

# STIAssessment v4.0

# Scanning

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## 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.



#### **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.

<mark>STI</mark> STI Assessment Scanr	ing		
Scanner Scantron_ES_20 Scantron_ES_20 Scantron_ES_22 NCS_OpScan_4U NCS_INSIGHT4	10 <b>Select Scanner</b> <u>Config</u> 10 60 Select Form <u>What</u>	<u>gure</u> <u>s This?</u>	G Login
Login to Scan Who, Where Class Level Sc O MIDDLE SC BENDER, JES MATH 7 (MA7)	canning C District Level Scanning HOOL Select Sc SICA (6660) Select Te Select Cl	chool eacher ass	
Select Test Gr 8 Lang ArtsQuo Or Enter Test ID Student ID to Scan	tation Marks with CR (TestID: 219149)	Sort Tests By © Date © Name	
Login to Scan	Version 4.0.6.0	8/3/20	09 4:22:38 PM



#### **Supported Forms**

Scanner					6 60
NCS_INSIGH	T4 💌	Select Scanner	<u>Configure</u>		G III
CP24_0728	1	Select Form	What's This?		Login
CP24_0728 CP24_0769					
-Login CP25_0587 CP26_0584					
Who, Where Class Leve	el Scanning	C District Level S	canning		
	SCHOOL	<b>T</b>	Select School		
BENDER,	JESSICA (6660)	-	Select Teacher		
MATH 7 (N	1A7)	-	Select Class		
Select Test					
Gr 8 Lang Arts	Quotation Marks w	ith CR (TestID: 2	19149)	-	
Or Enter Test ID			_Sort Test	is By	
	,		© Date		
Student ID to Scan	ļ			3	
	- N	1			

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.

STI Assessment S	canning	
Scanner NCS_iNSIGH CP24_0728	HT4  Select Scanner <u>Configure</u> Select Form <u>What's This?</u>	Login
Login to Scan Who, Where Class Le O MIDDL BENDER MATH 7 Select Test Gr 8 Lang Arts Or Enter Test II Student ID to Scan	Forms Help         Please look at the bottom right corner of the sheet to determine your form type. MAKE SURE the form selected on the Scanning application is the same as the form you are scanning. A mismatch between the two might cause the program to fail or score incorrectly. IMPORTANT: Please restart scanner and application when scoring forms of a different form type. Not doing so might cause the program to score incorrectly.         Forms Supported       Image: CP24_0728 - 4 Choice 30 Question Form       Image: CP24_0789 - 4 Choice 80 Question Form       Image: CP25_0587 - 5 Choice 30 Question Form       Image: CP25_0586 - 5 Choice 80 Question Form	
gin to Scan	Version 4.0.6.0 8/3/2009 5:0	1:34 PM

# **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).

Scanner	Select Scanner <u>Configure</u>	L O G - N
CP24_0728	ogin Select District	Login
Who, Where Class Lev O MIDDLE BENDER, MATH 7 (N	©@@ Login	
Select Test Gr 8 Lang Arts Or Enter Test ID	Login Cancel Go To StiAssessment.com	
Student ID to Scan	Scan Now	e me

#### **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.

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 C District Level Scanning O MIDDLE SCHOOL Select School BENDER, JESSICA (6660) Select Teacher MATH 7 (MA7) Select Class	
Select Test Gr 8 Lang ArtsQuotation Marks with CB. (TestID: 218148)	<b>•</b>
Or Enter Test ID Student ID to Scan	
Scan Now Ready - (www.stiassessment.com) Version 4.0.6.0 8/	3/2009 5:04:07 PM

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?	៤ទួក Logout
Ready - (www.stiassessment.com)  Who, Where Class Level Scanning Bth 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 Gr 8 Lang ArtsQuotation Marks with CR (TestID: 219149)	
Or Enter Test ID Sort Tests By © Date Student ID to Scan	
Scan Now Ready - (www.stiassessment.com) Version 4.0.6.0 8/3/2	009 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.

