld):
2542	10	DATA pages: Changed from (%ld) to (%ld) pages.
2543	10	USED pages: Changed from (%ld) to (%ld) pages.
2544	10	RSVD pages: Changed from (%ld) to (%ld) pages.
2545	10	ROWS count: Changed from (%l64d) to (%l64d) rows.

Error	Severity	Description (Message Text)
2546	10	Index '%.*Is' on table '%.*Is' is marked offline. Rebuild the index to bring it online.
2547	10	Performing second pass of index checks.
2548	10	DBCC: Compaction phase of index '%.*Is' is %d%% complete.
2549	10	DBCC: Defrag phase of index '%.*Is' is %d%% complete.
2557	14	User '%.*Is' does not have permission to run DBCC %Is for object '%.*Is'.
2559	16	The '%Is' and '%Is' options are not allowed on the same statement.
2560	16	Parameter %d is incorrect for this DBCC statement.
2562	16	'%Is' cannot access object '%.*Is' because it is not a table.
2566	14	DBCC DBREINDEX cannot be used on system tables.
2567	14	DBCC INDEXDEFRAG cannot be used on system table indexes
2568	16	Page %S_PGID is out of range for this database or is in a log file.
2570	16	Warning: Page %S_PGID, slot %d in Object %d Index %d Column '%.*Is' value '%.*Is' is out of range for data type '%.*Is'. Update column to a legal value.
2571	14	User '%.*Is' does not have permission to run DBCC %.*Is.
2572	16	DBCC cannot free DLL '%.*Is'. The DLL is in use.
2573	16	Database '%.*Is' is not marked suspect. You cannot drop it with DBCC.
2574	10	Object ID %d, index ID %d: Page %S_PGID is empty. This is not permitted at level %d of the B-tree.
2575	16	IAM page %S_PGID is pointed to by the next pointer of IAM page %S_PGID object ID %d index ID %d but was not detected in the scan.
2576	16	IAM page %S_PGID is pointed to by the previous pointer of IAM page %S_PGID object ID %d index ID %d but was not detected in the scan.
2577	16	Chain sequence numbers are out of order in IAM chain for object ID %d, index ID %d. Page %S_PGID sequence number %d points to page %S_PGID sequence number %d.

Error	Severity	Description (Message Text)
2578	16	Minimally logged extents were found in GAM interval starting at page %S_PGID but the minimally logged flag is not set in the database table.
2579	16	Table error: Extent %S_PGID object ID %d, index ID %d is beyond the range of this database.
2580	16	Table '%.*Is' is either a system or temporary table. DBCC CLEANABLE cannot be applied to a system or temporary table.
2583	16	An incorrect number of parameters was given to the DBCC statement.
2588	16	Page %S_PGID was expected to be the first page of a text, ntext, or image value.
2590	10	User '%.*Is' is modifying bytes %d to %d of page %S_PGID in database '%.*Is'.
2591	16	Could not find row in sysindexes with index ID %d for table '%.*Is'.
2592	10	%Is index successfully restored for object '%.*Is' in database '%.*Is'.
2593	10	There are %l64d rows in %ld pages for object '%.*Is'.
2594	16	Invalid index ID (%d) specified.
2595	16	Database '%.*Is' must be set to single user mode before executing this statement.
2597	16	The database is not open. Execute a 'USE '%.*Is'' statement and rerun the DBCC statement.
2598	16	Clustered indexes on sysobjects and sysindexes cannot be re-created.
2601	14	Cannot insert duplicate key row in object '%.*Is' with unique index '%.*Is'.
2603	21	No space left on logical page %S_PGID of index ID %d for object '%.*Is' when inserting row on an index page. This situation should have been handled while traversing the index.
2617	20	Buffer holding logical page %S_PGID not found in keep pool in SDES for object '%.*Is'. Contact Technical Support.
2624	21	Could not insert into table %S_DES because row length %d is less than the minimum length %d.

