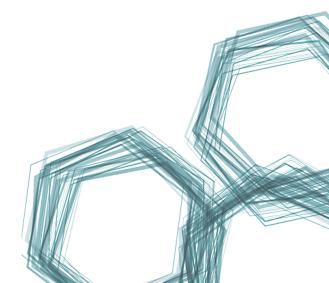
# Morae Software in the Usability Testing Lab

a guide to designing, observing, and analyzing usability tests



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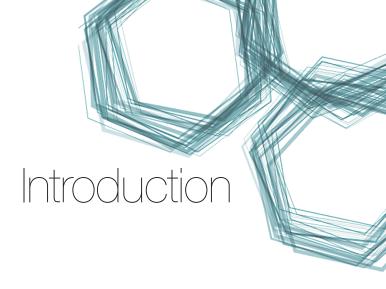
## What is Morae?

The Morae software suite is designed to facilitate your usability research process from study design to data analysis. Morae can support a variety of research types, including the following:

- Software and website usability testing
- In-depth interviews
- Field studies and ethnography
- Paper prototyping
- · Mobile device and hardware testing
- · Document usability testing

The Morae suite includes three applications: Recorder, Observer and Manager. Each application addresses different aspects of the research process. The following table summarizes each application.

Recorder Collect data	Observer Log and observe testing in real time	Manager Analyze, visualize, and share results
Create a study using preset templates or customize study	<ul> <li>Remotely view usability testing in real time</li> </ul>	<ul> <li>Automatically create graphs from testing data</li> </ul>
details to suit your needs  Capture audio, video, user	<ul> <li>Create markers to note and code participant's behavior</li> </ul>	<ul> <li>View and cross-reference events and tasks</li> </ul>
<ul><li>input, and on-screen activity</li><li>Create and administer surveys</li></ul>	<ul> <li>Log and make notes as the participant completes tasks</li> </ul>	<ul> <li>Add text or audio annotations</li> </ul>
		<ul> <li>Export your data for use in other programs</li> </ul>
		<ul> <li>Securely share video highlights from your study</li> </ul>



# **Morae Suite Applications**

Recorder allows you to capture audio and video. You can also record your user and his or her on-screen activity, including keyboard activity and mouse clicks.

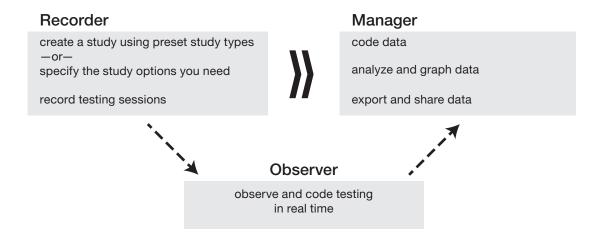
Observer allows one or more computers to observe the real-time audio and video data being recorded in Recorder. The two-room setup of the usability lab is designed so that researchers can use Observer in one room while the user completes research tasks in the other room. Observer also allows researchers to mark user actions and task information as they watch the real-time audio/video feed of user activity.

Manager allows you to organize your study information and individual interviews. You can create text or audio annotation for your data as well as code any data that wasn't marked using Observer. Manager performs data analysis, creates graphs and can export study data to other programs (such as Excel or Numbers). Manager can also be used to edit research video for presentations or to share with other researchers.

# The Usability Lab and Additional Equipment

The Usability Lab contains the software (Morae suite) and equipment you will need to perform the most common types of usability testing. This equipment includes a microphone, webcam, tripod and video camera. If additional equipment is needed for your research, you should ask your professor about additional resources or contact the English Department.

# Typical Morae Workflow



## Welcome to Recorder!

With this application, you can perform the following tasks:

- Choose the recording, study and marker settings that best fit the parameters of your usability test.
- Test the audio and video recording equipment.
- Record a user's on-screen actions, keyboard and mouse activity, and spoken comments; the feed from a webcam; and the feed from a handheld video camera during your usability test.

When you have finished using Recorder, you may import, analyze and graph your information in the Manager application.

## **Key Terms**

Before you begin, here are some terms that will help you understand Recorder:

#### Task

Something you ask the user to try to accomplish during a research session. Tasks are logged manually during the recording.

#### Success Score

A number and description you can match to a task, depending on how sufficiently the user completes the task. This is useful when later analyzing how successfully your users are performing.

#### Marker

A note about an important point in a recording. During analysis, you can quickly locate and review markers. You can log a marker in any Morae application, during a recording in Observer, as well as after a recording when using Manager. Markers are defined by three features—color, type, and definition—and you may adjust all three features by clicking **EDIT** in the right side of the window.

