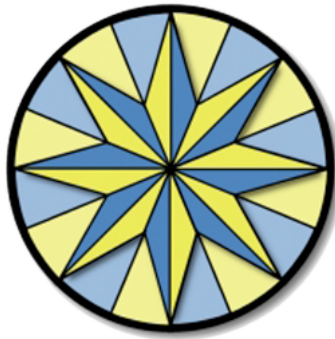


Compass 3.0



Software for Computer Access Assessment

User Guide

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Welcome to Compass!

Compass functional assessment software is a tool to assist professionals who provide educational, vocational, and clinical interventions in the area of computer use for people with disabilities. It can be used to:

- help diagnose difficulties with an existing interface;
- evaluate and compare the performance of potential access systems;
- plan and document the results of training interventions;
- track changes in a client's abilities over time; and
- measure the effectiveness of an intervention.

Compass consists of eight different [Skill Tests](#), each designed to evaluate a specific skill area, such as text entry or use of a pointing device. Any number and combination of the tests can be selected for each client. The selected tests can be run in any order and can be repeated to track changes over time. Additional tests can be added and tests can be removed at any time even after some tests have been run.

Each skill test has configuration settings that help determine characteristics of the test, such as the number of trials, the text size, or the type of feedback provided. Every test has a set of default values for these settings, which have been chosen to be reasonable for a wide range of clients. Configuration settings can also be adjusted based on a client's needs and the goals of the assessment. See [Configuring Tests](#) for more information.

For each test that is run, Compass records performance data and makes it available in a [test report](#). This shows a snapshot of performance during a single test. Compass also provides [multi-test reports](#) that let you compare results across multiple tests, as long as they have the same skill type. These reports present views of the assessment data to help you understand and interpret the results. Compass reports may be useful to a variety of individuals, including family members, funding sources, and other professionals involved with the client.

Please note that Compass does not replace a good fundamental knowledge of computer access evaluation practices. It is intended to be another tool available to augment the practical experience of the clinician. It is important to know the types of assistive technologies (AT) that can be used for computer access and the features of the specific devices that are being considered. The clinician needs to understand the issues involved in working with people with disabilities and the impact that AT interventions can have on their functional activities on and off of the computer.

Trial Period and Registration

When you run Compass for the first time, you will be asked whether you want to run it as a free trial or whether you want to register it for permanent use.

The free trial period lasts 30 days, during which you can explore all of the features of Compass. After the trial period expires, you will need to register Compass in order to continue using it. You can purchase a license code by visiting the KPR website at www.kpronline.com.

You may request an extension of the trial period, if you feel you didn't get sufficient chance to try Compass during the original 30 days. Please email your request to compass@kpronline.com.

When you are ready to register, launch Compass to get the registration dialog. Click the 'Register...' button.



Enter your name, email address, and Compass license code into the fields provided. Then click OK.



Your information will be sent to KPR, so that we can notify you of free Compass upgrades when available. (Please note: Your information will never be provided to anyone else.)

Glossary of Terms

The following terms are used throughout the Compass help system.

Assistive Technology - Devices or services used to increase, maintain, or improve functional capabilities of people with disabilities

AT - Assistive Technology

Client - The person whose computer access skills are being evaluated. The client is the person performing the actions of the tests.

Clinician - The AT professional who is setting up the tests or conducting the evaluations. May also be referred to as a Practitioner, or ATP.

Tips for Using Compass

1. Planning Your Assessment

Think carefully about what questions you are trying to answer with Compass. That will help you determine how to best set up Compass. For example, if you are trying to compare performance with two different keyboards, you might run two identical text entry tests, and run one with each keyboard. Try to only change one factor from one test to the next (e.g., the input device OR the size of the letters, but not both), to help you clearly interpret the results.

2. Tailoring the Tests

Remember that you can [configure every Compass test](#) in a variety of ways to meet your client's needs. And the configuration screen lets you preview how the settings will look and feel, so you can be sure it's the right set up before you start collecting data.

3. Running the Tests

Before you start a test, consider whether the client needs you to provide spoken instructions. The Start Test screen for each test has some written instructions that you can read out loud, or use as a basis for providing your own instructions. Also consider whether practice is necessary before the test. You can run a few practice trials right from the Start Test screen, to make sure the client understands the test.

4. Using the Results

In most cases, knowing what input device was used with a test is important to interpreting the results. Remember that Compass does not know what input device is being used, so you need to set the input device yourself, either during [test configuration](#) or on the [test report](#). Also note that you can [copy-and-paste](#) any Compass table into other applications, such as word processors and spreadsheets.

If you have questions, or other tips to add to this list, please [contact us](#) at compass@kpronline.com.

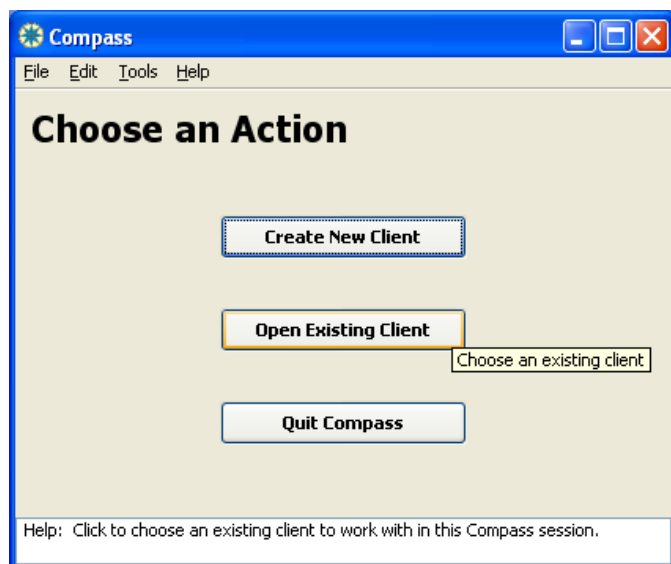
Getting Help

Several types of resources are available if you need help with any of the features of Compass.

First, information about some elements within Compass is available while you work.

Tool Tips provide a brief description of selected items in Compass. Rest the mouse cursor on the item you wish to learn more about and the **Tool Tip** will be displayed near the cursor. **Tool Tips** can be turned on or off by clicking on the **Tools** menu, selecting **Preferences** and clicking on the **Show Tool Tips** box.

Screen Tips provide more detail than **Tool Tips** for items in Compass. The **Screen Tips** appear in the help frame at the bottom of the Compass window. Move the mouse cursor to the item you wish to learn more about and the **Screen Tip** will be displayed. The picture below shows an example of a tool tip and a screen tip on a Compass screen, when the mouse is resting on the Open Existing Client button.



In addition, the Compass **Help System** (which you are using right now) provides detailed information on the various areas of the program. To open the help system, either press the F1 key, or click on the **Help** menu and select **Compass Help**. Key Words and Topic areas are displayed in bold text. Links to other topic pages are displayed in blue and are underlined. Links to topic areas within the same page are bold and underlined.

The following elements are available in the **Help System**:

The **Table of Contents** provides an overview of the available help topics. Clicking on a topic will open the topic page for that item.

The **SearchHelp** section allows you to type in a word or phrase to find information on that topic.

Finally, there is a PDF version of this Help System included with your installation of Compass. You can find this in the Compass installation folder, or visit www.kpronline.com to view it for download or printing.

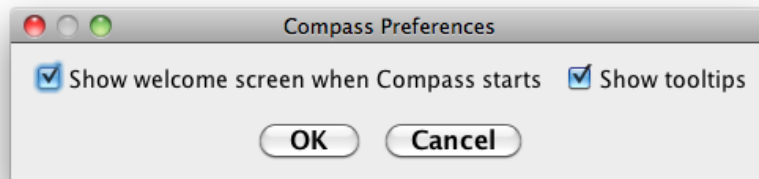
Tailoring the Compass Interface

You can adjust many aspects of the Compass interface, such as the text size used on Compass screens, the overall color scheme, the Compass window size, and more.

By default, Compass uses the display Theme, Appearance, and Settings that are currently set on your computer system. If you like the way the screens look, you don't have to do anything. But if you want to change the text size, for example, you can adjust the display settings as desired by using the Display Control Panel within Windows. Please see [Compass Accessibility](#) and [Operating System Settings](#) for more information.

Finally, Compass provides a Preferences menu item to adjust two features within the program: the appearance of an initial "welcome" screen, and the presence of tooltips while using Compass. To adjust the Preferences:

1. Select Tools/Preferences from the Compass menu at the top of the window.
2. This will display the following dialogue box:



3. If you want to see the [Welcome to Compass](#) screen when Compass starts, be sure that option has a check mark beside it. This is the default setting. To skip the welcome screen and go directly to the [Choose an Action](#) screen when Compass starts, uncheck the welcome screen option. (Use a mouse click to check and uncheck the option.)
4. If you want to see short tooltips on some Compass items when you hover over them with the mouse, check the "Show tooltips" option. This is the default setting. If you'd rather not see the tooltips, uncheck the option. Note that there are lengthier "screen tips" at the bottom of the Compass window, and these are always displayed, regardless of the tooltip setting. See [Getting Help](#) for more information about the various forms of help within Compass.
5. When you are done setting your preferences, click OK to save them, or Cancel to discard the changes.

International Languages and Compass

The overall Compass interface uses English as its language. However, it is possible to run each Compass test using other languages. For example, you can present the Word Test using French words, to provide a better and more realistic assessment for users whose first language is French. (If you would like to help translate Compass test materials into a new language, please contact us at compass@kpronline.com.)

Currently, every test has the option of presenting Arabic, English, French, Portuguese, or Spanish test materials. In the text entry tests, for example, test materials include letters, words, and sentences in the test language. In the Menu test, the test presents menu and item names that are in the test language. And in all tests, vocal feedback (if selected) is presented in the test language. Please see [Configuring Tests](#) for more information about running Compass tests in languages other than English.

A huge thank you to the practitioners who have helped us support non-English languages! The French translations were produced by Dale Szlamkowicz and her team at the Centre de réadaptation Lucie-Bruneau, in Montréal, Québec, Canada, with the help of Sylvie Saint Arneault from the Centre de réadaptation L'InterAction in Rivière du loup, Québec. The Spanish translations were produced by Emiliano Diez at Universidad de Salamanca in Spain, with some additional translations performed by KPR. The Portuguese translations were produced by Julio de Melo of Geraes Tecnologia Assistiva in Belo Horizonte, Brazil. The Arabic translations were produced by Noha Ibrahim Halawani during her graduate work at the University of Pittsburgh.

If you are working in a multi-lingual setting, please note that the Regional Options setting in Windows is used by Compass for formatting dates and times and other information that can vary by regions. This can be important. Compass may have trouble if you [create a Compass client](#) with one Regional Options setting, such as "English (Canada)", and then try to open the client file later with a different Regional Options setting, such as "French (Canada)." If that happens, you can change the Regional Options setting back to the original value (in this case "English (Canada)"), and then re-open the file. You can inspect and set the Regional Options by opening the Windows Control Panel, then Regional and Language Options, and viewing the Regional Options tab.

What's New in Version 3.0

1. Use of Java 11

This version moves to Java 11 to update the platform upon which Compass runs. This is a major change internally. It does offer greater compatibility with Dragon Naturally Speaking on Windows; see [the help page on speech recognition](#) for more information.

2. Better text entry results with Mac OS X Dictation

Mac OS X Dictation allows you to dictate sentences and words into the Sentence Test and Word Test. This Compass version fixes a problem where the Compass report could not display true results for trial time and text entry rate when using Mac OS X Dictation. See [the help page on speech recognition](#) for more information.

3. Assorted minor fixes

We fixed a few typos, included the version in the registration email, and tried to spruce things up in general.

What was New in Version 2.5

1. Option to Use Arabic Test Materials

While the overall Compass interface is still in English, you now have the option of presenting Arabic test materials in every test. In the text entry tests, for example, Arabic test materials include Arabic letters, words, and sentences. In the Menu test, the Arabic option presents menu and item names that are in Arabic. And in all tests, vocal feedback (if selected) is presented in Arabic. Please see [Configuring Tests](#) for more information about running Compass tests in Arabic. Thanks to Noha Ibrahim Halawani, who produced the Arabic translations during her graduate work at the University of Pittsburgh. For more information about using Compass in a multi-lingual setting, please see [International Languages](#).

What was New in Version 2.4

1. Use of Java JRE 8

This version moves to Java JRE 8 to update the platform upon which Compass runs. This is mainly for maintenance purposes but may offer some greater compatibility with newer screen recognition systems or screen readers.

2. Change to Java Access Bridge Installation

Java Access Bridge, which is needed for Compass to work with Windows screen readers such as NVDA, is now included automatically when you install Compass. Compass installation includes a local installation of the Access Bridge, for Compass only, so it will not affect any other Java applications that you may have on your computer. Enabling Java Access Bridge in the Windows Ease of Access Center has no effect on Compass.

What was New in Version 2.3

1. Option to Use Portuguese Test Materials

While the overall Compass interface is still in English, you now have the option of presenting Portuguese test materials in every test. In the text entry tests, for example, Portuguese test materials include Portuguese letters, words, and sentences. In the Menu test, the Portuguese option presents menu and item names that are in Portuguese. And in all tests, vocal feedback (if selected) is presented in Portuguese. Please see [Configuring Tests](#) for more information about running Compass tests in Portuguese. The Portuguese translations were produced by Julio de Melo of Geraes Tecnologia Assistiva in Belo Horizonte, Brazil. For more information about using Compass in a multi-lingual setting, please see [International Languages](#).

What was New in Version 2.2

1. Option to Use Spanish Test Materials

While the overall Compass interface is still in English, you now have the option of presenting Spanish test materials in every test. In the text entry tests, for example, Spanish test materials include Spanish letters, words, and sentences. In the Menu test, the Spanish option presents menu and item names that are in Spanish. And in all tests, vocal feedback (if selected) is presented in Spanish. Please see [Configuring Tests](#) for more information about running Compass tests in Spanish. The Spanish translations were produced by Emiliano Diez at Universidad de Salamanca in Spain, with some additional translations performed by KPR. For more information about using Compass in a multi-lingual setting, please see [International Languages](#).

2. Additional Sentence Test Materials

There are four additional sentence test lists, designed for more controlled testing:

1. **Practice** - contains 1 practice sentence. This is useful if you want to run a separate practice test with the guarantee that it will use a unique sentence.
2. **4-Sentence Test 1, 4-Sentence Test 2, and 4-Sentence Test 3** - each of these is a list with exactly 4 sentences. All three tests are matched with respect to the number of shifted characters, the total number of characters in the test, the characters per word, and the grade level of the text.

For more information about using these test lists, please see [Sentence Test Configuration](#).

What Was New in Version 2.1

1. Scan Test Enhancements

Five additional configuration settings have been added to the Scan Test. These include: additional letter matrix layouts, an extra-delay timing setting, scan initiation setting (auto or manual), loop count, as well as a type-a-sentence test option. See the [Scan Test Configuration](#) page for a complete description of these new options.

The Scan Test report now includes the specific scanning errors that occurred during the test. Clearer information on error types can help identify adjustments to reduce those errors. See the [Scan Test Results](#) page for a complete description of these new results.

2. Switch Test Enhancements

The visual prompt for this test has been improved to be a bit more interesting. It now shows a simple neutral face, which turns to a yellow smiley face when the switch is hit. Additionally, the test can now be configured to require 1, 2, or 3 switch hits in each trial. See the [Switch Test Configuration](#) page for a complete description of these new options.

The Switch Test report now provides recommendations for scanning timing parameters based on the results of the test. See the [Switch Test Results](#) page for a complete description of these recommendations.

What Was New in Version 2.0

1. Multi-Test Reports

Now you can compare two or more test results side-by-side. While single-test reports show you the results for one skill test, the new multi-test reports graphically compare results for multiple tests. This makes it much easier to see performance changes over time, or see the effect of using a different input device. See the [Multi-Test Reports](#) page for a complete description of this new report feature.

2. Runs on Mac OS X

Compass now runs on Mac OS X, in addition to Windows XP, Vista, and 7. It runs on OS X 10.6 (Snow Leopard) as well as most configurations of OS X 10.5 (Leopard). Compass relies on the Java software installed in Mac OS X, and requires at least Java SE 6.

3. New Format for Compass Files (.cms extension)

The way in which Compass data is stored has been completely revamped. One implication of this is that when you try to open .cms files created with Compass v1.2 or earlier, you will be asked if you want to convert them to the new format. If you agree to this conversion and save it, the old file will be overwritten. If you want to save a copy of your file in the old format, make a copy of it before doing the conversion in Compass.

4. New Licensing and Registration Process

We have tried to simplify the registration procedure while still providing a free 30-day trial. Please see the [Trial Period and Registration](#) page for more information.

5. Updated Look-and-Feel

One of the challenges of developing software to run on both Windows and Mac is getting the user interface to "look right" on both platforms. Previous versions of Compass used a generic look-and-feel due to some problems with the Windows-specific look-and-feel. We've been able to solve those problems, and now offer platform-specific look-and-feel for both Windows and Mac. So for the most part, Compass will look like a Windows application on Windows, and a Mac application on the Mac. Some gaps still exist, but overall it just looks a bit better than in previous versions.

What Was New in Version 1.2

Version 1.2 is the most recent version prior to this version 2.0 release. All of these features are also included in version 2.0.

1. New Layouts for the Scan Test

The Scan Test now includes 7 layouts, making the Scan test applicable to a much broader range of users. Layouts use either text or pictures and include row-column matrices and 2- and 4-item linear arrangements. See the [Scan Test Configuration](#) section for a complete description of the options available.

2. Support for Microsoft Windows Vista

Compass Version 1.2 and 1.1 work under the Windows Vista operating system, as well as Windows XP. If you need to use an earlier version of Windows, such as Win 98 or 2000, we suggest you use Compass Version 1.0.

3. Option to Use French Test Materials

While the overall Compass interface is still in English, you now have the option of presenting French test materials in every test. In the text entry tests, for example, French test materials include French letters, words, and sentences. In the Menu test, the French option presents menu and item names that are in French. And in all tests, vocal feedback (if selected) is presented in French. Please see [Configuring Tests](#) for more information about running Compass tests in French. The French translations were produced by Dale Szlamkowicz and her team at the Centre de réadaptation Lucie-Bruneau, in Montréal, Québec, Canada, with the help of Sylvie Saint Arneault from the Centre de réadaptation L'InterAction in Rivière du loup, Quebec. For more information about using Compass in a multi-lingual setting, please see [International Languages](#).

4. New Switch Hit Data in Switch Test

Compass now records and reports additional switch hit data in the Switch skill test. Version 1.0 counted only the single switch hit that immediately followed the test prompt. All additional switch hits that occurred during the pause between prompts were ignored. Version 1.2 and 1.1 count all switch hits that occur during a trial, to help show whether the client has sufficient understanding and control to only press the switch after a prompt is presented. For more information, please see the [revised Switch report](#).

5. Support for Java Access Bridge

The Java Access Bridge is a piece of stand-alone software produced by Sun Microsystems. You need the Access Bridge in order for some assistive technologies to work properly with Windows Java applications, such as Compass. When you install Compass, it will attempt to also install the Java Access Bridge for Compass' use. While Compass will run just fine without the Access Bridge, this new support lets Compass work with a wider range of assistive technologies.

Compass Accessibility

Compass is designed to be accessible to users with a wide range of abilities. The [skill tests](#) are intended to evaluate clients' abilities to use computers. All tests can be used with alternative input methods, such as alternative keyboards or pointing devices. The general procedure is to set up the input method you are assessing, if necessary, then run a Compass test using that input method. For example, to assess a client's performance using a standard keyboard with and without word prediction, you might first run a [Sentence test](#) without word prediction. Then you would set up the word prediction software you are interested in, and run a second Sentence test using word prediction. You can also change a test's [configuration settings](#) to help determine what types of assistive technology (AT) may be best for a particular client.

The parts of the program that are used by clinicians are also intended to be fully accessible using AT devices and methods. Navigation through Compass can be performed using a mouse or mouse emulator or using a keyboard or keyboard emulator.

If you have set custom display characteristics in the operating system, Compass will do its best to use those settings. For example, in Windows, Compass uses the "Message Box" font for most of the text displayed on Compass screens. To increase the size of Compass text, you can use the Windows Control Panel (the Display/Appearance tab) to increase the Message Box font size. You will need to re-start Compass after changing this display setting, in order for it to take effect. (Unfortunately, such display adjustments do **not** affect the Compass Help system.)

We have successfully tested Compass with a variety of AT devices and software, including [pointing devices](#), [alternative keyboards](#), screen magnifiers, as well as with the [operating system settings](#) within Windows and Mac OS X. This help system includes additional information on using Compass with [word prediction](#) and [speech recognition](#). If you find instances where Compass is not fully compatible with your AT, please let us know.

One known gap is the use of screen readers with Compass. On Windows, some screen readers, such as the free NVDA, work to some extent. The built-in Narrator does not work. On Mac OS X, the built-in VoiceOver reader does read some Compass elements, but not all. We are working to provide better screen reader support, and apologize for not being 100% accessible to all of our users.

Operating System Settings

The Windows and Mac operating systems provide many adjustments to keyboard, pointing device, and display settings in order to accommodate varied user abilities. Compass supports the settings listed below.

Keyboard Settings - in general, Compass will work with any keyboard setting, since they are designed to adjust keyboard behavior for all applications on the computer. These settings include:

- StickyKeys
- Key Repeat Rate
- Key Repeat Delay
- SlowKeys
- BounceKeys (not available on Mac)

Pointing device settings - in general, Compass will work with any pointing device setting, since they are designed to adjust mouse/pointing device behavior for all applications on the computer. These settings include:

- Pointer Speed
- Enhance Pointer Precision (not available on Mac)
- Double-click Speed

Display Settings

- Fonts set in Control Panel/Display/Appearance (Windows only). If you increase the 'messagebox' font in Windows, the fonts used in Compass will also increase accordingly.
- Color schemes set in Control Panel/Ease of Access Center/Make the computer easier to see (Windows) or Preferences/Accessibility/Display (OS X)
- Zoom feature in Control Panel/Ease of Access Center/Make the computer easier to see (Windows) or Preferences/Accessibility/Zoom (Mac OS X)

[Note that while Compass will respond to changes in control panel font settings, screens may not be legible if the font is too large.]

This allows you to tailor the Compass interface to accommodate the needs of the clinician (for example, by increasing the font size used on Compass screens). It also allows you to test the effect of input device settings such as changes in the double-click speed or key repeat rate.

Note that Compass [test configurations](#) also allow adjustment of fonts, colors, and timing parameters, which will override the operating system settings.

Using Compass with Pointing Devices

Like other application programs, Compass accepts mouse input from a standard mouse or any other device that acts exactly like (or emulates) a mouse. This includes off-the-shelf alternative mice and trackballs, as well as more specialized pointing devices, such as head controls, speech recognition, and MouseKeys. The table below summarizes Compass' compatibility with some of the pointing devices currently available.

Pointing Device	Compatible	Notes
Mouse	Y	Numerous mice tried with no prob
Trackball	Y	Numerous trackballs tried with no
MiniJoystick	Y	
Dragon NaturallySpeaking v11 (Mouse Move, Mouse Grid)	Y	
SmartNav (NaturalPoint)	Y	Generates clicks as expected, and c Compass
MouseKeys (Windows & OSX)	Y	Generates clicks as expected, and c Compass

Please note that the presence of a particular pointing device in the table in no way reflects an endorsement of its use with Compass or with any client. Our goal was simply to test a representative of each type of alternative pointing device (i.e., hand-controlled, head-controlled, voice-controlled, and keyboard-controlled). Other head-controlled pointing devices, for example, would be expected to be equally compatible with Compass.

Compass will not "know" which pointing device you are using unless you tell it. This is important so that you can accurately interpret your data. For example, if you are assessing a client using two different pointing devices, you might use a series of [Aim tests](#). If you do not keep track of which pointing device was used with which test, it will be impossible to determine whether one pointing device gave better performance than the other. The best time to enter the input device is during [test configuration](#) (before running the test), but you can also do it when [viewing the report](#).

Using Compass with Alternative Keyboards

Compass has been successfully tested with a variety of typical keyboards as well as alternative keyboards designed to accommodate physical impairment. Like other application programs, Compass accepts text input from a standard keyboard or any other device that acts exactly like (or emulates) a keyboard. The category of "alternative keyboards" is a very broad one, as it includes at least the following:

- Direct keyboard replacements, such as expanded or mini keyboards that take the place of the standard keyboard.
- On-screen keyboards, which present a visual image of a keyboard on the computer display. Items from the on-screen keyboard can be selected using direct selection with a pointing device, one or two-switch scanning, or other methods. On-screen keyboards often include some form of [word prediction](#) or other rate enhancement technique.
- [Speech recognition](#), in which the user speaks the text to be entered.

Compass is compatible with all of the direct keyboard replacements and on-screen keyboards tested so far. It also works with [word prediction](#) (and other rate enhancement), as well as [speech recognition](#), but we suggest that you read the Help pages about each of those methods to use them most effectively.

Note that Compass will not "know" which keyboard device you are using unless you tell it. This is important so that you can accurately interpret your data. For example, if you are assessing a client using two different keyboards, you might use a series of [Word tests](#). If you do not keep track of which keyboard was used with which test, it will be impossible to determine whether one keyboard gave better performance than the other. The best time to enter the input device is during [test configuration](#) (before running the test), but you can also do it when [viewing the report](#).

Using Compass with Word Prediction

Word prediction is a technique that reduces the number of selections required to enter text. As the user enters letters, a word list that matches the user's input is presented on the screen. If the desired word is in the prediction list, the user can complete the word by selecting it from the list. Word prediction can enhance text entry rate if the time saved by making fewer selections is greater than the time spent searching the prediction list. It may also lead to fewer spelling errors in some cases.

Compass can help you determine the effect of word prediction on speed and accuracy of text input. While Compass does not provide its own word prediction feature, it does allow you to enter text using any commercial word prediction program. This means that you could run, say, one [Sentence test](#) with no word prediction, then a Sentence test with word prediction. By comparing the Typing Speed and Net Errors between the two tests, you could get an idea of how word prediction affected performance. This same approach could be used to compare two different types of word prediction, or different settings within the same word prediction program.

Note that the Total Errors measure may be difficult to interpret when using word prediction with Compass. The reason is that most word prediction systems will insert some Backspace characters into the text as part of their operation. For example, when you end a sentence with a period, any automatic spaces added to the last word in the sentence will be deleted before the period is entered. These extra backspace characters will be counted as part of Total Errors, even though the user wasn't actually responsible for making the error. So Total Errors would include any backspace characters entered by the word prediction system, as well as those errors that might actually be typed by the user.

Regarding automatic spacing, Compass will not count any space characters that fall between the last character entered and the Enter key as errors. This means that the Net Errors measure will be accurate when using word prediction systems.

If you want to get a visual look at which characters were selected with word prediction, you can examine the detailed letter-by-letter table in the report (see [Word Test Results](#) or [Sentence Test Results](#)). As shown in the example below, this client selected the word "My" from the prediction list after first entering the initial letter "M". It took 1.2 seconds for the client to find and select the correct entry, and the entry caused the letters "y" and "Space" to be placed in the text field.

Compass

File Edit Tools Help

Detailed Results: Sentence 4

Client: _____
 Test Date: Oct 1, 2010 10:53:29 AM
 Evaluator: _____

Test Configuration

Configuration Name: Standard

Setting	Value
Input Device	Not Specified
Test Language	English
Number of Trials	4
Sentence List	Set 1
Allow Edits	Yes
Case Sensitive	No
Text Style	SansSerif, 30, Bold
Text Color	Black
Background Color	White

Input Device: Not Specified

Notes

Sentence-by-sentence Results

Target	Response	Correct?	Trial Time (sec)	Total Errors (%)	Net Errors (%)
He is still on our...	He is still on our...	Yes	24.95	7.69	0
My bike has a fl...	My bike has a fl...	Yes	16.62	7.69	0
Your mother wil...	Your mother wil...	Yes	11.33	7.14	0
We are having ...	We are having ...	No	11.08	17.39	8.7

Letter-by-letter Results

Response	Press Time (sec)	Duration (sec)
Shift	1.31	0.44
M	0.14	0.09
y	1.2	0
Space	0	0
b	1.02	0.12
i	1	0.11
k	1.38	0.02
e	0.02	0
Space	0	0

Print Report View Summary Save & Continue Cancel

Help: This screen shows the settings and results from this 'Sentence' test.

Using Compass with Speech Recognition

Speech recognition is a text input method that tries to recognize a user's speech, then convert it into text. If the recognition accuracy is high, speech recognition can improve text entry rate for typists with physical impairments. It may also reduce the user's physical effort, since most, if not all, text can be entered using voice rather than keypresses.

Some speech recognition systems work fine with Compass, but some do not. We wish we could report 100% compatibility, but speech recognition with Compass has been a bit of a moving target. For Dragon NaturallySpeaking on Windows, you should be able to dictate directly into Compass text fields using Dragon 12 and below. As of Dragon 13, Dragon will automatically open its Dictation Box when dictating into Compass (as it does for any "Basic Text Control" application). You can dictate in the Dictation Box, then do a Transfer into Compass. (If Dragon's Dictation Box comes up and doesn't work properly, try disabling it with Settings/Options, then Miscellaneous, and uncheck Use the Dictation Box for unsupported applications.)

The built-in Dictation for Mac OS X works successfully for dictating into the Compass text entry texts. However, the built-in Windows Speech Recognition doesn't seem to work. Please contact us at compass@kpronline.com with any reports of success or difficulty.

Compass can help you assess a user's performance with speech recognition, in at least two different ways. The basic approach is straightforward, but there are some measurement details that are important and will be described below.

1. Assess the effect of speech recognition on overall speed and accuracy

The purpose of this is to determine, when all recognition errors are corrected, how quickly and accurately the user could enter text using speech recognition. To measure this, you first activate the speech recognition software of your choice, then run a [Sentence test](#) within Compass. **At the end of the test, the important measurements to use are Typing Speed and Net Errors.** These will tell you how quickly the text was entered, and how accurate the end result was.

Note that the Total Errors measure may be difficult to interpret when using speech recognition with Compass in this way. The reason is that speech recognition system may generate a lot of extraneous keypresses when the user corrects a recognition error. In the Compass test report, click View Details and look at the Letter-by-letter Results to see if your speech recognizer does this. For example, you say the word "waste", and it recognizes it as the word "ways." The speech recognizer will, in effect, type the word "ways" into the sentence field. When you correct this error using speech commands, the recognizer will insert a number of backspace characters to get rid of the incorrect word, before "typing" the characters of the correct word. All of these extra keystrokes will be counted as part of Total Errors, even though the user wasn't actually responsible for making the error. So Total Errors would include errors made by the speech recognition system, as well as those errors that might actually be typed by the user.

Please note also that not all versions of Dragon NaturallySpeaking (DNS) allow the user to make voice corrections within Compass. If you are using a version of DNS that does not support voice corrections, you can still use Compass to help measure recognition accuracy, as described below.

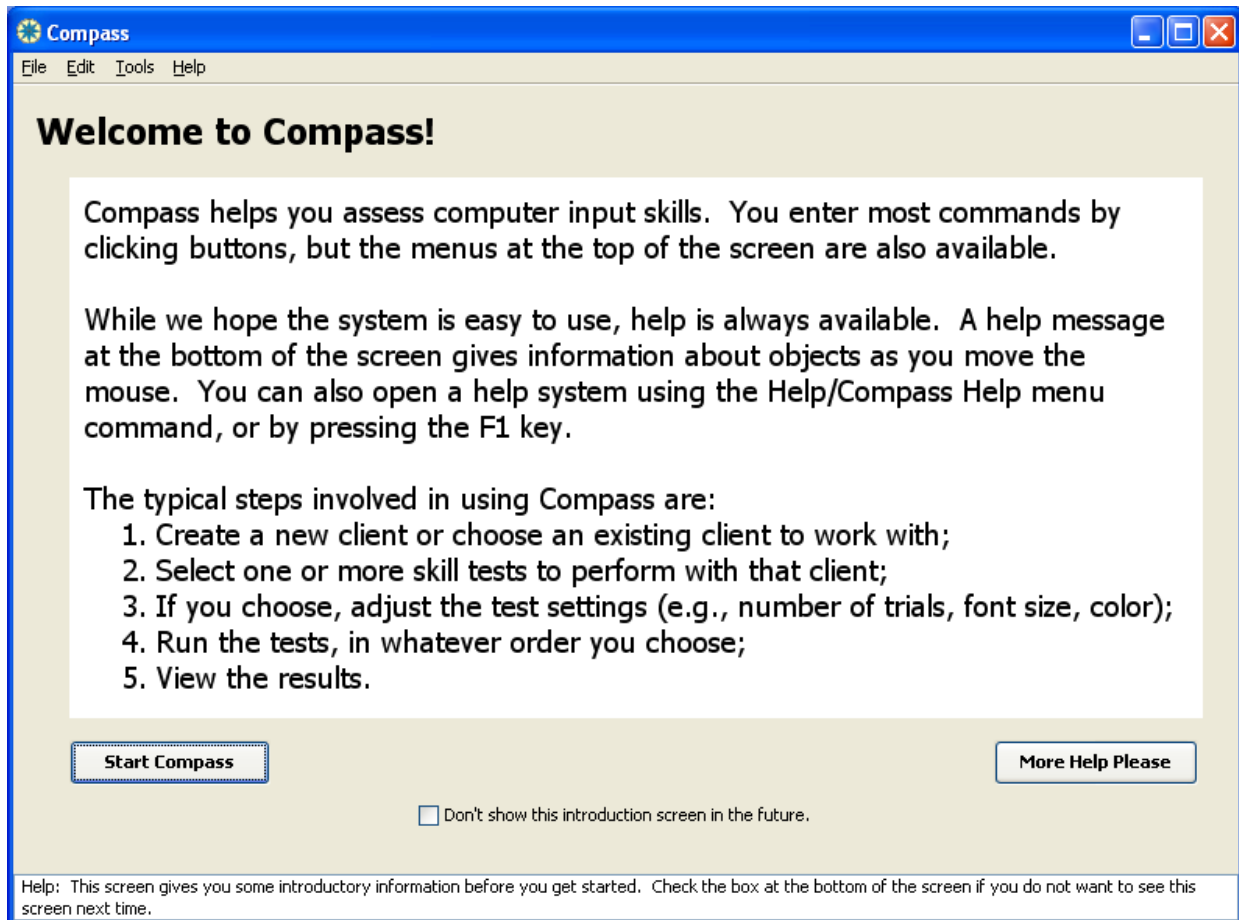
2. Assess recognition accuracy with speech recognition

The purpose of this is to determine the raw recognition accuracy that speech recognition is providing to a user, when no attempts at corrections are made. This can provide a useful benchmark of how well the recognizer is working, and whether training interventions are having the desired effect.

To measure recognition accuracy, first activate the speech recognition software of your choice, then run a [Sentence test](#) within Compass. Tell the user not to correct any recognition errors, whether by voice or keyboard. Simply speak each sentence and leave it at that. At the end of the test, the Net Errors measurement will tell you how accurately the system recognized the user's speech. (Recognition Accuracy would actually be $(100 - \text{Net Errors})$.) In this case, since no corrections were made, Total Errors and Net Errors should be the same. The Typing Speed measure will give you an idea of how quickly the user is speaking, and how fast text entry would be if no recognition errors occurred.

Welcome to Compass

The Welcome screen comes up when Compass is started. It provides an brief overview and describes the typical steps involved in using the program.



Clicking on the **Start Compass** button will take you to the [Choose an Action](#) screen where you can start working with clients.

Clicking on the **More Help Please** button opens the full Compass Help System.

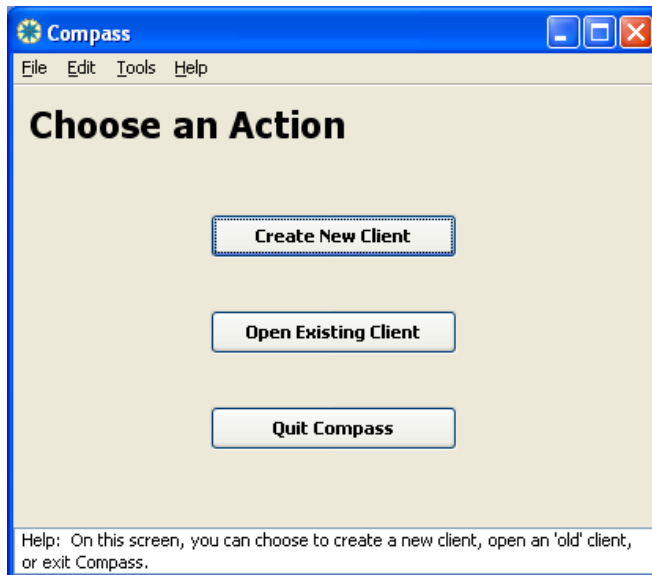
If you would like to skip this screen and go directly to the **Choose an Action** Screen whenever Compass is started, check the box at the bottom labeled "Don't show this introduction screen in the future". If you later want the Welcome screen to show at start-up, select **Preferences** from the **Tools** menu and select the "Show welcome screen when Compass starts" box.