Error	Severity	Description (Message Text)
2627	14	Violation of %ls constraint '%.*ls'. Cannot insert duplicate key in object '%.*ls'.
2701	10	Database name '%.*ls' ignored, referencing object in tempdb.
2702	16	Database '%.*ls' does not exist.
2705	16	Column names in each table must be unique. Column name '%.*ls' in table '%.*ls' is specified more than once.
2706	11	Table '%.*ls' does not exist.
2710	16	You are not the owner specified for the object '%.*ls' in this statement (CREATE, ALTER, TRUNCATE, UPDATE STATISTICS or BULK INSERT).
2714	16	There is already an object named '%.*ls' in the database.
2715	16	Column or parameter #%d: Cannot find data type %.*ls.
2716	16	Column or parameter #%d: Cannot specify a column width on data type %.*ls.
2717	15	The size (%d) given to the %S_MSG '%.*ls' exceeds the maximum allowed (%d).
2718	16	Column or parameter #%d: Cannot specify null values on a column of data type bit.
2721	11	Could not find a default segment to create the table on. Ask your system administrator to specify a default segment in syssegments.
2724	10	Parameter '%.*ls' has an invalid data type.
2727	11	Cannot find index '%.*ls'.
2730	11	Cannot create procedure '%.*ls' with a group number of %d because a procedure with the same name and a group number of 1 does not currently exist in the database. Must execute CREATE PROCEDURE '%.*ls';1 first.
2731	16	Column '%.*ls' has invalid width: %d.
2732	16	Error number %ld is invalid. The number must be from %ld through %ld
2734	16	The user name '%.*ls' does not exist in sysusers.
2736	16	Owner name specified is a group name. Objects cannot be owned by groups.
2737	16	Message passed to %hs must be of type char, varchar, nchar, or nvarchar.

Error	Severity	Description (Message Text)
2738	16	A table can only have one timestamp column. Because table '%.*ls' already has one, the column '%.*ls' cannot be added.
2739	16	The text, ntext, and image data types are invalid for local variables.
2740	16	SET LANGUAGE failed because '%.*ls' is not an official language name or a language alias on this SQL Server.
2741	16	SET DATEFORMAT date order '%.*ls' is invalid.
2742	16	SET DATEFIRST %d is out of range.
2743	16	%ls statement requires %S_MSG parameter.
2744	16	Multiple identity columns specified for table '%.*ls'. Only one identity column per table is allowed.
2745	10	Process ID %d has raised user error %d, severity %d. SQL Server is terminating this process.
2746	16	Cannot specify user error format string with a length exceeding %d bytes.
2747	16	Too many substitution parameters for RAISERROR. Cannot exceed %d substitution parameters.
2748	16	Cannot specify %ls data type (RAISERROR parameter %d) as a substitution parameter for RAISERROR.
2749	16	Identity column '%.*ls' must be of data type int, bigint, smallint, tinyint, or decimal or numeric with a scale of 0, and constrained to be nonnullable.
2750	16	Column or parameter #%d: Specified column precision %d is greater than the maximum precision of %d.
2751	16	Column or parameter #%d: Specified column scale %d is greater than the specified precision of %d.
2752	16	Identity column '%.*ls' contains invalid SEED.
2753	16	Identity column '%.*ls' contains invalid INCREMENT.
2754	16	Error severity levels greater than %d can only be specified by members of the sysadmin role, using the WITH LOG option.
2755	16	SET DEADLOCK_PRIORITY option '%.*ls' is invalid.
2756	16	Invalid value %d for state. Valid range is from %d to %d.
2757	16	RAISERROR failed due to invalid parameter substitution(s) for error %d, severity %d, state %d.
2758	16	%hs could not locate entry for error %d in sysmessages.