#### Scores

Scores are used for all types of markers; they are similar to success scores used in tasks.



#### In this section:

Welcome

**Key Terms** 

Set Up the Equipment

Open Recorder

Define Audio and Video Settings

Modify the Recording Details

Modify the Study Details

Make a Test Recording

**Record Your User Test** 

End Your Recording Session

**Keyboard Shortcuts** 

# Set up the Equipment

Before you begin defining and recording your session in Recorder, make sure that all of the recording equipment is properly connected to the computer.

Set up the Video Camera

1. Open the flip-out screen of the handheld Panasonic HDC-TM55.

The video camera must have a charged battery or be connected to a wall outlet.

2. Connect the camera to the white Pinnacle box with the RCA connector.

The RCA connector is the cord with yellow, white and red plugs. The cord connects to the camera's AV MULTI slot, which was originally concealed by the flip-out screen.

If you plug the cable in to the AV MULTI slot while the camera is on, the **SELECT OUTPUT SIGNAL** prompt will appear on the flip-out screen. You will see two options, **AV OUT** and **COMPONENT**. Select **COMPONENT** by touching its box on the flip-out screen.

- 3. Connect the Pinnacle box to the PC with the USB cord. If the light on top of the Pinnacle box is glowing green, the box is already connected to the PC.
- 4. Turn the camera on by pressing the round button with the O/I mark above it.

You will see a red light at the back end of the camcorder when the camera is on.







## Set up the Microphone

- 1. Plug the Logitech Microphone into the PC with its USB cable.
- 2. If the large button on top of the base is not glowing green, press it to turn the microphone on.

Congratulations! Now that you have the hardware set up, we can go into the Morae software.

# Open Recorder

- 1. Open morae recorder.
- 2. Click ok in the welcome to morae recorder window.

The **DEFAULT STUDY** configuration will work for all usability tests, and several of the other configurations do not include all Morae's recording options. Advanced users who know exactly which preset options they want may select the study configuration that fits their needs.





# **Define Audio and Video Settings**

1. Under video and audio sources, select your video source under Main.

You may choose to record all or part of the on-screen actions, the feed from the Pinnacle 510-USB Composite handheld camera or the feed from the webcam. which appears as **CAMERA** in the drop-down menu.

- 2. Under video and audio sources, select the source of your Picture-in-Picture (PiP) if you are using two video sources and would like both of their feeds to appear in the video and audio sources window
- 3. Under VIDEO AND AUDIO SOURCES, Select the Microphone (3- USB Audio Device under Audio.

Speak into microphone to test your audio levels, which should not go into red area of the bar. If they do, move the sound slider to the left. If the audio is not loud enough, move the sound slider to the right.

Congratulations! You have set up the recording equipment, the recording details, the study details, and your audio and video sources-everything you will need to make a test recording.



# Modify the Recording Details

- 1. Click on modify recording details.
- 2. Name your recording and choose your file location.

- If you select PASSWORD PROTECT RECORDING FILE, you will not be able to retrieve your password if you forget it.
- 3. Select CAPTURE OPTIONS from the blue menu.
  - 3.1 Choose your Main video source.

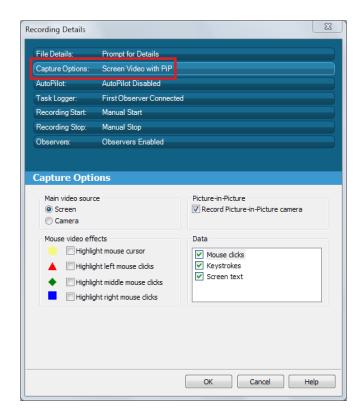
If you select **screen**, Recorder will capture all of the user's on-screen actions. To highlight those actions, check the relevant **MOUSE VIDEO EFFECTS**.

If you select **CAMERA**, Recorder will capture the feed from the webcam or the handheld Panasonic HDC-TM55, and you will not have the option of selecting **mouse video effects**. However, you will be able to log tasks, markers, and scores in real time and after you finished recording. This option is available only if you select one of the cameras as your main video source.

- 3.2 Check the RECORD PICTURE-IN-PICTURE CAMERA box if you are using two video sources and would like to record both of them, one inside the other, in the VIDEO AND AUDIO SOURCES window.
- 3.3 Choose the data you would like to record under DATA.

You can later analyze this data in Manager. Please visit page 19 for the Manager instructions.





