

# Technical Overview of Morae®:

## Usability testing software with insight you can share

Functionality that you could previously only obtain by combining multiple hardware and software products is now fully integrated into one software solution—Morae.

### BACKGROUND

Improving the usability and user experience of software, Web sites, intranets and eBusiness applications has proven to increase customer satisfaction and retention while decreasing development and support costs. Many organizations have realized a 10-to-100-fold return on their investment by incorporating usability methods into the development cycle.

Despite the positive returns from practicing usability and user-centered design, many organizations have not implemented it because of the costs involved, including a significant investment in infrastructure, time and training.

Today, Morae eliminates many of these barriers by providing a single software solution that enables organizations of any size to incorporate usability testing and analysis into the development process with very low risk.

### INTRODUCTION TO MORAE

Morae is an innovative software-based solution for usability testing that enhances data collection and speeds up analysis. Its dramatic effectiveness lies in the fact that it actually reduces the amount of work required, not only at setup, but also during the data logging, analysis and presentation stages. Its design works well for users new to the field of usability testing, as well as for seasoned specialists.

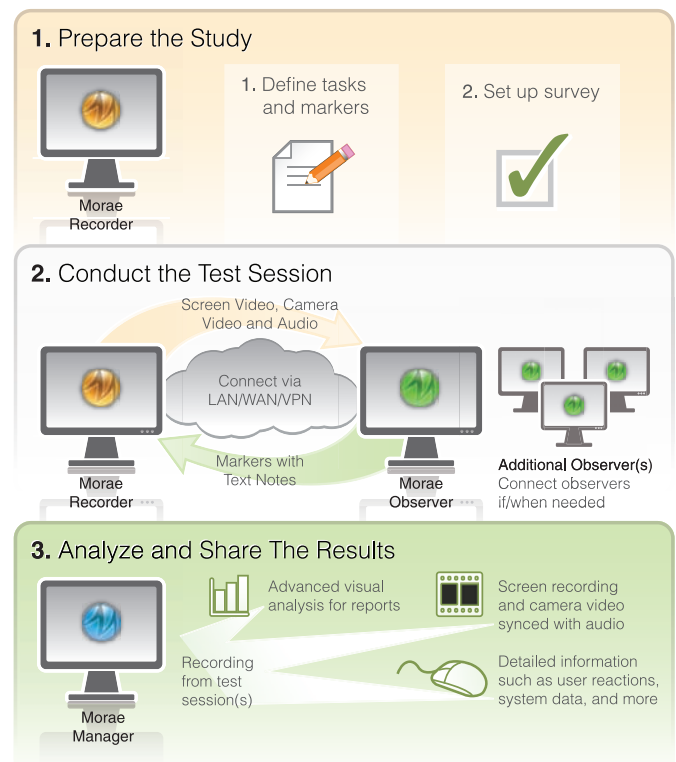
Morae records desktop activity on the user's computer and camera video of the user. It also creates a synchronized index of events occurring behind the scenes in applications and in the operating system.

From the recorded data, Morae can automatically calculate and graph standard usability metrics. Markers and tasks set during recording are placed along a zooming visual timeline and accessible with a single click. Professional graphs and video clips can be assembled quickly into video presentations to share.

Functionality that you could previously only obtain by combining multiple hardware and software products is now fully integrated into one software solution—Morae.

### HOW MORAE WORKS

Morae's three components, Manager, Recorder and Observer, work together to provide a complete picture of the user experience.



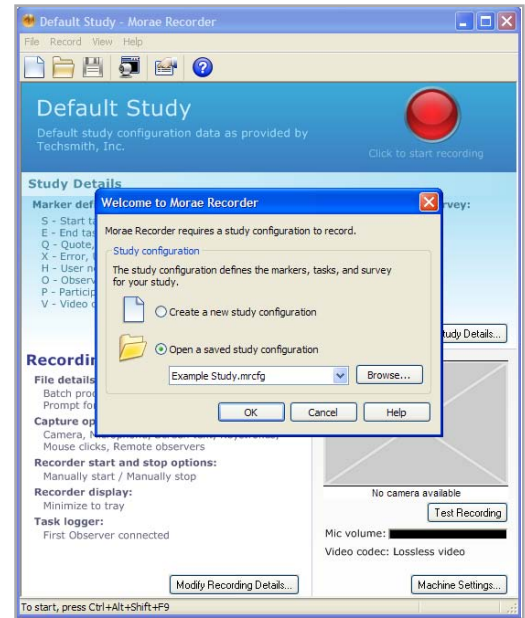
*“Morae is an incredible tool that offers powerful functionality and flexibility—it allows you to do usability testing anywhere, achieving the same results for a fraction of the cost of hiring third-party vendors.”*

– Maggie Duvall,  
Sr. Information Architect,  
Dell Computer

## Morae Recorder

Morae Recorder creates a complete chronicle of the events that occur behind the scenes in applications and the operating system, as well as the onscreen and keyboard activity of the user. These data streams are recorded in sync with video of the user (through a web camera or other camera device) and audio of the user (through a microphone).