	apping Details					10
	Current Stud	lent Mappii	ngs			
Ready	STI ID	Student No.	Student	alt_id	state_id	Class
Wł	• 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
Selei Gr 8 Or E	▲ Close					•
		Scan Now			1	

#### **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.

STI Assessment Scanning	
Scanner       NCS_iNSIGHT4     Select Scanner     Configure       CP24_0728     Select Form     What's This?	្រូទ្ធទ្ Logout
Ready - (www.stiassessment.com) Who, Where Class Level Scanning Bth Grade Students - Math Click here to view Mapping contents	
Select Test	7
Or Enter Test ID Student ID to Scan	
Scan Now Ready - (www.stiassessment.com) Version 4.0.6.0 8/3/	2009 5:10:37 PM

#### **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)

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  Bth Grade Students - Math  Select Mapping  Click here to view Mapping contents  Click here to view Mapping contents	
3-ques Gr 7 ARMT Reading Lit Recog 7.5 (TestID: 221424)	
Or Enter Test ID Student ID to Scan Student Number Student State ID	
Alternative Student Number STI-Assigned ID Ready - (www.stiassessment.com) Version 4.0.6.0 8/3/20/	09 5:11:09 PM

#### **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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<mark>1</mark> STI Assessment Sca	nning		
Scanner			
Scantron_ES_3	2010 💌 Select Scanner	<u>Configure</u>	LO GT
CP24_0769	Select Form	<u>What's This?</u>	Logout
Who, Where Class Level STI Assessment Please make sure IMPORTANT: If y Failing to do so r Do you want to	Scanning © District Level Sc vou are scanning form: CP24_076s ou are switching to a different form t nay cause the program to score inco continue?	anning 9. Scanning a different form migh type please make sure to RE-STA rrectly.	it cause incorrect scoring. RT the scanner and application.
	Yes	No	
Or Enter Test ID		Sort Tests By	
Student ID to Scan	Student Number	Name	
	Scan Now		
eady - (www.stiassessme	nt.com) Version 4.0.6.0	8/3/200	9 5:17:12 PM

Scantron_ES	_2010 💌	Select Scanne	r <u>Configure</u>		ÖŬ GT
CP24_0769	•	Select Form	What's This?	<u>i</u> .	Logout
Who, Where C Class L Mapping f Click here	Scan ADAMS, AUG	USTE	22.22%		
				-	-

s

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

TI Assessment Scanning		
Scanner	▼ Select Scanner <u>Configure</u>	LO
CP25_0587	Select Form What's This?	Logout
Ready - (www.stiassessment.co	1)	
Class Level Scanning	• District Level Scanning	
STI Assessment		×
Please make sure you are scar IMPORTANT: If you are switchin Failing to do so may cause the Do you want to continue?	g to a different form type please make sure to rogram to score incorrectly.	orm might cause incorrect sconing. o RE-START the scanner and application.
Or Enter Test ID	Sort Tests C Date • Name	s By
Scar Scar	Now	
y - (www.stiassessment.com)	Version 4.0.6.0	8/3/2009 5:18:11 PM
STI Assessment Sca	nina	
Scanner Scantron_ES_20	0 Select Scanner Configure	bo
CP25_0587	Select Form <u>What's This?</u>	Logout
Ready Sca Who, Where Class L	<ul> <li>This test has constructed response items, which re to be graded by logging into www.STIAssessme</li> </ul>	ch will ent.com
Mapping 1 AE	RAM, SHAKIYAH 25.00%	

Hit END on Scanner To Stop

Select Test

CR Assessment Test (TestID: 214669)

Done

•

# **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.

STI Assessment Scanning	
Scanner Scantron_ES_2010 Select Scanner <u>Configure</u> CP24_0728 Select Form <u>What's This?</u>	Logout
Ready - (www.stiassessment.com) Who, Where Class Level Scanning O MIDDLE SCHOOL Select School DEVIDED JERGION (2020)	
MATH 7 (MA7)	
Or Enter Test ID Or Enter Test ID Student ID to Scan Student Number Scan Now	
Ready - (www.stiassessment.com) Version 4.0.6.0 8/3/20	009 5:20:19 PM

#### **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 schooladministrator or teacher account would not display the radio buttons for class- and district-scanning levels.