Error	Severity	Description (Message Text)
2759	0	CREATE SCHEMA failed due to previous errors.
2760	16	Specified owner name '%.*ls' either does not exist or you do not have permission to use it.
2761	16	The ROWGUIDCOL property can only be specified on the uniqueidentifier data type.
2762	16	sp_setapprole was not invoked correctly. Refer to the documentation for more information.
2763	16	Could not find application role '%.*ls'.
2764	16	Incorrect password supplied for application role '%.*ls'.
2765	15	Could not locate statistics for column '%.*ls' in the system catalogs.
2766	16	The definition for user-defined data type '%.*ls' has changed.
2767	15	Could not locate statistics '%.*ls' in the system catalogs.
2768	15	Statistics for %ls '%.*ls'.
2769	15	Column '%.*ls'. Cannot create statistics on a column of data type %ls.
2770	16	The SELECT INTO statement cannot have same source and destination tables.
2771	16	Cannot create statistics on table '%.*ls'. This table is a virtual system table.
2772	16	Cannot access temporary tables from within a function.
2773	16	Sort order ID %d is invalid.
2774	16	Collation ID %d is invalid.
2775	16	Code page %d is not supported by the operating system.
2777	17	Database '%.*ls' contains columns or parameters with the following code page(s) not supported by the operating system: %ls.
2801	16	The definition of object '%.*ls' has changed since it was compiled.
2809	18	The request for %S_MSG '%.*ls' failed because '%.*ls' is a %S_MSG object.
2812	16	Could not find stored procedure '%.*ls'.

17.3.3 ADO Error Table

Constant	Value	Description
adErrBoundToCommand	3707 -2.147E+09 0x800A0E7B	Cannot change the ActiveConnection property of a Recordset object which has a Command object as its source.
adErrCannotComplete	3732 -2.147E+09 0x800A0E94	Server cannot complete the operation.
adErrCantChangeConnection	3748 -2.147E+09 0x800A0EA4	Connection was denied. New connection you requested has different characteristics than the one already in use.
adErrCantChangeProvider	3220 -2.147E+09 0X800A0C94	Supplied provider is different from the one already in use.
adErrCantConvertvalue	3724 -2.147E+09 0x800A0E8C	Data value cannot be converted for reasons other than sign mismatch or data overflow. For example, conversion would have truncated data.
adErrCantCreate	3725 -2.147E+09 0x800A0E8D	Data value cannot be set or retrieved because the field data type was unknown, or the provider had insufficient resources to perform the operation.
adErrCatalogNotSet	3747 -2.147E+09 0x800A0EA3	Operation requires a valid ParentCatalog .
adErrColumnNotOnThisRow	3726 -2.147E+09 0x800A0E8E	Record does not contain this field.
adErrDataConversion	3421 -2.147E+09 0x800A0D5D	Application uses a value of the wrong type for the current operation.
adErrDataOverflow	3721 -2.147E+09 0x800A0E89	Data value is too large to be represented by the field data type.
adErrDelResOutOfScope	3738 -2.147E+09 0x800A0E9A	URL of the object to be deleted is outside the scope of the current record.
adErrDenyNotSupported	3750	Provider does not support sharing

Constant	Value	Description
	-2.147E+09 0x800A0EA6	restrictions.
adErrDenyTypeNotSupported	3751 -2.147E+09 0x800A0EA7	Provider does not support the requested kind of sharing restriction.
adErrFeatureNotAvailable	3251 -2.147E+09 0x800A0CB3	Object or provider is not capable of performing requested operation.
adErrFieldsUpdateFailed	3749 -2.147E+09 0x800A0EA5	Fields update failed. For further information, examine the Status property of individual field objects.
adErrIllegalOperation	3219 -2.147E+09 0x800A0C93	Operation is not allowed in this context.
adErrIntegrityViolation	3719 -2.147E+09 0x800A0E87	Data value conflicts with the integrity constraints of the field.
adErrInTransaction	3246 -2.147E+09 0x800A0CAE	Connection object cannot be explicitly closed while in a transaction.
adErrInvalidArgument	3001 -2.147E+09 0x800A0BB9	Arguments are of the wrong type, are out of acceptable range, or are in conflict with one another.
adErrInvalidConnection	3709 -2.147E+09 0x800A0E7D	Operation is not allowed on an object referencing a closed or invalid connection.
adErrInvalidParamInfo	3708 -2.147E+09 0x800A0E7C	Parameter object is improperly defined. Inconsistent or incomplete information was provided.
adErrInvalidTransaction	3714 -2.147E+09 0x800A0E82	Coordinating transaction is invalid or has not started.
adErrInvalidURL	3729 -2.147E+09 0x800A0E91	URL contains invalid characters. Make sure the URL is typed correctly.
adErrItemNotFound	3265 -2.147E+09 0x800A0CC1	Item cannot be found in the collection corresponding to the requested name or ordinal.
adErrNoCurrentRecord	3021 -2.147E+09	Either BOF or EOF is True, or the current record has been deleted.