Choose an Action

Clicking on the **Create New Client** button in the **Choose an Action** screen allows you to define a brand new client to work with. This will create a file into which all information and performance data for the client will be stored.

Click on the **Open Existing Client** button to open a client file that was created and saved previously. Use this option even if no tests have been run yet but information about the client has been entered. NOTE: if you have client files that were created with Compass 1.2 or earlier, you will be asked to convert their data to the new format. If you choose to convert and save, the old file will be overwritten.

Use the **Quit Compass** button if you are done working with Compass. This will close the program. All of your data that was saved previously will be available in future sessions.



Overview of Sample Scenarios

These sample scenarios are taken from tasks that Compass beta testers were asked to do. We've included them here because they seemed to help users quickly understand how Compass could be used to address typical clinical assessment questions.

If you'd like to try any of the tasks in the sample scenarios, we suggest that you start with Task 1 and go from there. Note that the tasks do not give specific instructions on what to do. See if you can figure out how to use Compass to perform the task. Working through all eight tasks will give you a good sense of how to use Compass and what it can do.

Task 1

You are meeting a 35 year-old client named Steve Jones for the first time. He would like to start surfing the Web and using email, but he has not had much experience with computers. It is possible that he could use the standard mouse, but it is not clear whether this is optimal for him or not.

To get a simple baseline measure, run the test called "Aim" using the standard settings. View the results.

Task 2

Having seen Steve complete the aiming test relatively easily, you wonder how he would do selecting commands from menus.

Run the "Menu" test using standard settings.

Steve seemed to have some trouble reading the menu items on the screen. Repeat the Menu test, using 24 point font. View the results.

Task 3

You only had time for a short session with Steve today. Quit the Compass program to stop for the day.

Task 4

Now it's a couple of weeks later. You want to repeat the standard aiming test with Steve, and see if he will benefit from using a trackball instead of the standard mouse.

Do the Aim test once with the trackball. View the results.

Generate a multi-test report to compare the results from Steve's first Aim test (from Task #1 above) to this one. (Hint: on the Test List, select BOTH Aim tests, then click the Multi-Test Report button.)

Print the report, and see if there is a difference in Steve's performance using the trackball as compared to the mouse.

Task 5

A new client, Joan Smith, is here for a computer access evaluation. You want to use a variety of Compass tasks to assess her keyboarding and pointing skills. You think the Sentence, Drag, and Menu tests will be good ones to start with. Choose all three of these tests. Run the Sentence test with Joan, using standard settings. View the results.

Time runs out in this session with Joan. Quit Compass.

Task 6

Joan Smith returns for the second part of her computer access evaluation. You want to run the Drag test that you didn't have time for in the last session. Start the Drag test with Joan, using standard settings. After three trials, Joan is struggling and appears frustrated. You decide to stop the test but save the data. View the results.

You decide to try a second Drag test with the following settings adjusted to make it easier and more interesting for Joan:

- pictures for targets
- large targets
- large destination
- Engaging feedback.

Save the settings and run the test. Save the data but don't view the results.

Task 7

A new client, Joe Clark, is here for a computer access evaluation. His literacy skills are reported to be at the 1st grade level. In his school, he has been trying to do some single switch scanning activities, with mixed success.

You try the Scan test with Joe to see if he can choose the right picture from a choice of two. You have Joe practice first to make sure he is familiar with the task. Then run the test and view the results.

Task 8

Joe (from Task #7) had some trouble controlling his switch, and you decide to take a step back and make sure his switch site is in the best location.

Choose a Switch test for Joe, and run it with the current switch location, to get a baseline measure of Joe's speed and consistency at hitting the switch.

Try a new switch location, and run a second Switch test. It's a good idea to configure each test with a name that reflects the switch location, so you can keep track of it later. Repeat for as many locations as desired.

Create a multi-test report showing how performance varied with different switch locations. This may reveal a better switch location for Joe.

How Compass Stores Client Information

Compass stores all of the data for a client in a single file. The initial client information, the test list, test configurations and results are all within this file. Clicking on a **Save** or **Save and Continue** button anywhere with Compass updates the file with any changes made since the last save. Cancelling an action or exiting a screen without saving will not change any information that was previously saved.

When a new client is created by clicking on the **Save & Continue** in the [Enter Information for a New Client](#) screen, a **Save As** window is opened. The default file name will be the client's last name followed by their first name and middle initial without spaces. If you haven't entered any name information for this client, the default file name is "Client.cms." Compass automatically adds a .cms extension to the file name.

In Windows, the default file location is the My Documents folder. In Mac OS X, it is the user's home directory.

If you would like to use a different file name from the default name, enter the new name using any file name that is valid on your operating system. You do not need to enter the .cms extension; it will be added automatically when the file is saved. Changing the extension is not recommended as it may cause difficulties opening files later.

If you would like to use a different file location, files can be saved to alternative locations on your computer or network by navigating through the system using the standard file management methods for your operating system. If you are not sure how to navigate through your computer folders and files, we recommend using the default file location.

Click on **Save** to accept the displayed name and location. If you do not wish to save this data, click on **Cancel** to return to the [Enter Information for a New Client](#) screen.

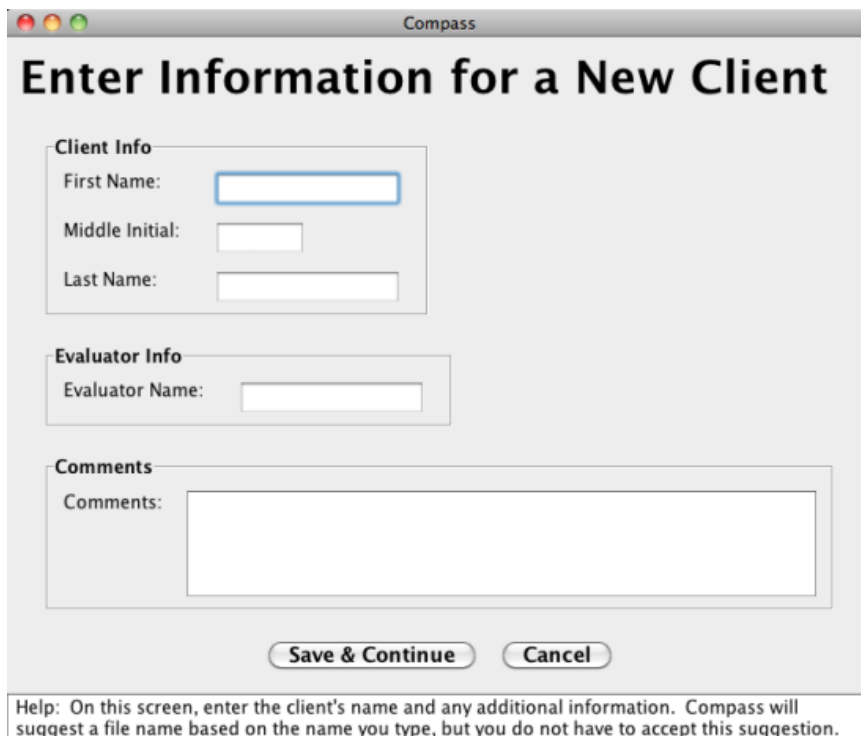
We recommend that you backup your Compass files regularly to protect your client information.

Create a New Client

If you have never run Compass with this client before, you create a new client file in which to store Compass information for this client. You can create a new client file in one of two ways:

1. Click the **Create New Client** button on the [Choose an Action](#) screen, which is displayed when you first run Compass. OR,
2. Choose **File/New Client** from the menubar.

This brings up the screen shown below, where you enter basic information for the new **Client**, including first name, middle initial, last name, and comments. This name will be the basis for the suggested file name, and will also be displayed on the [Test List](#). You can also enter an **Evaluator** name. This will be used as the default evaluator name in reports (although it can be changed when creating reports, if desired). Note that any of these fields can be left blank if desired.



The screenshot shows a window titled "Compass" with the following content:

- Client Info**
 - First Name:
 - Middle Initial:
 - Last Name:
- Evaluator Info**
 - Evaluator Name:
- Comments**
 - Comments:

Buttons: **Save & Continue** and **Cancel**

Help: On this screen, enter the client's name and any additional information. Compass will suggest a file name based on the name you type, but you do not have to accept this suggestion.

The **Comments** field allows you to enter any information that helps you to identify the client. This may include notes about the client or things like a registration number. All of this client information can be edited later by clicking on the **Tools** menu and selecting [Edit Client Information](#).

When you are done entering client information, click on the **Save & Continue** button. This opens a **Save As** dialogue box, where you can tell Compass what name and location you would like this client file to have. The default file name will be the client's last name followed by their first name and middle initial with a .cms extension. The default file location is the My Documents folder. Click on **Save** to accept the default name and location and create a file that will be used for the test and results

data for the new client. You may also type a file name of your own choosing if you wish, then click on **Save** to create the file. This opens the [Choose Skill Tests](#) screen.

For more information on saving files or changing the default values, see [How Compass Stores Information](#).

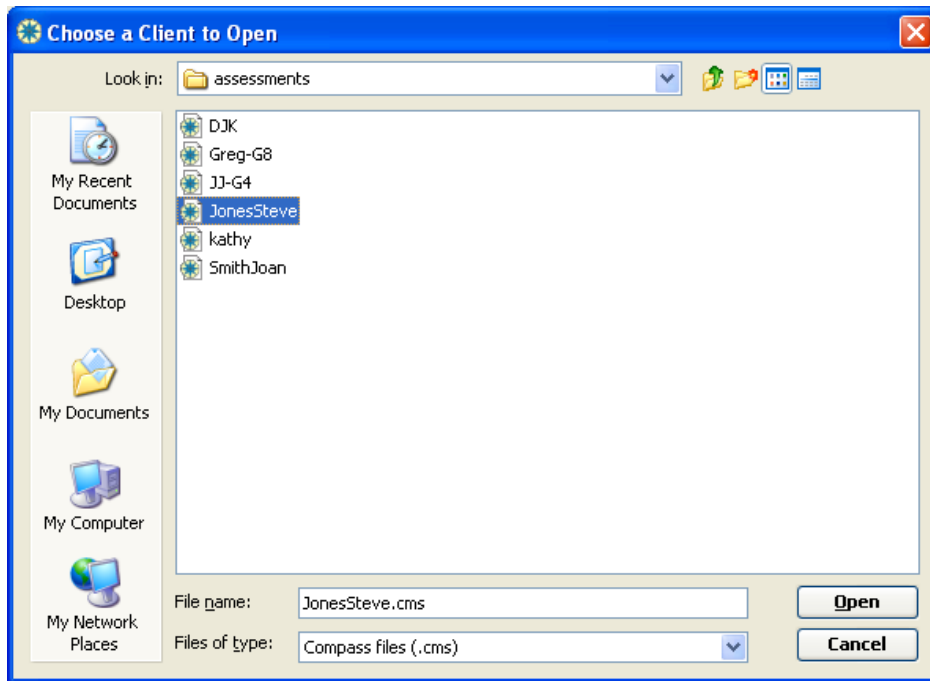
If you wish to end this step without saving a new client file, click the **Cancel** button. This will return you to the [Choose an Action](#) screen.

Open an Existing Client

You can open an existing client in one of two ways:

1. Click the **Open Existing Client** button on the [Choose an Action](#) screen, which is displayed when you first run Compass. OR,
2. Choose **File/Open Client** from the menubar.

This will bring up the **Open Existing Client** dialogue box which displays a list of file names for clients who have been entered into the system. To open a file, select the file you wish to open or type the file name, including the extension, into the **File name:** box and click the **Open** button or double click on the file name. Once a client file has been opened, Compass displays the [Test List](#) screen for the selected client.



The **Look in:** box initially opens to the My Documents folder which is the default file location. Navigate to other locations using standard file management methods for your operating system.

The **Files of type:** box initially displays files with the Compass .cms extension. You can select **All Files** within this box to view files of other types, but Compass can only open its own files.

On Mac OS X, the open dialog looks a bit different, but provides the same ability to navigate to a file location and select a Compass file.

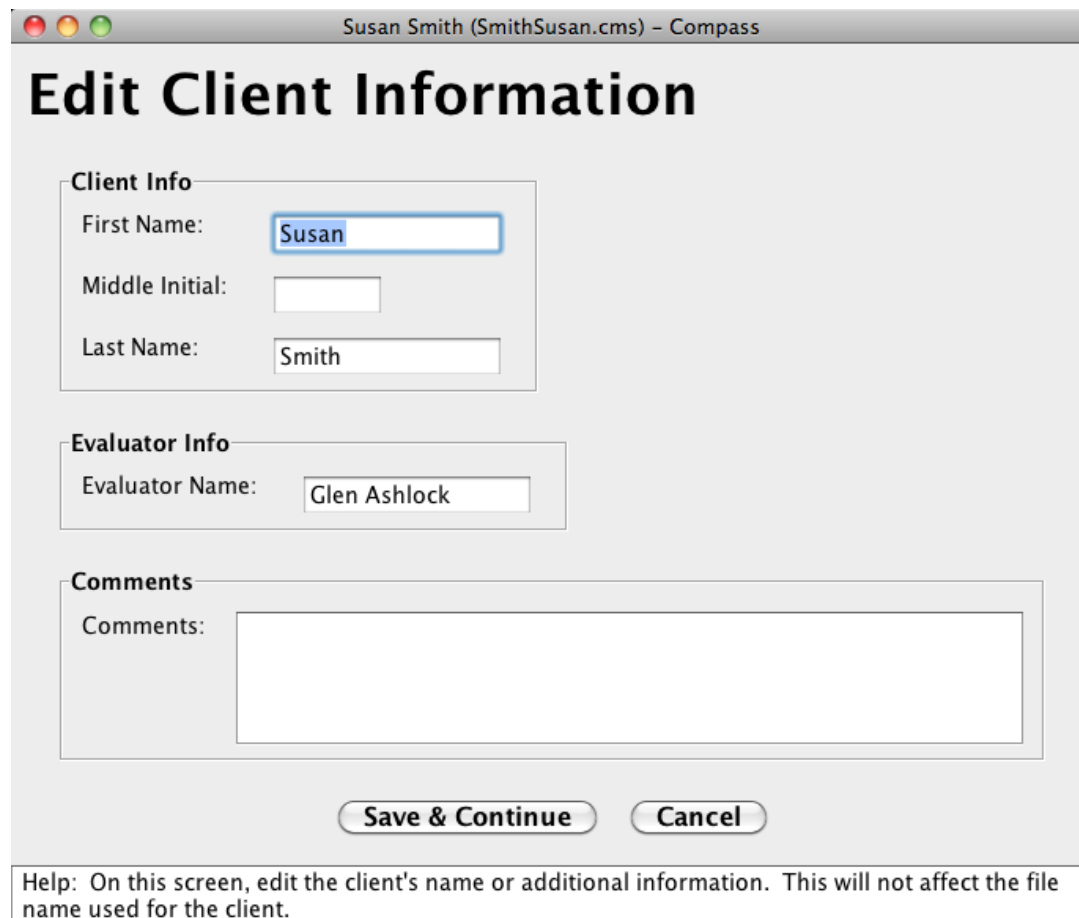
NOTE: if you have client files that were created with Compass 1.2 or earlier, you will be asked to convert their data to the new format when you first open them. If you choose to convert and save, the old file will be overwritten.

To return to the original screen without opening any files, click on the **Cancel** button.

Edit Client Information

Information about the client that was entered when the client file was created, including name and comments, can be viewed and edited at any time. To review or edit this information, select **Tools/Edit Client Information** from the menubar.

When the Edit Client Information screen is open, any of the client information fields can be edited and text can be added. To save the changes and return to the previous screen, click on **Save and Continue**. To exit and return to the previous screen without saving your changes, click on **Cancel**.



Susan Smith (SmithSusan.cms) - Compass

Edit Client Information

Client Info

First Name:

Middle Initial:

Last Name:

Evaluator Info

Evaluator Name:

Comments

Comments:

Help: On this screen, edit the client's name or additional information. This will not affect the file name used for the client.

Skill Tests

The **skill tests** are divided into a collection of “families,” each of which focuses on a specific element of computer use. The families that currently have active tests are scanning, pointing, and text entry. Descriptions of the individual tests are below.

Pointing Family

[Aim test](#) - Tests speed and accuracy of pointing device movements. It presents the client with a sequence of targets on the screen, and the client must use the pointing device to move a cursor into the target and make a selection.

[Drag test](#) - Tests the ability to accurately and consistently select objects and drag them to a target. It presents a series of targets and destinations on the screen and the client must use the pointing device to select the object, drag it to the destination location, and release it.

[Menu test](#) - Tests ability to select designated items from a pull-down menubar. It presents the client with a series of menu choices, which may include sub-menus as a configuration option, and the client must select the target menu item.

Scanning Family

[Switch test](#) - This is designed to evaluate a client's ability to activate a switch in response to a prompt. It presents a series of targets prompting the user to activate the switch on the screen, one at a time.

[Scan test](#) - This is designed to evaluate a client's ability to perform scanning using a single switch. A set of items is presented on the screen, along with a target item. The client tries to select the target item using their switch.

Text Entry Family

[Letter test](#) - This is designed to evaluate a client's ability to correctly enter a target letter. When the test is started, a series of letters will appear on the screen, one at a time. When any letter is entered, the next target letter will appear.

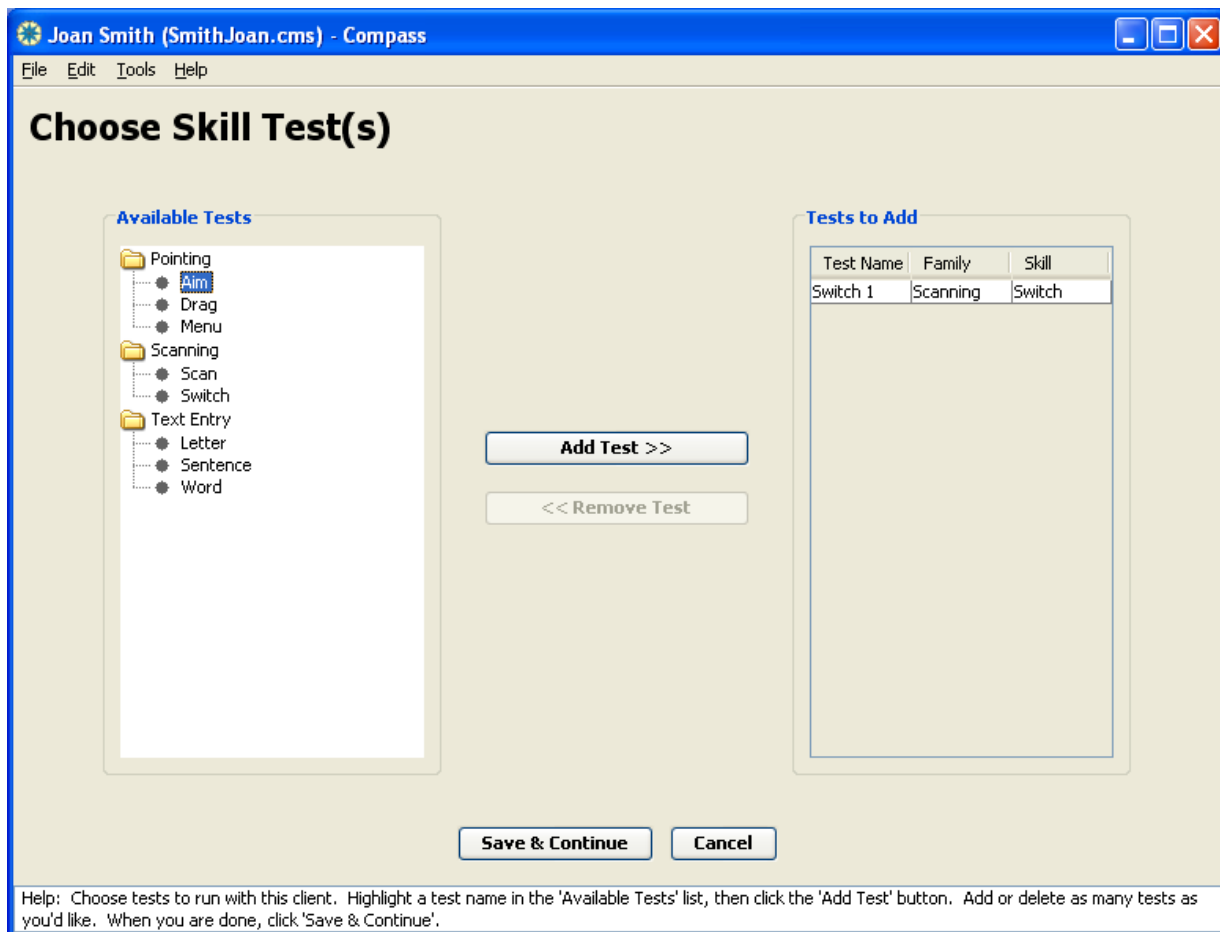
[Word test](#) - Tests ability to sequence several keystrokes together to copy a word displayed on the screen. A target word is displayed and the client must enter the word.

[Sentence test](#) - Tests ability to accurately enter a sentence displayed on the screen. A target sentence is displayed and the client must enter the sentence.

Choosing Skill Tests

Compass does not try to make suggestions about which skill tests you should use with a client. Rather, you decide which tests are most likely to give you valuable information about the client's strengths and limitations. You can select one or more tests to run with a client in two ways:

1. Immediately after you have created a [new client](#) file, the **Choose Skill Tests** screen is displayed.
2. From the [Test List](#) screen, click the **Add New Test** button.



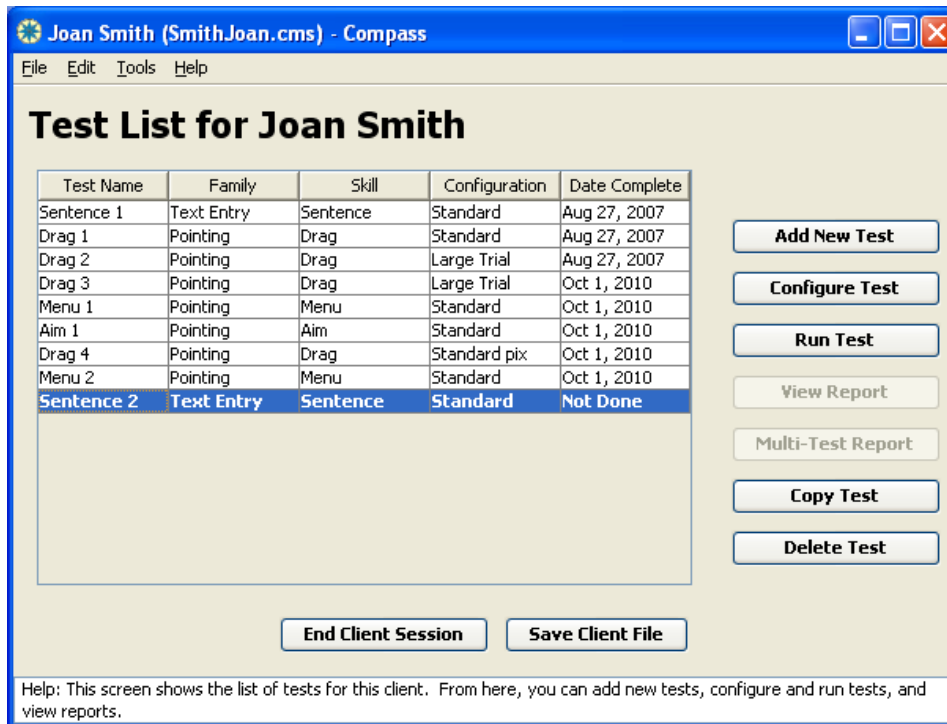
The **Available Tests** section lists all of the possible tests sorted by skill family. To add a test, select the test name and click on the **Add Test** button or double click on the test name. The test will appear in the **Tests to Add** section. Multiple instances of the same test can be added. A number will be automatically added after the name for each new instance of a test.

Tests can be removed from the **Tests to Add** section by selecting the test in that section and clicking on the **Remove Test** button.

Clicking on the **Save & Continue** button will save the selected tests and display the [Test List](#) screen. You can return to this screen and add additional tests at any time from the [Test List](#) screen. Click **Cancel** if you do not want to save any of the selected tests and return to the previous screen.

Test List

The **Test List** screen lists all tests that have been selected for the current client. The test list shows the test name, the skill test family, the type of skill test, the configuration name, whether the test has been completed, and the run date if it was completed. The information for tests that have not been run is shown in bold. By default, the tests are listed in the order that they were added with the earliest tests at the top of the display. The list items can be sorted by clicking on any of the column headings.



Test Name	Family	Skill	Configuration	Date Complete
Sentence 1	Text Entry	Sentence	Standard	Aug 27, 2007
Drag 1	Pointing	Drag	Standard	Aug 27, 2007
Drag 2	Pointing	Drag	Large Trial	Aug 27, 2007
Drag 3	Pointing	Drag	Large Trial	Oct 1, 2010
Menu 1	Pointing	Menu	Standard	Oct 1, 2010
Aim 1	Pointing	Aim	Standard	Oct 1, 2010
Drag 4	Pointing	Drag	Standard pix	Oct 1, 2010
Menu 2	Pointing	Menu	Standard	Oct 1, 2010
Sentence 2	Text Entry	Sentence	Standard	Not Done

A test must be selected before any actions can be performed. The labels on the buttons on the right side of the display will indicate if that option is active for the selected test by appearing bold for active options or in grey for functions that are not available for that test. For example, if a test has not yet been run, there is no performance data to display, so the **View Report** button is grayed out. Similarly, if a test has already been run, you can no longer change its configuration settings, so the **Configure Test** button would be grayed out. The **Multi-Test Report** button will only be active if two or more tests *of the same Skill* are selected.

Clicking on the **Configure Test** button will display the [configuration settings](#) for the selected test and allow you to make changes to the configuration. For more information on configuring specific tests, see the section for that test within the **Skill Tests** help folder.

Clicking on the **Run Test** button will open the [Start test](#) screen. From this screen you can start the test or practice using the test without collecting data. Note that once data are stored for a particular test, the **Run Test** button will be grayed out for that test. If you want to run that test again, using the same configuration settings, use the **Copy Test** button, and then run the copy.

Clicking on the **View Report** button will allow you to [view the results](#) for a completed test.

Clicking on the **Multi-Test Report** button will allow you to create a [multi-test report](#) for two or more completed tests.

Clicking on the **Copy Test** button will create a duplicate of the selected test. The duplicate test will have the same configuration as the original test. This is useful if you want to make sure you are comparing performance data resulting from identical tests, or if you want to make sure you are only changing one configuration setting when running a subsequent test.

Clicking on the **Add Test** button will return you to the [Choose Skill Test](#) screen so that additional tests can be added.

Clicking on the **Delete Test** button will remove the selected test. Tests can be deleted before or after they have been run. Selected tests can also be deleted by pressing the Delete key on the keyboard. The remaining tests and client information will not be affected. You can also select multiple tests to delete all at once, if desired. Prior to actually deleting any test, Compass will ask if you are sure you want to delete.

Click on the **End Client Session** button to end work with this client and return to the [Choose an Action](#) Screen. Any changes made during the session will automatically be saved when you confirm you are done with the client.

Click on the **Save Client File** button to save any changes made during the session without exiting the **Test List** screen. If the **Save** button is grey, no changes have been made since the file was last saved. You can also save a client file at any time using the **File/Save** or **File/Save As** menu commands.

Configuring Tests

Each skill test has configuration settings that help determine characteristics of the test, such as the number of trials, the size and color of test objects, or the selection method used in the test. Every test has a set of default values for these settings, which have been chosen to be reasonable for a wide range of clients. However, in many cases, you might want to adjust the settings to tailor the test more closely to the client's needs.

To configure a test, select the test name in the Test List screen and click on the **Configure Test** button. Tests can be configured at any time until they have been run. Changing the configuration for a test does not affect the configuration for other tests of the same type. For example, if you change the settings for test "Aim 1", it will not affect any other Aim tests that may be in this client's test list.

The test configuration screens display options specific to that type of test. The specific options for each test are described in the section for each test in the **Skill Tests** section of this help system. However, the general approach is the same for all tests, and is described below. The figure below is for a Menu test configuration, but illustrates concepts that are common to all test configurations.

Menu Test Configuration

Test Name:

Configuration Name:

Input Device:

Test Language:

Number of Trials:

Notes:

Prompt

Target Item and Menu

Target Item Only

Menu Complexity

'Simple' Menubar (4 menus)

'Typical' Menubar (8 menus)

Include Submenus

Feedback Options

Basic

Engaging

Correct Trials

None

Visual

Auditory

Both

Incorrect Trials

None

Visual

Auditory

Both

Timing

Maximum time per trial (sec):

Pause between trials (sec):

Help: On this screen, you can change the configuration settings for this Menu test. To see what the new settings look like, click the 'Preview' button. When you are done, click 'Save & Continue'.

The configuration screen allows you to change the test and configuration names. Each test name must be unique within each client file. For example, you cannot have two tests with the name "My Menu test". The default test name is the type of test with a number indicating how many of those tests have been selected for this client (e.g., Menu 1, Menu 2, and Menu 3).

You do not have to change the test names, but if you do, you should try to develop a consistent strategy that provides information about each test when you are viewing the [test list](#). This might be the date the tests were created (Menu 7-8-2009), the type of session (e.g., eval or follow-up), or whatever allows you to manage the tests most effectively.

Note that test names are used as labels in the [multi-test reports](#), so informative test names can make it easier to interpret that report.

Since the same configuration may be used for more than one test, the configuration name does not have to be unique, as long as the settings are the same for a given configuration name. The default configuration name is *Standard*, reflecting the default settings that are provided with Compass. If you make changes to the standard configuration, Compass will prompt you to change the name when you try to save those settings. This is because *Standard* refers to a specific collection of settings, and keeping it that way helps you have a better understanding of how each test was configured when you look at the [test list](#).

You should develop a consistent strategy for naming the configurations to describe the settings. If you have multiple tests for a particular client, this will definitely help you manage tests. A useful configuration name could describe the type of input method (e.g., trackball or head pointer), the type and size of objects (e.g., 14 bold text), or other important settings that distinguish this test from other tests.

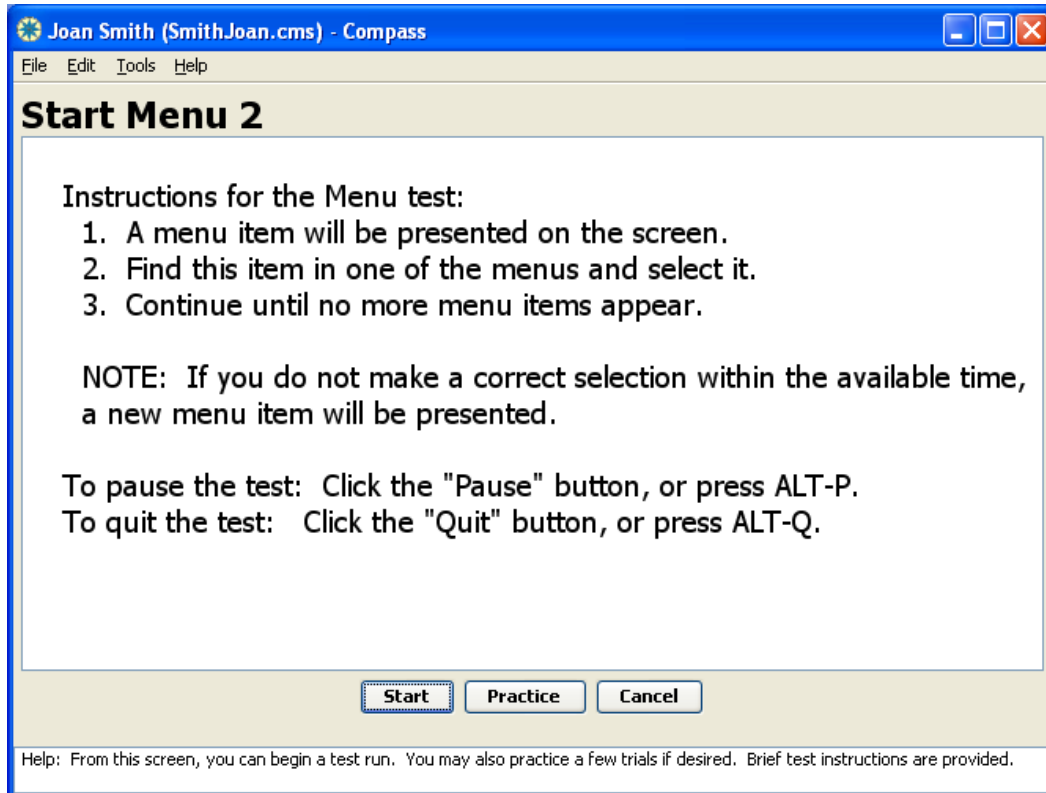
The **Input Device** field is important for keeping track of which input method was used with each test. Compass will not know if the client is using a trackball, rather than a mouse, unless you tell it. You may select the input device from the list provided, or type in more specific device information if desired.

The **Test Language** field defines which language is used for any text or vocal feedback presented to the client during the test. Currently, the choices are English, French, Spanish, Portuguese, and Arabic.

A **Notes** field is available in each configuration screen for any additional information you would like to add concerning the configuration of the test. The comments can be viewed in the **Notes** field of the report for that test.

Running Tests

To run a test, select the test in the [Test List](#) screen and click on the **Run Test** button. You will be presented with instruction on how to run the test on the **Start (Test name)** screen.



From this screen you can run a practice test by clicking on the **Practice** button. Practice tests can be used to make sure that the client understands how the test will be run without introducing errors or learning time into the results. They use the same configuration settings selected for the test except for the number of trials, which is set at three. No data are collected for practice tests, and they can be run any number of times.

Clicking on the **Start** button will run the test while collecting performance data. When the specified number of trials have been completed, you will have the option of saving the results, saving and viewing the results, or discarding the results. If the results are saved, they can be viewed at any time from the [Test List](#) screen, and the test will be displayed as having been completed in the [Test List](#) screen. If the data are discarded, the test will be listed as not completed and can be run again at any time.

During the test, you can temporarily pause the test by clicking the **Pause button**. To restart the test, click the **Re-Start button**. (In the Aim, Drag, Menu, Switch, and Scan tests, you can also press Alt-P to do a pause and re-start.) The timing "stopwatch" will not advance while a test is paused. When the test resumes from a pause, a new trial will be presented. Data for the trial that was interrupted by the

Pause are not recorded. (The [Sentence test](#) is the one exception to this; the same sentence remains on the screen for completion following a re-start.)

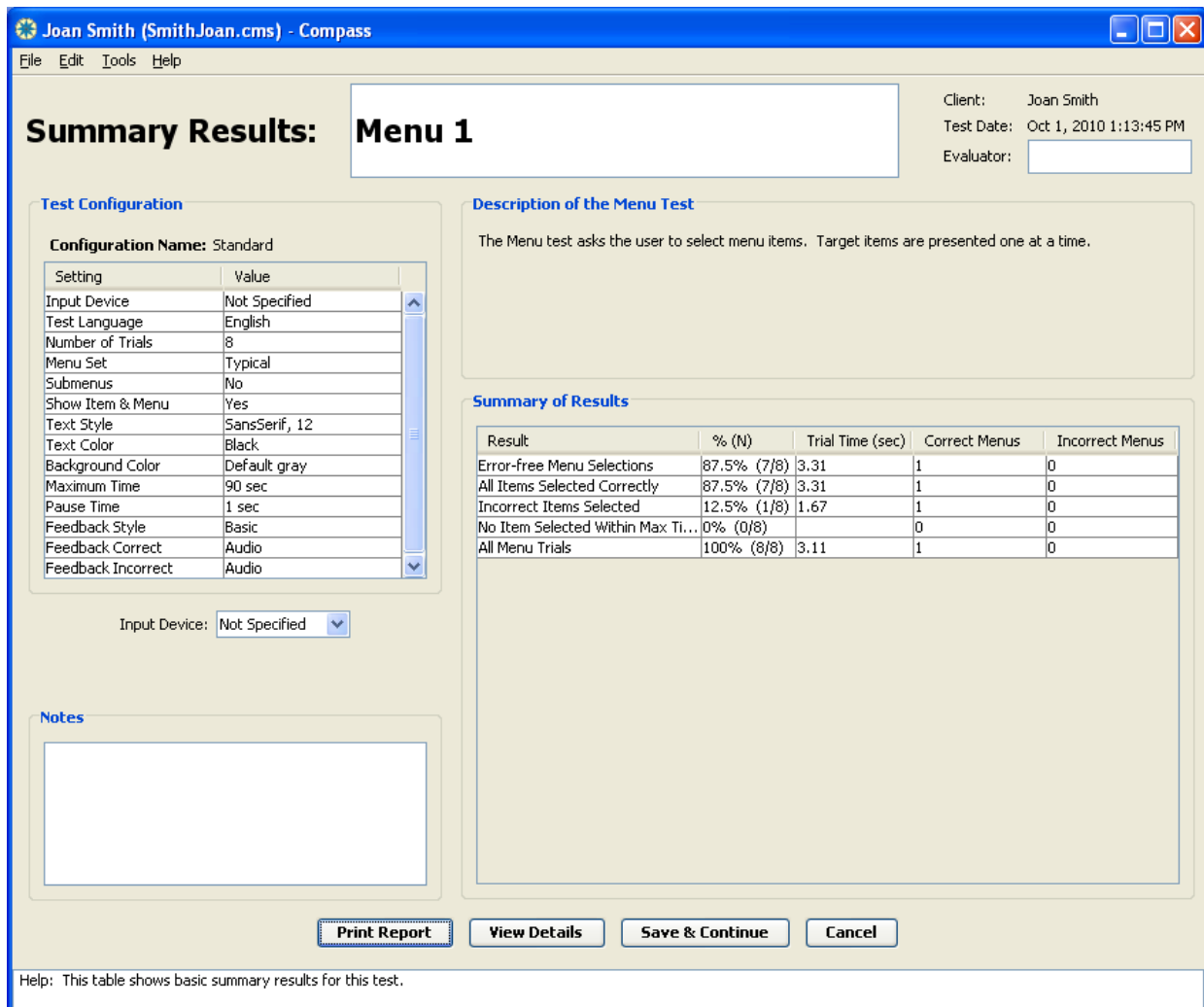
To stop the test before the selected number of trials have been completed, click the **Quit** button. (In the Aim, Drag, Menu, Switch, and Scan tests, you can also press Alt-Q to quit the test.) You will be asked to confirm that you wish to exit the test. If you confirm that you want to exit, you will be given the option of saving the partial data or discarding the data. If you save the data, the test will be listed as completed in the [Test List](#) screen. If the data are discarded, the test will be listed as not completed and can be run again at any time.