STI Assessment Scanning	
Scanner Scantron_ES_2010 Select Scanner Configure CP25_0587 Select Form What's This?	Logout
Ready - (www.stiassessment.com) Who, Where Class Level Scanning District Level Scanning O MIDDLE SCHOOL Select School BENDER, JESSICA (6660) Select Teacher READING 7 (R7) Select Class	
Select Test Training Gr 7 ARMT Reading Lit Recognition (TestID: 235678) Or Enter Test ID Student ID to Scan Student Number Scan Now Ready - (www.stiassessment.com) Version 4.0.6.0 8/3/200	9 5:21:38 PM
STI Assessment Scanning         Scanner         Scantron_ES_2010         CP25_0587         Select Form         What's This?	

Ready Who, Where Class Li

ANDERS

Select Test

This test has constru-

50.00%

Done

-

on Scanner To Stop

COOSAD. ADAMS, AUGUSTE

Hit END

CR Assessment Test (TestID: 214669

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

STI Assessment Scanning	X
Scanner       Scantron_ES_2010       Select Scanner       Configure         CP24_0769       Select Form       What's This?       Logout	
Who, Where   Class Level Scanning   O MIDDLE SCHOOL   Select School   MULLINS, LAURA (9338)   Select Teacher   MATH 8 TEAM 2 (MA8-2)   Select Class   Select Test   Mullins 3-ques Math 8 Probability Complementary (TestID: 221040)   Or Enter Test ID   Student ID to Scan   Student Number	
Ready - (www.stiassessment.com) Version 4.0.6.0 8/3/2009 5:23:45 PM	
STI Assessment Scanning	

Scantron_ES	_2010 💌	Select Scanne	r <u>Configure</u>	OU GT
CP24_0769	•	Select Form	What's This?	Logout
ady	Scan			
Who, Where Class L				
COOSAD.	ABRAM, SHA	(YAH	44.44%	
ANDERG				

# **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.)

	STI Assessment Scanning         Scanner         Scantron_ES_2010         CP24_0728         Select Form         What's This?	Logout
This test contains one or more constructed-response (CR) items. Before you can scan this test, you must set the points and percent-weighting for the CP Please login to STIAssessment and use the Assessment Management multidown menu to select 'Constructed Besonse Settions'	Ready ─Who, Where ⓒ Class Level Scanning ○ District Level Scanning	
	This test contains one or more constructed response (CR) items. Before you can scan this test, you m Please login to STIAssessment and use the Assessment Management pulldown menu to select 'Constru	ust set the points and percent-weighting for the CR items icted Response Settings'

#### **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

STI Assessment Scann	ing	
Scanner Scantron_ES_2010	Select Scanner Configure	LO
CP24_0769	Select Form <u>What's This?</u>	Logout
Ready Scan Who, Where Class L		
COOSAD. ABR	M. Test Taken 8/20/2007 Scored 4 Out Of 9	
	OK Done	

### 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.

P			LO
Scantron_ES_2	010 🗾	Select Scanner Configure	ĞŤ
CP24_0728	-	Select Form <u>What's This?</u>	Logout
Ready	an		1
Who, Where			
Who, Where Class Li			
Who, Where C Class L Mapping 1		×	
Who, Where C Class Li Mapping 1 <u>Click here</u>		Student-Class Mapping is not valid	
Who, Where C Class Li Mapping 1 <u>Click here</u>		Student-Class Mapping is not valid	