Because Recorder runs silently in the background, it never disturbs the user. And it captures only the input streams that you specify in the study configuration, saving the recording in a file format that can be opened by Morae Manager.



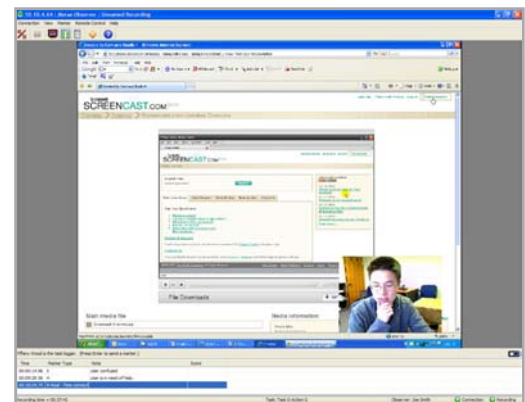
Morae Recorder

## Morae Observer

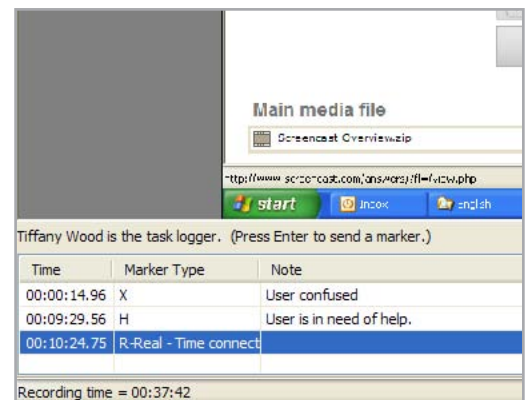
One or multiple observer(s) can connect over a network to Morae Recorder, allowing your entire team to observe the screen and camera video, and hear the audio of the user, streaming from Recorder.

Each observer can use notes to mark important moments—such as user comments, frustration, design problems, areas where the user gets stuck, and more—as they happen. Notes can also be used to share individual perspectives and solutions. The ongoing log in Observer lets you edit notes and tasks on the fly. All notes are consolidated with the video, and one-click access to notes in Manager makes it easy to instantly revisit them during analysis without scanning through the entire video.

The camera video, screen video, and audio streamed to Observer can be saved locally in a WMV file for immediate playback.



Morae Observer



Morae Observer (markers)

## Morae Manager

### ANALYSIS

Recorder automatically indexes the screen recordings, allowing you to easily search through them later in Morae Manager.

Using Manager's advanced Search Editor, you can quickly find specific user activities in the recording—such as Web page changes, key-strokes, mouse clicks, or window events. You can also search recordings for text that appeared onscreen during the test session.

Additionally, when you select an event from the search results, the video recordings of the screen and camera instantly move to the point in time when the event happened and highlight where it occurred onscreen.

### GRAPHING

Manager reduces the time and effort you spend on analysis by automatically calculating and graphing standard usability measurements, including effectiveness, efficiency, and satisfaction. It also lets you create and save your own custom measurements as templates that can be reused as consistent measures across studies.

Graph clips are powerful quantitative support for the qualitative issues shown in highlight videos. Also, you can export graphs and their data tables for use in reports or for further analysis.

### PRESENTATION

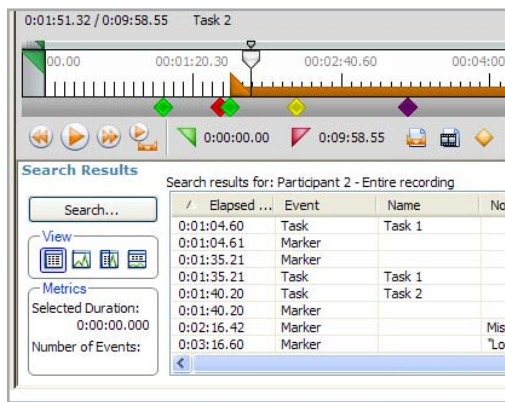
You can isolate important sections of recordings and save them as video clips, which can then be narrated with audio notes and included in a highlight video.