Special Note for Mac OS X Users:When running a test, the standard Apple and Application menus will still be active in the menubar. (We tried very hard to remove them, but were unable to do so.) If the user mistakenly selects the 'About Compass' and 'Quit Compass' items, nothing will happen, and the test can continue. If they do happen to mistakenly select another item, such as 'Hide Compass' or 'Sleep', that action will unfortunately occur and cause a disruption to the test in progress. In most cases, it will be possible to continue the test by Pausing the current trial, and Re-starting.

Viewing Results

Test results can be viewed immediately following the completion of a test by clicking the **Save and View Report** button. Results can be viewed at any time by selecting the test and clicking the **View Report** button in the [Test List](#) screen.

The results can be shown in a summary or detailed view. The results screen opens in the summary view. Click on the **View Details** button to display the detailed view and click on the **View Summary** button to return to the original view. Both views display the configuration settings, the date and time that the test was run, and the client name. If the input device used was not entered during configuration, the device type can be selected from the drop-down list or typed in. A field is available to add notes related to the test and another to add the name of the clinician who supervised the test. You may also change the test name to something more informative, if desired, as long as it does not duplicate a test name already in use for this client.



Summary Results: Menu 1

Client: Joan Smith
Test Date: Oct 1, 2010 1:13:45 PM
Evaluator:

Test Configuration

Configuration Name: Standard

Setting	Value
Input Device	Not Specified
Test Language	English
Number of Trials	8
Menu Set	Typical
Submenus	No
Show Item & Menu	Yes
Text Style	SansSerif, 12
Text Color	Black
Background Color	Default gray
Maximum Time	90 sec
Pause Time	1 sec
Feedback Style	Basic
Feedback Correct	Audio
Feedback Incorrect	Audio

Input Device: Not Specified

Description of the Menu Test

The Menu test asks the user to select menu items. Target items are presented one at a time.

Summary of Results

Result	% (N)	Trial Time (sec)	Correct Menus	Incorrect Menus
Error-free Menu Selections	87.5% (7/8)	3.31	1	0
All Items Selected Correctly	87.5% (7/8)	3.31	1	0
Incorrect Items Selected	12.5% (1/8)	1.67	1	0
No Item Selected Within Max Ti...	0% (0/8)		0	0
All Menu Trials	100% (8/8)	3.11	1	0

Notes

Print Report **View Details** **Save & Continue** **Cancel**

Help: This table shows basic summary results for this test.

The summary view provides an basic overview of the test results and graphical results where available. The detailed view shows each trial and client response during the test. Specific results for each test are described in the help section for that test.

To print a report, click the **Print Report** button. This will print the configuration settings, as well as both the summary and detailed performance data for the test.

Additionally, you can **cut-and-paste** the contents of any table into another application, such as a word processor. This may be useful when preparing reports on a particular client. To do this:

1. Select the portion of the table that you want to cut-and-paste. This can be done by dragging across the rows of the table with your mouse, or by using the cursor keys with the Shift key held down.
2. Choose Edit/Copy from the menubar, or press Ctrl-C, to copy the selected table.
3. Open the second application where you want to paste the table. Choose the paste command in that application.

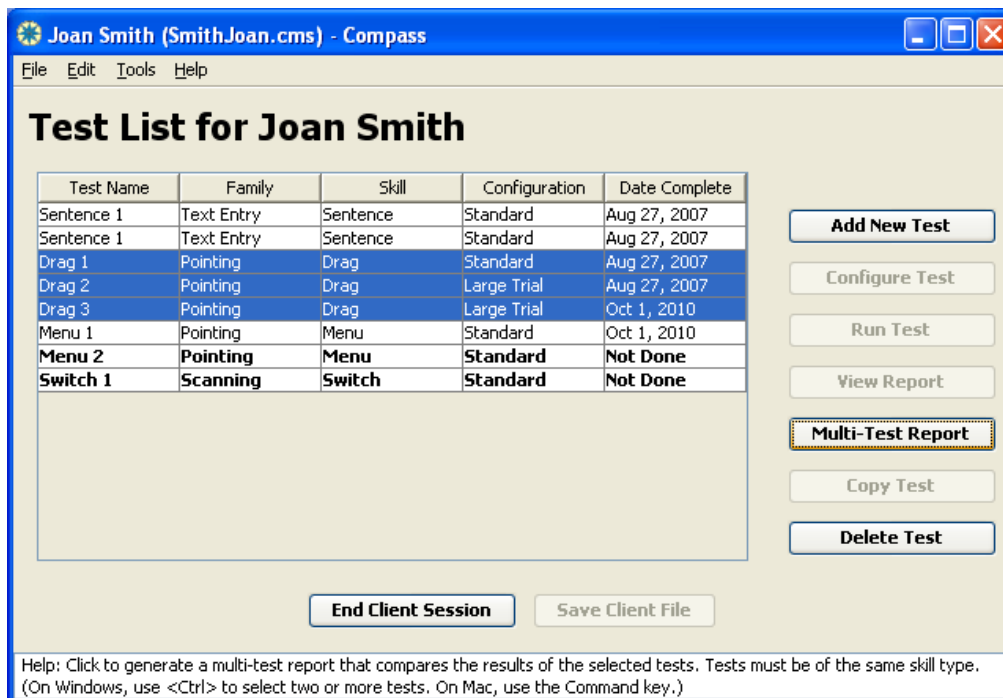
From a report screen, clicking on either the **Save & Continue** or **Cancel** button will return you to the [Test List](#) screen. The test data cannot be edited. The only changes you can make in the **Report** screens are to enter text into the Test Name, Input Device, Notes, and Evaluator fields. **Save & Continue** will preserve changes while **Cancel** exits without saving any changes or additions. The test data have been saved previously and will be preserved using either method.

Multi-Test Reports

A new feature with Compass 2.0, multi-test reports allow you to compare results across two or more tests in a single report. The tests in the report must all be of the same skill; e.g., they must be all Aim tests, or all Scan tests, etc.

You create a multi-test report from the [Test List](#). Follow these steps:

1. Be sure there are two or more completed tests of the same skill (e.g., two Aim tests).
2. Select the tests you want to compare. (On Windows, hold the Ctrl key down. On Mac OS X, hold the Command key. Then click on each desired test.)
3. Click the Multi-Test Report button. (This button will only be active when you have highlighted two or more completed tests of the same skill.)
4. Enter an evaluator name to appear in the report. (This is pre-populated with the evaluator name you entered for this client, if any.)
5. Click OK.
6. The first page of the report will appear in a separate window.



The report is presented in a separate window, one page at a time. The contents of the report include:

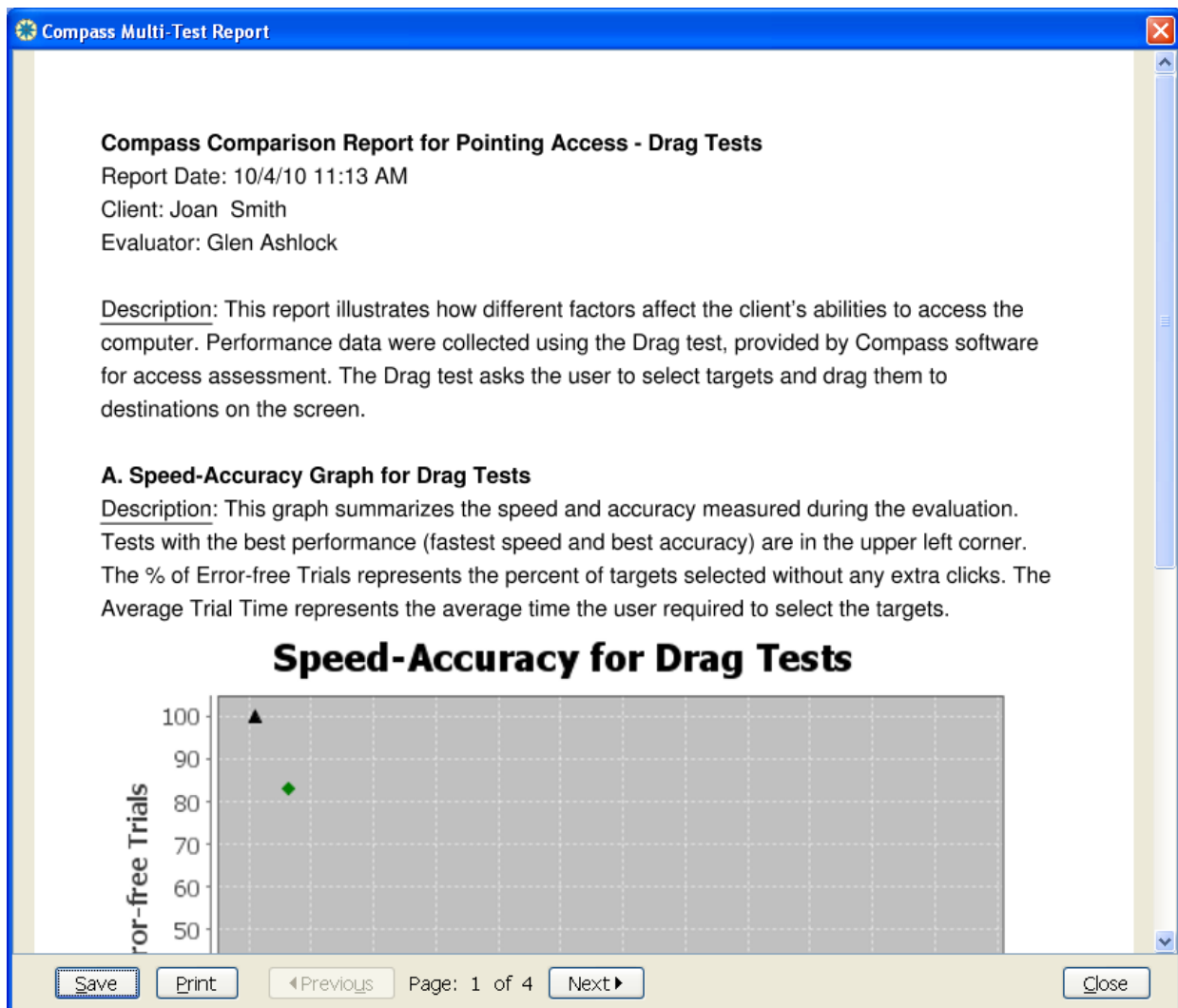
1. The combined speed-accuracy profile for the tests
2. A bar graph showing the accuracy results for the tests
3. A bar graph showing the speed results for each test
4. A description with each graph, specifying exactly what performance variables were used in the graph
5. A table of data points used in the graphs

6. The configuration of each test included in the report

Please note: The tests included in the report are referred to by their Test Names. These Test Names form the graph legends and labels for each test. If you want a more informative name than the defaults, you can change the Test Names in two ways:

1. Before the test has been run, you can change the test name by [configuring the test](#).
2. After the test has been run, you can change the test name by [viewing the results report](#) for that test.

Note that test names must be unique, e.g., there cannot be two tests with the same name in a Compass data file.



To move between pages of the report, click the **Previous** and **Next** buttons. To print the report, click the **Print** button.

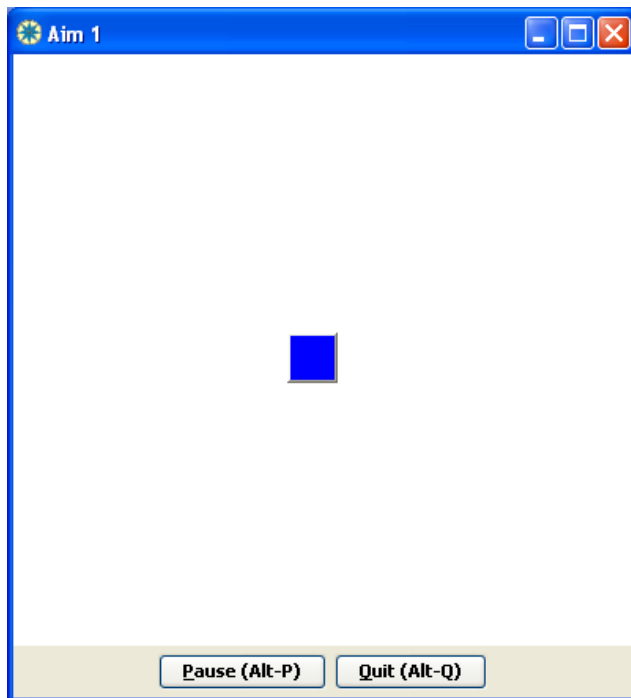
Reports can be saved in RTF (Rich Text Format) or PDF (Portable Document Format) formats. On Windows, RTF is the default format, since it allows you to edit the report later if desired. On Mac OS X, PDF is the default format, since RTF is not a strongly supported format on the Mac. Either way, you can choose the format you prefer. To save the report, click the **Save** button. Then provide a name and location for the file, select the file format if desired, and click OK.

To close the report window, click the Close button. If you haven't saved the report, you'll be asked whether you want to save.

Aim Test Overview

The Aim test is designed to evaluate a client's ability to move the cursor to a target and make a selection. The size, location, and selection method are some of the options that can be varied (see the [Aim Test Configuration](#) section for a complete description of the options).

When the test is started, a series of targets will appear on the screen, one at a time. When a target is selected, the next target will appear at a new location. If no target is selected within the maximum available time (which is 30 seconds by default), the next target will appear. The figure below shows the standard square target, although this can be changed to an icon or picture by adjusting the [Aim configuration settings](#).



To pause the test, click the **Pause button** or press Alt-P. The test will pause until you click on the **Re-Start button** (at the same location as the **Pause button**) or press Alt-P again.

To quit the test before it is completed, click on the **Quit button** or press Alt-Q. Compass will ask you to confirm that you are sure you want to quit.

Aim Test Configuration

There are numerous options available in the configuration screens for the Aim test. You may choose to use the default settings if desired, but we have made a variety of settings adjustable in an attempt to help you tailor the test to your particular needs.

Aim Test Configuration

Test Name:

Configuration Name:

Input Device:

Test Language:

Number of Trials:

Notes:

Target Types

Squares
 Pictures
 Icons

Selection Method

Click Dwell
 Double Click Dwell Time (sec):

Target Size and Color

Small
 Toolbar
 Icon-Size
 Large

Feedback Options

Basic
 Engaging

Correct Trials

None
 Visual
 Auditory
 Both

Incorrect Trials

None
 Visual
 Auditory
 Both

Target Location

Distance

Short
 Medium
 Long

Screen Coverage

Percentage Regions
Width:
Height:

Draw cursor path

Timing

Maximum time per trial (sec):
Pause between trials (sec):

Help: On this screen, you can change the configuration settings for this test. To see what the new settings look like, click the 'Preview' button. When you are done, click 'Save & Continue'.

Test name - Enter the name you would like to use for this test. The test names must be unique within each client file. The default name is *Aim* with a number indicating how many aim tests have been selected for this client (i.e., Aim 1, Aim 2, Aim 3). You should try to develop a consistent strategy for naming tests that provides information about each test. This might be the date the tests were selected (Aim 7-8-03), the type of session (eval or follow-up), or whatever helps you to manage the tests most effectively.

Configuration name - Enter the name you would like to use for this configuration. Since the same configuration may be used for more than one test, the configuration name does not have to be unique, as long as the settings are the same. The default name is *Standard*. When changes are made to the standard configuration, Compass will prompt you to change the name upon exiting the configuration screen.

You should develop a consistent strategy for naming the configurations to describe the settings used. This will help you recall how this test differs from another one. A good configuration name might describe the type of input method (e.g., trackball or head pointer), the type and size of targets (e.g., small icons), or other important settings.

Input device - Allows the input device being used to be selected from a drop-down list of common devices. Device names that are not on the drop-down list can be typed into the field. The default value is *Not Specified*. If you are comparing performance with different input devices, it is important to set the Input Device field accordingly. Otherwise, it may not be clear which input device was used when viewing test results.

The **Test Language** field defines which language is used for any text or vocal feedback presented to the client during the test. Currently, the choices are English, French, Spanish, Portuguese, and Arabic, with *English* as the default value. In the Aim test, only Engaging Feedback is affected by the Test Language.

Notes - A field for any comments relating to the configuration. By default, this field is empty. Adding comments may be useful for describing why certain choices were made in the configuration or any other information that will help you when reviewing the test.

Number of Trials - The number of targets that will be presented during the test. The default value is *12* trials. The number should be large enough to provide a representative sample of the client's ability to perform the task and small enough to avoid unintended fatigue or loss of interest.

Feedback Options

Style - The feedback style option allows you to select the most appropriate form of feedback for the user. **Basic feedback** provides simple, direct feedback. **Engaging feedback** provides a more stimulating response to help motivate and hold the interest of clients when necessary. Feedback styles are consistent across all of the trials. The default feedback style is *Basic*.

Four feedback options are available for correct and/or incorrect trials. The option for **Correct Trials** defines the type of feedback provided when the user selects the target within the time allowed. The default value for Correct Trials is *Auditory*. The option for **Incorrect Trials** defines the type of feedback provided when the user does not select the target in the time allowed. The default value for Incorrect Trials is *Auditory*. The feedback options are:

1. **None** - Compass will provide no feedback for any of the trials of this type. When a selection is made or the trial times out, the next trial will start until the test is completed.
2. **Visual** - Compass will provide a visual response.

3. **Auditory** - Compass will provide an auditory response.
4. **Both** - Compass will provide both a visual and an auditory response.

Target Types - This allows you to select the type of targets to be used in the test. Three types of targets are available:

1. **Squares**- These are simple square targets.
2. **Icons** - These are realistic icons similar to the ones used in applications and the operating system.
3. **Pictures** - These are color drawings of animals or other objects.

Only one type of target can be selected for each test. The default target style is *Squares*.

Selection Method - This is used to define the method of selecting the targets. The selection method should be reliable and consistent so that the test is evaluating the client's ability to position the cursor on the target, and to recognize when the cursor is on the target. Once you have established that the client can accurately move and position the cursor, the test can be run again using alternate selection methods to evaluate the best selection option.

There are three choices of **selection methods**:

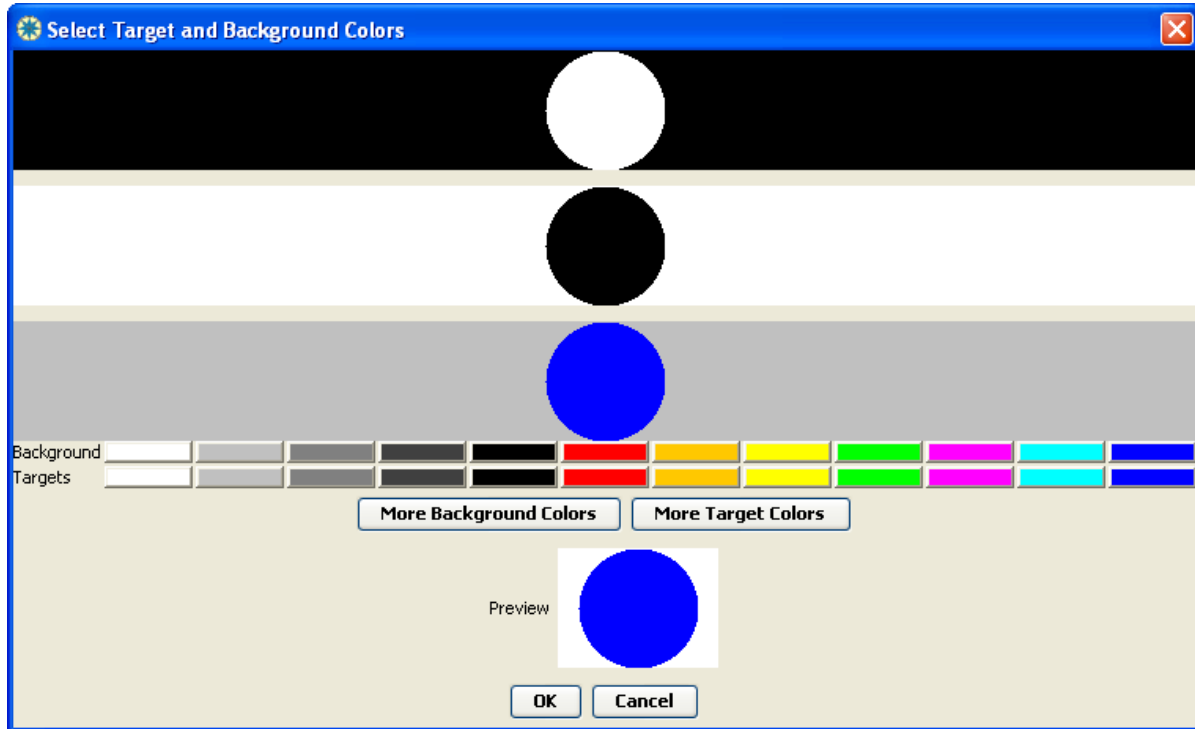
1. **Click** - This is the typical method for making selections. Compass will record a selection when the mouse button or the method being used to emulate the mouse button is activated. *Click* is the default value.
2. **Double Click** - Compass will record a selection only when either the mouse button or button emulator is double clicked within the time and distance parameters defined in the Windows operating system. (On Mac OS X, an Aim double-click is valid if both clicks occur within the target and within 500 milliseconds of each other.)
3. **Dwell** - When Dwell is selected, Compass will record a selection when the cursor is held in one position for the length of time entered in the Dwell Time field. The default dwell time is *1.0 seconds*.

Target Size and Color - This is used to determine the size of the targets used in the test. There are four size options which can be used in any combination within a test.

1. **Small** - These targets are approximately the size of the minimize, restore, and close buttons.
2. **Toolbar**- These targets are approximately the size of buttons on the toolbar.
3. **Icon-Size** - These targets are approximately the size of icons on the desktop. *Icon-Size* is the default value.
4. **Large** - These targets are enlarged versions of the icons.

By default, Compass uses blue targets on a white background. To change the color of the targets and/or the color of the test background, click the **Set Colors...** button. This will bring up the dialogue box shown below. The three rows of white, black, and blue targets on different backgrounds show pre-set color combinations. You can select one of these by clicking on it. To set the background color,

click on one of the color buttons shown on the "Background" row. To set the target color, click on one of the color buttons shown on the "Target" row. Your choices will be reflected in the Preview area. When you have the colors you want, click OK to use them. Or click Cancel to return without making any color changes.



Note that if you are using icons or pictures for your targets (as set under Target Types), the target color setting will be ignored, because the icon and picture targets have their own built-in colors.

Target Location - these settings determine where the targets appear on the screen.

Distance - This determines how far away the target is from the starting position of the mouse cursor. There are three distances available, and you may choose any single distance or a combination of distances within a test. By default, Compass uses *Medium* and *Long* distances.

1. **Short** - The targets will be about one-tenth the screen width apart.
2. **Medium** - This target distance is twice as large as the short distance.
3. **Long** - The targets will be about half the screen width apart.

Screen Coverage - In cases where the user has difficulty accessing a part of the screen, the coverage can be adjusted to include only the portion you wish to use during the evaluation. Targets will only appear in the selected portions of the screen. There are two ways to control screen coverage:

1. **Percentage** - This is the default option. The height and width setting determine how far from the center of the screen the targets can appear. For example, if the width is set to 50%, the targets will appear in an area no wider than halfway between the center and sides of the screen. If the

height is set to 50% targets will be no higher than halfway between the center and top of the screen and no lower than halfway between the center and bottom of the screen. The default is to use **100%** of the screen.

Regions - This option allows you to specify the regions of the screen where you would like the targets to appear. When you select the regions button, you will be shown a box representing the screen that is divided into six regions. Select the regions you want the test to use by clicking on them or by moving between them with the tab key and pressing the space bar to select them. Colored regions show screen areas where the targets can appear. Any combination of the regions may be selected, as long as at least 1 region is used.

Note that certain combinations of target distance and screen coverage can contradict each other. For example, if you've selected Long target distances, but set screen coverage to only one small region, the requested distance may not fit in the requested region. Compass will do its best to place the target in that situation, generally putting it at one of the corners of the requested region.

Draw Cursor Path - If this box is selected, a path between the starting position of the mouse cursor and the current target will be shown. This provides a visual prompt that may be useful for some clients. The default is to have **no cursor path** shown.

Timing

Maximum Time per Trial - This allows you to define the maximum time allowed to complete each trial. If no selection is made within the designated time, the trial times out and advances to the next trial. The time should be long enough to give the client the opportunity to make a selection but not be so long that the client becomes frustrated or bored if they are unable to successfully make a selection. The default value is **30 seconds**.

Pause Between Trials - This allows you to define the length of the pause between a selection or time out and the start of the next trial. A longer pause may be useful for users who need time to recover physically or to process the feedback of the previous trial before starting the next one. The default value is **1 second**.

The three buttons at the bottom of the configuration screen perform the following functions:

Preview Test - Click this button to run an abbreviated version of the test using the settings you have selected. No data are collected for the trials in the preview.

Save & Continue - Click this button to save the test configuration settings you have selected and return to the [Test List](#). If necessary, Compass will prompt you to change the configuration name before you can exit (see [Configuring Tests](#)).

Cancel - Click this button to return you to the [Test List](#) without saving any changes to the configuration settings.

Aim Test Results

The results for a single Aim test can be displayed in **summary** or **detailed** views. If you want to compare results for two or more Aim tests, you can create a [multi-test report](#). This page describes the data collected for an Aim test and how it is displayed on the single test report. You create a report for a single Aim test by selecting the test on the [Test List](#), then clicking **View Report**.

The summary view is presented first. A button at the bottom of the screen allows toggling between views. Both views include a table with the configuration settings used for the test. The client name, the date and time the test was run is displayed along with a box to enter the evaluator's name. There is also a box to enter notes about the test. If the input device was not entered in the [configuration screen](#), it can be entered in the results screens. The other configuration settings cannot be changed, since they represent specific characteristics of how the test was run.

Summary Results: Aim 2

Client: Joan Smith
Test Date: Oct 1, 2010 4:00:49 PM
Evaluator:

Test Configuration

Configuration Name: Standard

Setting	Value
Input Device	Not Specified
Test Language	English
Number of Trials	12
Selection Method	Click
Target Type	Squares
Target Size	Icon
Target Distance	Medium Long
Draw Path	No
Target Color	Blue
Background Color	White
Screen Coverage	100%, 100%

Input Device:

Description of the Aim test

The Aim test asks the user to acquire targets with a pointing device. The user moves the cursor to each target and selects it.

Summary of Results

Result	% (N)	Trial Time (sec)	Reaction Time (sec)	Entries	Clicks
Error-free Target Selections	83.33% (10/12)	1.36	0.07	1.4	1
All Targets Selected	100% (12/12)	1.45	0.09	1.33	1.17
Targets Not Selected	0% (0/12)				
All Aim Trials	100% (12/12)	1.45	0.09	1.33	1.17

Target Map

Green circles indicate the position of targets which were successfully selected. Red X's indicate the position of targets that were not selected in the available time.

Buttons:

Help:

The **Summary of Results** provides results for four different categories, shown in the different rows of the table:

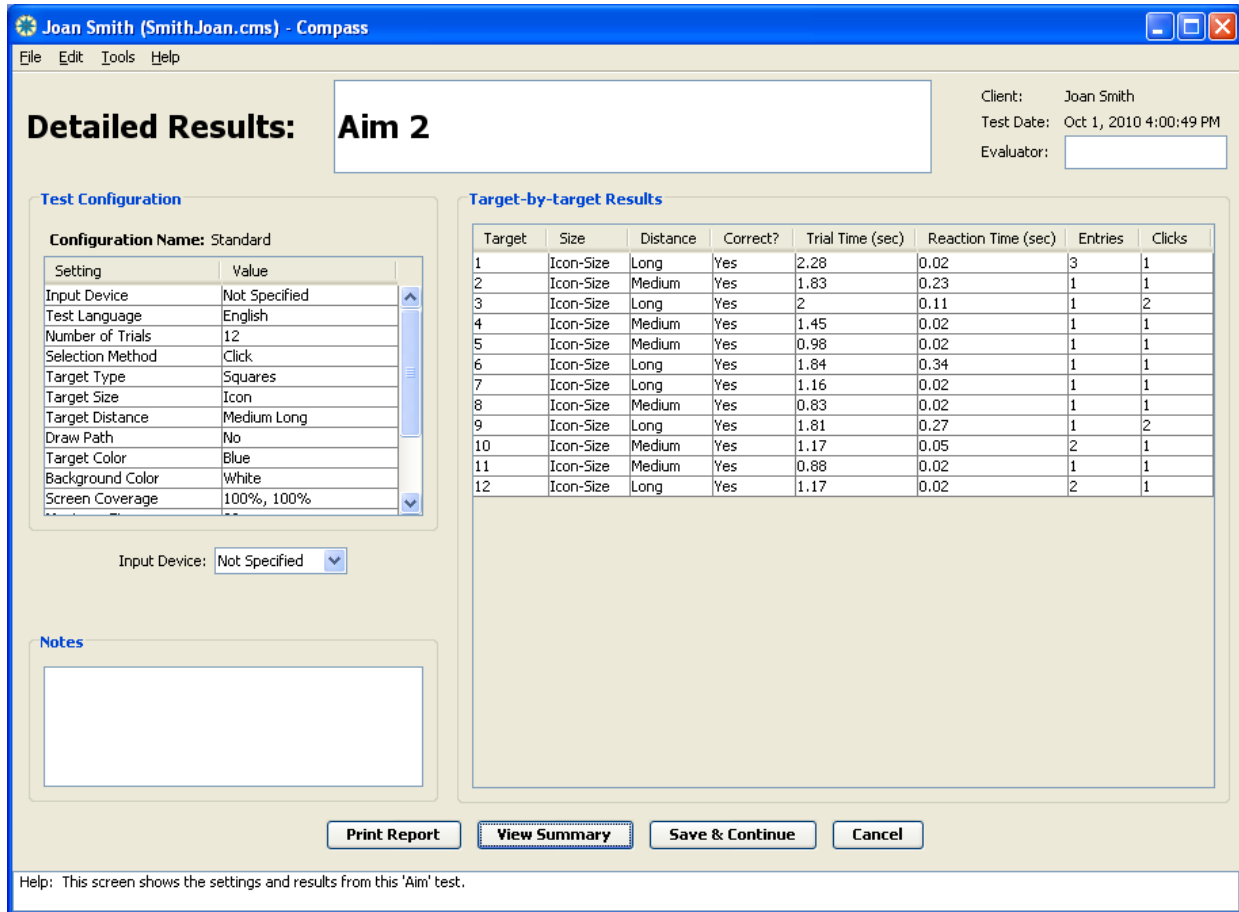
1. **Error-free Target Selections:** this represents all trials that were completed successfully, without any extra mouse clicks.

2. **All Targets Selected:** this represents all trials that were completed successfully, whether or not they had any extra mouse clicks. (Note that this includes all the "Error-free Target Selections", plus any successful selections that had at least one extra mouse click.)
3. **Targets Not Selected:** this represents trials in which the target was not successfully selected in the time available. The available time per trial is specified by the max time configuration setting.
4. **All Aim Trials:** this represents all trials in the test. This combines the results of "All Targets Selected" and "Targets Not Selected."

For each category of trials, the following results are reported in the table columns:

1. **% (N):** how many trials fell into this category. This is shown both as a percentage of all trials in the test, as well as the exact number of trials.
2. **Trial Time (sec):** the average time required to perform each trial in this category. This is measured in seconds from when the target is first presented until the target is selected by the client. Trial Time is displayed as the maximum time setting for targets that were not selected within the available time.
3. **Reaction Time (sec):** the average reaction time for each trial in this category. Reaction time is measured from when the target is first presented until the mouse cursor starts to move.
4. **Entries:** the average number of times the mouse cursor entered the target, for the trials in this category. A value of 1 is the minimum, and indicates that the client did not move the cursor off any targets once it had been positioned within the target area. A larger number would indicate that the client had some difficulty keeping the cursor within the target area long enough to make a selection. Occasional movements off of a target do not necessarily indicate difficulty with targeting.
5. **Clicks:** The average number of mouse clicks needed to select the targets in this category. This counts all clicks that occur from when the target is presented until the next target is presented. A value of 1 indicates that the client was able to select each target with a single click. Larger values would indicate that the client activated their selection method without being on a target. When the Dwell setting is used, a successful dwell is counted as one click. When the Double-click setting is used, a successful selection is counted as two clicks.

The **Target Map** is a graphical representation of the display showing the relative location of targets and whether they were correctly selected. Correctly selected targets appear as a green circle and targets that were not selected within the available time appear as a red X. The size of the circles represents the relative size of the target. The number of the trial is displayed for each target as well. This can help identify areas of the screen in which target selection is more difficult for the client.



Detailed Results: Aim 2

Client: Joan Smith
Test Date: Oct 1, 2010 4:00:49 PM
Evaluator:

Test Configuration

Configuration Name: Standard

Setting	Value
Input Device	Not Specified
Test Language	English
Number of Trials	12
Selection Method	Click
Target Type	Squares
Target Size	Icon
Target Distance	Medium Long
Draw Path	No
Target Color	Blue
Background Color	White
Screen Coverage	100%, 100%

Input Device: Not Specified

Target-by-target Results

Target	Size	Distance	Correct?	Trial Time (sec)	Reaction Time (sec)	Entries	Clicks
1	Icon-Size	Long	Yes	2.28	0.02	3	1
2	Icon-Size	Medium	Yes	1.83	0.23	1	1
3	Icon-Size	Long	Yes	2	0.11	1	2
4	Icon-Size	Medium	Yes	1.45	0.02	1	1
5	Icon-Size	Medium	Yes	0.98	0.02	1	1
6	Icon-Size	Long	Yes	1.84	0.34	1	1
7	Icon-Size	Long	Yes	1.16	0.02	1	1
8	Icon-Size	Medium	Yes	0.83	0.02	1	1
9	Icon-Size	Long	Yes	1.81	0.27	1	2
10	Icon-Size	Medium	Yes	1.17	0.05	2	1
11	Icon-Size	Medium	Yes	0.88	0.02	1	1
12	Icon-Size	Long	Yes	1.17	0.02	2	1

Print Report View Summary Save & Continue Cancel

Help: This screen shows the settings and results from this 'Aim' test.

The **detailed view** displays a table with the following results for each individual target:

1. **Target** - The number of each target indicating the order of appearance.
2. **Size** - The size of that target. Options include small, toolbar, icon, or large. Refer to the [Aim Configuration](#) section for a description of the target sizes.
3. **Distance** - The distance of this target, relative to the previous target. Options include short, medium, and long. Refer to the [Aim Configuration](#) section for a description of the target distances.
4. **Correct?** - Indicates whether the target was selected within the time allowed. Yes indicates that the target was selected; no indicates the target was not selected before time expired for that trial.
5. **Trial Time (sec)** - The time in seconds needed to select each target. If a target is not selected, the Maximum Time for a trial is shown. On rare occasions, it is possible for the reported Trial Time to be greater than the Maximum Time. If the mouse cursor is inside the target when the Max Time expires, the trial will continue until either (a) the user selects the target or (b) the user moves the cursor out of the target, whichever comes first.
6. **Reaction Time (sec)** - The time in seconds from the appearance of the target until the initiation of cursor movement.
7. **Entries** - The number of times the mouse cursor entered this target during the trial. The minimum number of entries necessary to select the target is 1.

8. **Clicks** - The number of mouse clicks made during that trial. If the selection method is set to Dwell, the number of clicks will include any Dwells of the specified length within the target, as well as any physical mouse clicks. Dwells outside of the target are not counted.

Note that the width of the columns in any of the tables can be resized by moving the cursor to the edge of the box containing the label and dragging it to the left or right.

Additionally, you can [cut-and-paste](#) the contents of an Aim report into another application, such as a word processor. This may be useful when preparing reports on a particular client.

The following buttons are available to help you navigate and work with reports.

