STI Education Data Management Solutions

STIAssessment v4.0

Scanning

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Contents

Introduction

This document provides an overview of the scanning-application architecture and describes the scanning capabilities of the program.

The STIAssessment Scan application is installed on a client computer, which is connected to a scanner. First, the application scans forms that contain student answers for a specific assessment from the scanner, then sends the request to the Web Service. If the data is validated successfully, the Web Service automatically scores the multiple-choice portion of the assessment and returns the performance percentage back to the application. This operation is done on a student-by-student basis. If the data is not validated successfully for reasons such as *Invalid Student ID*, *Student not Present in Class*, *Student Already Taken Test*, etc., the Web Service returns the appropriate error back to the application. The program and exception examples are detailed further in the document.

*All data is sent securely via SSL secure connections.
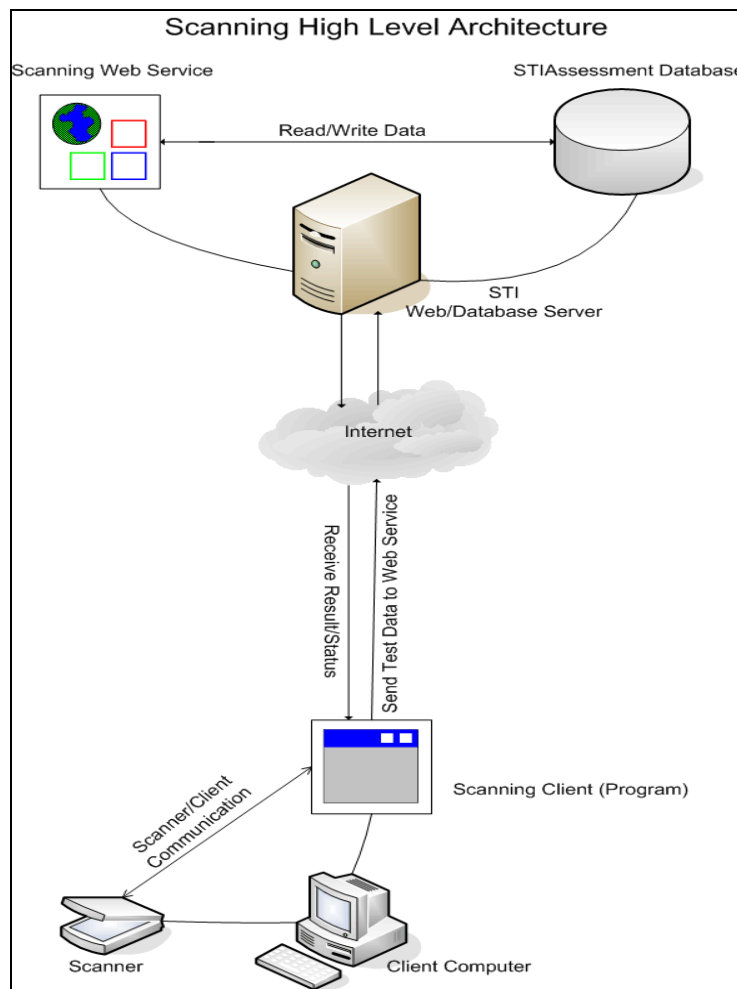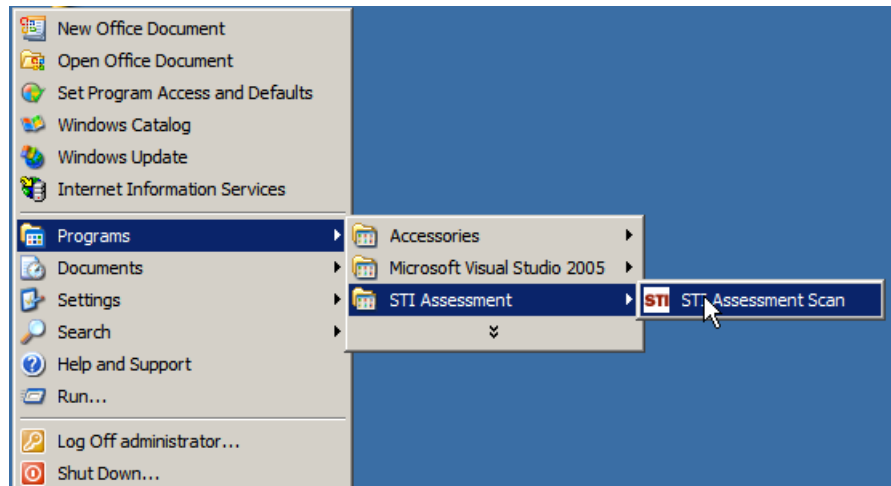
Initial Set-Up of STIAssessment Scanning

Any available application scanning updates are automatically installed whenever the user starts the application. This ensures that the user always has the most current version of the application without having to manually install it.
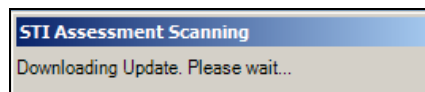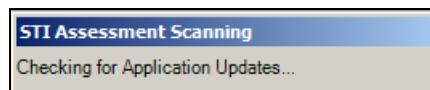
Launch Program

The first step is starting the program.

Automatic Application Updates

Once the program is launched, it checks for and installs any updates.