Webcam video of the user can be displayed with screen video as picture-in-picture. The picture-in-picture window can be moved and resized as needed, so it never blocks important onscreen content.

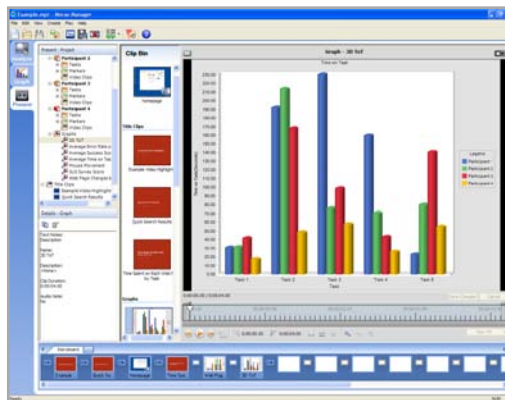
Morae's intuitive, built-in editing tools make it easy to assemble video and graph clips into a professional highlight video to share with developers, management, and clients.



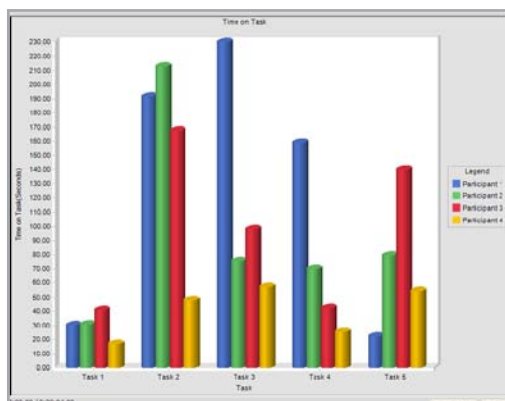
Morae Manager



Morae Manager (timeline close up)



Morae Manager (results graphing)



Morae Manager (graphing close up)

*“Morae has made the technical side of usability testing trivial.”*

– Joel Spolsky,  
Founder,  
Fog Creek Software

*“User testing has become much more efficient since Morae has been on the market.”*

– Jakob Nielsen,  
Nielsen Norman Group

*“We were confident in Morae from having used it in our everyday testing. But Morae really proved that it was reliable and effective when we deployed it in a non-typical and must-work situation where every participant interaction, and every minute of that interaction, was critical to our larger user experience testing goals. There were no ‘re-do’ options here and Morae came through for us as always.”*

– Sabine Kabel-Eckes,  
User Experience Designer,  
SAP

## Features Overview

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### Morae Recorder

Morae Recorder is installed on the participant’s PC and records:



#### Observer

Markers entered from an Observer location



#### Window Events

Windows/dialogs getting focus, opening, closing and resizing



#### Keyboard Activity

Keystrokes that the user makes



#### Web Page Changes

When and where the user changes Web pages



#### Mouse Clicks

Left, right and middle clicks



#### Audio

User audio through a microphone



#### Camera Video

User video through a webcam



#### Screen Video

All activity on the user’s screen



#### Screen Text

All text on the user’s screen

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- **Customizable studies**

Customize tasks and markers to meet your study needs. Custom markers and their definitions are visible in Observer, so viewers can use them to log important moments during the test.

- **Built-in satisfaction survey**

A standard user satisfaction survey (SUS) is built into Morae, and scores are calculated and graphed automatically. Or, you can create and save a custom survey with various types of questions, including scale, freeform answer, choose one answer, and choose multiple answers.

- **Silent recording**

Recorder runs inconspicuously in the background without affecting the user experience. Recorder can be minimized to the tray or task bar, or hidden completely.

- **Easy data management**

Recorder saves all the information it collects into a single file that is easy to move and manage. If the recording file approaches the size of a CD-ROM (600 MB), it automatically rolls over into another file.

- **Robust data protection**

In the event of a system crash, Recorder will recover your data up to the point of the crash.

- **Fully programmable**

Customize multiple options and save settings for repeated use. Use the built-in COM server to control Recorder programmatically from other applications.

## Morae Observer

Multiple Observer(s) can connect to the computer running Recorder over LAN/WAN/VPN or broadband\* and view the user's screen and facial expressions, as well as hear what the user is saying, all streamed live from the Recorder computer.

(\* Firewall configuration required)

- **In-depth logging**

The running log allows you to see all the markers and tasks you've set, and go back and edit them on the fly during the session.

