

# 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 Scann	ing		
Scanner Scantron_ES_20 Scantron_ES_20 Scantron_ES_20 NCS_OpScan_4U NCS_INSIGHT4	10 30 Select Form What'	ure <u>s This?</u>	د م Login
Login to Scan Who, Where Class Level Sc O MIDDLE SCH BENDER, JESS MATH 7 (MA7)	HOOL Select Sc SICA (6660) Select Te	acher	
Select Test	ation Marks with CR (TestID: 219149)	Sort Tests By © Date © Name	
Login to Scan	Version 4.0.6.0	8/3/200	9 4:22:38 PM



#### **Supported Forms**

Scanner					6 60
NCS_INSIGH	T4 💌	Select Scanner	<u>Configure</u>		
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		
		<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		C Name	3	
	Scan Now	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 re-         start scanner and application when scoring forms of a different form type.         Not doing so might cause the program to score incorrectly.         Forms Supported         CP24_0728 - 4 Choice 30 Question Form         CP24_0769 - 4 Choice 80 Question Form         CP25_0587 - 5 Choice 30 Question Form         CP25_0586 - 5 Choice 80 Question Form         CP25_0586 - 5 Choice 80 Question Form         Scan Now	
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		
NCS_INSIGHT4	Select Scanner <u>Configure</u>	LO G-N
CP24_0728	ogin	Login
-Login to Scan	Select District	
	zScanning District	<b>_</b>
Class Levi		
O MIDDLE		
BENDER,	leee Login	
Turner to	Password	
Select Test	Login Cancel	
Gr 8 Lang Arts	Go To StiAssessment.com	
Or Enter Test ID	, @ Date	
Student ID to Scan	⊂ Nam	
	Scan Now	

#### **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 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 CR (TestID: 219149)	<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     8/3/21	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.

Scanner -	apping Details					10
- T	Current Stud	ent 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	<ul> <li>Close</li> </ul>	_			_	•
		can Now				

#### **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 3-ques Gr 7 ARMT Reading Lit Recog 7.5 (TestID: 221424)	7
Or Enter Test ID Student ID to Scan	
Scan Now       Ready - (www.stiassessment.com)   Version 4.0.6.0  8/3/2	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       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 Select Test	
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 Student State ID	
Alternative Student Number	9 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.

<mark>1</mark> STI Assessment Sca	nning		
Scanner			
Scantron_ES_2	2010 💌 Select Scanner	<u>Configure</u>	Lộ
CP24_0769	Select Form	What's This?	Logout
IMPORTANT: If y	you are scanning form : CP24_0769. ou are switching to a different form ty nay cause the program to score incorr	Scanning a different form might pe please make sure to RE-STAR	
	Yes	No	
Or Enter Test ID		Sort Tests By	
Student ID to Scan	Student Number	▼ <sup>®</sup> Name	
eady - (www.stiassessme	nt.com) Version 4.0.6.0	8/3/2009	5:17:12 PM

Scantron_ES	_2010 💌	Select Scanne	er <u>Configure</u>		LO OU GT
CP24_0769	•	Select Form	What's This?	2	Logout
Who, Where Class Le	Scan ADAMS, AUC	GUSTE	22.22%		
			Stop	. Done	-

s

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

Scanner	Select Scanner	ionfigure.	LO OUT GT
CP25_0587	Select Form	Vhat's This?	Logout
Ready - (www.stiassessment.cor Who, Where Class Level Scanning	n)	ing	
	ng to a different form type ple	ning a different form might cause ease make sure to RE-START the s	
	Y(2	No	
Or Enter Test ID Student ID to Scan Student Scar	Number	Sort Tests By © Date © Name	
y - (www.stiassessment.com)	Version 4.0.6.0	8/3/2009 5:	18:11 PM
, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			

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 Configure CP24_0728  Select Form What's This?	Logout
Ready - (www.stiassessment.com) Who, Where Class Level Scanning O MIDDLE SCHOOL Select School	
BENDER, JESSICA (6660) Select Teacher MATH 7 (MA7) Select Class	
Select Test	
Training Gr 7 Math Order of operations (TestID: 235686)         Or Enter Test ID         Student ID to Scan         Student Number	
Scan Now Ready - (www.stiassessment.com) Version 4.0.6.0 8/3/200	19 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	
Ready - (www.stiassessment.com)   Who, Where I 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 Sort Tests By © Date © Date © Name Student ID to Scan Student Number Scan Now	
Ready - (www.stiassessment.com) Version 4.0.6.0 8/3/2009 5:23:45 PM	
STI Assessment Scanning	

s This? Logout

# **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.)

	Scanner Scantron_ES_2010  Select Scanner Configure CP24_0728  Select Form What's This?	Logout
	Ready Who, Where Class Level Scanning C District Level Scanning	
ssessment Scanni	ng ore constructed-response (CR) items. Before you can scan this test, you must se	t the points and operant weighting for the CD
	ent and use the Assessment Management pulldown menu to select 'Constructed f	

#### **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

elect Form <u>What's T</u>	Select Scanner Configur         Select Form         What's T         BRAM.         Test Taken 8/20/2007 Score	his?
	BRAM,	Select Form <u>What's This?</u>

# 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.

		LO
Scantron_ES_2010	Select Scanner Configure	ĞŤ
CP24_0728	Select Form What's This?	Logout
Ready Sean		1
Who, Where		
C Class L		
Mapping 1	×	
Mapping t	Student-Class Mapping is not valid	
Contraction of the local division of the loc		