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Supported Scanners

Supported scanners are listed in the **Select Scanner** pull-down menu. All supported scanners were actually used during development of the application and are thus verified to work properly with the program.

Supported Forms

The **Select Form** drop-down displays a list of supported forms.

The supported forms are as follows:

- ♦ **CP24_078:** *4-choice, 30 item form*
- ♦ **CP24_069:** *4-choice, 80 item form*
- ♦ **CP25_0587:** *5-choice, 30 item form*
- ♦ **CP26_0584:** *5-choice, 80 item form*

If you have any leftover CP25_0586 forms, you may still use them. Select form **CP26_0584** on the menu.

What's This? Dialog

This dialog may be launched by clicking on the **What's This?** link next to the **Select Form** list. This dialog gives useful information on the types of forms used for scanning. It also reminds users to re-start the scanner and application when switching form types at the time of scanning.
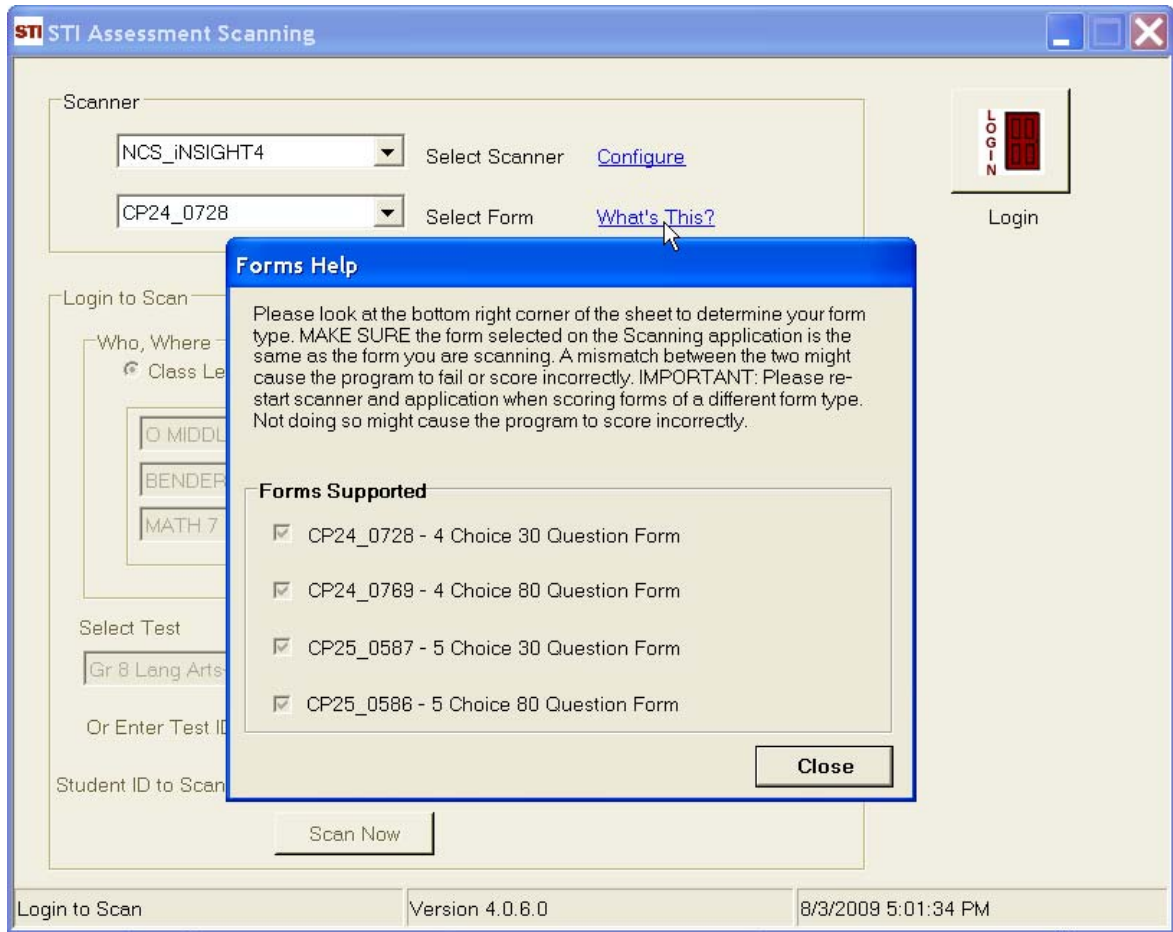
District-Based Scanning

Logging In as District Administrator (DA)