1. **Print Report** - Clicking this button prints the summary and detailed report.
2. **View Details** - When in the summary view, clicking on this button changes the display to the detailed report view.
3. **View Summary** - When in the detailed view, clicking on this button returns the display to the summary view.
4. **Save & Continue** - Clicking on this button from either view will save the data for the test, any comments you have entered, and the evaluator name and return you to the [Test List](#) screen.
5. **Cancel** - Clicking on this button from either view will return you to the [Test List](#) screen without saving any changes to the results information. Note that all performance data have already been saved before viewing the report and will not be lost or changed by selecting the Cancel button.

Drag Test Overview

The **Drag test** is designed to evaluate a client's ability to select and drag items using a pointing device. In a sense, then, it is a functional extension of the [Aim test](#), which only evaluated target selection. We refer to the "target" as the item to be dragged, and the "destination" as the object to which the target is dragged. The target and destination sizes, the distance between them, and the selection method are some of the options that can be varied (see [Drag Test Configuration](#) for a complete description of the options).

When the test is started, a target object and a destination will appear on the screen. The destination is identified by the heavy border surrounding it. Additionally, when using icons in the test (which is the default value), the destination is always a trashcan. When using pictures in the test, the destination is always a drawing of a house. When a target is dragged into the destination, the next target-destination pair will appear. If the target is not dragged into the destination within the available maximum time (as determined by the [configuration settings](#)), the next trial will also appear. The entire target does not need to be within the destination; if any part of the target is released within the destination, the trial will be considered successful.



To pause the test, click the **Pause button** or press Alt-P. The test will pause until you click on the **Re-Start button** (at the same location as the **Pause button**) or press Alt-P again.

To quit the test before it is completed, click on the **Quit button** or press Alt-Q. Compass will ask you to confirm that you are sure you want to quit.

Drag Test Configuration

There are numerous options available in the configuration screens for the Drag test. You may choose to use the default settings if desired, but we have made a variety of settings adjustable in an attempt to help you tailor the test to your particular needs.

The screenshot shows the 'Drag Test Configuration' dialog box. The window title is 'Joan Smith (SmithJoan.cms) - Compass'. The menu bar includes 'File', 'Edit', 'Tools', and 'Help'. The dialog is titled 'Drag Test Configuration' and contains the following sections:

- Test Name:** Drag 5
- Configuration Name:** Standard pix
- Input Device:** Not Specified
- Test Language:** English
- Number of Trials:** 12
- Notes:** (Empty text area)
- Target Types:**
 - Squares
 - Pictures
 - Icons
- Selection Method:**
 - Click
 - Dwell
 - Dwell Time (sec): 1.0
- Size and Color:**
 - Target Size:**
 - Small
 - Toolbar
 - Icon-Size
 - Large
 - Destination Size:**
 - Same as Target
 - Large
 - Set Colors...** (Button)
- Feedback Options:**
 - Basic
 - Engaging
 - Correct Trials:**
 - None
 - Visual
 - Auditory
 - Both
 - Incorrect Trials:**
 - None
 - Visual
 - Auditory
 - Both
- Target Location:**
 - Distance:**
 - Short
 - Medium
 - Long
 - Screen Coverage:**
 - Percentage
 - Regions
 - Width: 100
 - Height: 100
 - Select Regions...** (Button)
 - Draw cursor path
- Timing:**
 - Maximum time per trial (sec): 30
 - Pause between trials (sec): 1

At the bottom of the dialog are three buttons: 'Preview Test', 'Save & Continue', and 'Cancel'. A help message at the bottom reads: 'Help: On this screen, you can change the configuration settings for this test. To see what the new settings look like, click the 'Preview' button. When you are done, click 'Save & Continue'.'

Many of these settings are the same as those used in the Aim test, so please see [Aim Test Configuration](#) for a description of settings common to both tests. Additional settings for the Drag test are described below.

Selection Method - This is used to define the method of selecting the targets. There are two choices:

1. **Click** - This is the typical method for making selections. Compass will record a selection when the mouse button or the method being used to emulate the mouse button is activated. **Click** is the default value.
2. **Dwell** - When Dwell is selected, Compass will record a selection when the cursor is held in one position for the length of time entered in the Dwell Time field. The default dwell time is **1.0 seconds**.

Size and Color - This is used to determine the size of the targets and destination items used in the test. There are four **Target Size** options which can be used in any combination within a test.

1. **Small** - These targets are approximately the size of the minimize, restore, and close buttons.
2. **Toolbar** - These targets are approximately the size of buttons on the toolbar.
3. **Icon-Size** - These targets are approximately the size of icons on the desktop. **Icon-Size** is the default value.
4. **Large** - These targets are enlarged versions of the icons.

There are two **Destination Size** options:

1. **Same as Target** - The destination object is always the size of the target object. This mimics an operation such as dragging a file icon into the recycle bin. **Same As Target** is the default value.
2. **Large** - The destination object is about 2" square, providing a bigger drag destination. This mimics an operation such as dragging a file icon into an open folder window.

Target Location - these settings determine where targets and destinations are presented on the screen. Screen coverage works the same way as described under [Aim Test Configuration](#), but distance and cursor path are defined somewhat differently from how they are used in the Aim test.

Distance - This determines how far away the destination is from the target. There are three distances available, and you may choose any single distance or a combination of distances within a test. By default, Compass uses **Medium** and **Long** distances.

1. **Short** - The targets and destinations are within the same region of the screen.
2. **Medium** - This distance between target and destination is twice as large as the short distance.
3. **Long** - The targets and destinations will be about half the screen distance apart.

Draw Cursor Path - If this box is selected, an arrow will be drawn between the location of the target and the destination. This provides a visual prompt that may be useful for some clients. The default is to have **no cursor path shown**.

The three buttons at the bottom of the configuration screen perform the following functions:

Preview Test - Click this button to run an abbreviated version of the test using the settings you have selected. No data are collected for the trials in the preview.

Save & Continue - Click this button to save the test configuration settings you have selected and return to the [Test List](#). If necessary, Compass will prompt you to change the configuration name before you can exit (see [Configuring Tests](#)).

Cancel - Click this button to return you to the [Test List](#) without saving any changes to the configuration settings.

Drag Test Results

The results for a single Drag test can be displayed in **summary** or **detailed** views. If you want to compare results for two or more Drag tests, you can create a [multi-test report](#). This page describes the data collected for a Drag test and how it is displayed on the single test report. You create a report for a single Drag test by selecting the test on the [Test List](#), then clicking **View Report**.

The summary view is presented first. A button at the bottom of the screen allows toggling between views. Both views include a table with the configuration settings used for the test. The client name, the date and time the test was run is displayed along with a box to enter the evaluator's name. There is also a box to enter notes about the test. If the input device was not entered in the [configuration screen](#), it can be entered in the results screens. The other configuration settings cannot be changed, since they represent specific characteristics of how the test was run.

Summary Results: Drag 4

Client: Joan Smith
Test Date: Oct 1, 2010 4:05:19 PM
Evaluator:

Test Configuration

Configuration Name: Standard pix

Setting	Value
Input Device	Not Specified
Test Language	English
Number of Trials	12
Selection Method	Click
Target Type	Pictures
Target Size	Large
Destination Size	Large
Destination Distance	Medium Long
Draw Path	No
Target Color	White
Destination Color	Red
Background Color	White

Input Device:

Description of the Drag Test

The Drag test asks the user to select a target and drag it to a destination on the screen. Targets appear one at a time.

Summary of Results

Result	% (N)	Trial Time (sec)	Click Errors	Drag Attempts
Error-free Drags	83.33% (10/12)	1.58	0	1
All Drags Completed Successfully	100% (12/12)	1.82	0	1.17
Drags Not Completed	0% (0/12)			
All Drag Trials	100% (12/12)	1.82	0	1.17

Target Map

Green circles indicate the position of destinations to which the target was successfully dragged. Red X's indicate the position of destinations for which the drag was not completed within the available time.

Notes:

Help: This screen shows the settings and results from this 'Drag' test.

The **Summary of Results** provides results for four different categories, shown in the different rows of the table:

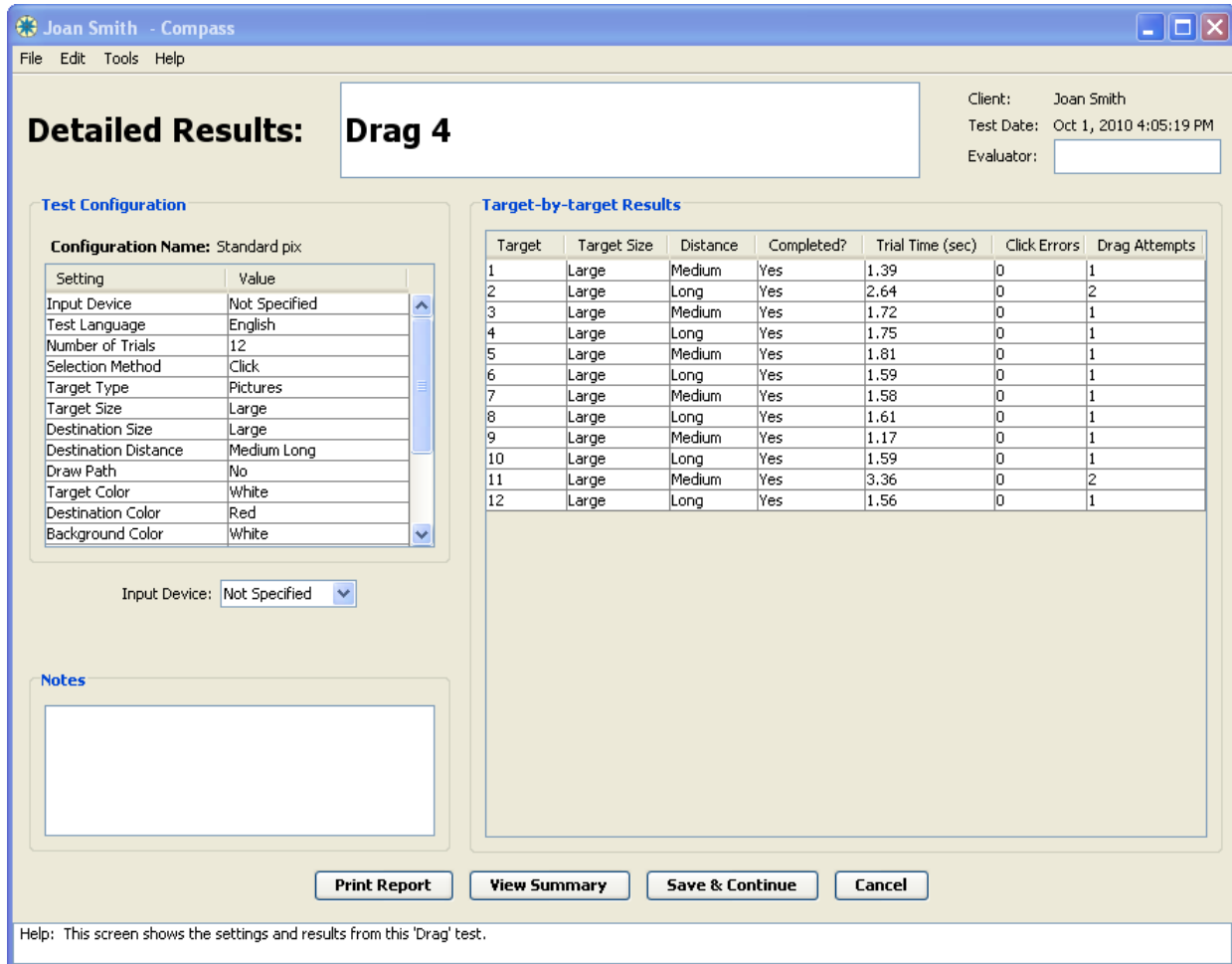
1. **Error-free Drags:** this represents all trials that were completed successfully, without any extra mouse clicks and with only one drag attempt.

2. **All Drags Completed Successfully:** this represents all trials that were completed successfully, whether or not they had any extra mouse clicks or additional drag attempts. (Note that this includes all the "Error-free Drags", plus any successful selections that had at least one extra mouse click or drag attempt.)
3. **Drags Not Completed:** this represents trials in which the target was not successfully dragged to the destination in the time available. The available time per trial is specified by the max time configuration setting.
4. **All Drag Trials:** this represents all trials in the test. This combines the results of "All Drags Completed Successfully" and "Drags Not Completed."

For each category of trials, the following results are reported in the table columns:

1. **% (N):** how many trials fell into this category. This is shown both as a percentage of all trials in the test, as well as the exact number of trials.
2. **Trial Time (sec):** the average time required to perform each trial in this category. This is measured in seconds from when the target and destination are first presented until the target is dragged and released into the destination.
3. **Click Errors:** The average number of mouse clicks that occurred outside of the presented target. This counts all clicks that occur outside the target, from when the trial is presented until the user completes the trial. A value of 0 indicates that the client was able to select each target with a single click. Larger values would indicate that the client activated their selection method without being on a target. (If **Dwell** is the specified selection method, Click Errors is always 0.)
4. **Drag Attempts:** the average number of times the target was picked up and dragged before the completion of each trial. A value of 1 is the minimum, and indicates that the client did not "let go" of the target once dragging began.

The **Target Map** is a graphical representation of the display showing the relative location of destinations and whether the target was correctly dragged to them. Correctly completed destinations appear as a green circle, and those not completed within the available time appear as a red X. The number of the trial is displayed for each destination, as well as a line showing the target starting point. While there is a lot of information provided in a small space, it does display a pattern that can help identify areas of the screen in which target selection is more difficult for the client.



Detailed Results: Drag 4

Client: Joan Smith
Test Date: Oct 1, 2010 4:05:19 PM
Evaluator:

Test Configuration

Configuration Name: Standard pix

Setting	Value
Input Device	Not Specified
Test Language	English
Number of Trials	12
Selection Method	Click
Target Type	Pictures
Target Size	Large
Destination Size	Large
Destination Distance	Medium Long
Draw Path	No
Target Color	White
Destination Color	Red
Background Color	White

Input Device: Not Specified

Target-by-target Results

Target	Target Size	Distance	Completed?	Trial Time (sec)	Click Errors	Drag Attempts
1	Large	Medium	Yes	1.39	0	1
2	Large	Long	Yes	2.64	0	2
3	Large	Medium	Yes	1.72	0	1
4	Large	Long	Yes	1.75	0	1
5	Large	Medium	Yes	1.81	0	1
6	Large	Long	Yes	1.59	0	1
7	Large	Medium	Yes	1.58	0	1
8	Large	Long	Yes	1.61	0	1
9	Large	Medium	Yes	1.17	0	1
10	Large	Long	Yes	1.59	0	1
11	Large	Medium	Yes	3.36	0	2
12	Large	Long	Yes	1.56	0	1

Notes

Print Report View Summary Save & Continue Cancel

Help: This screen shows the settings and results from this 'Drag' test.

The **detailed view** displays a table with the following results for each individual target-destination pair:

1. **Target** - The number of each target-destination pair indicating the order of appearance.
2. **Size** - The size of that target. Options include small, toolbar, icon, or large. Refer to the [Drag Configuration](#) section for a description of the target sizes.
3. **Distance** - The distance between the target and the destination. Options include short, medium, and long. Refer to the [Drag Configuration](#) section for a description of the target distances.
4. **Completed?**- Indicates whether the target was selected within the time allowed. Yes indicates that the target was successfully released into the destination; no indicates that dragging was not completed before time expired for that trial.
5. **Trial Time (sec)** - The time in seconds needed to release the target into the destination. If a target is not selected, the Maximum Time for a trial is shown. On rare occasions, it is possible for the reported Trial Time to be greater than the Maximum Time. If the cursor is inside the target when Max Time expires, the trial will continue until either (a) the user releases the target or (b) the user moves the target out of the destination, whichever comes first.
6. **Click Errors:** The number of mouse clicks that occurred outside of the target. A value of 0 indicates that the client was able to select each target with a single click. Larger values indicate

that the client activated their selection method without being on a target. (If **Dwell** is the specified selection method, Click Errors is always 0.)

7. **Drag Attempts:** the number of times the target was picked up and dragged for this trial. A value of 1 is the minimum, and indicates that the client did not "let go" of the target once dragging began.

Note that the width of the columns in any of the tables can be resized by moving the cursor to the edge of the box containing the label and dragging it to the left or right.

Additionally, you can [cut-and-paste](#) the contents of an Drag report into another application, such as a word processor. This may be useful when preparing reports on a particular client.

The following buttons are available to help you navigate and work with reports.

1. **Print Report** - Clicking this button prints the summary and detailed report.
2. **View Details** - When in the summary view, clicking on this button changes the display to the detailed report view.
3. **View Summary** - When in the detailed view, clicking on this button returns the display to the summary view.
4. **Save & Continue** - Clicking on this button from either view will save the data for the test, any comments you have entered, and the evaluator name and return you to the [Test List](#) screen.
5. **Cancel** - Clicking on this button from either view will return you to the [Test List](#) screen without saving any changes to the results information. Note that all performance data have already been saved before viewing the report and will not be lost or changed by selecting the Cancel button.

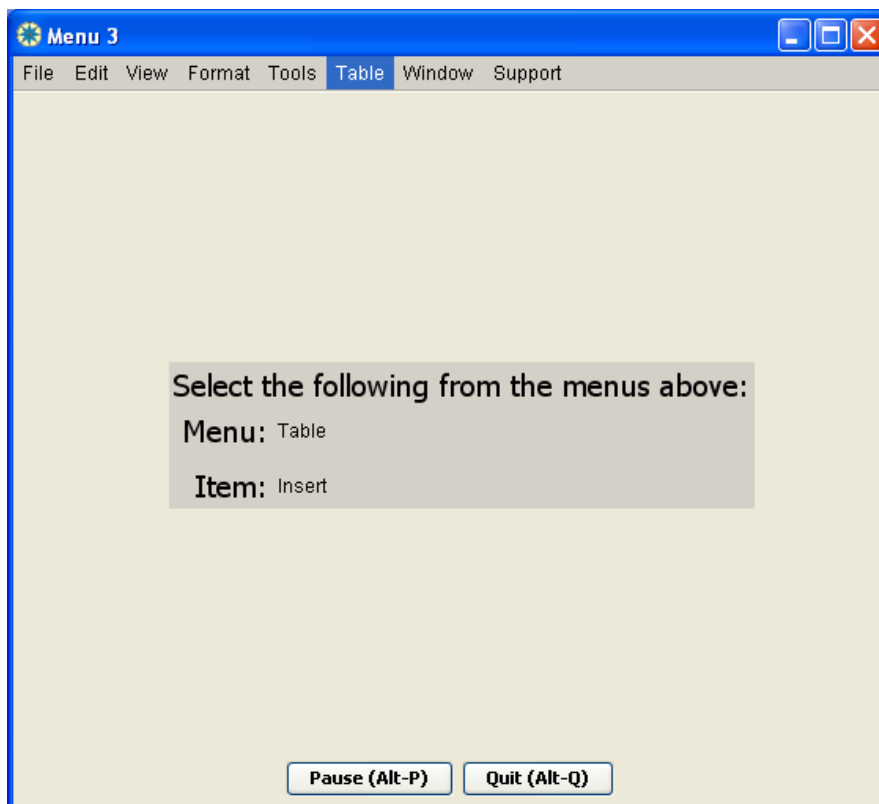
Note that some users have reported that the target map does not print properly on their printer. At this point, we have not figured out how to guarantee that it will print correctly on every printer, and we apologize for the inconvenience.

Menu Test Overview

The **Menu test** is designed to evaluate a client's ability to navigate through menus and make selections. Any input device can be used with this test.

For each trial, the target item to be selected is displayed. In the example below, the item is "Insert". By default, the menu that contains the target item is also displayed, in this case "Table." If the test is configured for sub-menus to be used, the menu name, sub-menu name, and target item will all be displayed (for a complete description of the test options see the [Menu Test Configuration](#) section). Note that the location of the target item prompt is generally toward the lower right corner. This helps make sure that it is out of the way of the drop-down menus, especially when the font used is relatively large.

The client's goal is to select the target item from the menubar at the top of the window. When a menu item is selected, whether it is correct or not, the next menu and target will appear. If no item is selected within the maximum available time, the next trial will appear.



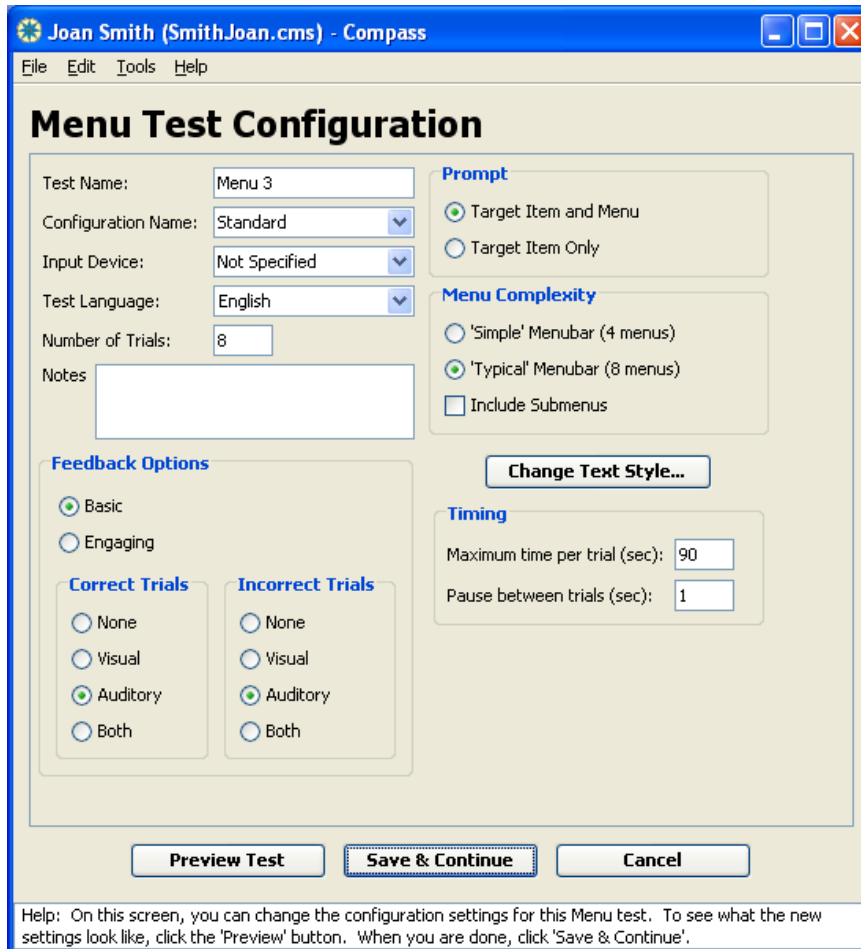
To pause the test, click the **Pause button** or press Alt-P. The test will pause until you click on the **Re-Start button** (at the same location as the **Pause button**) or press Alt-P again.

To quit the test before it is completed, click on the **Quit button** or press Alt-Q. Compass will ask you to confirm that you are sure you want to quit.

Special Note for Mac OS X Users: When running the Menu test, the standard Apple and Application menus will still be active in the menubar. (We tried very hard to remove them, but were unable to do so.) If the user mistakenly selects the 'About Compass' and 'Quit Compass' items, nothing will happen, and the test can continue. If they do happen to mistakenly select another item, such as 'Hide Compass' or 'Sleep', that action will unfortunately occur and cause a disruption to the test in progress. In most cases, it will be possible to continue the test by Pausing the current trial, and Re-starting.

Menu Test Configuration

There are numerous options available in the configuration screens for the Menu test. You may choose to use the default settings if desired, but we have made a variety of settings adjustable in an attempt to help you tailor the test to your particular needs.



Test name - Enter the name you would like to use for this test. The test names must be unique within each client file. The default name is *Menu* with a number indicating how many menu tests have been selected for this client (i.e., Menu 1, Menu 2, Menu 3). You should try to develop a consistent strategy for naming tests that provides information about each test. This might be the date the tests were selected (Menu 8-5-04), the type of session (eval or follow-up), or whatever helps you to manage the tests most effectively.

Configuration name - Enter the name you would like to use for this configuration. Since the same configuration may be used for more than one test, the configuration name does not have to be unique, as long as the settings are the same. The default name is *Standard*. When changes are made to the standard configuration, Compass will prompt you to change the name upon exiting the configuration screen.

You should develop a consistent strategy for naming the configurations to describe the settings used. This will help you recall how this test differs from another one. A good configuration name might describe the type of input method (e.g., trackball or head pointer), the type and size of the text (e.g., 14 bold), or other important settings.

Input device - Allows the input device being used to be selected from a drop-down list of common devices. Device names that are not on the drop-down list can be typed into the field. The default value is *Not Specified*. If you are comparing performance with different input devices, it is important to set the Input Device field accordingly. Otherwise, it may not be clear which input device was used when viewing test results.

The **Test Language** field defines which language is used for any text or vocal feedback presented to the client during the test. Currently, the choices are English, French, Spanish, Portuguese, and Arabic, with *English* as the default value. In the Menu test, the menus and items to select from are presented in the Test Language.

Notes - A field for any comments relating to the configuration. By default, this field is empty. Adding comments may be useful for describing why certain choices were made in the configuration or any other information that will help you when reviewing the test.

Number of Trials - The number of targets that will be presented during the test. The default value is 8 trials. The number should be large enough to provide a representative sample of the client's ability to perform the task and small enough to avoid unintended fatigue or loss of interest.

Feedback Options

Style - The feedback style option allows you to select the most appropriate form of feedback for the user. **Basic feedback** provides simple, direct feedback. **Engaging feedback** provides a more stimulating response to help motivate and hold the interest of clients when necessary. Feedback styles are consistent across all of the trials. The default feedback style is *Basic*.

Four feedback options are available for correct and/or incorrect trials. The option for **Correct Trials** defines the type of feedback provided when the user selects the target within the time allowed. The default value for Correct Trials is *Auditory*. The option for **Incorrect Trials** defines the type of feedback provided when the user selects an incorrect menu item. The default value for Incorrect Trials is *Auditory*. The feedback options are:

1. **None** - Compass will provide no feedback for any of the trials of this type. When a selection is made or the trial times out, the next trial will start until the test is completed.
2. **Visual** - Compass will provide a visual response.
3. **Auditory** - Compass will provide an auditory response.
4. **Both** - Compass will provide both a visual and an auditory response.

Prompt - This specifies what information is displayed to tell the client which menu item to select in each trial. The options are:

Target Item and Menu - The target item and the menu in which it is located will both be displayed to the user. This gives the client full information about where to find the target item, and is the default option.

Target Item Only - Only the target item will be displayed to the user. For example, the item "Save" would be displayed, without telling the user that "Save" is found in the "File" menu. This option might be useful to see if a client can search an unfamiliar menubar effectively.

Menu Complexity - This specifies how many menus and menu items there are to choose from, as well as whether sub-menus are included. There are two choices for the size of the menubar:

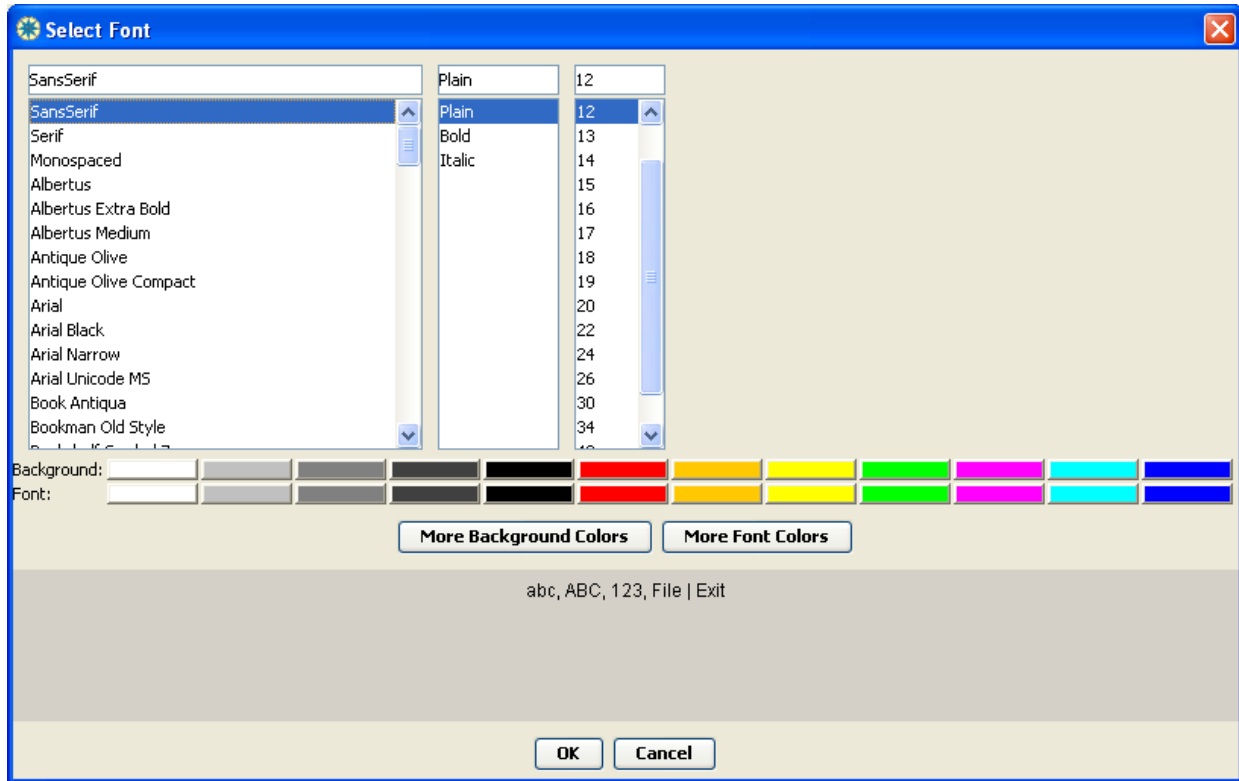
Simple Menubar - When this is selected, the menubar at the top of the test window includes four menus. The number of choices within each menu varies from three to six items. This provides fewer distractions than are typically found in most menubars, and may make it easier to perform the task for some clients.

Typical Menubar - When this is selected, the menubar displays eight menus. The number of item choices within each menu varies from three to ten. This is intended to be similar to a common menubar, such as the one found in Microsoft Word, and is the default option.

Include Submenus - When this is selected, several of the menus will include items that have submenus which cascade to the side of the main menu. Submenus can be used with both the **simple** and **typical menubars**. If the **Prompt** is set to **Target Item and Menu**, the prompt display will include the submenu (if any), as well as the menu name and the target item. The default value is *submenus off*.

Text Style (Windows only) - By default, Compass uses a bold size 12 font, with black letters on a gray background for the Menu test. To change the font and/or color of the text and/or the color of the test background, click the **Text Style...** button. This will bring up the dialogue box shown below. The three panels at the top show the available fonts, styles, and sizes for the text. You can select one of these by clicking on it. To set the background color, click on one of the color buttons shown on the "Background" row. To set the text color, click on one of the color buttons shown on the "Font" row. Your choices will be reflected in the Preview area. When you have the colors you want, click OK to use them. Or click Cancel to return without making any changes.

Please note: Changing the text style is only available on Windows. Mac OS X uses only a fixed font for menus.



Timing

Maximum Time per Trial - This allows you to define the maximum time allowed to complete each trial. If no selection is made within the designated time, the trial times out and advances to the next trial. The time should be long enough to give the client the opportunity to make a selection but not be so long that the client becomes frustrated or bored if they are unable to successfully make a selection. The default value is *90 seconds*.

Pause Between Trials - This allows you to define the length of the pause between a selection or time out and the start of the next trial. A longer pause may be useful for users who need time to process the feedback of the previous trial before starting the next one. The default value is *1second*.

The three buttons at the bottom of the configuration screen perform the following functions:

Preview Test - Click this button to run an abbreviated version of the test using the settings you have selected. No data are collected for the trials in the preview.

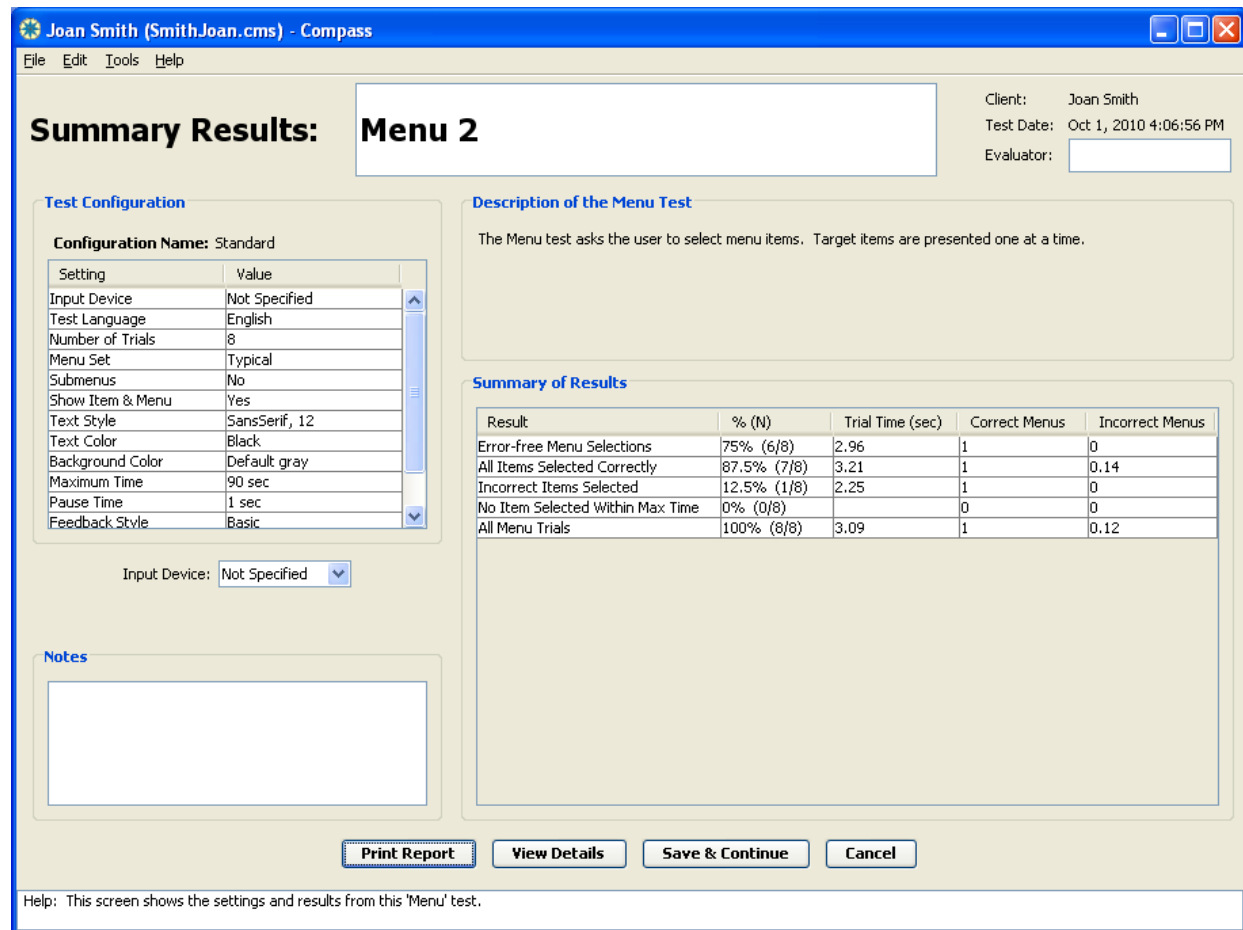
Save & Continue - Click this button to save the test configuration settings you have selected and return to the [Test List](#). If necessary, Compass will prompt you to change the configuration name before you can exit (see [Configuring Tests](#)).

Cancel - Click this button to return you to the [Test List](#) without saving any changes to the configuration settings.

Menu Test Results

The results for a single Menu test can be displayed in **summary** or **detailed** views. If you want to compare results for two or more Menu tests, you can create a [multi-test report](#). This page describes the data collected for a Menu test and how it is displayed on the single test report. You create a report for a single Menu test by selecting the test on the [Test List](#), then clicking **View Report**.

The summary view is presented first. A button at the bottom of the screen allows toggling between views. Both views include a table with the configuration settings used for the test. The client name, the date and time the test was run is displayed along with a box to enter the evaluator's name. There is also a box to enter notes about the test. If the input device was not entered in the [configuration screen](#), it can be entered in the results screens. The other configuration settings cannot be changed, since they represent specific characteristics of how the test was run.



Summary Results: Menu 2

Client: Joan Smith
Test Date: Oct 1, 2010 4:06:56 PM
Evaluator: []

Test Configuration

Configuration Name: Standard

Setting	Value
Input Device	Not Specified
Test Language	English
Number of Trials	8
Menu Set	Typical
Submenus	No
Show Item & Menu	Yes
Text Style	SansSerif, 12
Text Color	Black
Background Color	Default gray
Maximum Time	90 sec
Pause Time	1 sec
Feedback Style	Basic

Input Device: Not Specified [v]

Description of the Menu Test

The Menu test asks the user to select menu items. Target items are presented one at a time.