Constant	Value	Description
	0x800A0BCD	Requested operation requires a current record.
adErrNotExecuting	3715 -2.147E+09 0x800A0E83	Operation cannot be performed while not executing.
adErrNotReentrant	3710 -2.147E+09 0x800A0E7E	Operation cannot be performed while processing event.
adErrObjectClosed	3704 -2.147E+09 0x800A0E78	Operation is not allowed when the object is closed.
adErrObjectInCollection	3367 -2.147E+09 0x800A0D27	Object is already in collection. Cannot append.
adErrObjectNotSet	3420 -2.147E+09 0x800A0D5C	Object is no longer valid.
adErrObjectOpen	3705 -2.147E+09 0x800A0E79	Operation is not allowed when the object is open.
adErrOpeningFile	3002 -2.147E+09 0x800A0BBA	File could not be opened.
adErrOperationCancelled	3712 -2.147E+09 0x800A0E80	Operation has been cancelled by the user.
adErrOutOfSpace	3734 -2.147E+09 0x800A0E96	Operation cannot be performed. Provider cannot obtain enough storage space.
adErrPermissionDenied	3720 -2.147E+09 0x800A0E88	Insufficient permission prevents writing to the field.
adErrPropConflicting	3742 -2.147E+09 0x800A0E9E	Property value conflicts with a related property.
adErrPropInvalidColumn	3739 -2.147E+09 0x800A0E9B	Property cannot apply to the specified field.
adErrPropInvalidOption	3740	Property attribute is invalid.

Constant	Value	Description
	-2.147E+09 0x800A0E9C	
adErrPropInvalidValue	3741 -2.147E+09 0x800A0E9D	Property value is invalid. Make sure the value is typed correctly.
adErrPropNotAllSettable	3743 -2.147E+09 0x800A0E9F	Property is read-only or cannot be set.
adErrPropNotSet	3744 -2.147E+09 0x800A0EA0	Optional property value was not set.
adErrPropNotSettable	3745 -2.147E+09 0x800A0EA1	Read-only property value was not set.
adErrPropNotSupported	3746 -2.147E+09 0x800A0EA2	Provider does not support the property.
adErrProviderFailed	3000 -2.147E+09 0x800A0BB8	Provider failed to perform the requested operation.
adErrProviderNotFound	3706 -2.147E+09 0x800A0E7A	Provider cannot be found. It may not be properly installed.
adErrReadFile	3003 -2.147E+09 0x800A0BBB	File could not be read.
adErrResourceExists	3731 -2.147E+09 0x800A0E93	Copy operation cannot be performed. Object named by destination URL already exists. Specify adCopyOverwrite to replace the object.
adErrResourceLocked	3730 -2.147E+09 0x800A0E92	Object represented by the specified URL is locked by one or more other processes. Wait until the process has finished and attempt the operation again.
adErrResourceOutOfScope	3735 -2.147E+09 0x800A0E97	Source or destination URL is outside the scope of the current record.
adErrSchemaViolation	3722 -2.147E+09 0x800A0E8A	Data value conflicts with the data type or constraints of the field.
adErrSignMismatch	3723	Conversion failed because the

Constant	Value	Description
	-2.147E+09 0x800A0E8B	data value was signed and the field data type used by the provider was unsigned.
adErrStillConnecting	3713 -2.147E+09 0x800A0E81	Operation cannot be performed while connecting asynchronously.
adErrStillExecuting	3711 -2.147E+09 0x800A0E7F	Operation cannot be performed while executing asynchronously.
adErrTreePermissionDenied	3728 -2.147E+09 0x800A0E90	Permissions are insufficient to access tree or subtree.
adErrUnavailable	3736 -2.147E+09 0x800A0E98	Operation failed to complete and the status is unavailable. The field may be unavailable or the operation was not attempted.
adErrUnsafeOperation	3716 -2.147E+09 0x800A0E84	Safety settings on this computer prohibit accessing a data source on another domain.
adErrURLDoesNotExist	3727 -2.147E+09 0x800A0E8F	Either the source URL or the parent of the destination URL does not exist.
adErrURLNamedRowDoesNotExist	3737 -2.147E+09 0x800A0E99	Record named by this URL does not exist.
adErrVolumeNotFound	3733 -2.147E+09 0x800A0E95	Provider cannot locate the storage device indicated by the URL. Make sure the URL is typed correctly.
adErrWriteFile	3004 -2.147E+09 0x800A0BBC	Write to file failed.
adWrnSecurityDialog	3717 -2.147E+09 0x800A0E85	For internal use only. Don't use.
adWrnSecurityDialogHeader	3718 -2.147E+09 0x800A0E86	For internal use only. Don't use.