Users must log in to the system with their respective credentials to scan assessment data and obtain results. The following screenshot shows the login window for a district administrator (*DA*).
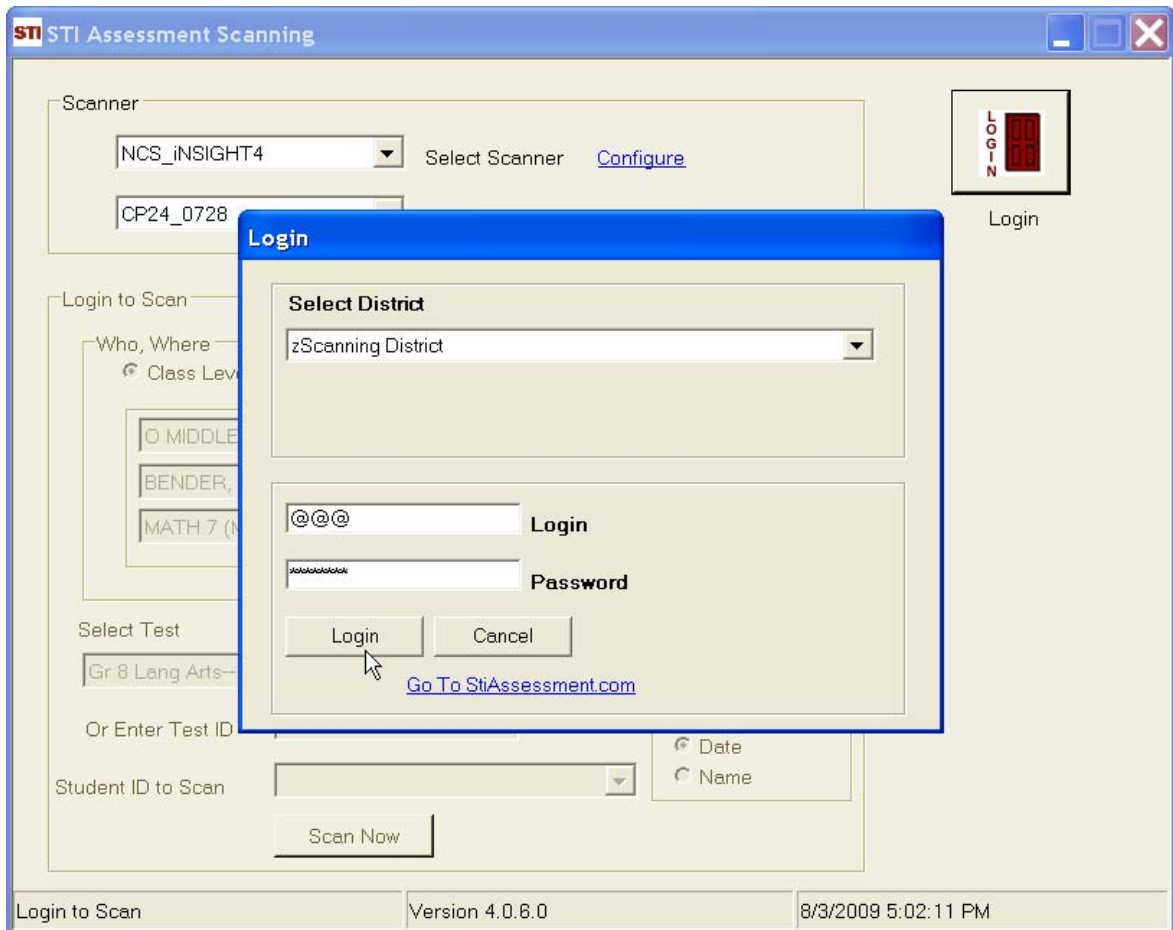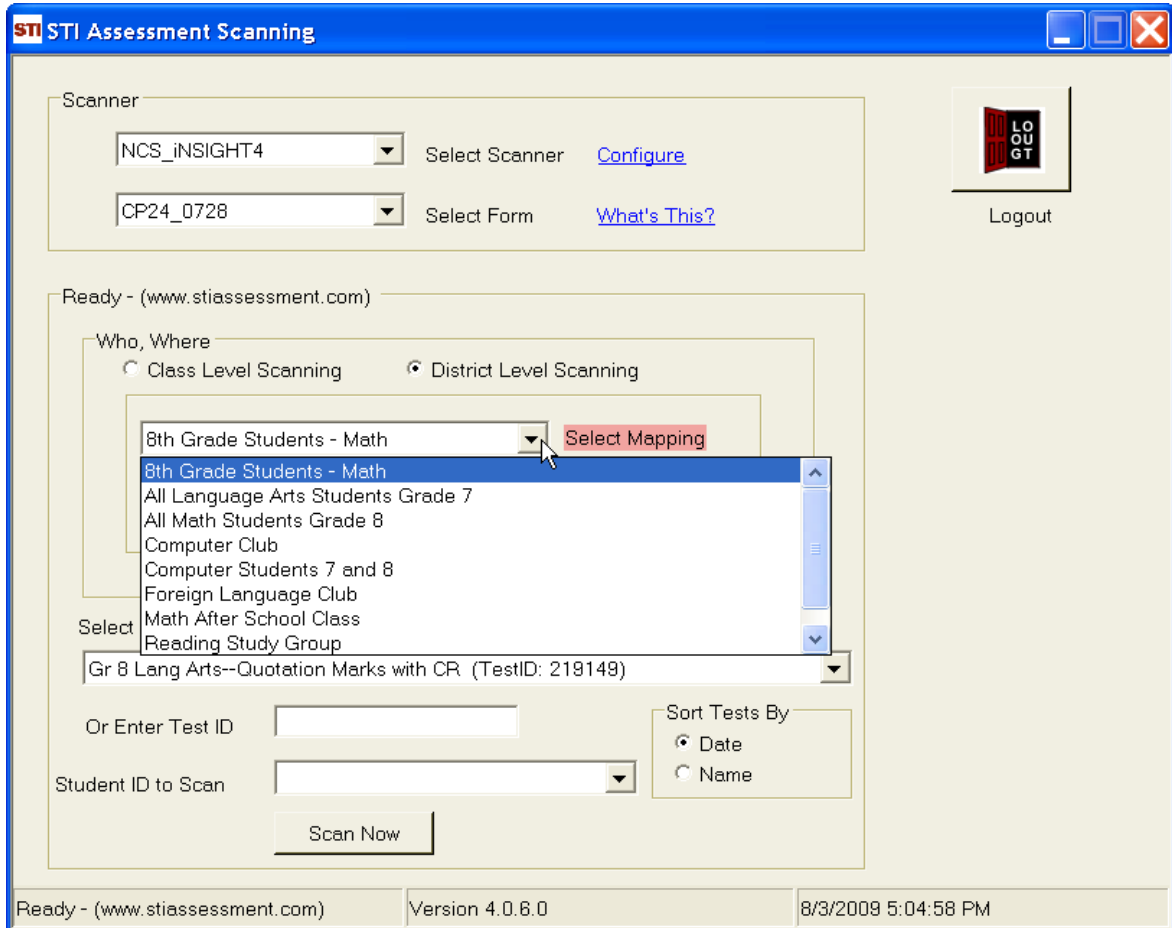
Selecting Scanning Levels