Summary of Results

Result	% (N)	Trial Time (sec)	Correct Menus	Incorrect Menus
Error-free Menu Selections	75% (6/8)	2.96	1	0
All Items Selected Correctly	87.5% (7/8)	3.21	1	0.14
Incorrect Items Selected	12.5% (1/8)	2.25	1	0
No Item Selected Within Max Time	0% (0/8)	0	0	0
All Menu Trials	100% (8/8)	3.09	1	0.12

Notes

[]

Print Report View Details Save & Continue Cancel

Help: This screen shows the settings and results from this 'Menu' test.

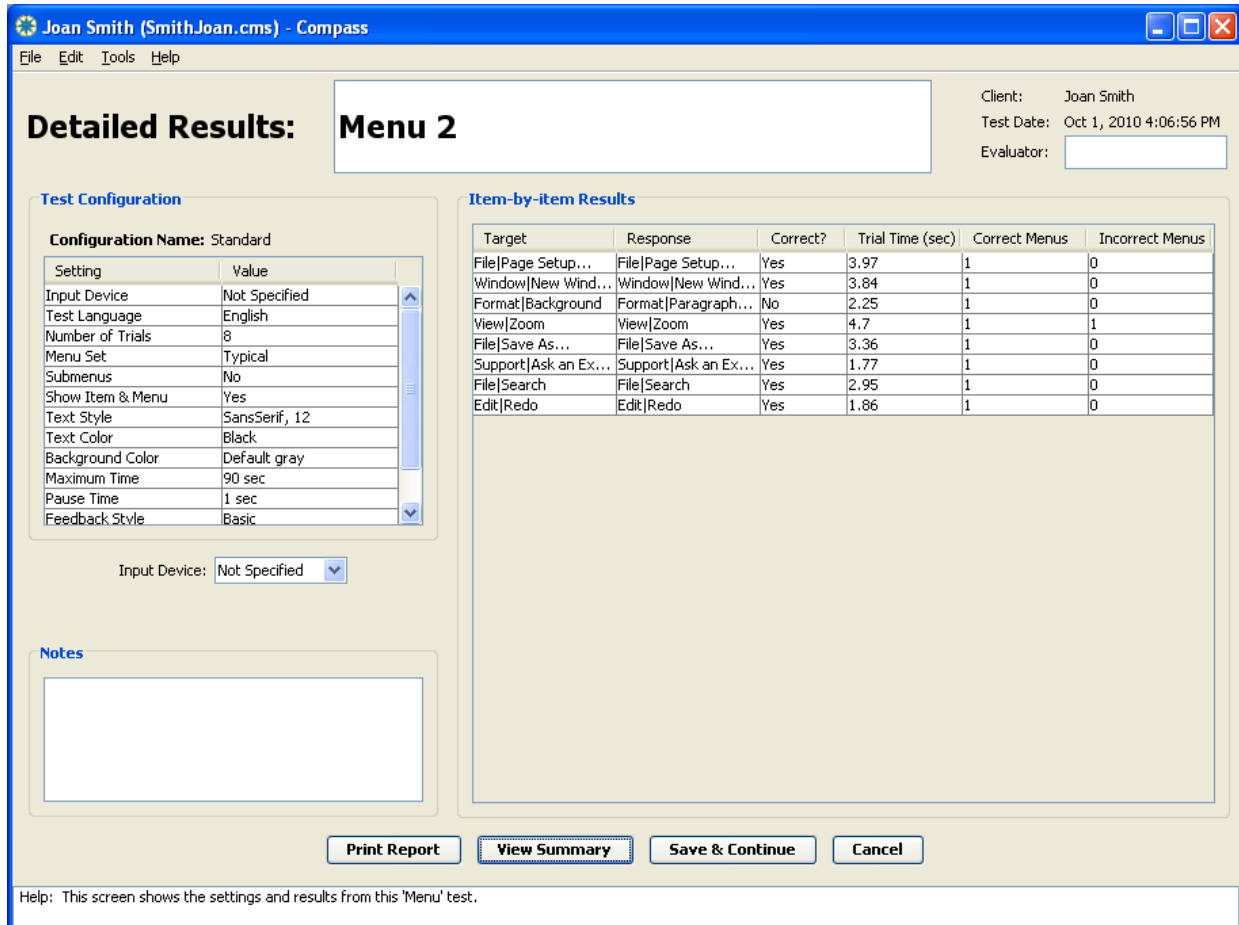
The **Summary of Results** provides results for five different categories, shown in the different rows of the table:

1. **Error-free Menu Selections:** this represents all trials that were completed successfully, without any extra menu selections.

2. **All Items Selected Correctly:** this represents all trials in which the correct menu item was selected, whether or not they had any extra menu selections. (Note that this includes all the "Error-free Menu Selections", plus any successful selections in which at least one extra menu was activated.)
3. **Incorrect Items Selected:** this represents all trials in which an incorrect menu item was selected.
4. **No Item Selected Within Max Time:** this represents trials in which no menu item was selected in the time available. The available time per trial is specified by the max time configuration setting.
5. **All Menu Trials:** this represents all trials in the test. This combines the results of "All Items Selected Correctly" and "Incorrect Items Selected" and "No Item Selected Within Max Time."

For each category of trials, the following results are reported in the table columns:

1. **% (N):** how many trials fell into this category. This is shown both as a percentage of all trials in the test, as well as the exact number of trials.
2. **Trial Time (sec):** the average time required to perform each trial in this category. This is measured in seconds from when the prompt is first presented until a menu item is selected by the client. If an item is not selected, the Maximum Time for a trial is shown.
3. **Correct Menus:** the average number of correct menus activated during each trial in this category. For example, if the target item was File/Save, and the client pulled down the File menu twice when selecting the menu item, Correct Menus would be 2. A value of 1 is the minimum. A larger number would indicate that the client had some difficulty either finding or selecting the menu item, once the correct menu was pulled down.
4. **Incorrect Menus:** the average number of incorrect menus activated during each trial in this category. For example, if the target item was File/Save, and the client pulled down the Edit menu before moving to the correct File menu, Incorrect Menus would be 1. A value of 0 is the minimum. Note that for people who use the cursor keys to select menu items, an incorrect menu selection will be counted for each menu traversed by the user.



Detailed Results: Menu 2

Client: Joan Smith
Test Date: Oct 1, 2010 4:06:56 PM
Evaluator:

Test Configuration

Configuration Name: Standard

Setting	Value
Input Device	Not Specified
Test Language	English
Number of Trials	8
Menu Set	Typical
Submenus	No
Show Item & Menu	Yes
Text Style	SansSerif, 12
Text Color	Black
Background Color	Default gray
Maximum Time	90 sec
Pause Time	1 sec
Feedback Style	Basic

Input Device:

Item-by-item Results

Target	Response	Correct?	Trial Time (sec)	Correct Menus	Incorrect Menus
File Page Setup...	File Page Setup...	Yes	3.97	1	0
Window New Wind...	Window New Wind...	Yes	3.84	1	0
Format Background	Format Paragraph...	No	2.25	1	0
View Zoom	View Zoom	Yes	4.7	1	1
File Save As...	File Save As...	Yes	3.36	1	0
Support Ask an Ex...	Support Ask an Ex...	Yes	1.77	1	0
File Search	File Search	Yes	2.95	1	0
Edit Redo	Edit Redo	Yes	1.86	1	0

Print Report View Summary Save & Continue Cancel

Help: This screen shows the settings and results from this 'Menu' test.

The **detailed view** displays a table with the following results for each individual trial:

1. **Target** - The target menu item to be selected in that trial.
2. **Response** - The menu item actually selected by the client for that trial.
3. **Correct?**- Indicates whether the client's response matched the target menu item. Yes indicates that the target was selected correctly; no indicates that either an incorrect menu item was selected or that no item was selected before time expired for that trial.
4. **Time (sec)** - The time in seconds needed to select each item. If no item was selected, the Maximum Time for a trial is shown.
5. **Correct Menus** - The number of times the correct menu was activated during this trial.
6. **Incorrect Menus** - The number of times an incorrect menu was activated during this trial.

Note that the width of the columns in any of the tables can be resized by moving the cursor to the edge of the box containing the label and dragging it to the left or right.

Additionally, you can [cut-and-paste](#) the contents of a Menu report into another application, such as a word processor. This may be useful when preparing reports on a particular client.

The following buttons are available to help you navigate and work with reports.

1. **Print Report** - Clicking this button prints the summary and detailed report.
2. **View Details** - When in the summary view, clicking on this button changes the display to the detailed report view.
3. **View Summary** - When in the detailed view, clicking on this button returns the display to the summary view.
4. **Save & Continue** - Clicking on this button from either view will save the data for the test, any comments you have entered, and the evaluator name and return you to the [Test List](#) screen.
5. **Cancel** - Clicking on this button from either view will return you to the [Test List](#) screen without saving any changes to the results information. Note that all performance data have already been saved before viewing the report and will not be lost or changed by selecting the Cancel button.

Scan Test Overview

The **Scan test** is designed to evaluate a client's ability to use a single switch to make choices from a scanning layout. The target item is displayed in the window with a layout of item choices below it. Items can be selected from the layout using the mouse button or external switch to perform single-switch scanning. (The external switch needs to emulate the mouse button in order to work.) The scan rate can be adjusted, as well as the letter size and color.

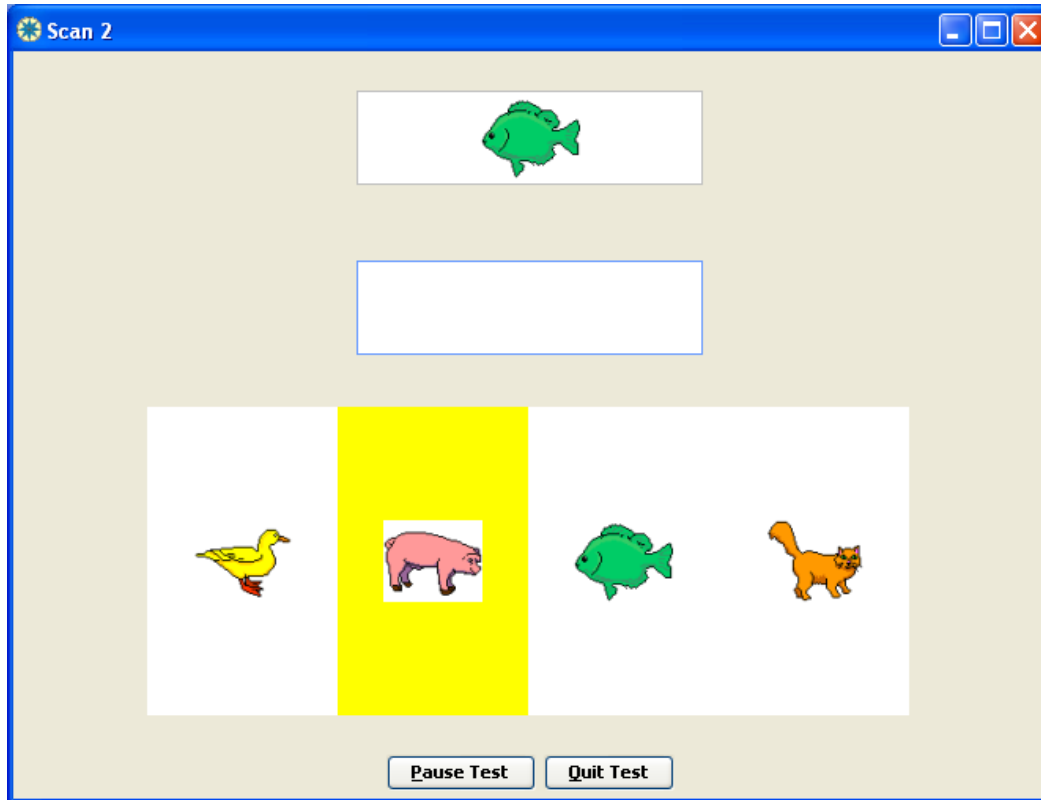
Additionally, a variety of scan layouts are available, using text or pictures as the items. Layouts include row-column matrices and 2- and 4-item linear layouts. They are pre-filled with text or picture items, depending on how you've configured the Scan test. See the [Scan Test Configuration](#) section for a complete description of the options available.

When the test is started, a target item is presented. The client's goal is to select the target item from the scanning layout. For a row-column layout, items are selected from the layout as follows:

1. Press the switch to begin scanning through the rows. (Not required if Scan Initiation is set to Automatic.)
2. When the desired row is highlighted, press the switch again to select it. This begins scanning through the letters in that row.
3. When the desired letter is highlighted, press the switch a third time to select it.

Selecting items from a linear layout is similar, except that one fewer switch hit is required, since there is no need to select a specific row. In the figure below, the 'pig' item is ready to be selected. Note that a scanning selection occurs on the switch **press**; scanning does not pause while the client releases the switch.

When an item has been selected, it will be displayed briefly, and the next target item will appear. If no item is entered within the maximum available time, the trial will "time-out", and the next target item will appear.



Note that the "space" character is shown as an underscore "_" in all letter layouts. Two letter layouts are available: alphabetical and frequency-based. See the [Scan Test Configuration](#) section for more details.

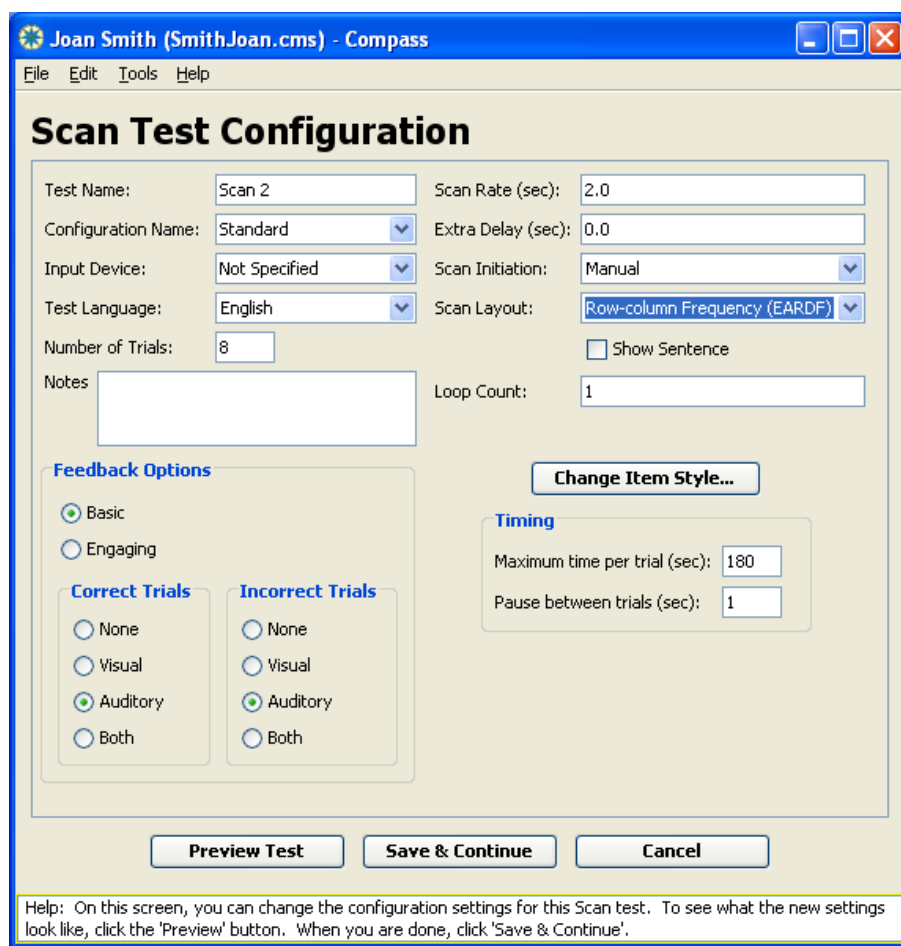
To pause the test, click the **Pause button** or press Alt-P. The test will pause until you click on the **Re-Start button** (at the same location as the **Pause button**) or press Alt-P again.

To quit the test before it is completed, click on the **Quit button** or press Alt-Q. Compass will ask you to confirm that you are sure you want to quit.

Scan Test Configuration

There are numerous options available in the configuration screens for the Scan test. You may choose to use the default settings if desired, but we have made a variety of settings adjustable in an attempt to help you tailor the test to your particular needs.

Note that the Compass Scan test only supports single-switch, automatic scanning of linear or row-column layouts (depending on which layout you choose). If you want to assess scanning under other conditions, such as two-switch or inverse scanning, the best way to do it is to use third-party scanning software, such as an on-screen keyboard, and run a Compass text entry test such as [Letter](#), [Word](#), or [Sentence](#).



Joan Smith (SmithJoan.cms) - Compass

File Edit Tools Help

Scan Test Configuration

Test Name: Scan Rate (sec):

Configuration Name: Extra Delay (sec):

Input Device: Scan Initiation:

Test Language: Scan Layout:

Number of Trials: Show Sentence

Notes:

Loop Count:

Feedback Options

Basic
 Engaging

Correct Trials **Incorrect Trials**

None None
 Visual Visual
 Auditory Auditory
 Both Both

Change Item Style...

Timing

Maximum time per trial (sec):
Pause between trials (sec):

Help: On this screen, you can change the configuration settings for this Scan test. To see what the new settings look like, click the 'Preview' button. When you are done, click 'Save & Continue'.

Test name - Enter the name you would like to use for this test. The test names must be unique within each client file. The default name is *Scan* with a number indicating how many scan tests have been selected for this client (i.e., Scan 1, Scan 2, Scan 3). You should try to develop a consistent strategy for naming tests that provides information about each test. This might be the date the tests were selected (Scan 8-5-04), or whatever helps you to manage the tests most effectively.

Configuration name - Enter the name you would like to use for this configuration. Since the same configuration may be used for more than one test, the configuration name does not have to be unique, as long as the settings are the same. The default name is *Standard*. When changes are made to the standard configuration, Compass will prompt you to change the name upon exiting the configuration screen.

You should develop a consistent strategy for naming the configurations to describe the settings used. This will help you recall how this test differs from another one. A good configuration name might describe the scan rate (e.g., 0.75 sec), the type and size of the text (e.g., 14 bold), or other important settings.

Input device - Allows the input device being used to be selected from a drop-down list of common devices. Device names that are not on the drop-down list can be typed into the field. The default value is *Not Specified*. If you are comparing performance with different input devices, it is important to set the Input Device field accordingly. Otherwise, it may not be clear which input device was used when viewing test results. For the Scan test, you may find it helpful to enter specific switch sites in the configuration settings. This could be done in the input device field, in the Notes field, or perhaps as part of the test or configuration name.

The **Test Language** field defines which language is used for any text or vocal feedback presented to the client during the test. Currently, the choices are English, French, Spanish, Portuguese, and Arabic, with *English* as the default value. In the Scan test, the matrix letters to select from are presented in the Test Language.

Notes - A field for any comments relating to the configuration. By default, this field is empty. Adding comments may be useful for describing why certain choices were made in the configuration or any other information that will help you when reviewing the test.

Number of Trials - The number of targets that will be presented during the test. The default value is 8 trials. The number should be large enough to provide a representative sample of the client's ability to perform the task and small enough to avoid unintended fatigue or loss of interest.

Feedback Options

Style - The feedback style option allows you to select the most appropriate form of feedback for the user. **Basic feedback** provides simple, direct feedback. **Engaging feedback** provides a more stimulating response to help motivate and hold the interest of clients when necessary. Feedback styles are consistent across all of the trials. The default feedback style is *Basic*.

Four feedback options are available for correct and/or incorrect trials. The option for **Correct Trials** defines the type of feedback provided when the user selects the target within the time allowed. The default value for Correct Trials is *Auditory*. The option for **Incorrect Trials** defines the type of feedback provided when the user does not select the target in the time allowed. The default value for Incorrect Trials is *Auditory*. The feedback options are:

1. **None** - Compass will provide no feedback for the trials of this type (correct or incorrect). When a selection is made or the trial times out, the next trial will start unless the test is completed.

2. **Visual** - Compass will provide a visual response.
3. **Auditory** - Compass will provide an auditory response.
4. **Both** - Compass will provide both a visual and an auditory response.

Scan Rate - This allows you to define how quickly the scan highlight moves during scanning. The scan rate represents how long the highlight stays on a row or column before moving to the next row or column. The default value is **2 seconds**.

Extra Delay - This allows you to define an extra delay to add to the first row and first column during scanning. The extra delay is added to the scan rate to define how long the highlight stays on the first row and first column. The default value is **0 seconds**.

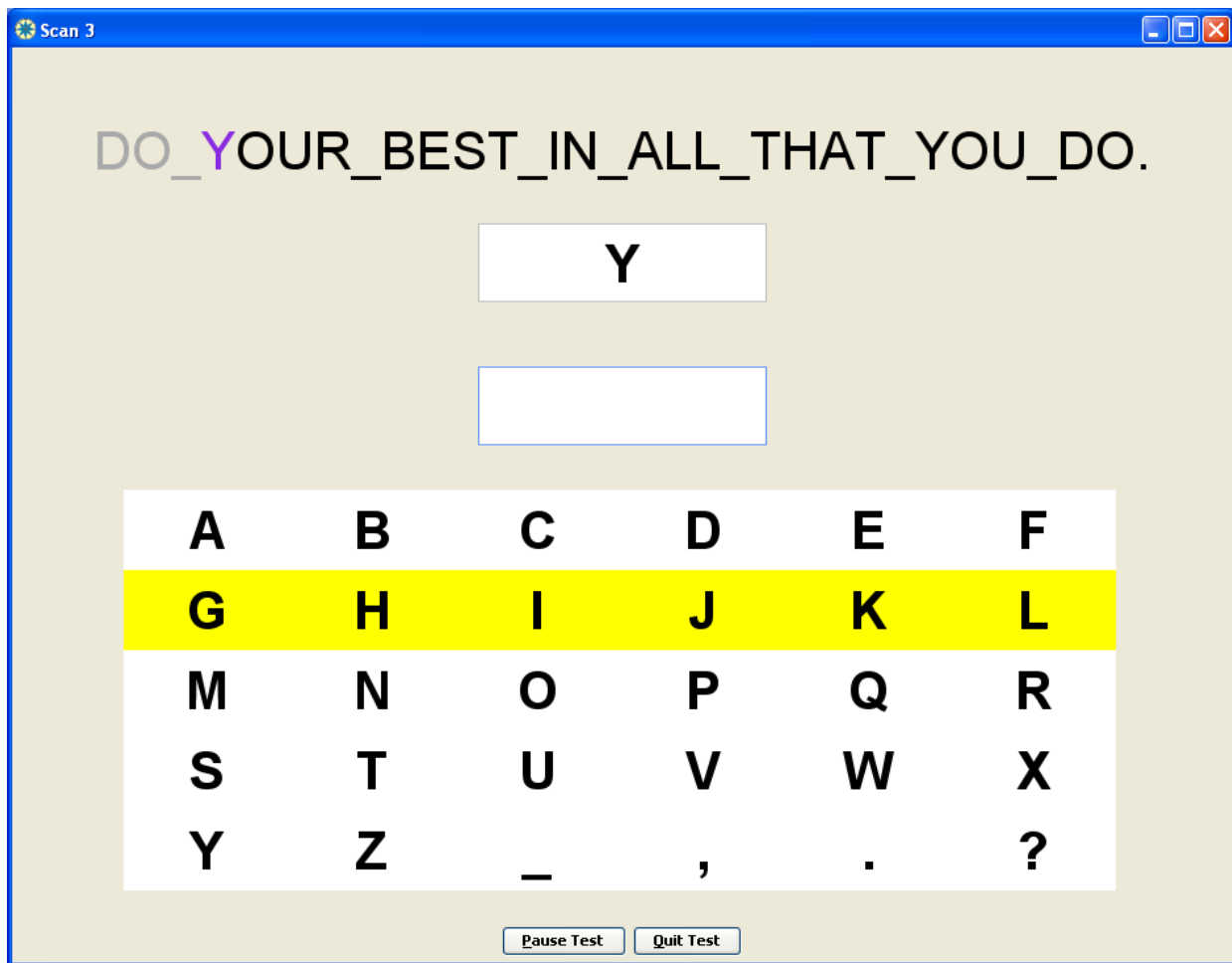
Scan Initiation - This defines whether scanning begins automatically after each selection (automatic) or whether the switch must be pressed in order to begin scanning (manual). The default value is **Automatic**.

Scan Layout - This defines what sort of items are presented in the test, and how they are arranged for scanning selection. The default value for Scan Layout is **Row/column Frequency (EARDF)**. Ten pre-built layouts are available:

1. **Row/column Alphabetical** - This is a letter matrix arranged into 5 rows and 6 columns. The arrangement of letters in the matrix is alphabetical.
2. **Row/column Frequency (EARDF)** - This is a letter matrix arranged into rows and columns. The arrangement of letters in the matrix is based on the frequency of their use in the selected Test Language; more frequently used letters are located fewer scan steps away from the upper left corner. For example, when English is the Test Language, the 'space' character, indicated by '_', is in the upper left corner, since it is the most frequently used character in English. The 'EARDF' indicates the letters in the top row and distinguishes this matrix from the other frequency-based matrices that are included as options. 'EARDF' roughly corresponds to the Time Logical matrix from Leshner et al. 1998. This matrix can be used as a French frequency-of-use layout; in that case, the letters are arranged to reflect their frequency-of-use in the French language.
3. **Row/column Frequency (EARDU)** - This is a row-column letter matrix, where the arrangement of letters in the matrix is based on the frequency of their use in English. More frequently used letters are located fewer scan steps away from the upper left corner. The 'EARDU' indicates the letters in the top row and distinguishes this matrix from the other frequency-based matrices that are included as options. 'EARDU' roughly corresponds to the TIC Logical matrix from Leshner et al. 1998. We have not yet provided this layout in a French version; the EARDF matrix can be used as a French frequency-of-use layout.
4. **Row/column Frequency (EASTO)** - This is a row-column letter matrix, where the arrangement of letters in the matrix is based on the frequency of their use in English. More frequently used letters are located fewer scan steps away from the upper left corner. The 'EASTO' indicates the letters in the top row and distinguishes this matrix from the other frequency-based matrices that are included as options. The space character is shifted away from the upper-left corner, since this layout was originally used in systems that combine letter selection with word prediction, thereby requiring fewer selections of the space character. We have not yet provided this layout in a French version; the EARDF matrix can be used as a French frequency-of-use layout.

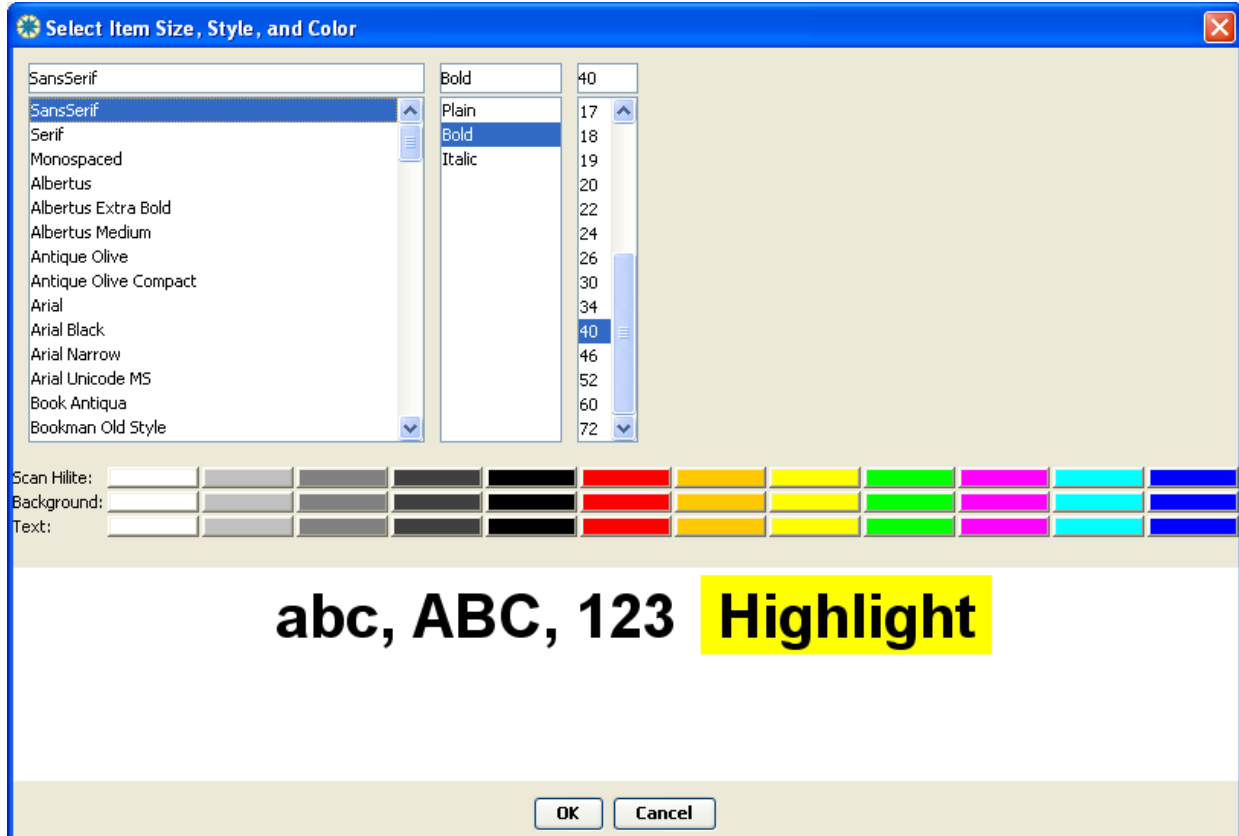
5. **Row/column QWERTY** - This is a letter matrix arranged into 4 rows and 10 columns. The arrangement of letters in the matrix is based on the layout of the common QWERTY physical keyboard. While this is not a recommended layout for most scanning users, it is included here it is often an available option in real systems. We have not yet provided this layout in a French version.
6. **Row/column Image**- This is a matrix of 9 images, arranged in 3 rows and 3 columns. The items are cartoon-like images of common animals.
7. **Two word** - This presents two individual words, arranged in 2 columns for linear scanning.
8. **Two image** - This presents two animal images, arranged in 2 columns for linear scanning.
9. **Four word** - This presents four individual words, arranged in 4 columns for linear scanning.
10. **Four image** - This presents four animal images, arranged in 4 columns for linear scanning.

Show Sentence - If this is checked, the test will be comprised of letters making up a sentence, approximately 30 letters long, as shown below. The test ends after completion of one sentence, although you can quit at any point in the sentence and save the data to that point. The default value for Show Sentence is *Off*.



Loop Count - Defines the number of times all columns in a row should be scanned before scanning moves on to another row. The default value for Loop Count is *1*.

Item Style - This controls the size of letters and images, as well as the colors of the background and scanning highlight. Additionally, for text items, the text color can be changed, as well as the font and font style. By default, the Scan test uses a bold size 40 font with black letters on a gray background, and a yellow scanning highlight. To change the font and colors used in the test, click the **Change Item Style...** button. This will bring up the dialogue box shown below.



The three panels at the top show the available fonts, styles, and sizes for the items. (Fonts and styles will only be active if the current layout uses text items.) You can select one of these by clicking on it. To set the background color, click on one of the color buttons shown on the "Background" row. To set the text color, click on one of the color buttons shown on the "Text" row. (This will only be active if the current layout uses text items.) Your choices will be reflected in the Preview area. When you have the colors you want, click OK to use them. Or click Cancel to return without making any changes.

Timing

Maximum Time per Trial - This allows you to define the maximum time allowed to complete each trial. If no selection is made within the designated time, the trial times out and advances to the next trial. The time should be long enough to give the client the opportunity to make a selection but not be so long that the client becomes frustrated or bored if they are unable to successfully make a selection. The default value is *180 seconds*.

Pause Between Trials - This allows you to define the length of the pause between a selection or time out and the start of the next trial. A longer pause may be useful for users who need time to process the feedback of the previous trial before starting the next one. The default value is *1second*.

The three buttons at the bottom of the configuration screen perform the following functions:

1. **Preview Test** - Click this button to run an abbreviated version of the test using the settings you have selected. No data are collected for the trials in the preview.
2. **Save & Continue** - Click this button to save the test configuration settings you have selected and return to the [Test List](#). If necessary, Compass will prompt you to change the configuration name before you can exit (see [Configuring Tests](#)).
3. **Cancel** - Click this button to return you to the [Test List](#) without saving any changes to the configuration settings.

Scan Test Results

The results for a single Scan test can be displayed in **summary** or **detailed** views. If you want to compare results for two or more Scan tests, you can create a [multi-test report](#). This page describes the data collected for a Scan test and how it is displayed on the single test report. You create a report for a single Scan test by selecting the test on the [Test List](#), then clicking **View Report**.

The summary view is presented first. A button at the bottom of the screen allows toggling between views. Both views include a table with the configuration settings used for the test. The client name, the date and time the test was run is displayed along with a box to enter the evaluator's name. There is also a box to enter notes about the test. If the input device was not entered in the [configuration screen](#), it can be entered in the report screens. The other configuration settings cannot be changed, since they represent specific characteristics of how the test was run.

Summary Results: Scan 2

Client: Joan Smith
 Test Date: Jun 2, 2013 12:17:28 PM
 Evaluator:

Test Configuration

Configuration Name: Standard

Setting	Value
Input Device	Not Specified
Test Language	English
Number of Trials	8
Scan Rate	2.0 sec
Extra Delay	0.0 sec
Scan Initiation	Manual
Scan Layout	Row-column Frequency (EARDF)
Sentence	false
Loop Count	1
Item Style	SansSerif, 40, Bold
Text Color	Black
Background Color	White
Hilite Color	Yellow
Maximum Time	180 sec

Input Device:

Description of the Scan Test

The Scan test asks the user to select a series of single items from a scan matrix. Individual characters, words, or images are presented one at a time.

Summary of Results

Result	% (N)	Trial Time (sec)	Timing Errors
Correct Item Selected	75% (6/8)	7.71	16.67% (1/6)
Incorrect Item Selected	25% (2/8)	11.59	0% (0/2)
No Item Selected within Max Time	0% (0/8)		0% (0/0)
All Item Trials	100% (8/8)	8.68	12.5% (1/8)

Additional Results

Error Type	Count	Correct Selections	Proportion
No Switch Press	1	6	0.17
No Switch Press Target Row	0	6	0
Before Target Row	0	6	0
After Target Row	0	6	0
Before Target Column	1	6	0.17
After Target Column	1	6	0.17
Unintentional Row	0	6	0
Unintentional Column	0	6	0
Total Scanning Errors	3	6	0.5

Notes:

Print Report **View Details** **Save & Continue** **Cancel**

Help:

The **Summary of Results** provides results for four different categories, shown in the different rows of the table:

1. **Correct Item Selected:** this represents all trials in which the correct item was selected.
2. **Incorrect Item Selected:** this represents all trials in which an incorrect item was selected.
3. **No Item Selected Within Max Time:** this represents trials in which no item was selected in the time available. The available time per trial is specified by the max time configuration setting.
4. **All Trials:** this represents all trials in the test. It combines the results from the first three categories.

For each category of trials, the following results are reported in the table columns:

1. **% (N):** how many trials fell into this category. This is shown both as a percentage of all trials in the test, as well as the exact number of trials.
2. **Trial Time (sec):** the average time required to perform each trial in this category. This is measured in seconds from when the target item is first presented until an item is selected by the client. The end of the trial occurs when the final switch is pressed (not including the release time for the final switch hit).
3. **Timing Errors:** the number and percentage of timing errors committed for the trials in this category. A timing error occurs when an item is not selected at the first opportunity, with the minimum number of scan steps. For example, if the client scans through the rows two times before making a selection, that would count as a timing error. A maximum of 1 timing error is counted for each trial. A lack of timing errors indicates good control of the switch and good understanding of single-switch scanning.

Below the main summary table, the **Additional Results** table displays more details about the scanning errors that occurred during the test. Eight different types of scanning error are counted, in the following rows:

1. **No Switch Press:** occurs when the user did not hit the switch during one complete pass through all the rows. If there is only one row in the matrix, this error cannot occur.
2. **No Switch Press Target Row:** occurs when the user did not hit the switch during one complete pass through all the columns.
3. **Before Target Row:** occurs when the user mistakenly selects the row immediately before the desired row (i.e., the row that contains the target item). If there is only one row in the matrix, this error cannot occur.
4. **After Target Row:** occurs when the user mistakenly selects the row immediately after the desired row (i.e., the row that contains the target item). If there is only one row in the matrix, this error cannot occur.
5. **Before Target Column:** occurs when the user mistakenly selects the column immediately before the desired column (i.e., the target item).
6. **After Target Column:** occurs when the user mistakenly selects the column immediately after the desired row (i.e., the target item).
7. **Unintentional Row:** occurs when the user mistakenly selects an incorrect row that is neither immediately before or immediately after the target row.

8. **Unintentional Column:** occurs when the user mistakenly selects an incorrect column that is neither immediately before or immediately after the target column.
9. **Total Scanning Errors:** the sum of all of the scanning error types.

For each type of scanning error, the following results are reported in the table columns:

1. **Count:** how many times this error occurred during the test.
2. **Correct Selections:** the number of correct items selected during the test. This is the same as the 'N' reported under Correct Items Slected in the main summary table. It is always the same for each error type, which is a bit redundant, but makes the value in the Proportion column easier to understand.
3. **Proportion:** displays the number of scanning errors as a proportion of the correct selections. This is Count divided by Correct Selections, for each error type.