18 Appendix

18.1 AIMS Field Limits

Audio FFName	255 (Fname 255)
Ballot File Name	255
Ballot Name	255
Ballot Type	50
Candidate Description	255
Data Dictionary Text	80
Data Dictionary Trans	200
Election Authority	1900 unicode
Election Title	1900 unicode
Database Name	20
Header Graphic	255 (Fname 255)
Election Type	50
Font Name	30
Font Style Description	30
Group Description	255
Short Label	50
Group Type Description	50
Header Description	255
IG Error Detail	1000
IG Error Type	50
Label Group Description	50
Label Type	50

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Language Name	100
Language Name Native	100
Language Audio FF Name	255
Mark Description	50
Phonetic Language	50
Phonetic Language Desc	50

Precinct Name	255
Prompt Description	100
Prompt Voter Action	50
Prompt Sys Response	50
Prompt Screen	50

Prompt Translations

Translations Text	1900 unicode
Audio FF Name	255 (Fname 255)

Prompt Translations Import

Language Name	100
Translation Text	1900 unicode
New Translation	1900 unicode

Prompt Type	50
Race Description	255
Split Ballot Name	100
GEMS Style Code	50
Split Name	255

Trans Archive

Translated Text	1900 unicode
English Text	1900 unicode
Translated Group Desc	50

Translations

Trans Text	1900 unicode
Trans Phonetic	1900 unicode

Translations XLS Import

Trans Text	1900 unicode	(Language Name 100)
New Translation	1900 unicode	
Write-In Count	0 to 100	
Vote-For Count	0 to 100	

AIMS Election Editor/Machine Setup

Default Voice	0 to 10
Race Summary Chars.	0 to 1900 characters
Write by Oval X	-248 to +248 mm
Write by Oval Y	-559 to +559 mm
Write-In-Length	1 to 248 mm
Length of Stub	0 to 248 mm
Test X Offset	-248 to +248 mm
Test Y Offset	-559 to +559 mm

18.2 AIMS Terminology

Some terms used in this Election Guide may not be familiar to you. The following graphic will help orient you to the terms used in this here.

OFFICIAL BALLOT DEMONSTRATION ELECTION

County Clerk's Name _____ Judge's Initials _____

AutoMARK 1

YOUR COUNTY, STATE

To vote, darken the oval to the LEFT of your choice, like this ●. To cast a write-in vote, darken the oval to the LEFT of the blank space provided and write the candidate's name in that space. For specific information, refer to the card of instruction posted in the voting booth. If you tear, spoil, deface or erroneously mark this ballot, return it to the election judge and obtain another.

PAST PRESIDENT	AUTHORS
FOR FAVORITE PAST PRESIDENT (Vote for One) <input type="radio"/> THOMAS JEFFERSON <input type="radio"/> ABRAHAM LINCOLN <input type="radio"/> FRANKLIN D. ROOSEVELT <input type="radio"/> DWIGHT D. EISENHOWER <input type="radio"/> JOHN F. KENNEDY <input type="radio"/> Write-in _____	FOR FAVORITE AUTHORS (Vote for Two) <input type="radio"/> CARL SANDBURG <input type="radio"/> NELSON ALGREN <input type="radio"/> MAYA ANGELOU <input type="radio"/> ERNEST HEMINGWAY <input type="radio"/> Write-in _____ <input type="radio"/> Write-in _____
BASEBALL TEAM	MINISTER OF ART
FOR FAVORITE BASEBALL TEAM (Vote for One) <input type="radio"/> CUBS <input type="radio"/> WHITE SOX <input type="radio"/> CARDINALS <input type="radio"/> Write-in _____	FOR MINISTER OF ART (Vote for One) <input type="radio"/> ANDREW WYETH <input type="radio"/> ALEXANDER CALDER <input type="radio"/> Write-in _____
LATE NIGHT TALK SHOW	STATE OF ILLINOIS
FOR FAVORITE LATE NIGHT TALK SHOW (Vote for One) <input type="radio"/> DAVID LETTERMAN <input type="radio"/> JAY LENO <input type="radio"/> CONAN O'BRIEN <input type="radio"/> Write-in _____	Should the State of Illinois repeal the gasoline tax? <input type="radio"/> YES <input type="radio"/> NO