District Administrators are able to scan tests at both class and district levels. The screens that appear upon DA login are different from those seen by users with lower access levels, such as teachers and school administrators (*SA's*).

The following screenshot shows options to be selected for class-level scanning: *School*, *Teacher* and *Class*. This defines the answer forms that need to be scanned in terms of an individual class within the district.

This screenshot shows options being selected for district-level scanning. Notice that district-level scanning is done by selecting custom arrays called *mappings*.

STI Assessment Scanning

Scanner

NCS_iNSIGHT4 — Select Scanner — Configure

CP24_0728 — Select Form — What's This?

Logout

Ready - (www.stiassessment.com)

Who, Where

○ Class Level Scanning   ● District Level Scanning

8th Grade Students - Math — Select Mapping

8th Grade Students - Math
All Language Arts Students Grade 7
All Math Students Grade 8
Computer Club
Computer Students 7 and 8
Foreign Language Club
Math After School Class
Reading Study Group

Select
Gr 8 Lang Arts--Quotation Marks with CR (TestID: 219149)

Or Enter Test ID [   ]

Sort Tests By
● Date
○ Name

Student ID to Scan [   ]

Scan Now

Ready - (www.stiassessment.com)   Version 4.0.6.0   8/3/2009 5:04:58 PM

Selecting a Mapping

Student *mappings* may be created for scanning at the district level. Mappings may correspond to certain grades (for example, all the fourth-graders in a particular district's elementary schools) or other custom arrays (for example, all the seventh-graders in middle schools, but not in junior-high schools, or all the students in gifted programs). Only those mappings that have been checked off for Scanning in STIAssessment will appear in the *Select Mapping* drop-list.

STI ID	Student No.	Student	alt_id	state_id	Class
1229760	11899	OLIVARES, ...			MATH 8
1229870	68982	WORLEY, L...			MATH 8
1229995	69587	AINSLEY, S...			MATH 8
1230057	56595	ARAZ, ISAB...			MATH 8
1230140	19822	O'DELL, RY...			MATH 8
1230246	23475	ANDERSON...			MATH 8
1230254	23456	ADAMS, ASIA			MATH 8

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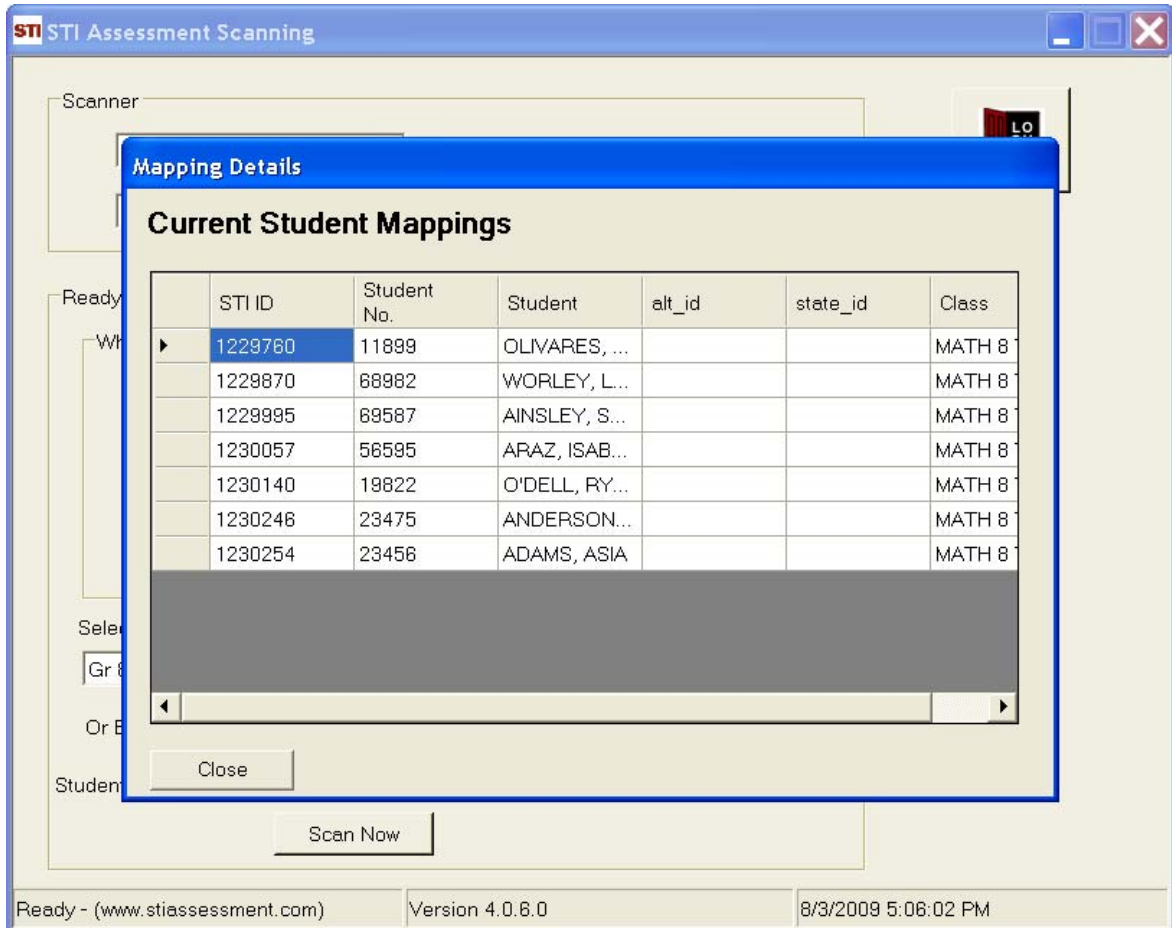
Selecting a Test