#### 4. Select recording START in the blue menu.

#### Additional options:

- If you want to start your recording manually, keep the default settings.
- If you want your recording to begin when the user clicks the mouse, opens an application or closes an application, select one of those options from the BASED ON AN EVENT drop-down menu.
- If you want the recording to begin at a specific date and time, enter that information under AT A SPECIFIC DATE/TIME.
- If you want someone using the Observer application to be able to start the recording, click using observer. If you want only a specific Observer to start the application, enter his or her name next to Observer name.
- If you want to begin the recording automatically, select **AUTOPILOT**.

#### 5. Select recording stop from the blue menu.

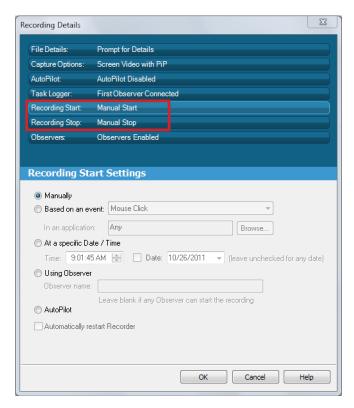
Select how you would like to stop your recording. The categories in the **RECORDING STOP** window are identical to those in the **RECORDING START** window.

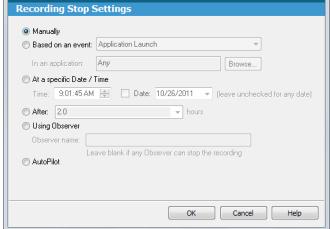
#### 6. Click ok.



## **Quick Tip: AutoPilot**

AutoPilot is an advanced feature that allows you to make an automated recording. For more information, visit the following page on the Morae website: http://www.techsmith.com/learn/morae/3/record/record-automated-sessions/





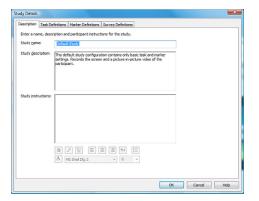
# Modify the Study Details

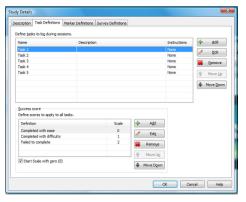
- 1. Click on modify study details.
- 2. In the description tab, enter your study NAME, STUDY DESCRIPTION and, if necessary, study instructions.
- 3. In the TASK DEFINITIONS tab, edit, add or remove tasks and success scores as needed.

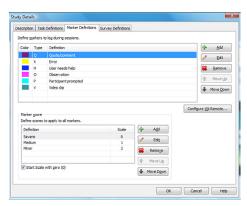
Reminder: Success scores are numbers and descriptions you can match to a task, depending on how sufficiently the user completes the task.

4. In the MARKER DEFINITIONS tab, add, edit or remove markers and marker scores as needed.

Reminder: Markers are notes about an important point in a recording.







#### 5. In survey definitions, add, edit, copy or remove surveys as needed.

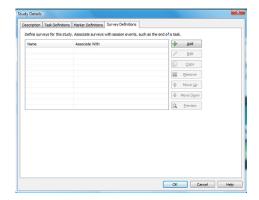
- If you click ADD, you can create a survey based on a numbered scale, a series of multiple-choice options, a series of boxes that the user may check or an openended question.
- You may keep the default STANDARD SYSTEM USABILITY SCALE (SUS) survey, which allows the user to answer 10 questions using a five-point "Strongly Disagree" to "Strongly Agree" scale, or you can define your own questions by selecting custom QUESTIONS under the SURVEY QUESTIONS heading.
- · After you choose your survey, you may associate it with the beginning or ending of the recording, or with the completion of a task that you have defined under the As-**SOCIATE WITH** heading under the main **SURVEY DEFINITIONS** tab.

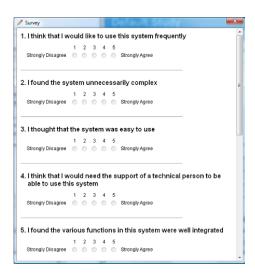
#### 6. Click OK.



#### When would I add a survey?

Suppose you are testing some medical software documentation, and all of the participants in your study are doctors or nurses. Because you do not work in the medical field, you do not know whether the "key terms" section of your document sufficiently explains some complex topics. You want to create a survey with open-ended questions so that your participants may suggest how you should rephrase your definitions.





# Make a Test Recording

Always make a test recording BEFORE you record your usability test to ensure that all of the equipment is working correctly.