- **Instant notes and comments**

Observer(s) can set markers and add text notes to flag important moments. Markers and notes are saved and synchronized with the recording file. Get richer insight from the testing process through the eyes of the entire team.

- **Shareable copy of the session**

Observer(s) can record a digital video file (WMV) of the streaming content, including screen video, camera video and audio. After the session, this video can be viewed and shared immediately using Windows Media Player.

- **Remotely controlled Recorder**

Someone at an Observer station can optionally control when Recorder starts and stops recording. You can also deliver the satisfaction survey remotely from Observer.

*"It allows researchers to take control of managing the recordings themselves—instead of having to rely on professional video editors. The all-digital form makes it much easier and more convenient to access the recordings."*

– Mark Safire,  
Director of User  
Experience Research,  
Sachs Insights

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## Morae Manager: Analysis Features

- **Synchronized video and audio**

When you import a recording into Manager, the screen video, camera video and audio are synchronized. Video streams are displayed separately, so the camera video doesn't block the screen video.

- **Quick navigation**

Use Manager's powerful search to quickly find exactly when the user clicked a button, typed on the keyboard, navigated to a particular Web page, interacted with a specific dialog box, or viewed certain text onscreen.

- **Automatic calculation of standard metrics**

Manager can calculate and graph effectiveness, efficiency, and satisfaction, as specified in the Common Industry Format standard.

- **Custom metrics**

Analyze data in innovative ways across multiple participants studies, including time on and between tasks, mouse movement, mouse clicks, markers, and SUS satisfaction score. Save custom templates for reuse.

- **Focused analysis with tasks**

You can predefine tasks (name, description and score), log them in Observer during the test, or after the test in Manager, and Morae will automatically calculate and graph task completion rates.

- **Access to Observer markers**

Review markers and notes in Manager that team members made during the session, so you can understand observations and suggestions in context. Notes are saved in the recording, making it easy to see when and where team members noted something of interest.

- **Exportable data**

Export Morae data and logged markers, including all of the comments, to a CSV file that can be opened in spreadsheet applications. This makes it easy to include Morae data in your written reports.

TechSmith is developing tools, like Morae and UserVue, that give designers and developers easier, faster access to the user experience information they need to create richer, usable user experiences.

## Morae Manager: Graphing Features

- **Graphs of multiple tasks or participants**  
Graph data and survey results across all tasks and participants in a study, and quickly create graphs that show trends in user activity across all participants.
- **Automatic graphing of key metrics**  
Instantaneously graph key usability metrics including effectiveness, efficiency, and satisfaction using default graph templates.
- **Table format**  
Export graph data tables in CSV format for further analysis, or for use in other applications, like PowerPoint.
- **Customizable templates**  
Create your own graph templates that can be reused as consistent measures across different projects. Customize graphs for a common look and feel using colors, fonts, and formatting options.
- **Graph clips can be added to highlight videos**  
Graphs are a powerful way to support the qualitative issues shown in video clips.

## Morae Manager: Presentation Features

- **Simple drag-and-drop functionality**  
Select a section of video, or a graph, and drag it to the storyboard to include it in your highlight video. You can even import video from other sources to add to your highlight videos.
- **Video of the user included**  
The image of the user is superimposed automatically over the screen video as a Picture-in-Picture (PIP) image, so stakeholders can see and hear exactly what the user did and said. Add the power of user reaction to your highlight videos with ease.
- **Titles and transitions**  
Add title clips with an optional audio voiceover to introduce areas of the video, and use fade and dissolve transitions at the beginning and end or between clips.
- **Production choices that make sharing easy**  
Morae's flexibility gives you two file format options for the final video—Windows Media (WMV) format or standard AVI format. WMV format will play in Windows Media Player and is also useful if you wish to stream the highlight video.
- **Multiple highlight videos**  
Create one highlight video for the project team and a different one to management or the client. Each project can have multiple highlight videos, which can also be produced in batches to save time.

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TechSmith Corporation was founded in 1987 and is located in Okemos, Michigan. TechSmith provides practical business software tools to capture and manipulate images, voice and video from Windows desktops. The company's flagship software packages, SnagIt and Camtasia Studio, enable customers to create visually enhanced content for teaching, training, Web sites, documentation, and business presentations. Morae is the first and only all-digital solution for recording and analyzing human-computer interaction. TechSmith products are used by 98 percent of the *Fortune* 500. For additional information, visit [www.techsmith.com](http://www.techsmith.com).

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