Tests may be selected from a pull-down menu or by entering a Test ID Number. Once the test is selected, the user clicks the **Scan Now** button.

Sorting Tests

Since there are usually a lot of tests to choose from when using the pull-down menu, users may opt to select the sorting method that will result in the desired test being listed closer to the top or bottom of the menu, and thus easier to find. There are two ways of sorting tests: by *Test Name* or by *Date Created*. Based on the selected option, tests are sorted in the ascending order.

Student ID to Scan

Users have the option to select which type of student ID to scan. The options are:
- Student Number (unique student ID imported from *Information***NOW** or STIOffice)
- Student State ID
- Alternative Student Number
- STI-Assigned ID (unique student ID generated in STIAssessment)

Scanning Examples

After the **Scan Now** button is clicked, a dialog box appears, reminding users to confirm that they have the correct form and to restart the scanner and the application if switching between different forms.

Clicking the **Yes** button on the dialog box causes scanning to commence, and a scanning-progress box appears on the screen. As each form is successfully scanned, the box shows the percentage of multiple-choice items the student answered correctly. For tests that include constructed-response items, the unweighted percentage score for the multiple-choice part of the test is displayed, along with a reminder that the test contains constructed-response items.

Example 1: District-wide Scanning Based on Mappings (Multiple-Choice-only Test)