AutoMARK
voter assist terminal

FRONT Card 1 RptPet 10 "AutoMARK 1"

Revision History

Revision	Date	Reason for Revision
1	11/01/06	Original document based on AQS-31-5001-208-R.doc
2	11/29/06	Fixed graphic on pg 1 - ph
3	01/11/07	Added Section 8.4 Translations Viewer. Updated Sec 12.3.3. Updated 11.1.4 and 6.3 - ph
4	2/1/07	Updated disclaimer, footer. Updated 8.4 –ph
5	04/02/07	Added 17.2.2 System Errors table to 17.2 Troubleshooting Guide – gg. Updated 3.4, 5.3.1, 5.4, and 14.4. Removed 3.5. – ph
6	5/16/07	Edited much of pp. 1-44, globally edited styles and formatting for consistency.-gg Updated copyright date. –gg updated 10.4.3., 5.3.1.1 –ph
7	6/4/07	Clearly identified Optech-specific text. Reword disclaimer–gg
8	6/20/07	Added Section 12.7.1 prompts for multiple page ballots. - ph
9	9/21/07	Updated race editor screen shots. -ph
10	9/24/07	Fixed formatting in document. -ph
11	2/28/08	No additional access control measures statement added. –ac Added info to section 7.1.3.12, 8.1, 12.3.2, 9.3.1. Added section 8.5 -ph
12	3/03/08	Verified section 1.4, 5.4, 10.4, 3.4, and 7.13 –each contains the correct requested information. -ac
13	3/21/08	Added note to section 8.3. Added section 11.3.5 –ph
14	4/6/09	Added a requirement for SanDisk Compact Flash Card reader drivers to Section 3.1.2. Updated Sections 5.2 and 12.3.3 with instruction for manually editing the code channel for ES&S ballot style 840 and multiples of 840.
15	6/3/09	Updated Section 3.1.2 to include Visual Studio .NET 2003 as required software. Updated Section 3.2 with procedures for installing VAT Preview prior to installing the core AIMS application.
16	6/11/09	Updated Section 3.3. Instructions for uninstalling AIMS to instruct the user to execute the uninstall for AIMS ESS DLL with the Windows Installer Cleanup Utility. Removed instructions for manually deleting AIMS files and folders.
17	9/25/09	Updated Sections 3.1.2 and 3.2.1 to replace the requirement for Visual Studio .NET 2003 with Microsoft .NET Framework v. 1.1 based on internal review. Updated verbiage in the same section to indicate that the Microsoft Excel install is optional and not required.
18	11/22/2009	Added a warning to Section 13.1, “Backing up/Restoring the AIMS Database,” instructing the user to avoid backing up to the default, AIMS folder prior to uninstalling/re-installing AIMS. Revised Section 3.3. to remove instructions for separately uninstalling AIMS ESS.dll and MICROSOFT SQL SERVER DESKTOP ENGINE. Uninstalling AIMS using the standard Windows Add/Remove Programs procedure now removes these elements as well.

Appendix

19	2.16.2010	Added note number 10 to Section 5.3.1 in response to certification review.
20	3.10.2010	Updated Section 2.2, "Administrator Responsibilities," to reference the <i>ES&S Hardening Procedures – Election Management PC</i> for instructions for securing the computer running AIMS.
21	1.17.2011	Updated the project tag in the file name. Updated the copyright date.

End of Document