- 1. Click the TEST RECORDING button in the top menu bar.
- 2. Click YES in the prompt window.

Your test recording will begin as soon as the Recorder window minimizes, so do not worry if it looks like the window has disappeared.

- 3. During the test recording, move the mouse, speak and, if you've set up a camera, look into it to make sure that all of the equipment is recording correctly.
- 4. Recorder will automatically play your test footage after 30 seconds.
  - If the audio levels are too high or too low, adjust the sound slider.
  - If you do not hear any sounds, check the sound slider, the microphone cable, the source under **VIDEO AND AUDIO SOURCES** and the microphone's large green button, which should have a green light.
  - If you do not see any video, check the connections to and from the camera, make sure that the camera is turned on and make sure that you selected the correct camera under **VIDEO AND AUDIO SOURCES**.



## **Quick Tip: Test Recording**

During the test recording, the recording window will display the message: "Unavailable during recording."



## **Record Your User Test**

- 1. Click the large red RECORD button in the Recorder window.
- 2. Conduct your usability test.

# **End Your Recording Session**

- 1. When you want to stop your recording, right-click the small camera icon with the red dot, which appears in the Windows taskbar at the very bottom of the screen, and select STOP RECORDING.
  - If you are recording the user's onscreen actions, you will not be able to log tasks, markers and scores in real time.
  - If you are using the camcorder or the webcam as your primary video source, you
    will see a window notifying you that you are the task logger, and a new window will
    take up the whole screen. Click ok.
- 2. Save your recording once Recorder prompts you to do so.

Congratulations! You have recorded your usability test. You may now import your recording in Manager, which allows you to create tasks, add markers and create graphs of your data. To learn more about Manager, visit page 19.

# **Keyboard Shortcuts**

D: Open Recording Details window

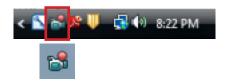
U: Open Study Details window

P: Change Picture-in-Picture (PiP) options

**ALT + S**: Start or pause a task when you are the Task Logger

ALT + E: End a task when you are the Task Logger





## Welcome to Observer!

The two-room setup of the usability lab allows researchers to use Observer in one room, while the user completes research tasks in the other room. With this application, you can do the following:

- · Remotely view a user testing study in real time
- Create markers to note and code the participant's behavior
- Log and make notes about tasks that the participant completes

When you've finished using Observer, the markers and tasks you have logged will appear in the Recorder file that you import into Manager, where you can analyze the data you collected.

## **Key Terms**

Before you begin, here are some terms that will help you understand Observer.

#### Logging

Making a note of a participant's behavior. In Observer, you can log behavior as a single occurrence (markers) or as a timed action (tasks).

#### Marker

A note about a single action that you add to the recording. Markers are coded according to the Marker Types you established when setting up the recording in Recorder. You cannot change Marker Types in Observer.

#### Task

A timed action that the participant is asked to complete. To log a task, you will have to start and stop the task recording. You can also add markers to specific tasks.

#### Marker Definitions

The Marker Definitions window lists your defined Marker Types. You can double-click one of the colored diamonds to create a new Marker with that Marker Type.

#### Score

Observer allows you to score participant behavior on each marker and task in order to generate data in Manager. You can create your own scoring system when you set up the study in Recorder, and your scoring criteria will appear in the Score column of the Log window.



#### In this section:

Welcome

**Key Terms** 

Connect to Recorder

Log Markers

Log Tasks

Finish an Observation

**Keyboard Shortcuts** 

Additional Information

## Connect to Recorder

To get started, you first need to connect to the computer running Recorder.

1. Open Observer. If prompted for an update check, click No.

You should now see the prompt screen Connect to Recorder.

- 2. Under CONNECTION, type the name of the computer running Recorder.
  - Computer in Room 314: LITTLEMOUNTAIN
  - Computer in Room 315: LONGNECKVILLAGE
- 3. Enter or change observer NAME.

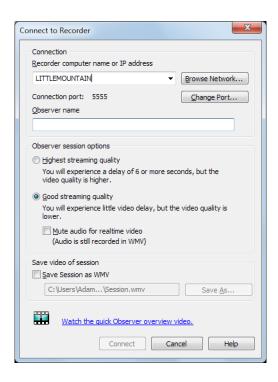
The Observer Name will be associated with all markers and tasks you log.

4. Under OBSERVER SESSION OPTIONS, set your preferred streaming quality.

The default setting of **GOOD** is adequate for most tests.