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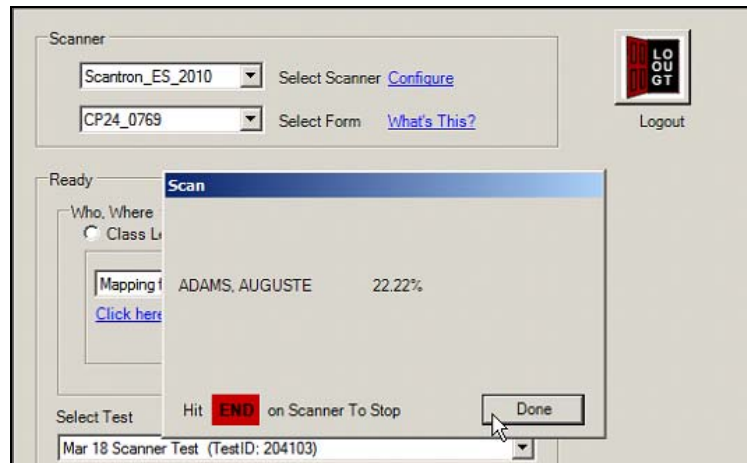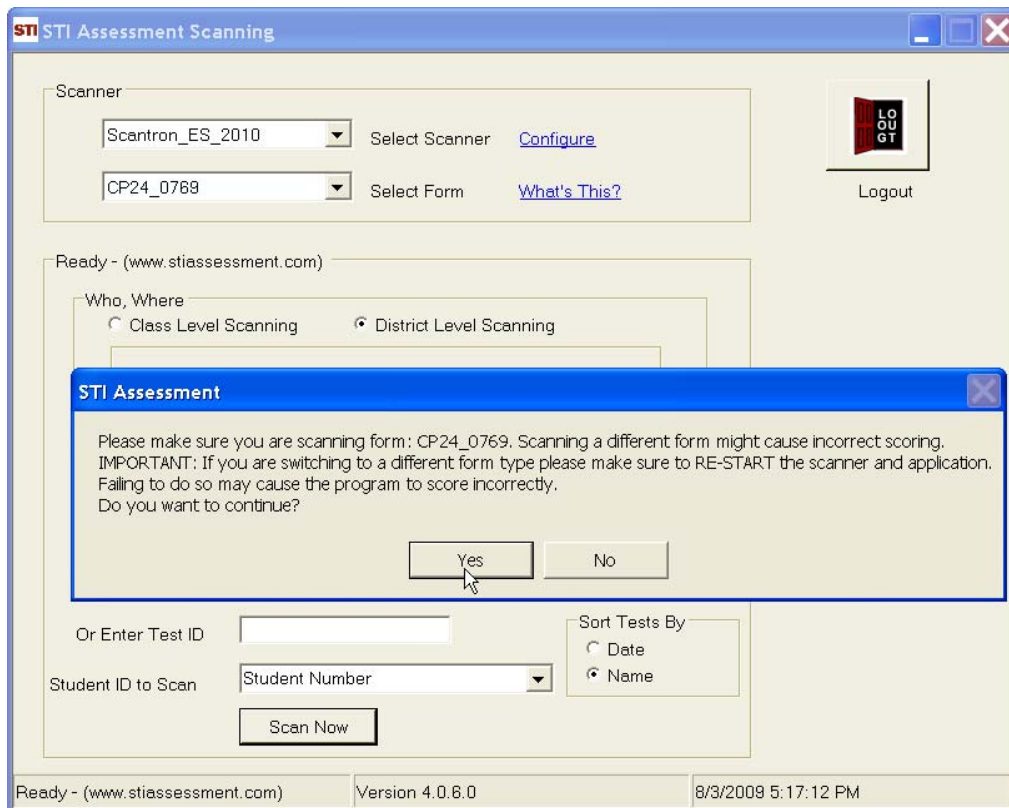
Example 2: District-Based Scanning (Test with Constructed-Response Items)
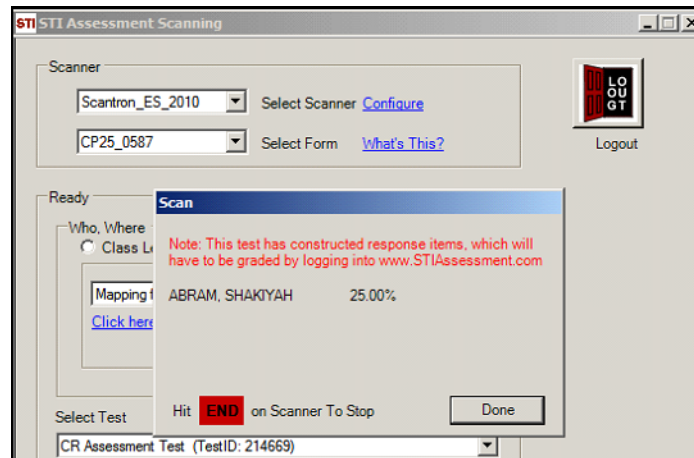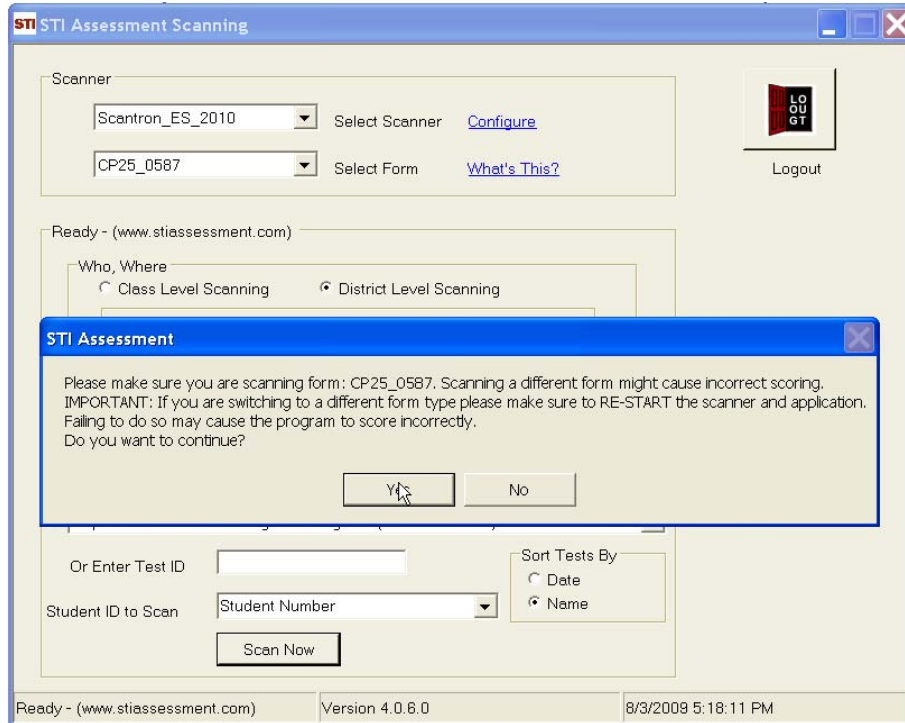
Class-Based Scanning

In order to scan tests, STIA users must first log in to the scanning application.

Teachers and School Administrators (SA's) are limited to class-based scanning. As the screenshot below shows, the radio buttons for different scanning levels do not appear.