The screenshot shows the 'Detailed Results' window for 'Scan 1'. The window title is 'Joan Smith (Smith.Joan.cms) - Compass'. The menu bar includes 'File', 'Edit', 'Tools', and 'Help'. The client information is 'Client: Joan Smith', 'Test Date: Oct 1, 2010 4:10:19 PM', and 'Evaluator: []'. The 'Test Configuration' section shows a 'Configuration Name: Standard' and a table of settings. The 'Item-by-item Results' section contains a table with columns: Target, Response, Correct?, Trial Time (sec), and Timing Error?. Below the table are buttons for 'Print Report', 'View Summary', 'Save & Continue', and 'Cancel'. A help message at the bottom states: 'Help: This table shows detailed trial-by-trial results for this test.'

Setting	Value
Input Device	Not Specified
Test Language	English
Number of Trials	8
Scan Rate	2.0 sec
Scan Layout	Row/Column Frequency
Item Style	SansSerif, 40, Bold
Text Color	Black
Background Color	White
Highlight Color	Yellow
Maximum Time	180 sec
Pause Time	1 sec
Feedback Style	Basic

Target	Response	Correct?	Trial Time (sec)	Timing Error?
I	I	Yes	5.75	No
Y	Y	Yes	11.53	No
A	A	Yes	6.56	No
L	O	No	5.38	No
W	W	Yes	11.23	No
T	T	Yes	3.16	No
=	E	No	3.22	No
A	A	Yes	4.94	No

The **detailed view** displays a table with the following results for each individual trial:

1. **Target** - The target item presented in the trial.
2. **Response** - The item selected by the client.

3. **Correct?**- Indicates whether the target was selected within the time allowed. "Yes" indicates that the correct item was entered. "No" indicates that either an incorrect item was entered or that no item was entered before time expired for that trial.
4. **Trial Time (sec)** - The time in seconds needed to complete each trial, measured until the final switch hit is pressed. If an item is not entered within the available time, the Maximum Time for a trial is shown.
5. **Timing Error?** - Indicates whether a timing error occurred during the trial. A timing error occurs when an item is not selected at the first opportunity, with the minimum number of scan steps. For example, if the client scans through the rows two times before making a selection, that would count as a timing error. A maximum of 1 timing error is counted for each trial.

Note that the width of the columns in any of the tables can be resized by moving the cursor to the edge of the box containing the label and dragging it to the left or right.

Additionally, you can [cut-and-paste](#) the contents of a Scan report into another application, such as a word processor. This may be useful when preparing reports on a particular client.

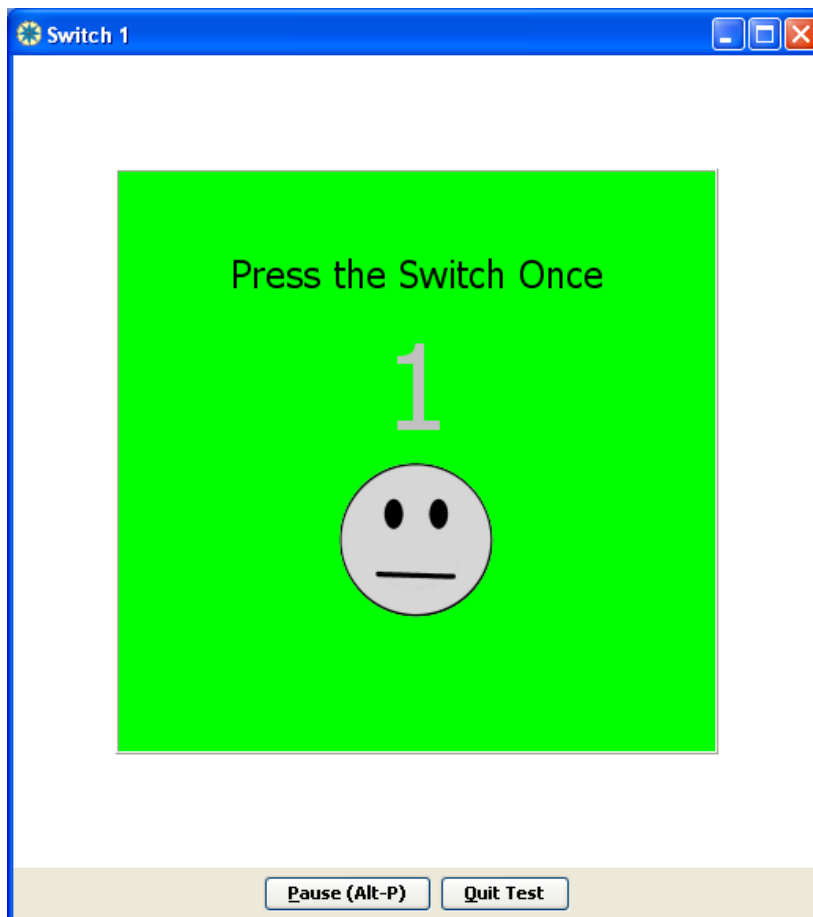
The following buttons are available to help you navigate and work with reports.

1. **Print Report** - Clicking this button prints the summary and detailed report.
2. **View Details** - When in the summary view, clicking on this button changes the display to the detailed report view.
3. **View Summary** - When in the detailed view, clicking on this button returns the display to the summary view.
4. **Save & Continue** - Clicking on this button from either view will save the data for the test, any comments you have entered, and the evaluator name and return you to the [Test List](#) screen.
5. **Cancel** - Clicking on this button from either view will return you to the [Test List](#) screen without saving any changes to the results information. Note that all performance data have already been saved before viewing the report and will not be lost or changed by selecting the Cancel button.

Switch Test Overview

The **Switch Test** is designed to evaluate a client's ability to activate a switch in response to a prompt. The left mouse button or a switch that emulates the left mouse button can be used as the input. The prompt is visual, with the option for an additional auditory prompt (see [Switch Test Configuration](#) for a complete description of the options).

For each trial, the user is prompted visually (with optional auditory prompt, depending on the [configuration settings](#)) to press the switch. When the switch is activated, feedback is provided, depending on the prompt and feedback settings. In the default case of visual prompt and basic feedback, the face prompt turns to a yellow smiley face, and a short 'ding' sound signifies the successful switch hit. A 'Wait...' message appears on the screen until the next prompt appears. If the switch is not activated within the maximum available time, the screen will be cleared before the next prompt appears. Note that the location of the mouse cursor does not matter for this test (as long as it is not within the Pause or Quit buttons when the client activates it).

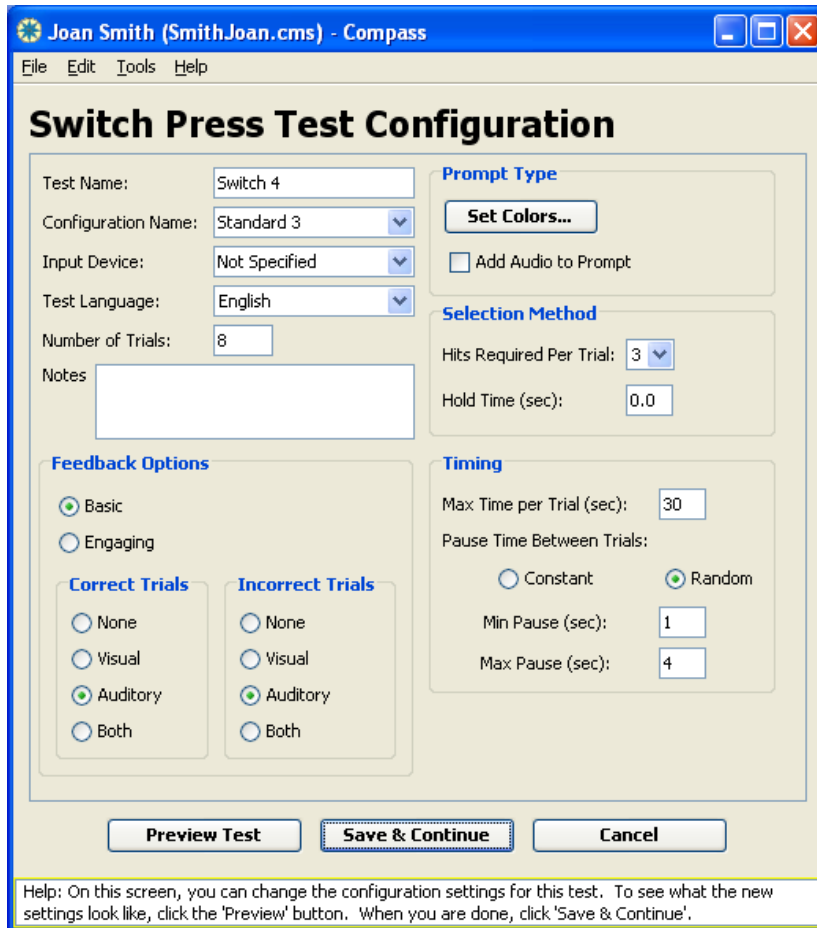


To pause the test, click the **Pause button** or press Alt-P. The test will pause until you click on the **Re-Start button** (at the same location as the **Pause button**) or press Alt-P again.

To quit the test before it is completed, click on the **Quit button** or press Alt-Q. Compass will ask you to confirm that you are sure you want to quit.

Switch Test Configuration

There are numerous options available in the configuration screens for the Switch test. You may choose to use the default settings if desired, but we have made a variety of settings adjustable in an attempt to help you tailor the test to your particular needs.



Joan Smith (SmithJoan.cms) - Compass

File Edit Tools Help

Switch Press Test Configuration

Test Name:

Configuration Name:

Input Device:

Test Language:

Number of Trials:

Notes:

Prompt Type

Add Audio to Prompt

Selection Method

Hits Required Per Trial:

Hold Time (sec):

Feedback Options

Basic
 Engaging

Correct Trials

None
 Visual
 Auditory
 Both

Incorrect Trials

None
 Visual
 Auditory
 Both

Timing

Max Time per Trial (sec):

Pause Time Between Trials:

Constant Random

Min Pause (sec):

Max Pause (sec):

Help: On this screen, you can change the configuration settings for this test. To see what the new settings look like, click the 'Preview' button. When you are done, click 'Save & Continue'.

Test name - Enter the name you would like to use for this test. The test names must be unique within each client file. The default name is *Switch* with a number indicating how many switch tests have been selected for this client (i.e., Switch 1, Switch 2, Switch 3). You should try to develop a consistent strategy for naming tests that provides information about each test. This might be the date the tests were selected (Switch 8-5-04), the type of session (eval or follow-up), or whatever helps you to manage the tests most effectively.

Configuration name - Enter the name you would like to use for this configuration. Since the same configuration may be used for more than one test, the configuration name does not have to be unique, as long as the settings are the same. The default name is *Standard*. When changes are made to the standard configuration, Compass will prompt you to change the name upon exiting the configuration screen.

You should develop a consistent strategy for naming the configurations to describe the settings used. This will help you recall how this test differs from another one. A good configuration name might describe the type of switch (e.g., large buddy or puff switch), the prompt color (e.g., blue), or other important settings.

Input device - Allows the input device being used to be selected from a drop-down list of common devices. Device names that are not on the drop-down list can be typed into the field. The default value is *Not Specified*. If you are comparing performance with different input devices, it is important to set the Input Device field accordingly. Otherwise, it may not be clear which input device was used when viewing test results. For the Switch test, you may find it helpful to enter specific switch sites in the configuration settings. This could be done in the input device field, in the Notes field, or perhaps as part of the test or configuration name.

The **Test Language** field defines which language is used for any text or vocal feedback presented to the client during the test. Currently, the choices are English, French, Spanish, Portuguese, and Arabic, with *English* as the default value. In the Switch test, the Engaging Feedback is presented in the Test Language.

Notes - A field for any comments relating to the configuration. By default, this field is empty. Adding comments may be useful for describing why certain choices were made in the configuration or any other information that will help you when reviewing the test.

Number of Trials - The number of prompts that will be presented during the test. The default value is 8 trials. The number should be large enough to provide a representative sample of the client's ability to perform the task and small enough to avoid unintended fatigue or loss of interest.

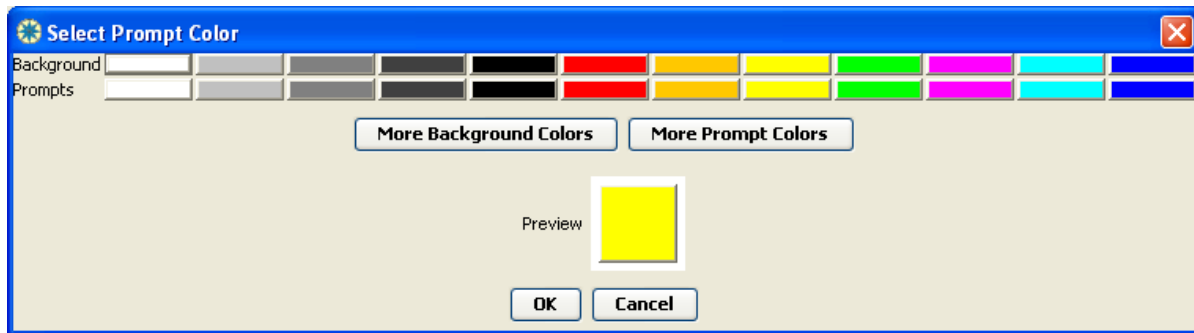
Feedback Options

Style - The feedback style option allows you to select the most appropriate form of feedback for the user. **Basic feedback** provides simple, direct feedback. **Engaging feedback** provides a more stimulating response to help motivate and hold the interest of clients when necessary. Feedback styles are consistent across all of the trials. The default feedback style is *Basic*.

Four feedback options are available for correct and/or incorrect trials. The option for **Correct Trials** defines the type of feedback provided when the user selects the target within the time allowed. The default value for Correct Trials is *Auditory*. The option for **Incorrect Trials** defines the type of feedback provided when the user does not select the target in the time allowed. The default value for Incorrect Trials is *Auditory*. The feedback options are:

1. **None** - Compass will provide no feedback for this type of trial (correct or incorrect). When a selection is made or the trial times out, the next trial will start until the test is completed.
2. **Visual** - Compass will provide a visual response.
3. **Auditory** - Compass will provide an auditory response.
4. **Both** - Compass will provide both a visual and an auditory response.

Prompt Type - Every trial begins with a visual prompt. The settings here define the colors of the visual prompt as well as whether to also use an auditory prompt. The auditory prompt presents a short bell sound. Check the **Add Audio to Prompt** box to play the sound at the start of each trial. The default value is *Off*. The visual prompt is a neutral face that becomes a yellow smiley face when the switch is hit. You can change the color of the face's background and the overall test background by clicking on the **Set Colors...** button. This will bring up the dialogue box shown below. To set the background color, click on one of the color buttons shown on the "Background" row. To set the prompt color, click on one of the color buttons shown on the "Prompts" row. Your choices will be reflected in the Preview area. When you have the colors you want, click OK to use them. Or click Cancel to return without making any changes.



Selection Method - These settings control how you must operate the switch to successfully complete a trial.

Hits Required Per Trial - How many switch hits are required to complete each trial. The default hits required is *1*, so that only one switch hit is required per trial. 2- and 3-hit tests are available as well.

Hold Time - The amount of time the switch must be held down to count as a selection. A non-zero hold time can be helpful to filter out short, unintentional switch activations. The default time is *0 seconds*.

Timing

Maximum Time per Trial - This allows you to define the maximum time allowed to make a selection. If the switch is not activated within the designated time, the trial times out and advances to the next trial. The time should be long enough to give the client the opportunity to make a selection but not be so long that the client becomes frustrated or bored if they are unable to successfully complete the task. The default value is *30 seconds*.

Pause Time Between Trials - This defines how many seconds there are between the end of one trial and the beginning of the next trial. There are two general options for pause time in the Switch test:

1. **Constant** - The amount of time between trials remains the same throughout the test. This allows the client to anticipate when the next trial will be presented and develop a rhythm when making selections. Often, the switch press time will be shorter with a constant pause time than with a random pause time. By default, the constant pause time is *1 second*.
2. **Random** - The amount of time between trials changes throughout the test. The pause time for each trial is selected randomly between the **Minimum** and **Maximum** specified. This keeps the

client from anticipating the next prompt, which can yield a "purer" measure of response time. By default, the random pause time ranges between **1** and **4 seconds**.

Note that switch hits that occur during the pause between trials are ignored.

The three buttons at the bottom of the configuration screen perform the following functions:

Preview Test - Click this button to run an abbreviated version of the test using the settings you have selected. No data are collected for the trials in the preview.

Save & Continue - Click this button to save the test configuration settings you have selected and return to the [Test List](#). If necessary, Compass will prompt you to change the configuration name before you can exit (see [Configuring Tests](#)).

Cancel - Click this button to return you to the [Test List](#) without saving any changes to the configuration settings.

Switch Test Results

The results for a single Switch test can be displayed in **summary** or **detailed** views. If you want to compare results for two or more Switch tests, you can create a [multi-test report](#). This page describes the data collected for a Switch test and how it is displayed on the single test report. You create a report for a single Switch test by selecting the test on the [Test List](#), then clicking **View Report**.

The summary view is presented first. A button at the bottom of the screen allows toggling between views. Both views include a table with the configuration settings used for the test. The client name, the date and time the test was run is displayed along with a box to enter the evaluator's name. There is also a box to enter notes about the test. If the input device was not entered in the [configuration screen](#), it can be entered in the results screens. The other configuration settings cannot be changed, since they represent specific characteristics of how the test was run.

Summary Results: Switch 1

Client: Joan Smith
Test Date: Jun 2, 2013 10:47:24 AM
Evaluator:

Test Configuration

Configuration Name: Standard

Setting	Value
Input Device	Not Specified
Test Language	English
Number of Trials	8
Hits Required	1
Hold Time	0.0 sec
Prompt Type	Visual
Prompt Color	Green
Background Color	White
Maximum Time	30 sec
Type of Pause	Random
Minimum Pause Time	1 sec
Maximum Pause Time	4 sec
Feedback Style	Basic
Feedback Correct	Audio

Input Device:

Description of the Switch Test

The Switch test asks the user to press a switch in response to a visual and/or auditory prompt. The test may be set up to require one, two, or three switch hits for each trial.

Summary of Results

Result	% (N)	Trial Time (sec)	1st Press Time (sec)	Release Time (sec)	Switch Hits
Correct Trials	100% (8/8)	1.5	1.12	0.39	1
Incorrect Trials	0% (0/8)				0
No Switch Pressed	0% (0/8)				0
All Switch Trials	100% (8/8)	1.5	1.12	0.39	1

Recommendations

These recommendations are based on your use of the switch during this test. They relate to using the switch to make choices in an automatic scanning system. Feel free to ignore these if you have no plans to use your switch with a scanning system.

Setting	Value	Description
Scan Rate	1.716 sec	The amount of time that items remain highlighted in a scanning system
Extra Delay		Extra time to highlight the 1st row and column. Blank unless Hits Required > 1 in this test.

Notes:

Buttons: **Print Report** **View Details** **Save & Continue** **Cancel**

Help:

The **Summary of Results** provides results for four different categories, shown in the different rows of the table:

1. **Correct Trials:** this represents all trials in which the switch was activated properly.

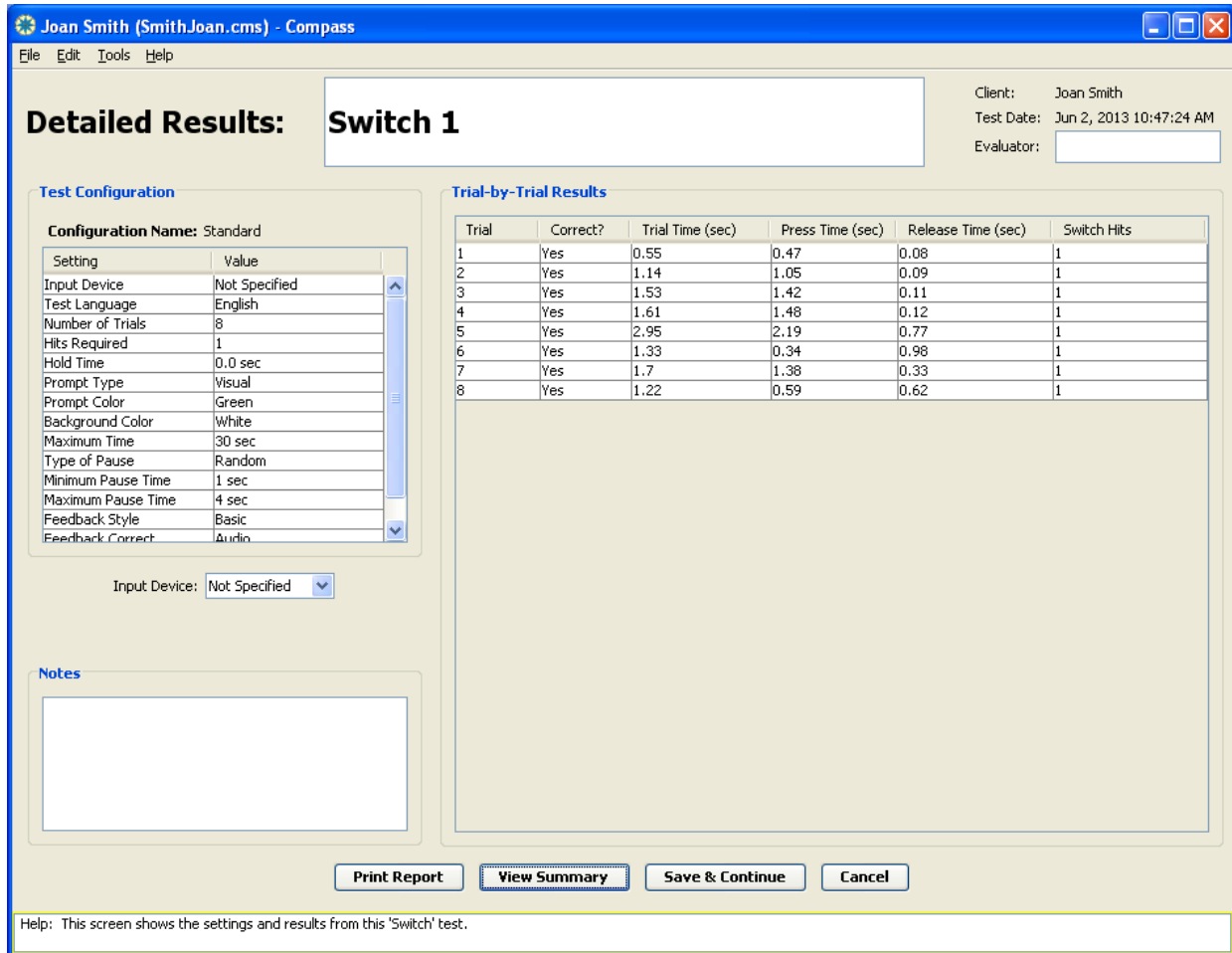
2. **Incorrect Trials:** this represents all trials in which at least one switch event occurred, but not all required hits were completed or held for the the required hold time.
3. **No Switch Pressed:** this represents trials in which there was no switch activity during the time available for the trial. The available time per trial is specified by the max time configuration setting.
4. **All Switch Trials:** this represents all trials in the test. It includes the categories of "Correct Trials" and "Incorrect Trials" and "No Switch Pressed Within Max Time."

For each category of trials, the following results are reported in the table columns:

1. **% (N):** how many trials fell into this category. This is shown both as a percentage of all trials in the test, as well as the exact number of trials.
2. **Trial Time (sec):** the average time required to perform each trial in this category. This is measured in seconds from when the prompt is first presented until the trial ends. For a correct trial, the trial ends when the first switch hit following the prompt is released.
3. **1st Press Time (sec):** the average initial press time for each trial in this category. 1st Press Time is measured from when the prompt is first presented until the switch is first depressed.
4. **Release Time (sec):** the average release time for each trial in this category. Release time is measured from when the switch is depressed until it is released.
5. **Recovery Time (sec):** the average seconds required to press the switch after the previous release, for trials in this category. Recovery Time is only relevant, and is only displayed, for tests that require more than one switch hit per trial.
6. **Switch Hits:** the average number of switch hits for each trial in this category. Every correct trial includes at least the number of hits required, as specified in the configuration settings. Additional switch hits that occur between prompts are also counted.

The **Recommendations** table provides suggestions for using the switch to make choices in an automatic scanning system, based on the results of this Switch test. Specifically, it suggests timing parameters that will most likely be appropriate (neither too fast nor too slow). Feel free to ignore these if you have no plans to use your switch with a scanning system.:

1. **Scan Rate:** this represents the amount of time, in seconds, that items remain highlighted in a scanning system . In other words, this is how much time you have to hit the switch in order to select the desired item. It is calculated as approximately $(1.5 * 1st\ Press\ Time)$.
2. **Extra Delay:** this represents the extra time to highlight the first row or first column, in addition to the scan rate. This can only be recommended based on results from 2- and 3-hit Switch tests, so this is left blank when hits required is set to 1.



Detailed Results: Switch 1

Client: Joan Smith
Test Date: Jun 2, 2013 10:47:24 AM
Evaluator:

Test Configuration

Configuration Name: Standard

Setting	Value
Input Device	Not Specified
Test Language	English
Number of Trials	8
Hits Required	1
Hold Time	0.0 sec
Prompt Type	Visual
Prompt Color	Green
Background Color	White
Maximum Time	30 sec
Type of Pause	Random
Minimum Pause Time	1 sec
Maximum Pause Time	4 sec
Feedback Style	Basic
Feedback Correct	Audio

Input Device: Not Specified

Trial-by-Trial Results

Trial	Correct?	Trial Time (sec)	Press Time (sec)	Release Time (sec)	Switch Hits
1	Yes	0.55	0.47	0.08	1
2	Yes	1.14	1.05	0.09	1
3	Yes	1.53	1.42	0.11	1
4	Yes	1.61	1.48	0.12	1
5	Yes	2.95	2.19	0.77	1
6	Yes	1.33	0.34	0.98	1
7	Yes	1.7	1.38	0.33	1
8	Yes	1.22	0.59	0.62	1

Print Report View Summary Save & Continue Cancel

Help: This screen shows the settings and results from this 'Switch' test.

The **detailed view** displays a table with results for each individual trial. Note that the detailed report is somewhat different from the above figure when more than one hit is required per trial. Use the screen-tip help at the bottom of the Compass display for information about each column in that case. The following results are shown in the default case of one hit required per trial:

1. **Trial** - The number of each trial indicating the order of appearance.
2. **Correct?** - Indicates whether the target was selected within the time allowed. Yes indicates that the switch was successfully activated; no indicates the switch was not activated before time expired for that trial.
3. **Trial Time (sec)** - The time in seconds needed to perform each trial. If the switch is not activated properly within the available time, the Maximum Time for a trial is shown.
4. **Press Time (sec)** - The time in seconds from the prompt until the switch is pressed.
5. **Release Time (sec)** - The time in seconds from when the switch is pressed until it is released.
6. **Switch Hits** - The number of switch hits that occurred from the presentation of this trial's prompt until the presentation of the next prompt.

Note that the width of the columns in any of the tables can be resized by moving the cursor to the edge of the box containing the label and dragging it to the left or right.

Additionally, you can [cut-and-paste](#) the contents of a Switch report into another application, such as a word processor. This may be useful when preparing reports on a particular client.

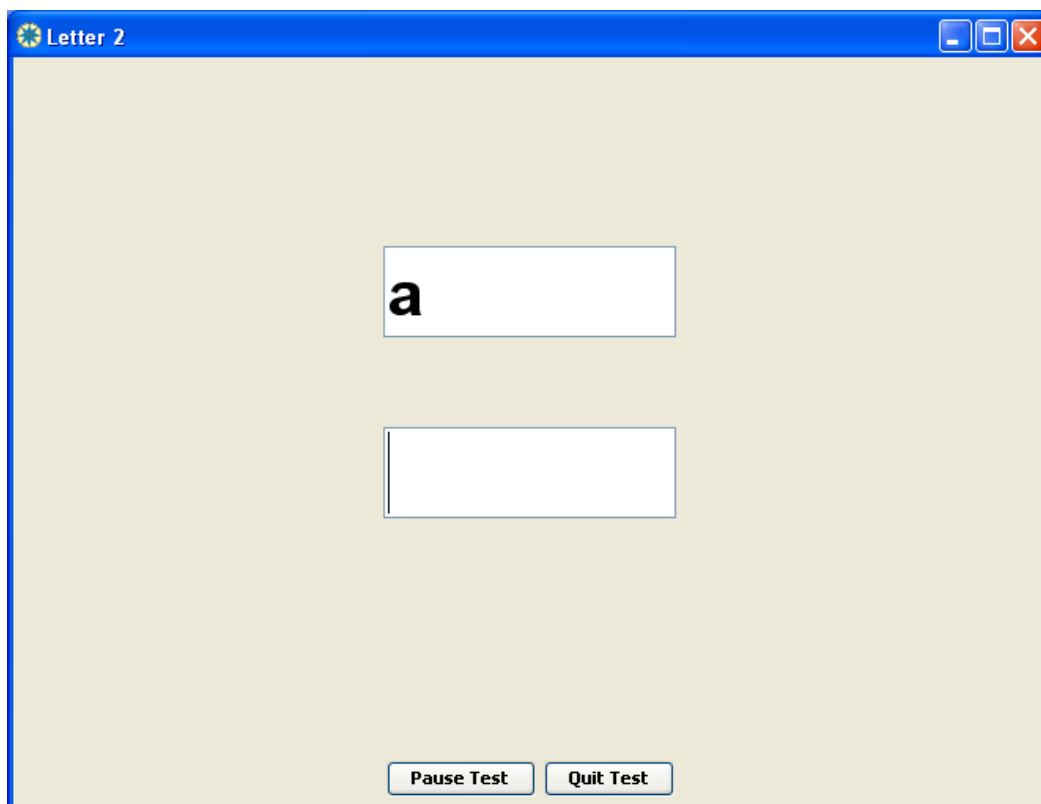
The following buttons are available to help you navigate and work with reports.

1. **Print Report** - Clicking this button prints the summary and detailed report.
2. **View Details** - When in the summary view, clicking on this button changes the display to the detailed report view.
3. **View Summary** - When in the detailed view, clicking on this button returns the display to the summary view.
4. **Save & Continue** - Clicking on this button from either view will save the data for the test, any comments you have entered, and the evaluator name and return you to the [Test List](#) screen.
5. **Cancel** - Clicking on this button from either view will return you to the [Test List](#) screen without saving any changes to the results information. Note that all performance data have already been saved before viewing the report and will not be lost or changed by selecting the Cancel button.

Letter Test Overview

The **Letter test** is designed to evaluate a client's ability to correctly enter a target letter. Letters can be entered using any style of keyboard or keyboard emulator.

For each trial, the target letter to be entered is displayed. In the example below, the target letter is "a". The case of the letters presented can be set to upper or lower case or a combination of both. See the [Letter Test Configuration](#) section for a complete description of the options available. The client's goal is to enter the target letter using their keyboard or keyboard emulator. When the client enters a letter, whether it is correct or not, the next target letter will appear. If no letter is entered within the maximum available time, the next trial will appear.

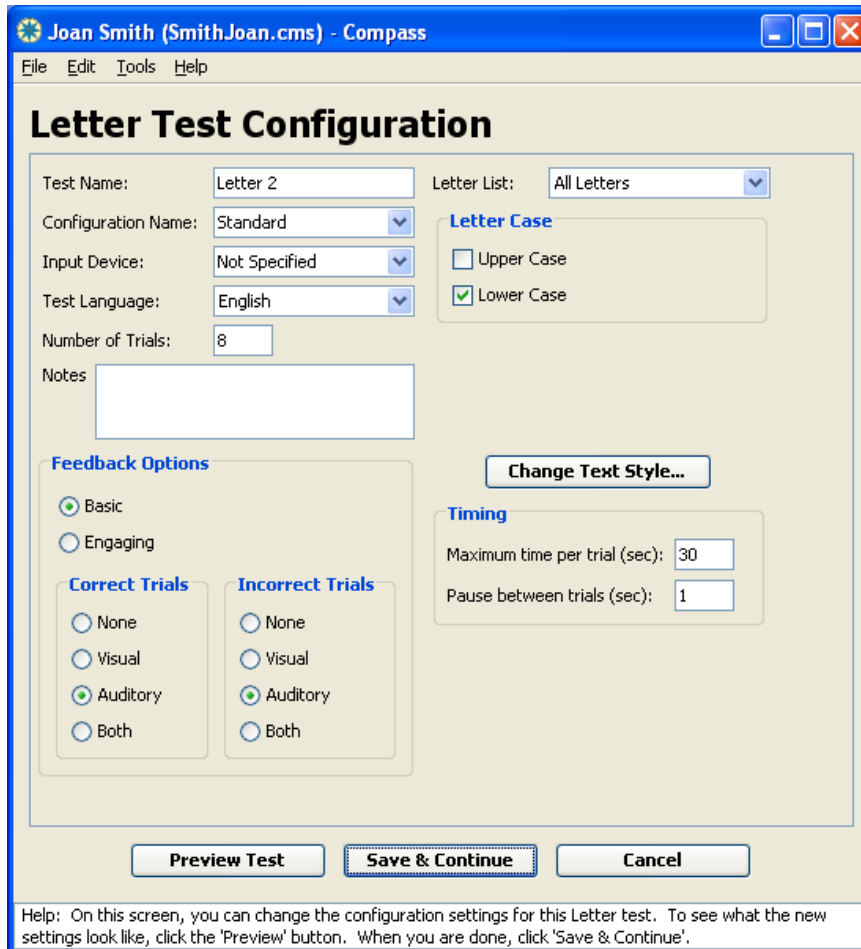


To pause the test, click the **Pause Test button**. The test will pause until you click on the **Re-Start button** (at the same location as the **Pause button**).

To quit the test before it is completed, click on the **Quit Test button**. Compass will ask you to confirm that you are sure you want to quit.

Letter Test Configuration

There are numerous options available in the configuration screens for the Letter test. You may choose to use the default settings if desired, but we have made a variety of settings adjustable in an attempt to help you tailor the test to your particular needs.



Test name - Enter the name you would like to use for this test. The test names must be unique within each client file. The default name is *Letter* with a number indicating how many letter tests have been selected for this client (i.e., Letter 1, Letter 2, Letter 3). You should try to develop a consistent strategy for naming tests that provides information about each test. This might be the date the tests were selected (Letter 8-5-04), or whatever helps you to manage the tests most effectively.

Configuration name - Enter the name you would like to use for this configuration. Since the same configuration may be used for more than one test, the configuration name does not have to be unique, as long as the settings are the same. The default name is *Standard*. When changes are made to the standard configuration, Compass will prompt you to change the name upon exiting the configuration screen.

You should develop a consistent strategy for naming the configurations to describe the settings used. This will help you recall how this test differs from another one. A good configuration name might describe the input method (e.g., type of on-screen keyboard), the color of the text (e.g., blue on yellow), or other important settings.

Input device - Allows the input device being used to be selected from a drop-down list of common devices. Device names that are not on the drop-down list can be typed into the field. The default value is *Not Specified*. If you are comparing performance with different input devices, it is important to set the Input Device field accordingly. Otherwise, it may not be clear which input device was used when viewing test results.

The **Test Language** field defines which language is used for any text or vocal feedback presented to the client during the test. Currently, the choices are English, French, Spanish, Portuguese, and Arabic, with *English* as the default value. In the Letter test, the letters to copy are presented in the Test Language.

Notes - A field for any comments relating to the configuration. By default, this field is empty. Adding comments may be useful for describing why certain choices were made in the configuration or any other information that will help you when reviewing the test.

Number of Trials - The number of targets that will be presented during the test. The default value is 8 trials. The number should be large enough to provide a representative sample of the client's ability to perform the task and small enough to avoid unintended fatigue or loss of interest.

Feedback Options

Style - The feedback style option allows you to select the most appropriate form of feedback for the user. **Basic feedback** provides simple, direct feedback. **Engaging feedback** provides a more stimulating response to help motivate and hold the interest of clients when necessary. Feedback styles are consistent across all of the trials. The default feedback style is *Basic*.