- 5. If you want to save a video of your session in Observer, check the box and choose your save location by selecting SAVE AS.
- 6. Click connect. If the prompt screen configuring pinnacle studio appears, click cancel.

Congratulations! You are the task logger. You should now see on your screen a live feed from Recorder. You should also see the **Log** window and the **MARKER DEFINITIONS** window. You can now start logging markers and tasks.





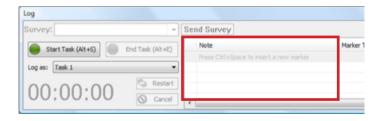
## Log Markers

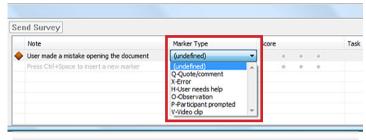
- 1. In the Log window, double-click an empty NOTE field. Type your information for that marker.
- 2. Double-click on the MARKER TYPE field and choose the appropriate marker from the drop-down menu.

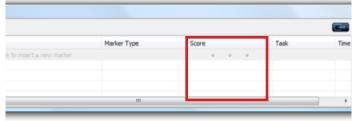
Notice that the diamond next to the **NOTE** field has changed colors to correspond with your chosen MARKER TYPE.

3. Select the score for that marker. Hover your mouse over the dots in the score column to see the scoring criteria, and choose the appropriate one.

You've logged a marker! Now let's look at how to log tasks.









#### When would I log a marker?

Suppose you are testing software documentation for your company. Your participant's task is to access the documentation file from your company's website and read the documentation. The participant makes a mistake opening the document, so you want to note this error.

# **Log Tasks**

When you start a task, the first task is automatically selected (or, if you have already logged a task, the next task in your list is selected). If you want to choose another task to log, select it from the LOG AS drop-down menu or type ALT + L and choose your task with the arrow keys. if you created your own tasks in Recorder, these names will appear in the drop-down menu and in the TASK column.

- 1. Click the START TASK button or press ALT + s to begin timing the task. Type a note for the task, and press enter.
- 2. Log markers for the task.

These markers will be classified as part of the task you are logging.

3. Click END TASK OR TYPE ALT + E to Stop the timer and end the task.

The note you typed for **START TASK** will also appear in the field for **END TASK**.

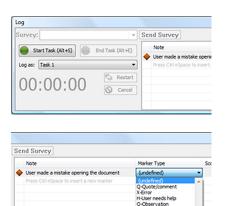
4. Score your task with the appropriate dot in the score column.

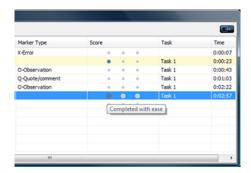
Reminder: Scoring criteria are chosen in Recorder. Refer to Modify the Study Details on page 9.



## When would I log a task?

Your participant has opened the documentation and will begin reading it aloud. You want to note the entire process of the participant's reading and make notes during the reading.





## Finish Your Observer Session

When the recording ends, you will be prompted to SAVE A COPY OF LOG as a text file (.txt). This text file is for your records. You do not need to import it into Manager.

- 1. Choose where you want to save your file.
- 2. Type a name for your file.
- 3. Click SAVE.

Congratulations! You have finished an observation. The markers and tasks you logged will now appear in Manager when you import your recording file.

# **Keyboard Shortcuts**

CTRL + SPACE: Create a new marker.

CTRL + [THE LETTER OF THE MARKER TYPE]: Create a new marker with the type already chosen. For example: **CTRL + X** creates a new marker with type **X-ERROR**.

- **ALT + L**: Choose a new task.
- **ALT + s**: Start timing a task.
- **ALT + E**: Stop timer and end a task.

## **Additional Information**

For video tutorials on logging markers and tasks in Observer, visit the Morae website: http://www.techsmith.com/learn/morae/observe-and-log.asp

# Welcome to Manager!

With this application you can do the following:

- View an existing user testing study
- · Create markers to note and code participants' behavior
- · Log, score, and make notes about tasks the participant has completed
- · Create graphs of your data

Morae Manager allows you to organize your study information and individual interviews. You can create text or audio annotation for your data as well as code any data that wasn't marked using Observer. Manager performs data analysis, creates graphs and can export study data to other programs (such as Excel or Numbers). Manager can also be used to edit research video for presentations or to share with other researchers.

## **Key Terms**

Before you begin, here are some terms that will help you understand Manager.

## Logging

Making a note of a participant's behavior. In Manager, you can log behavior as a single occurrence (markers) or as a timed action (tasks).

#### Marker

A note about a single action that you add to the recording.