A teacher is able to scan tests only for those students who belong to the teacher's classes; the school and teacher pull-downs will show only that teacher's school and name. A school administrator has the ability to obtain a list of teachers for his or her school and may then scan forms for students belonging to different teachers' classes.
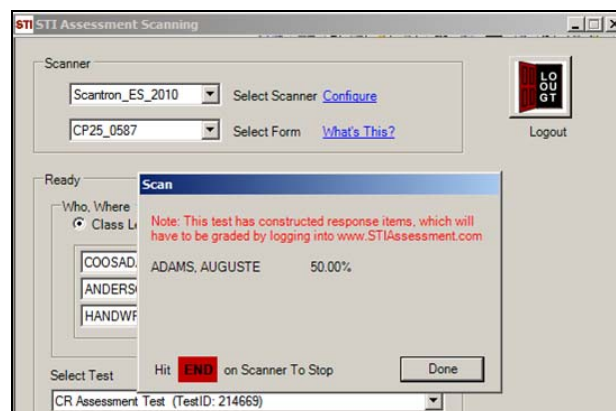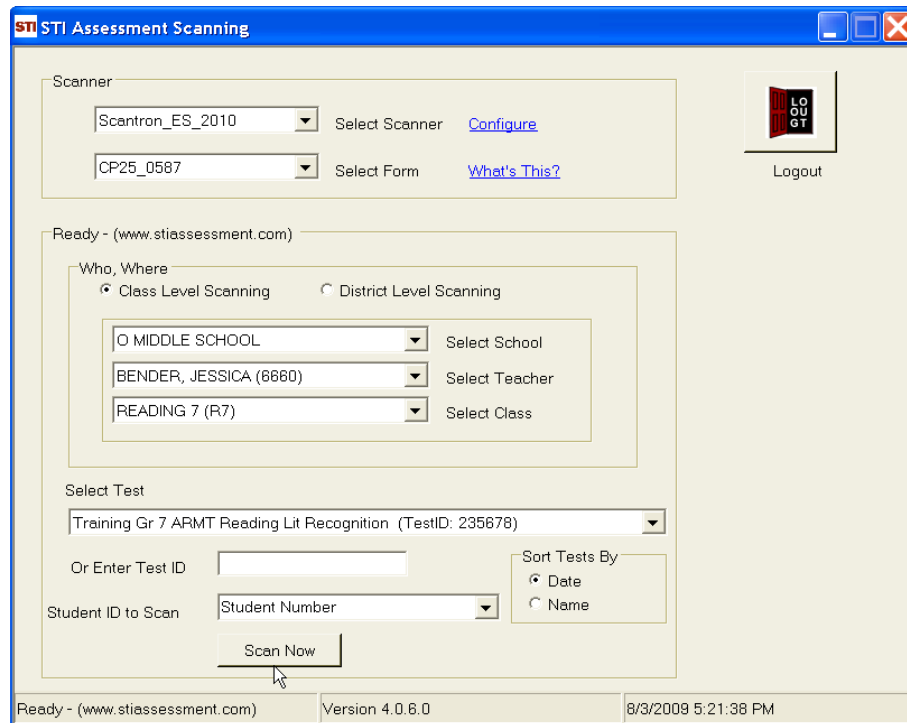
More Scanning Examples

After the **Scan Now** button is clicked, a dialog box appears, reminding users to confirm that they have the correct form and to restart the scanner and the application if switching between different forms.

Clicking the **Yes** button on the dialog box causes scanning to commence, and a scanning-progress box appears on the screen. As each form is successfully scanned, the box shows the percentage of multiple-choice items the student answered correctly. For tests that include constructed-response items, the unweighted percentage score for the multiple-choice part of the test is displayed, along with a reminder that the test contains constructed-response items.

Example 3: Class based Scanning (Tests with Constructed Response Items)

Note that this screen shot came from a district-administrator account; the interface for a school-administrator or teacher account would not display the radio buttons for class- and district-scanning levels.

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## Example 4: Class-Based Scanning (Multiple-Choice-only Test)
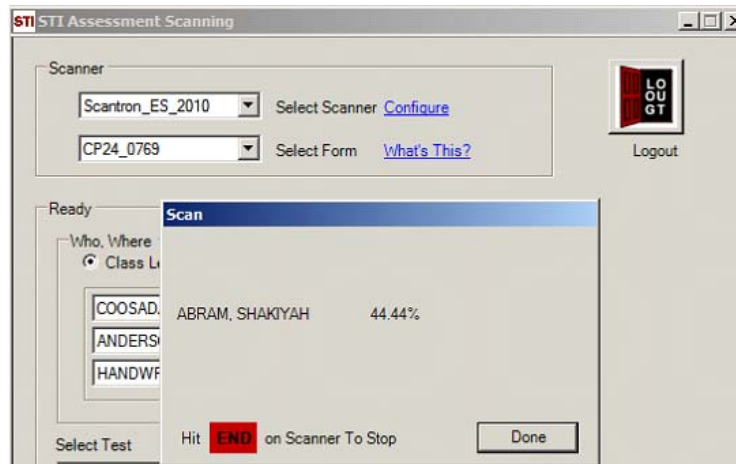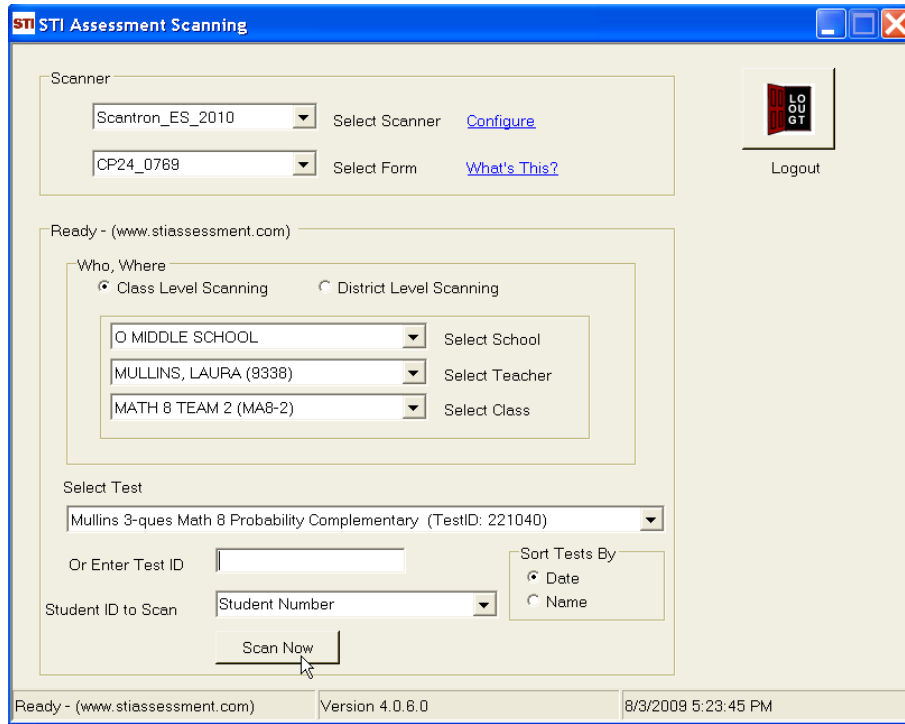
Scanning Exceptions