Four feedback options are available for correct and/or incorrect trials. The option for **Correct Trials** defines the type of feedback provided when the user selects the target within the time allowed. The default value for Correct Trials is *Auditory*. The option for **Incorrect Trials** defines the type of feedback provided when the user selects an incorrect letter. The default value for Incorrect Trials is *Auditory*. The feedback options are:

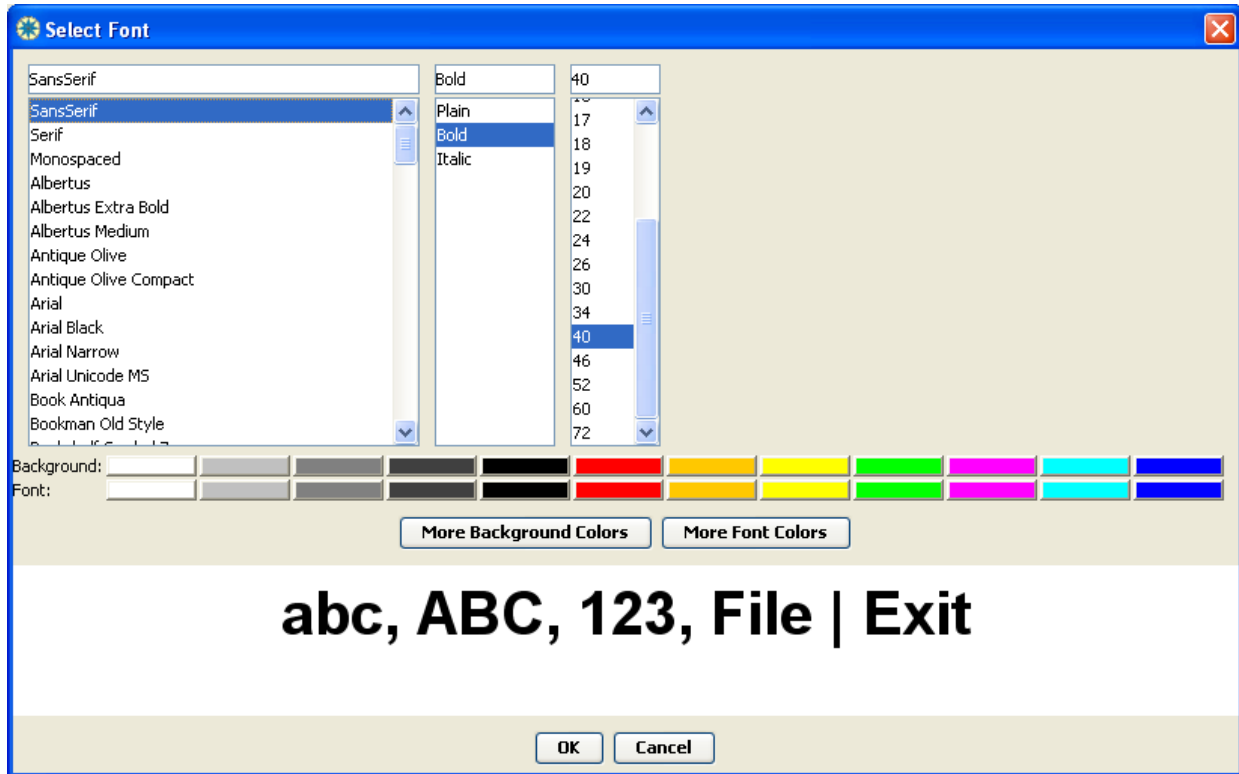
1. **None** - Compass will provide no feedback for any of the trials of this type. When a selection is made or the trial times out, the next trial will start until the test is completed.
2. **Visual** - Compass will provide a visual response.
3. **Auditory** - Compass will provide an auditory response.
4. **Both** - Compass will provide both a visual and an auditory response.

Letter List - This defines the group of letters from which target letters are selected. There are three options for Letter List:

1. **All Letters** - any letter of the alphabet might be presented as a target letter. This is the default option.
2. **Corners (QWERTY)** - Target letters are drawn from only those characters at the corner locations in a QWERTY keyboard, such as 'w' or 'p'. This may be a useful way to focus the test when you suspect that performance might be much different for peripheral characters.
3. **Letters and Numbers** - Target letters are drawn from all alphabetic characters as well as all digits.

Letter Case - Allows you to define whether upper or lower case letters or both are presented during the test. Check **Upper Case** only to ensure that only uppercase letters are presented in the test. Check **Lower Case** only to ensure that only lowercase letters are presented in the test. This is the default option. Check both to let Compass randomly choose which case to use for each trial. Note that this setting does not affect the case of letters entered by the client. Unless Shift or Caps-Lock is used, letters entered by the client will be in lowercase. Note also that the scoring for the Letter test is always **case sensitive**; if the letter entered by the client is not in the same case as the target letter, it will be scored as incorrect.

Text Style - By default, the Letter test uses a bold size 40 font, with black letters on a gray background. To change the font and/or color of the text and/or the color of the test background, click the **Text Style...** button. This will bring up the dialogue box shown below. The three panels at the top show the available fonts, styles, and sizes for the text. You can select one of these by clicking on it. To set the background color, click on one of the color buttons shown on the "Background" row. To set the text color, click on one of the color buttons shown on the "Font" row. Your choices will be reflected in the Preview area. When you have the colors you want, click OK to use them. Or click Cancel to return without making any changes.



Timing

Maximum Time per Trial - This allows you to define the maximum time allowed to complete each trial. If no selection is made within the designated time, the trial times out and advances to the next trial. The time should be long enough to give the client the opportunity to make a selection but not be so long that the client becomes frustrated or bored if they are unable to successfully make a selection. The default value is *30 seconds*.

Pause Between Trials - This allows you to define the length of the pause between a selection or time out and the start of the next trial. A longer pause may be useful for users who need time to process the feedback of the previous trial before starting the next one. The default value is *1second*.

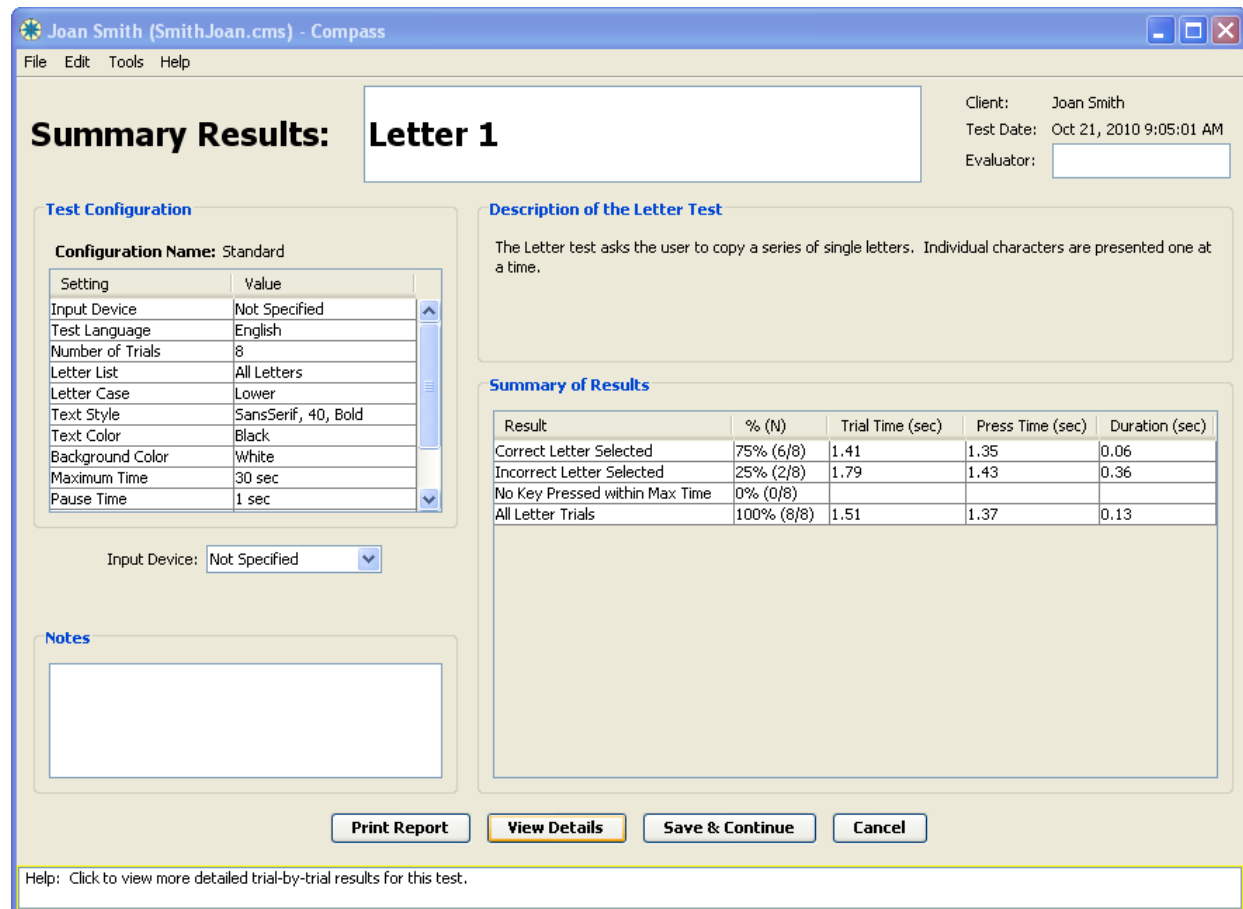
The three buttons at the bottom of the configuration screen perform the following functions:

1. **Preview Test** - Click this button to run an abbreviated version of the test using the settings you have selected. No data are collected for the trials in the preview.
2. **Save & Continue** - Click this button to save the test configuration settings you have selected and return to the [Test List](#). If necessary, Compass will prompt you to change the configuration name before you can exit (see [Configuring Tests](#)).
3. **Cancel** - Click this button to return you to the [Test List](#) without saving any changes to the configuration settings.

Letter Test Results

The results for a single Letter test can be displayed in **summary** or **detailed** views. If you want to compare results for two or more Letter tests, you can create a [multi-test report](#). This page describes the data collected for a Letter test and how it is displayed on the single test report. You create a report for a single Letter test by selecting the test on the [Test List](#), then clicking **View Report**.

The summary view is presented first. A button at the bottom of the screen allows toggling between views. Both views include a table with the configuration settings used for the test. The client name, the date and time the test was run is displayed along with a box to enter the evaluator's name. There is also a box to enter notes about the test. If the input device was not entered in the [configuration screen](#), it can be entered in the results screens. The other configuration settings cannot be changed, since they represent specific characteristics of how the test was run.



Joan Smith (SmithJoan.cms) - Compass

File Edit Tools Help

Summary Results: Letter 1

Client: Joan Smith
Test Date: Oct 21, 2010 9:05:01 AM
Evaluator:

Test Configuration

Configuration Name: Standard

Setting	Value
Input Device	Not Specified
Test Language	English
Number of Trials	8
Letter List	All Letters
Letter Case	Lower
Text Style	SansSerif, 40, Bold
Text Color	Black
Background Color	White
Maximum Time	30 sec
Pause Time	1 sec

Input Device:

Description of the Letter Test

The Letter test asks the user to copy a series of single letters. Individual characters are presented one at a time.

Summary of Results

Result	% (N)	Trial Time (sec)	Press Time (sec)	Duration (sec)
Correct Letter Selected	75% (6/8)	1.41	1.35	0.06
Incorrect Letter Selected	25% (2/8)	1.79	1.43	0.36
No Key Pressed within Max Time	0% (0/8)			
All Letter Trials	100% (8/8)	1.51	1.37	0.13

Notes

Help: Click to view more detailed trial-by-trial results for this test.

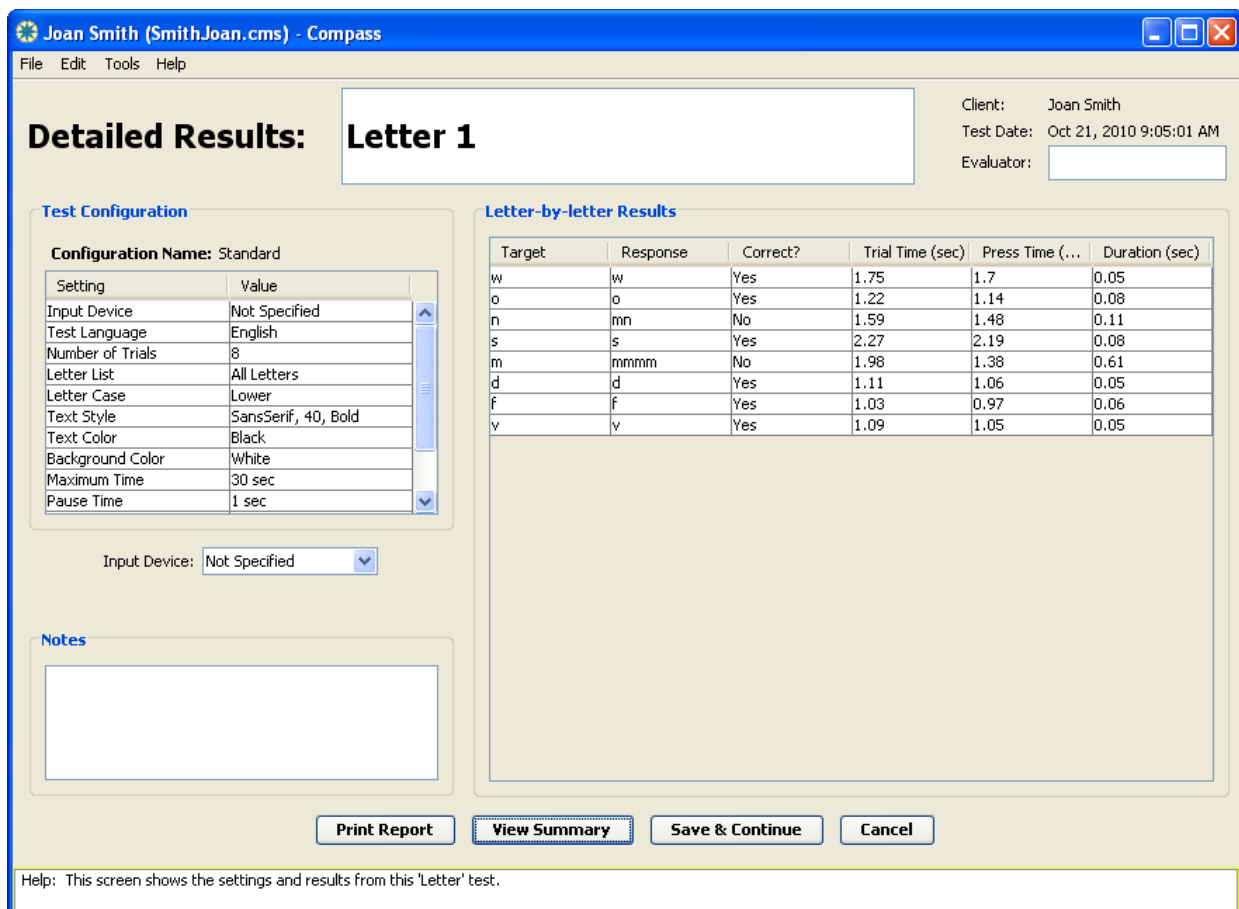
The **Summary of Results** provides results for four different categories, shown in the different rows of the table:

1. **Correct Letter Selected:** this represents all trials in which the correct letter was entered, with no mistakes. Note that letter entries must match the case of the target letter (upper or lower) in order to be scored as correct.

2. **Incorrect Letter Selected:** this represents all trials in which an incorrect letter was entered.
3. **No Key Pressed Within Max Time:** this represents trials in which no letter was entered in the time available. The available time per trial is specified by the max time configuration setting.
4. **All Letter Trials:** this represents all trials in the test. This combines the results of "Correct Trials" and "Incorrect Trials" and "No Key Pressed Within Max Time."

For each category of trials, the following results are reported in the table columns:

1. **% (N):** how many trials fell into this category. This is shown both as a percentage of all trials in the test, as well as the exact number of trials.
2. **Trial Time (sec):** the average time required to perform each trial in this category. This is measured in seconds from when the target letter is first presented until a letter is entered by the client. The end of the trial occurs when the key is released.
3. **Press Time (sec):** the average press time for the trials in this category. Press time is measured from when the target letter is first presented until a key is pressed.
4. **Duration (sec):** the average release time for the trials in this category. Release time is measured from when the client presses a key until its release.



Joan Smith (SmithJoan.cms) - Compass

File Edit Tools Help

Detailed Results: Letter 1

Client: Joan Smith
Test Date: Oct 21, 2010 9:05:01 AM
Evaluator:

Test Configuration

Configuration Name: Standard

Setting	Value
Input Device	Not Specified
Test Language	English
Number of Trials	8
Letter List	All Letters
Letter Case	Lower
Text Style	SansSerif, 40, Bold
Text Color	Black
Background Color	White
Maximum Time	30 sec
Pause Time	1 sec

Input Device: Not Specified

Notes

Letter-by-letter Results

Target	Response	Correct?	Trial Time (sec)	Press Time (...)	Duration (sec)
w	w	Yes	1.75	1.7	0.05
o	o	Yes	1.22	1.14	0.08
n	mn	No	1.59	1.48	0.11
s	s	Yes	2.27	2.19	0.08
m	mmm	No	1.98	1.38	0.61
d	d	Yes	1.11	1.06	0.05
f	f	Yes	1.03	0.97	0.06
v	v	Yes	1.09	1.05	0.05

Print Report View Summary Save & Continue Cancel

Help: This screen shows the settings and results from this 'Letter' test.

The **detailed view** displays a table with the following results for each individual trial:

1. **Target** - The target letter presented in the trial.
2. **Response** - The letter (or letters) entered by the client.
3. **Correct?**- Indicates whether the target was selected within the time allowed. "Yes" indicates that the correct letter was entered, in the correct case. "No" indicates that either an incorrect letter was entered or that no letter was entered before time expired for that trial.
4. **Trial Time (sec)** - The time in seconds needed to complete each trial, measured until the key is released. If a letter is not entered within the available time, the Maximum Time for a trial is shown.
5. **Press Time (sec)** - The time in seconds from the prompt until the first key is pressed.
6. **Duration (sec)** - The time in seconds from when the key is pressed until it is released.

Note that the width of the columns in any of the tables can be resized by moving the cursor to the edge of the box containing the label and dragging it to the left or right.

Additionally, you can [cut-and-paste](#) the contents of a Letter report into another application, such as a word processor. This may be useful when preparing reports on a particular client.

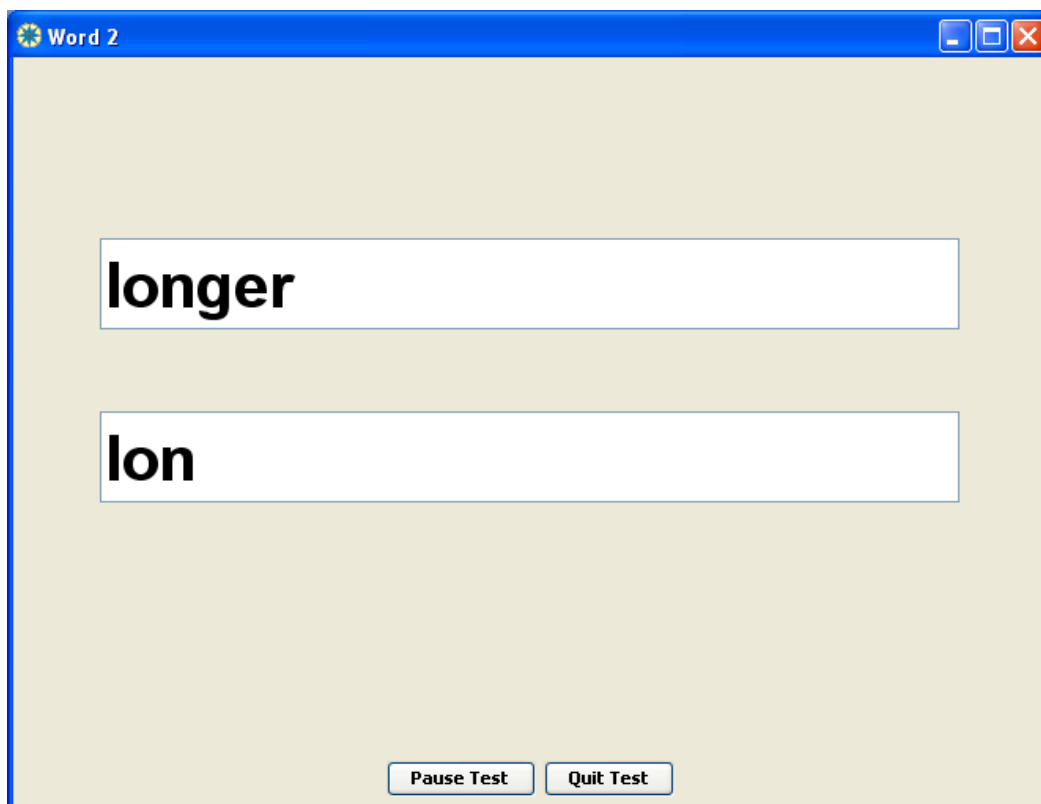
The following buttons are available to help you navigate and work with reports.

1. **Print Report** - Clicking this button prints the summary and detailed report.
2. **View Details** - When in the summary view, clicking on this button changes the display to the detailed report view.
3. **View Summary** - When in the detailed view, clicking on this button returns the display to the summary view.
4. **Save & Continue** - Clicking on this button from either view will save the data for the test, any comments you have entered, and the evaluator name and return you to the [Test List](#) screen.
5. **Cancel** - Clicking on this button from either view will return you to the [Test List](#) screen without saving any changes to the results information. Note that all performance data have already been saved before viewing the report and will not be lost or changed by selecting the Cancel button.

Word Test Overview

The **Word test** is designed to evaluate a client's ability to correctly enter a target word. The target word is displayed in the window with a box for text entry below it. Text can be entered using any style of keyboard or keyboard emulator. Three sets of words at different reading levels are available and the size, style, and color of the text can be adjusted. (See [Word Test Configuration](#) section for a complete description of the options).

In each trial, the client's goal is to copy the target word. Press the Enter key to end the current trial and move on to the next one. If the Enter key is not pressed within the maximum available time, the trial will "time-out", and the next word will appear.

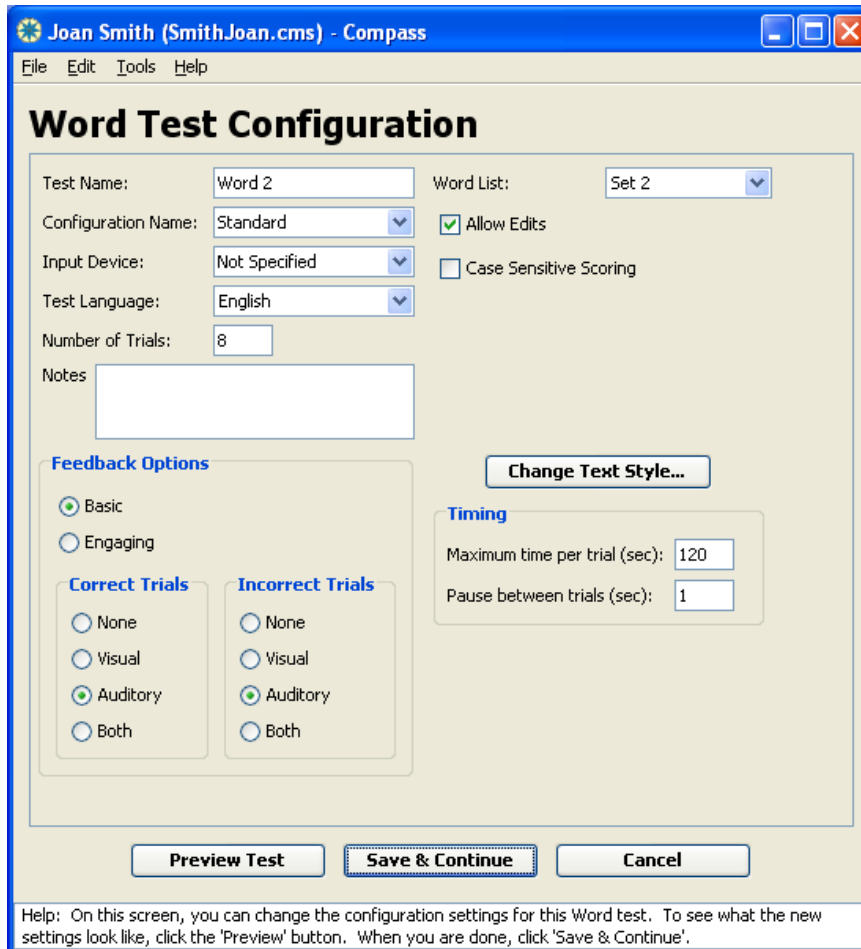


To pause the test, click the **Pause Test button**. The test will pause until you click on the **Re-Start button** (at the same location as the **Pause button**).

To quit the test before it is completed, click on the **Quit Test button**. Compass will ask you to confirm that you are sure you want to quit.

Word Test Configuration

There are numerous options available in the configuration screens for the Word test. You may choose to use the default settings if desired, but we have made a variety of settings adjustable in an attempt to help you tailor the test to your particular needs.



Joan Smith (SmithJoan.cms) - Compass

File Edit Tools Help

Word Test Configuration

Test Name: Word List: ▾

Configuration Name: ▾ Allow Edits

Input Device: ▾ Case Sensitive Scoring

Test Language: ▾

Number of Trials:

Notes

Feedback Options

Basic
 Engaging

Correct Trials **Incorrect Trials**

None None
 Visual Visual
 Auditory Auditory
 Both Both

Timing

Maximum time per trial (sec):
Pause between trials (sec):

Help: On this screen, you can change the configuration settings for this Word test. To see what the new settings look like, click the 'Preview' button. When you are done, click 'Save & Continue'.

Test name - Enter the name you would like to use for this test. The test names must be unique within each client file. The default name is **Word** with a number indicating how many word tests have been selected for this client (i.e., Word 1, Word 2, Word 3). You should try to develop a consistent strategy for naming tests that provides information about each test. This might be the date the tests were selected (Word 12-20-05), or whatever helps you to manage the tests most effectively.

Configuration name - Enter the name you would like to use for this configuration. Since the same configuration may be used for more than one test, the configuration name does not have to be unique, as long as the settings are the same. The default name is **Standard**. When changes are made to the standard configuration, Compass will prompt you to change the name upon exiting the configuration screen.

You should develop a consistent strategy for naming the configurations to describe the settings used. This will help you recall how this test differs from another one. A good configuration name might describe the input method (e.g., word prediction), the type and size of the text (e.g., 14 bold), or other important settings.

Input device - Allows the input device being used to be selected from a drop-down list of common devices. Device names that are not on the drop-down list can be typed into the field. The default value is *Not Specified*. If you are comparing performance with different input devices, it is important to set the Input Device field accordingly. Otherwise, it may not be clear which input device was used when viewing test results.

The **Test Language** field defines which language is used for any text or vocal feedback presented to the client during the test. Currently, the choices are English, French, Spanish, Portuguese, and Arabic, with *English* as the default value. In the Word test, the words to transcribe are presented in the Test Language.

Notes - A field for any comments relating to the configuration. By default, this field is empty. Adding comments may be useful for describing why certain choices were made in the configuration or any other information that will help you when reviewing the test.

Number of Trials - The number of targets that will be presented during the test. The default value is 8 trials. The number should be large enough to provide a representative sample of the client's ability to perform the task and small enough to avoid unintended fatigue or loss of interest.

Feedback Options

Style - The feedback style option allows you to select the most appropriate form of feedback for the user. **Basic feedback** provides simple, direct feedback. **Engaging feedback** provides a more stimulating response to help motivate and hold the interest of clients when necessary. Feedback styles are consistent across all of the trials. The default feedback style is *Basic*.

Four feedback options are available for correct and/or incorrect trials. The option for **Correct Trials** defines the type of feedback provided when the user completes the word correctly within the time allowed. The default value for Correct Trials is *Auditory*. The option for **Incorrect Trials** defines the type of feedback provided at the end of trial if the word entered is incorrect. The default value for Incorrect Trials is *Auditory*. The feedback options are:

1. **None** - Compass will provide no feedback for any of the trials of this type. When a selection is made or the trial times out, the next trial will start until the test is completed.
2. **Visual** - Compass will provide a visual response.
3. **Auditory** - Compass will provide an auditory response.
4. **Both** - Compass will provide both a visual and an auditory response.

Word List - This defines the group of words from which target words are selected. There are three options for Word List, in increasing level of reading difficulty:

Set 1 - corresponds roughly to 1st grade reading level.

Set 2 - corresponds roughly to 3rd grade reading level. This is the default option.

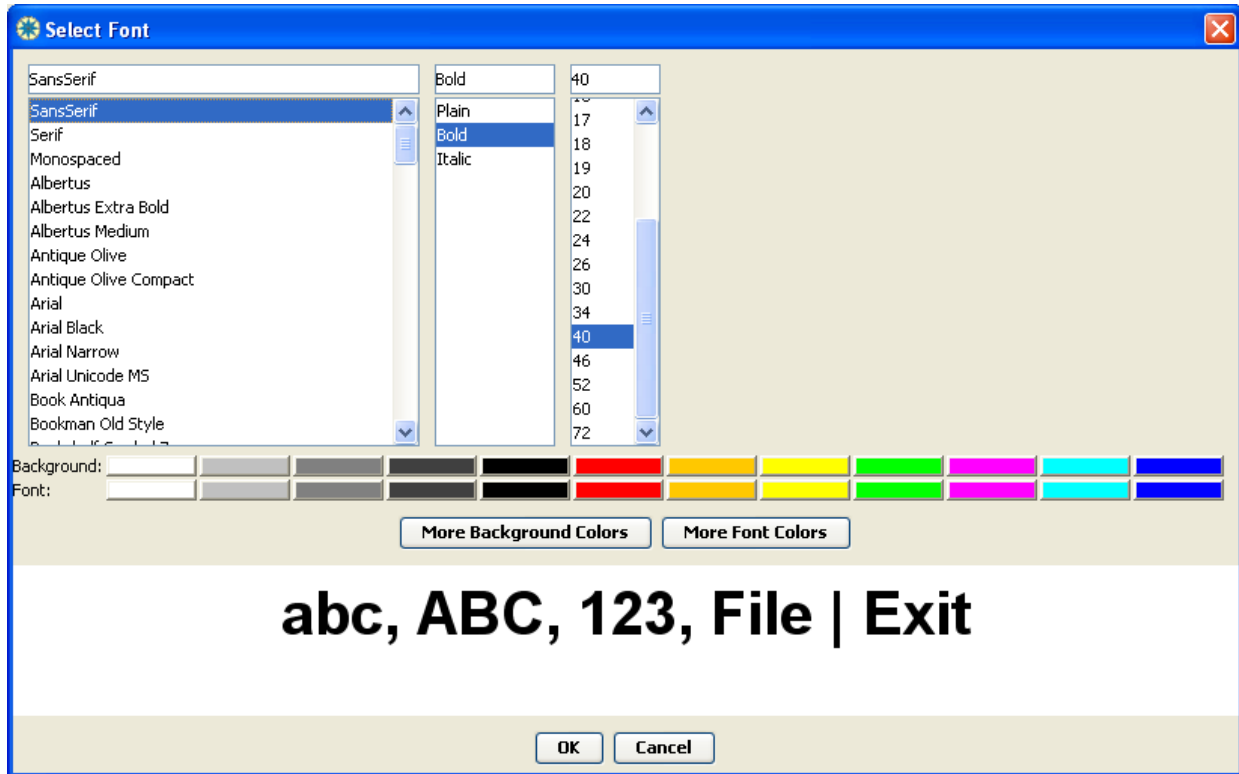
Set 3 - corresponds roughly to 6th grade reading level.

Note that even though the words in these lists have different word lengths, the words per minute rate calculations assume a constant word length of 5 letters per word. This allows you to meaningfully compare the rates achieved for different word lists.

Allow Edits - Determines whether or not the client can fix any mistakes made. If **Allow Edits** is checked, errors in letter entry are displayed and can be edited in the usual fashion with keyboard or mouse. This is the default option, since it represents the typical text entry scenario. If **Allow Edits** is not checked, only those letters that are correct for the target word will be displayed. Incorrect letter entries will not be displayed, although they will be counted in the results for the test. This setting may help reduce distraction due to errors for some clients.

Case Sensitive Scoring - Determines whether an entry must be in the correct upper or lower case in order to count as "correct." If **Case Sensitive Scoring** is checked, errors in case are counted as errors, even if the letters match the target. For example, "A" vs. "a" would be an error, with case sensitive scoring. If **Case Sensitive Scoring** is not checked, errors in case are not considered when counting errors. So the "A" vs. "a" example would be scored as correct. This is the default option.

Text Style - By default, the Word test uses a bold size 40 font, with black letters on a white background. To change the font and/or color of the text and/or the color of the test background, click the **Text Style...** button. This will bring up the dialogue box shown below. The three panels at the top show the available fonts, styles, and sizes for the text. You can select one of these by clicking on it. To set the background color, click on one of the color buttons shown on the "Background" row. To set the text color, click on one of the color buttons shown on the "Font" row. Your choices will be reflected in the Preview area. When you have the colors you want, click OK to use them. Or click Cancel to return without making any changes.



Timing

Maximum Time per Trial - This allows you to define the maximum time allowed to complete each trial. If no selection is made within the designated time, the trial times out and advances to the next trial. The time should be long enough to give the client the opportunity to make a selection but not be so long that the client becomes frustrated or bored if they are unable to successfully make a selection. The default value is *120 seconds*.

Pause Between Trials - This allows you to define the length of the pause between a selection or time out and the start of the next trial. A longer pause may be useful for users who need time to process the feedback of the previous trial before starting the next one. The default value is *1second*.

The three buttons at the bottom of the configuration screen perform the following functions:

Preview Test - Click this button to run an abbreviated version of the test using the settings you have selected. No data are collected for the trials in the preview.

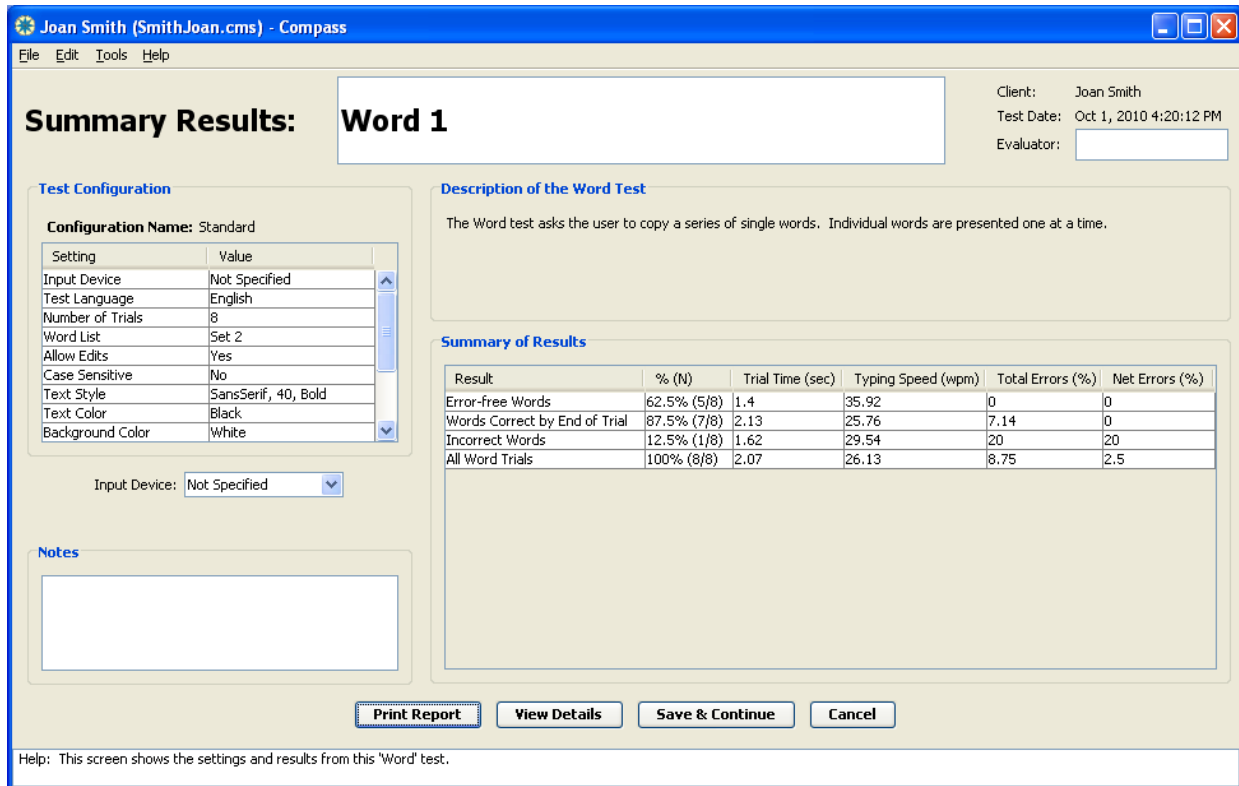
Save & Continue - Click this button to save the test configuration settings you have selected and return to the [Test List](#). If necessary, Compass will prompt you to change the configuration name before you can exit (see [Configuring Tests](#)).

Cancel - Click this button to return you to the [Test List](#) without saving any changes to the configuration settings.

Word Test Results

The results for a single Word test can be displayed in **summary** or **detailed** views. If you want to compare results for two or more Aim tests, you can create a [multi-test report](#). This page describes the data collected for an Aim test and how it is displayed on the single test report. You create a report for a single Aim test by selecting the test on the [Test List](#), then clicking **View Report**.

The summary view is presented first. A button at the bottom of the screen allows toggling between views. Both views include a table with the configuration settings used for the test. The client name, the date and time the test was run is displayed along with a box to enter the evaluator's name. There is also a box to enter notes about the test. If the input device was not entered in the [configuration screen](#), it can be entered in the report screens. The other configuration settings cannot be changed, since they represent specific characteristics of how the test was run.