#### Task

A timed action the participant has completed. You can also add markers to specific tasks.

#### Score

Manager allows you to score participant behavior on each marker and task in order to generate data. You can create your own scoring system when you set up a study in Recorder, and your scoring criteria will appear in the Score column of the Log window.



#### In this section:

Welcome

**Key Terms** 

Create a New Project

Log Tasks

Log Markers

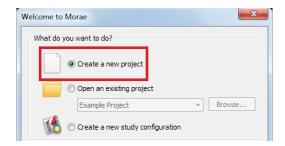
Create a Graph

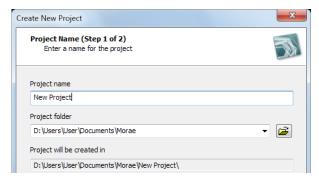
Additional Information

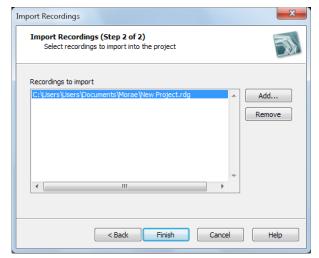
# Create a New Project

- 1. Open Morae Manager.
- 2. Choose create New Project and click OK.
- 3. In the CREATE NEW PROJECT window, type a project name, choose a folder, and click NEXT.
- 4. In the IMPORT RECORDINGS WINDOW, Click ADD.
- 5. Find and select your file from the queue, then click OPEN.
- 6. Click FINISH.

Congratulations! You're now ready to start analyzing your data in the project panel.







# **Log Tasks**

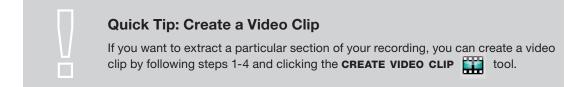
In the PROJECT PANEL you can play back a recording and analyze data by grouping your test into different tasks, images, and clips. You can also create graphs that reflect your analysis.

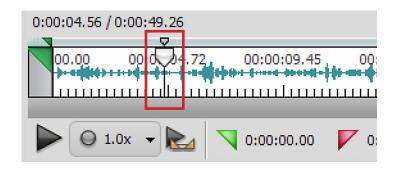
1. Decide where you'd like your task to start by left-clicking on the playhead and dragging it to the appropriate time marker.

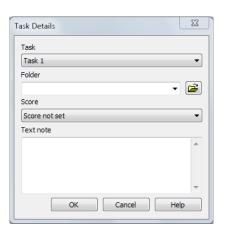
You can use the space bar to play or pause your recording.

- 2. Once the playhead is placed where you want it, click on the
- 3. Drag the playhead to your desired end point and click the SELECTION END **V** tool.
- 4. Preview your task by clicking on the PLAY SELECTION
- 5. To log your task click on the Log TASK 📋 tool.
- 6. At the TASK DETAILS prompt, select a task name, a score, and a note if desired. Click ok.

Your task is now logged. Good job!



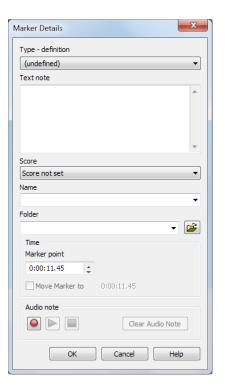




# **Log Markers**

- 1. Use your mouse to drag the playhead to the point where you'd like to add your marker.
- 2. Click the diamond-shaped Log MARKER 🔷 icon or press CTRL + M.
- 3. In the MARKER DETAILS WINDOW, choose a type of marker, make a note, score, and/or name for the marker.
- 4. Click ok.

The marker should be logged. Success!



## Create a Graph

- 1. Select the GRAPH

tab from the upper left side of the window.

- 2. Select CREATE A NEW GRAPH.
- Create new graph
- 3. Click the select an analysis type icon, and choose a type from the drop-down menu.

The most commonly used types are **TASK** and **MARKER** analysis.

4. Once you've chosen your analysis type you'll be prompted to choose a metric. Click on the icon and select the appropriate metric from the drop-down menu.

A graph of your data should automatically be created. Nice job.

5. To save your graph, select file -> save -> graph as. Type a name for your graph, and click save.

If you wish to share your graph, select FILE -> EXPORT -> GRAPH AS. Here you can save your graph as an image by choosing the .bmp extension from the SAVE AS TYPE dropdown menu.

## **Additional Information**

For tutorials and advanced user instructions, visit the Morae website: http://www.techsmith.com/tutorial-morae-current.html