The following examples represent a few of the instances in which the Web Service throws an error to the client because the data is invalid.

Constructed-Response Item Settings Incomplete

When tests containing constructed-response items are given online, it is impossible to fail to submit constructed-response (CR) settings, because it's not possible to assign tests without the CR settings. However, when a test is administered in paper-and-pencil form, test creators may print out the test, but forget to perform the last step of weighting the sections of the test and assigning the number of points associated with a constructed-response item. (The number of points associated with a CR is almost always the number of points in its scoring rubric.)
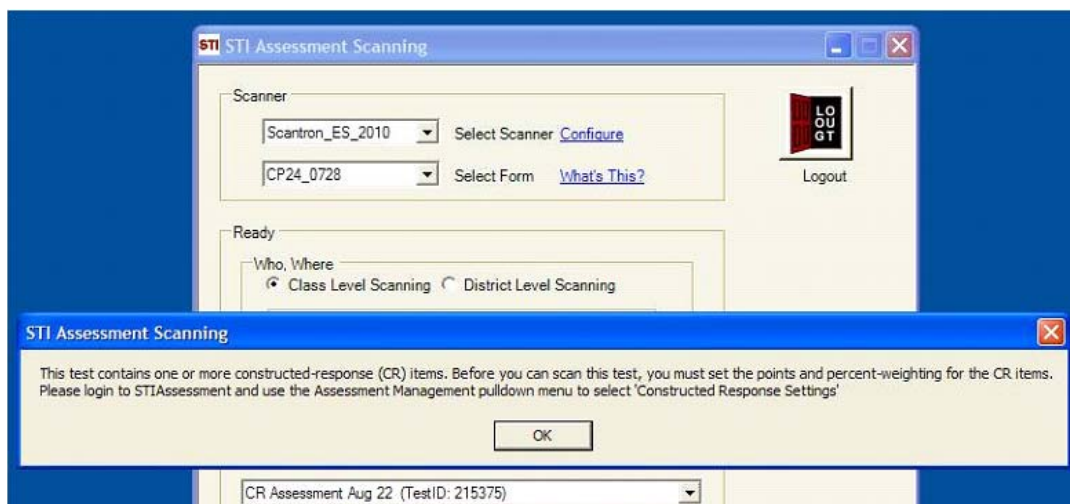
Test Already Taken by Student

If the student has already taken the assessment, the application throws an exception and provides the date on which the student took the assessment, as well as the corresponding score

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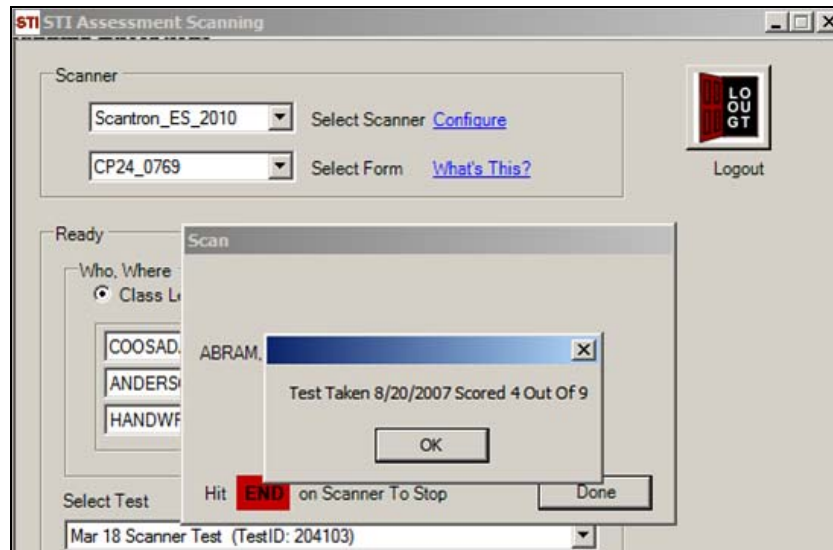
Student Not Mapped to the Selected Mapping

This exception is thrown only for district-based scanning, since mappings are not used in class-based scanning.