Summary Results: Word 1

Client: Joan Smith
Test Date: Oct 1, 2010 4:20:12 PM
Evaluator:

Test Configuration

Configuration Name: Standard

Setting	Value
Input Device	Not Specified
Test Language	English
Number of Trials	8
Word List	Set 2
Allow Edits	Yes
Case Sensitive	No
Text Style	SansSerif, 40, Bold
Text Color	Black
Background Color	White

Input Device: Not Specified

Description of the Word Test

The Word test asks the user to copy a series of single words. Individual words are presented one at a time.

Summary of Results

Result	% (N)	Trial Time (sec)	Typing Speed (wpm)	Total Errors (%)	Net Errors (%)
Error-free Words	62.5% (5/8)	1.4	35.92	0	0
Words Correct by End of Trial	87.5% (7/8)	2.13	25.76	7.14	0
Incorrect Words	12.5% (1/8)	1.62	29.54	20	20
All Word Trials	100% (8/8)	2.07	26.13	8.75	2.5

Print Report View Details Save & Continue Cancel

Help: This screen shows the settings and results from this 'Word' test.

The **Summary of Results** provides results for four different categories, shown in the different rows of the table:

1. **Error-free Words:** this represents all words that were entered without any errors.
2. **Words Correct by End of Trial:** this represents trials in which the word entered by the client matched the target word. If the **Allow Edits** setting was on, this means that any errors made were fixed by the client before the end of the trial.

3. **Incorrect Words:** this represents trials in which the word entered by the client was not completed or not completed correctly. The available time per trial is specified by the max time configuration setting.
4. **All Trials:** this represents all trials in the test. This combines the results of "Words Correct by End of Trial" and "Incorrect Words."

For each category of trials, the following results are reported in the table columns:

1. **% (N):** how many trials fell into this category. This is shown both as a percentage of all trials in the test, as well as the exact number of trials.
2. **Trial Time (sec):** the average time required to perform each trial in this category. This is measured in seconds from when the target word is first presented until the Enter key is selected by the client, ending the trial. (Note that the time required to press the Enter key is not added into the overall trial time.)
3. **Typing Speed:** the average typing speed in words per minute for the trials in this category. This is calculated based on the average seconds per letter, and converted into words per minute assuming that there are 5 letters per word.
4. **Total Errors (%):** this is the average percent errors committed for the trials in this category. It includes unfixed as well as fixed errors, if any.
5. **Net Errors (%):** this is the average net errors remaining in these words at the end of the trial. It includes only those errors that were not fixed before the end of the trial. Note that if the **Allow Edits** setting is off, the Net Errors column is not displayed. This is because if the client is not able to fix any errors, the Total Errors and Net Errors are exactly the same. If the **Allow Edits** setting is on, comparing Net Errors to Total Errors can give a sense of how well the client recognized and corrected errors that they made.

For more information on calculating error rates, please see the [Notes](#) below.

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File Edit Tools Help

Detailed Results: Word 1

Client: Joan Smith
Test Date: Oct 1, 2010 4:20:12 PM
Evaluator:

Test Configuration

Configuration Name: Standard

Setting	Value
Input Device	Not Specified
Test Language	English
Number of Trials	8
Word List	Set 2
Allow Edits	Yes
Case Sensitive	No
Text Style	SansSerif, 40, Bold
Text Color	Black
Background Color	White

Input Device:

Word-by-word Results

Target	Response	Correct?	Trial Time (sec)	Total Errors (%)	Net Errors (%)
set	set	Yes	1.74	0	0
though	though	Yes	4.25	33.33	0
dog	dog	Yes	0.95	0	0
myself	myself	Yes	1.83	0	0
every	every	Yes	3.64	16.67	0
gave	gvave	No	1.62	20	20
sing	sing	Yes	0.76	0	0
funny	funny	Yes	1.73	0	0

Letter-by-letter Results

Response	Press Time (sec)	Duration (sec)
s	1.33	0.27
e	0.16	0.11
t	0.25	0.14
<ENTER>	0.83	0
t	0.74	0.17
h	0.41	0.12
r	0.17	0.19
o	0.22	0.14
u	0.05	0.14

Notes

Print Report View Summary Save & Continue Cancel

Help: This screen shows the settings and results from this 'Word' test.

The **detailed view** displays two results tables, the top one showing results for each word trial, and the bottom one showing each character entered during the test. The **Word-by-Word results** table shows the following results for each individual trial:

1. **Target** - The target word presented in the trial.
2. **Response** - The word entered by the client.
3. **Correct?**- Indicates whether the client's entry matched the target word. "Yes" indicates that the correct word was entered. "No" indicates that either an incorrect word was entered or that no word was entered before time expired for that trial.
4. **Trial Time (sec)** - The time in seconds needed to complete the entered word, measured until the Enter key is pressed. (Note that the time for entering the Enter key is not included in the Trial Time).
5. **Total Errors (%)** - a measure of the errors committed in this trial. It includes all errors, whether fixed or unfixed. For example, in the test shown above, the user typed an extra 'v' to produce 'gvave' instead of 'gave.' This 1 error, divided by 5 letters typed, results in a 20% total error rate for that word. And because the user did not fix the error, the net error rate is the same as the total error rate.
6. **Net Errors (%)** - a measure of the errors remaining in the word at the end of the trial. For example, in the test shown above, the user committed an error while entering the word 'every.' This is reflected in the total error rate of 16.67%. The user did fix the error before ending the trial, resulting in a net error rate of 0% for the word 'every.' (Note that if the **Allow Edits** setting is off, the Net Errors column is not displayed. This is because if the client is not able to fix any errors, the Total Errors and Net Errors are exactly the same.)

For more information on calculating error rates, please see the [Notes](#) below.

The **Letter-by-Letter results** table shows the following results for each individual character entered during the test:

1. **Target** - The target letter. This is only displayed if the **Allow Edits** setting is off, because that is the only time that Compass will reliably know the target letter at all times.
2. **Response** - The letter entered by the client.
3. **Correct?** - Whether the response matched the target. This is only displayed if the **Allow Edits** setting is off, because that is the only time that Compass will reliably know the target letter at all times.
4. **Press Time (sec)** - The time in seconds from when the previous key was depressed until this key was pressed.
5. **Duration (sec)** - The time in seconds from when the key was pressed until it was released.

The sum of Press Times for a word is the Trial Time for that word.

Note that the width of the columns in any of the tables can be resized by moving the cursor to the edge of the box containing the label and dragging it to the left or right.

Additionally, you can [cut-and-paste](#) the contents of a Word report into another application, such as a word processor. This may be useful when preparing reports on a particular client.

The following buttons are available to help you navigate and work with reports.

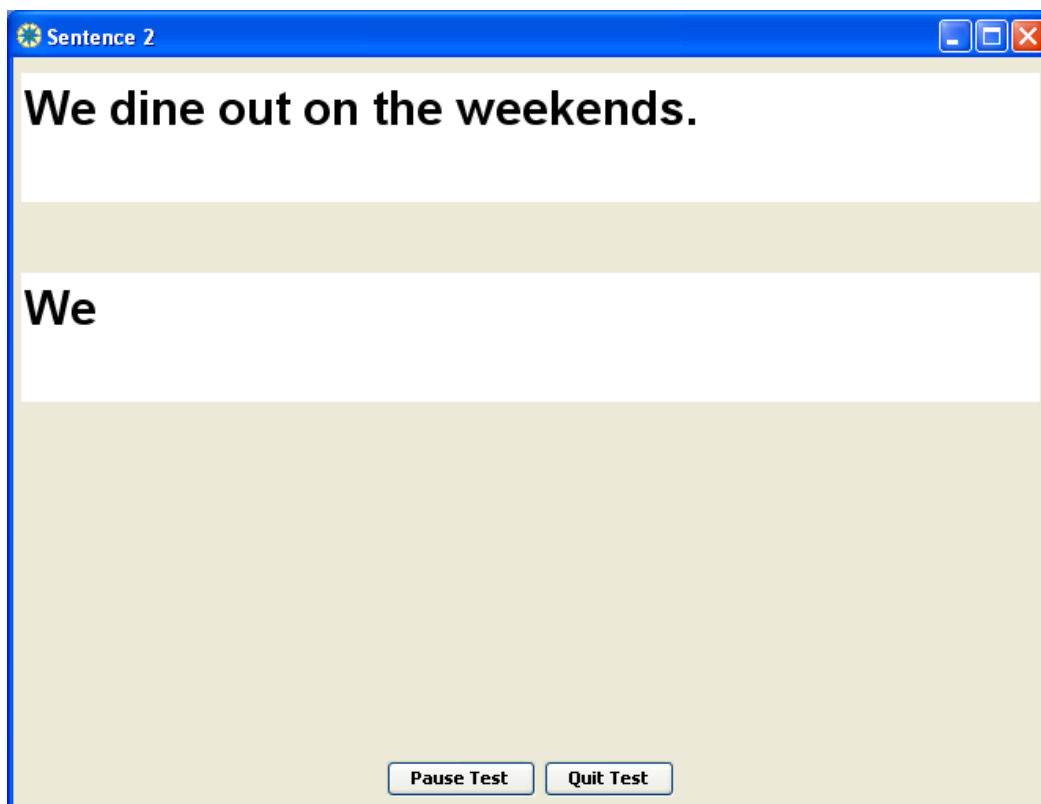
1. **Print Report** - Clicking this button prints the summary and detailed report.
2. **View Details** - When in the summary view, clicking on this button changes the display to the detailed report view.
3. **View Summary** - When in the detailed view, clicking on this button returns the display to the summary view.
4. **Save & Continue** - Clicking on this button from either view will save the data for the test, any comments you have entered, and the evaluator name and return you to the [Test List](#) screen.
5. **Cancel** - Clicking on this button from either view will return you to the [Test List](#) screen without saving any changes to the results information. Note that all performance data have already been saved before viewing the report and will not be lost or changed by selecting the Cancel button.

Note on error rate calculations: The calculations used to determine Total Error and Net Error rates are based on the work of Soukoreff and MacKenzie (2003), in their paper entitled "Metrics for text entry research: An evaluation of MSD and KSPC, and a new unified error metric", *Proceedings of CHI 2003*. Their method is used to determine the "distance" between the word entered by the client and the target word, at the end of the trial. This forms the basis for the net error rate. If the word entered matches the target word exactly, this distance is zero. For total error rate, the distance at the end of the trial is adjusted to account for any errors that were fixed along the way.

Sentence Test Overview

The **Sentence test** is designed to evaluate a client's ability to correctly enter a target sentence. The target sentence is displayed in the window with a box for text entry below it. Text can be entered using any style of keyboard or keyboard emulator. Two sets of sentences are available, and the size, style, and color of the text can be adjusted. (See the [Sentence Test Configuration](#) section for a complete description of the options).

In each trial, the client's goal is to copy the target sentence. Press the Enter key to end the current trial and move on to the next one. If the Enter key is not pressed within the maximum available time, the trial will "time-out", and the next sentence will appear.

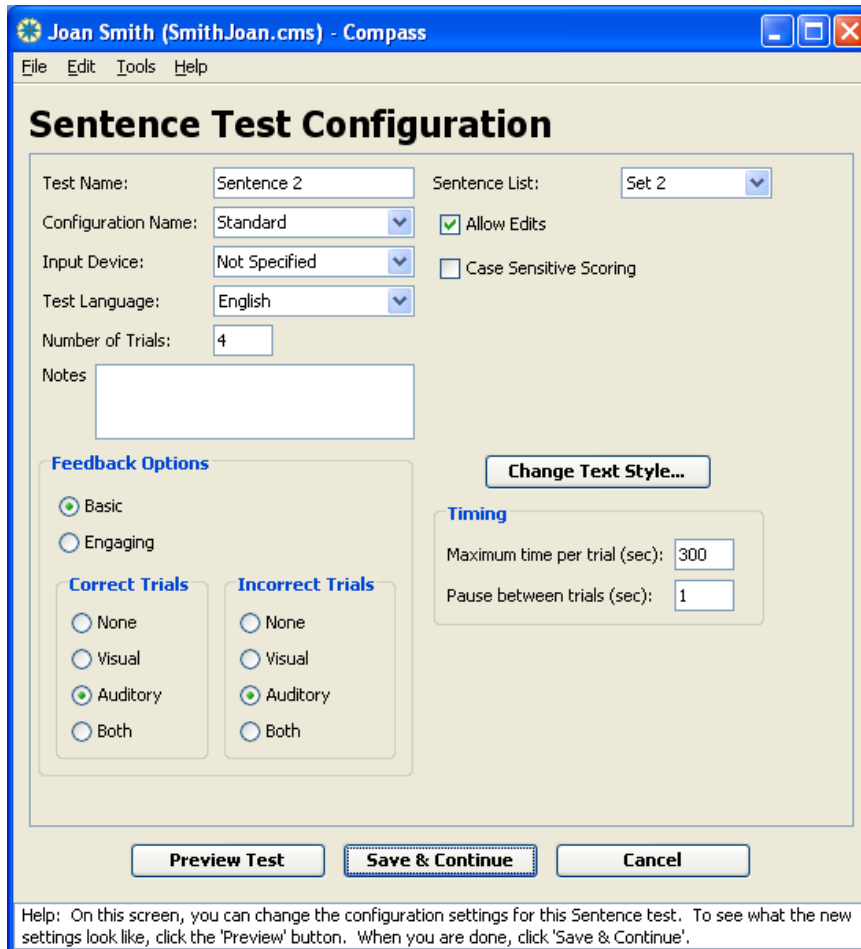


To pause the test, click the **Pause Test button**. The test will pause until you click on the **Re-Start button** (at the same location as the **Pause button**).

To quit the test before it is completed, click on the **Quit Test button**. Compass will ask you to confirm that you are sure you want to quit. Note that if you quit in the middle of entering a sentence, the data for that partial sentence will not be recorded.

Sentence Test Configuration

There are numerous options available in the configuration screens for the Sentence test. You may choose to use the default settings if desired, but we have made a variety of settings adjustable in an attempt to help you tailor the test to your particular needs.



Joan Smith (SmithJoan.cms) - Compass

File Edit Tools Help

Sentence Test Configuration

Test Name: Sentence List:

Configuration Name: Allow Edits

Input Device: Case Sensitive Scoring

Test Language:

Number of Trials:

Notes

Feedback Options

Basic
 Engaging

Correct Trials **Incorrect Trials**

None None
 Visual Visual
 Auditory Auditory
 Both Both

Timing

Maximum time per trial (sec):
Pause between trials (sec):

Help: On this screen, you can change the configuration settings for this Sentence test. To see what the new settings look like, click the 'Preview' button. When you are done, click 'Save & Continue'.

Test Name - Enter the name you would like to use for this test. The test names must be unique within each client file. The default name is *Sentence* with a number indicating how many sentence tests have been selected for this client (i.e., Sentence 1, Sentence 2, Sentence 3). You should try to develop a consistent strategy for naming tests that provides information about each test. This might be the date the tests were selected (Sentence 12-20-05), or whatever helps you to manage the tests most effectively.

Configuration Name - Enter the name you would like to use for this configuration. Since the same configuration may be used for more than one test, the configuration name does not have to be unique, as long as the settings are the same. The default name is *Standard*. When changes are made to the standard configuration, Compass will prompt you to change the name upon exiting the configuration screen.

You should develop a consistent strategy for naming the configurations to describe the settings used. This will help you recall how this test differs from another one. A good configuration name might describe the input method (e.g., word prediction), the type and size of the text (e.g., 14 bold), or other important settings.

Input Device - Allows the input device being used to be selected from a drop-down list of common devices. Device names that are not on the drop-down list can be typed into the field. The default value is *Not Specified*. If you are comparing performance with different input devices, it is important to set the Input Device field accordingly. Otherwise, it may not be clear when viewing test results which input device was used.

The **Test Language** field defines which language is used for any text or vocal feedback presented to the client during the test. Currently, the choices are English, French, Spanish, Portuguese, and Arabic, with *English* as the default value. In the Sentence test, the sentences to transcribe are presented in the Test Language.

Notes - A field for any comments relating to the configuration. By default, this field is empty. Adding comments may be useful for describing why certain choices were made in the configuration or any other information that will help you when reviewing the test.

Number of Trials - The number of targets that will be presented during the test. The default value is 4 trials. The number should be large enough to provide a representative sample of the client's ability to perform the task and small enough to avoid unintended fatigue or loss of interest.

Feedback Options

Style - The feedback style option allows you to select the most appropriate form of feedback for the user. **Basic feedback** provides simple, direct feedback. **Engaging feedback** provides a more stimulating response to help motivate and hold the interest of clients when necessary. Feedback styles are consistent across all of the trials. The default feedback style is *Basic*.

Four feedback options are available for correct and/or incorrect trials. The option for **Correct Trials** defines the type of feedback provided when the user completes the sentence correctly within the time allowed. The default value for Correct Trials is *Auditory*. The option for **Incorrect Trials** defines the type of feedback provided at the end of trial if the sentence entered is incorrect. The default value for Incorrect Trials is *Auditory*. The feedback options are:

1. **None** - Compass will provide no feedback for any of the trials of this type. When a selection is made or the trial times out, the next trial will start until the test is completed.
2. **Visual** - Compass will provide a visual response.
3. **Auditory** - Compass will provide an auditory response.
4. **Both** - Compass will provide both a visual and an auditory response.

Sentence List - This defines the group of sentences from which target words are selected. There are six options for Sentence List. The first two options are, in increasing level of reading difficulty:

1. **Sentence Set 1** - corresponds roughly to 1st grade reading level, or lower. (The Flesch-Kinkaid Grade Level score is 0.0 for these sentences.)
2. **Sentence Set 2** - these are slightly longer than the sentences in Set 1, with some longer words. It corresponds roughly to 3rd grade reading level. (The Flesch-Kinkaid Grade Level score is 2.4 for these sentences.) This is the default option.

Sentence Set 1 contains about 25 sentences, and Sentence Set 2 contains about 100 sentences. When you run a Sentence test using either of these sets, the test will select each sentence at random and ensure that no sentence is presented more than once in the test.

The remaining list options are designed for more controlled testing, and are best-suited for use with 4 or fewer sentences in the test:

1. **Practice** - contains 1 practice sentence. This is useful if you want to run a separate practice test with the guarantee that it will use a unique sentence.
2. **4-Sentence Test 1, 4-Sentence Test 2, and 4-Sentence Test 3** - each of these is a list with exactly 4 sentences. All three tests are matched with respect to the number of shifted characters, the total number of characters in the test, the characters per word, and the grade level of the text. They correspond roughly to a 3rd or 4th grade reading level. (The Flesch-Kinkaid Grade Level score is 3.8 for these sentences.)

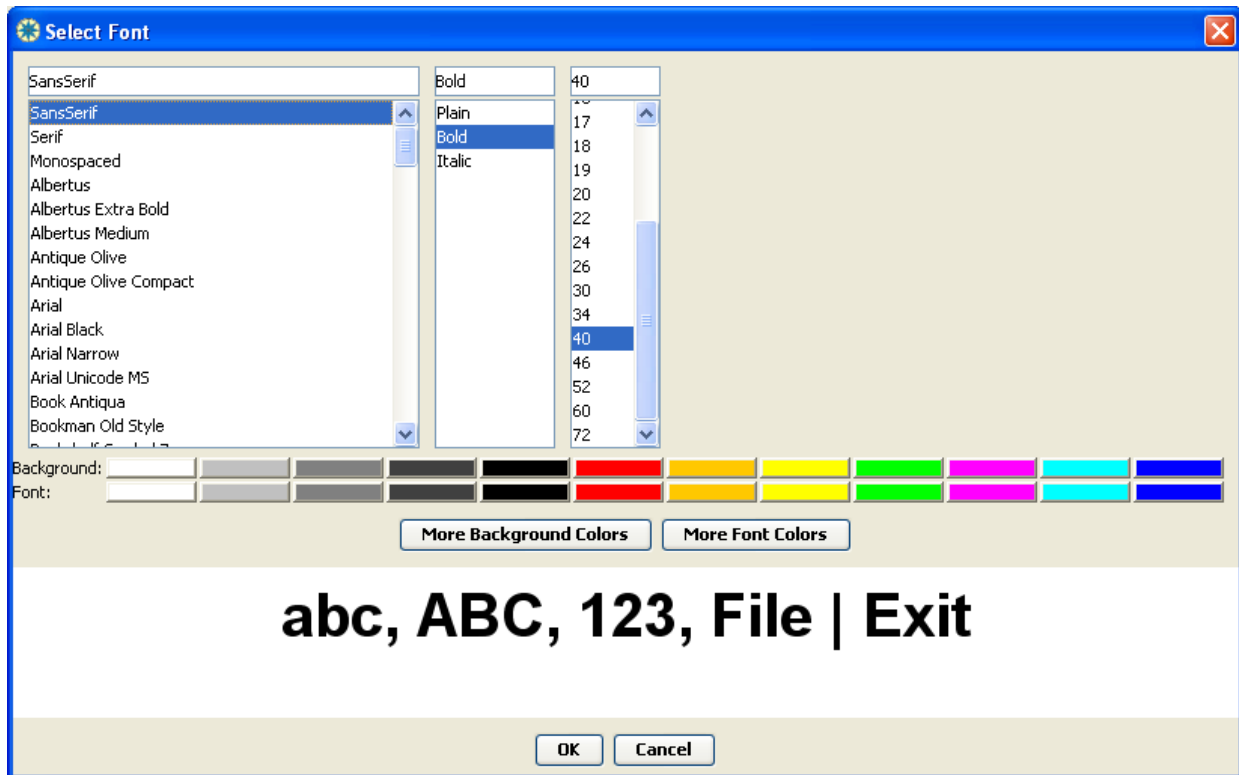
When you use any of these 4-Sentence tests, each sentence in the test is presented in a fixed order. These tests lend themselves to more strict data collection requirements. They allow you to run up to three Sentence tests in a row with a guarantee that all the sentences will be unique. (With Sentence Set 1 and Set 2, it is likely that all sentences will be unique, but it is possible that a sentence could get randomly selected in two successive tests.)

Note that even though the words in these sentence lists have different word lengths, the words per minute rate calculations assume a constant word length of 5 letters per word. This allows you to meaningfully compare the rates achieved for different word lists. The sentence lists were derived from the phrase sets described by MacKenzie & Soukoreff (2003), in their paper entitled "Phrase sets for evaluating text entry techniques", *Proceedings of CHI 2003 Conference*.

Allow Edits - Determines whether or not the client can fix any mistakes made. If **Allow Edits** is checked, errors in letter entry are displayed and can be edited in the usual fashion with keyboard or mouse. This is the default option, since it represents the typical text entry scenario. ;If **Allow Edits** is not checked, only those letters that are correct for the target sentence will be displayed. Incorrect letter entries will not be displayed, although they will be counted in the results for the test. This setting may help reduce distraction due to errors for some clients.

Case Sensitive Scoring - Determines whether an entry must be in the correct upper or lower case in order to count as "correct." If **Case Sensitive Scoring** is checked, errors in case are counted as errors, even if the letters match the target. For example, "A" vs. "a" would be an error, with case sensitive scoring. If **Case Sensitive Scoring** is not checked, errors in case are not considered when counting errors. So the "A" vs. "a" example would be scored as correct. This is the default option.

Text Style - By default, the Sentence test uses a bold size 30 font, with black letters on a white background. To change the font and/or color of the text and/or the color of the test background, click the **Text Style...** button. This will bring up the dialogue box shown below. The three panels at the top show the available fonts, styles, and sizes for the text. You can select one of these by clicking on it. To set the background color, click on one of the color buttons shown on the "Background" row. To set the text color, click on one of the color buttons shown on the "Font" row. Your choices will be reflected in the Preview area. When you have the colors you want, click OK to use them. Or click Cancel to return without making any changes.



Timing

Maximum Time per Trial - This allows you to define the maximum time allowed to complete each trial. If no selection is made within the designated time, the trial times out and advances to the next trial. The time should be long enough to give the client the opportunity to make a selection but not be so long that the client becomes frustrated or bored if they are unable to successfully make a selection. The default value is **300 seconds** (or 5 minutes per sentence).

Pause Between Trials - This allows you to define the length of the pause between a selection or time out and the start of the next trial. A longer pause may be useful for users who need time to process the feedback of the previous trial before starting the next one. The default value is **1second**.

The three buttons at the bottom of the configuration screen perform the following functions:

Preview Test - Click this button to run an abbreviated version of the test using the settings you have selected. No data are collected for the trials in the preview.

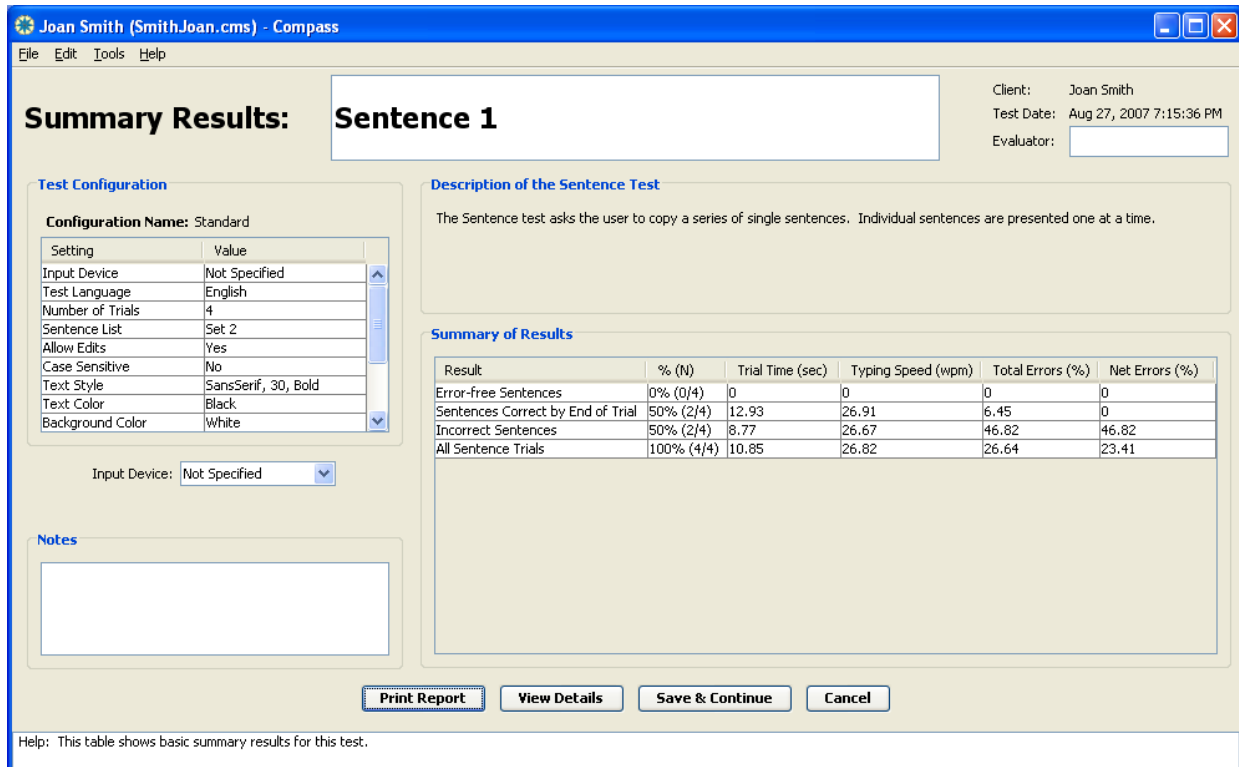
Save & Continue - Click this button to save the test configuration settings you have selected and return to the [Test List](#). If necessary, Compass will prompt you to change the configuration name before you can exit (see [Configuring Tests](#)).

Cancel - Click this button to return you to the [Test List](#) without saving any changes to the configuration settings.

Sentence Test Results

The results for a single Sentence test can be displayed in **summary** or **detailed** views. If you want to compare results for two or more Sentence tests, you can create a [multi-test report](#). This page describes the data collected for a Sentence test and how it is displayed on the single test report. You create a report for a single Sentence test by selecting the test on the [Test List](#), then clicking **View Report**.

The summary view is presented first. A button at the bottom of the screen allows toggling between views. Both views include a table with the configuration settings used for the test. The client name, the date and time the test was run is displayed along with a box to enter the evaluator's name. There is also a box to enter notes about the test. If the input device was not entered in the [configuration screen](#), it can be entered in the report screens. The other configuration settings cannot be changed, since they represent specific characteristics of how the test was run.



Summary Results: Sentence 1

Client: Joan Smith
Test Date: Aug 27, 2007 7:15:36 PM
Evaluator:

Test Configuration

Configuration Name: Standard

Setting	Value
Input Device	Not Specified
Test Language	English
Number of Trials	4
Sentence List	Set 2
Allow Edits	Yes
Case Sensitive	No
Text Style	SansSerif, 30, Bold
Text Color	Black
Background Color	White

Input Device:

Notes

Description of the Sentence Test

The Sentence test asks the user to copy a series of single sentences. Individual sentences are presented one at a time.

Summary of Results

Result	% (N)	Trial Time (sec)	Typing Speed (wpm)	Total Errors (%)	Net Errors (%)
Error-free Sentences	0% (0/4)	0	0	0	0
Sentences Correct by End of Trial	50% (2/4)	12.93	26.91	6.45	0
Incorrect Sentences	50% (2/4)	8.77	26.67	46.82	46.82
All Sentence Trials	100% (4/4)	10.85	26.82	26.64	23.41

Print Report View Details Save & Continue Cancel

Help: This table shows basic summary results for this test.

The **Summary of Results** provides results for four different categories, shown in the different rows of the table:

1. **Error-free Sentences:** this represents all sentences that were entered without any errors.
2. **Sentences Correct by End of Trial:** this represents trials in which the sentence entered by the client matched the target sentence. If the **Allow Edits** setting was on, this means that any errors made were fixed by the client before the end of the trial.

3. **Incorrect Sentences:** this represents trials in which the sentence entered by the client was not correctly completed in the time available. The available time per trial is specified by the max time configuration setting.
4. **All Trials:** this represents all trials in the test. This combines the results of "Sentences Correct by End of Trial" and "Incorrect Sentences."

For each category of trials, the following results are reported in the table columns:

1. **% (N):** how many trials fell into this category. This is shown both as a percentage of all trials in the test, as well as the exact number of trials.
2. **Trial Time (sec):** the average time required to perform each trial in this category. This is measured in seconds from when the target sentence is first presented until the Enter key is selected by the client, ending the trial. (Note that the time required to press the Enter key is not added into the overall trial time.)
3. **Typing Speed:** the average typing speed in words per minute for the trials in this category. This is calculated based on the average seconds per letter, and converted into words per minute assuming that there are 5 letters per word.
4. **Total Errors (%):** this is the average percent errors committed for the trials in this category. It includes unfixed as well as fixed errors, if any.
5. **Net Errors (%):** this is the average net errors remaining in these sentences at the end of the trial. It includes only those errors that were not fixed before the end of the trial. Note that if the **Allow Edits** setting is off, the Net Errors column is not displayed. This is because if the client is not able to fix any errors, the Total Errors and Net Errors are exactly the same. If the **Allow Edits** setting is on, comparing Net Errors to Total Errors can give a sense of how well the client recognized and corrected errors that they made.

For more information on calculating error rates, please see the [Notes](#) below.

Detailed Results: Sentence 1

Client: Joan Smith
Test Date: Aug 27, 2007 7:15:36 PM
Evaluator:

Test Configuration

Configuration Name: Standard

Setting	Value
Input Device	Not Specified
Test Language	English
Number of Trials	4
Sentence List	Set 2
Allow Edits	Yes
Case Sensitive	No
Text Style	SansSerif, 30, Bold
Text Color	Black
Background Color	White

Input Device: Not Specified

Sentence-by-sentence Results

Target	Response	Correct?	Trial Time (sec)	Total Errors (%)	Net Errors (%)
They watched t...	They watched t...	Yes	10.41	3.23	0
'Would you like t...	Would you like ...	No	14.38	5.41	5.41
Soon we will ret...	Soobe	No	3.17	88.24	88.24
It should be sun...	It should be sun...	Yes	15.45	9.68	0

Letter-by-letter Results

Response	Press Time (sec)	Duration (sec)
T	2.44	0
h	0.17	0
e	0.19	0
y	0.2	0
Space	0.2	0
w	0.62	0
a	0.24	0
t	0.23	0
c	0.31	0

Print Report View Summary Save & Continue Cancel

Help: This screen shows the settings and results from this 'Sentence' test.

The **detailed view** displays two results tables, the top one showing results for each sentence trial, and the bottom one showing each character entered during the test. The **Sentence-by-Sentence results** table shows the following results for each individual trial:

1. **Target** - The target sentence presented in the trial.
2. **Response** - The sentence entered by the client.
3. **Correct?** - Indicates whether the client's entry matched the target sentence. "Yes" indicates that the correct sentence was entered. "No" indicates that either an incorrect letter was entered or that no sentence was entered before time expired for that trial.
4. **Trial Time (sec)** - The time in seconds needed to complete the entered sentence, measured until the Enter key is pressed. (Note that the time for entering the Enter key is not included in the Trial Time).
5. **Total Errors (%)** - a measure of the errors committed in this trial. It includes all errors, whether fixed or unfixed. For example, in the 1st sentence of the test shown above, the user made some corrections during the trial, resulting in a correct sentence by the end of the trial. The errors committed along the way are reflected in the total error rate of 3.23% for that sentence, but the fact that all the errors were fixed is reflected in the net error rate of 0% for that sentence.
6. **Net Errors (%)** - a measure of the errors remaining in the word at the end of the trial.

For more information on calculating error rates, please see the [Notes](#) below.

The **Letter-by-Letter results** table shows the following results for each individual character entered during the test:

1. **Target** - The target letter. This is only displayed if the **Allow Edits** setting is off, because that is the only time that Compass will reliably know the target letter at all times.
2. **Response** - The letter entered by the client.
3. **Correct?**- Whether the response matched the target. This is only displayed if the **Allow Edits** setting is off, because that is the only time that Compass will reliably know the target letter at all times.
4. **Press Time (sec)** - The time in seconds from when the previous key was depressed until this key was pressed.
5. **Duration (sec)** - The time in seconds from when the key was pressed until it was released.

The sum of Press Times for a sentence is the Trial Time for that sentence.

Note that the width of the columns in any of the tables can be resized by moving the cursor to the edge of the box containing the label and dragging it to the left or right.

Additionally, you can [cut-and-paste](#) the contents of a Sentence report into another application, such as a word processor. This may be useful when preparing reports on a particular client.

The following buttons are available to help you navigate and work with reports.

1. **Print Report** - Clicking this button prints the summary and detailed report.
2. **View Details** - When in the summary view, clicking on this button changes the display to the detailed report view.
3. **View Summary** - When in the detailed view, clicking on this button returns the display to the summary view.
4. **Save & Continue** - Clicking on this button from either view will save the data for the test, any comments you have entered, and the evaluator name and return you to the [Test List](#) screen.
5. **Cancel** - Clicking on this button from either view will return you to the [Test List](#) screen without saving any changes to the results information. Note that all performance data have already been saved before viewing the report and will not be lost or changed by selecting the Cancel button.

Note on error rate calculations: The calculations used to determine Total Error and Net Error rates are based on the work of Soukoreff and MacKenzie (2003), in their paper entitled "Metrics for text entry research: An evaluation of MSD and KSPC, and a new unified error metric", *Proceedings of CHI 2003*. Their method is used to determine the "distance" between the text entered by the client and the target text, at the end of the trial. This forms the basis for the net error rate. If the text entered matches the target text exactly, this distance is zero. For total error rate, the distance at the end of the trial is adjusted to account for any errors that were fixed along the way.

About Koester Performance Research (KPR)

Koester Performance Research (KPR) works to enhance computer access, particularly for people who have physical impairments or other disabilities. Our goal is to help ensure that everyone gets the right access solution to meet their needs. To pursue this goal, we develop software and conduct research on usability and accessibility.

KPR is located in beautiful Ann Arbor, MI. Visit us on the web at <https://kpronline.com>.

If you have suggestions about Compass, we hope you will send them to us at compass@kpronline.com. We want to make sure that Compass continues to meet your needs as it evolves.

You can also subscribe to our mailing list at kpronline.com, for news and updates about once or twice a month. (See kpronline.com/blog for the types of things we post.)

Technical Support

Compass has been extensively tested and designed with the highest quality and ease of use in mind. We hope that you will have a great experience with Compass. However, an issue may arise for which you need some support.

You may contact KPR directly at compass@kpronline.com. We will do our best to respond to your question within 24 hours.

As we develop additional support resources, we will list those at our website at <https://kpronline.com>. You may want to visit there regularly to see what's new.

You can also subscribe to our mailing list at kpronline.com, for news and updates about once or twice a month. (See kpronline.com/blog for the types of things we post.)

Thank you for choosing Compass!

Development Team

Compass research and development is led by Koester Performance Research. Contributors also included the Ann Arbor Center for Independent Living, University of Pittsburgh, and Eastern Michigan University. Support for development was provided by Phase I and Phase II STTR grants from the National Institutes of Health.

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The team also thanks Wally Welch and Kathy Koehler for valuable consulting services during the development process.

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