Roles

People assume roles in their interactions with Mirador. In each role, a person has a different focus, leading to the use of a different set of features in a characteristic workflow. A role does not define a level of expertise. For example, one researcher may be highly comfortable with manifests and workspace management, while another is confused or intimidated by these concepts. What they have in common is their focus.

In the course of a project, a person may act in the role of a curator, then a researcher, then an author/producer. Their focus will change, and their needs from Mirador will change. Roles are not application modes. They are intended as a way to ensure that features used together are developed in harmony; that features that support one role don't negatively influence another, etc.

Role	Description	Context	Motivations	Design considerations
Author/ Producer	The author/producer creates artifacts for use elsewhere. She arranges content to present an argument; configures and arranges elements for presentation in an exhibition or a course. Her focus is the presentation.	ancillary tool (sometimes primary environment)	Build course materials Create data for analysis Create a complex, layered presentation of information Produce an artifact to document, communicate, or present an argument about the state of the object; help make a scholarly argument; complete an assignment Configure a presentation that supports an argument; that enhances the viewer's understanding of the content	Efficiency of repeated actions Error prevention and tolerance Control over all aspects of presentation Consistency with other frequently-used tools
Researcher	The researcher examines and analyses content in depth; her focus is the intellectual work of discovery. As researcher, she engages with more advanced features of Mirador than in any other role, but does not want to have to be a Mirador expert.	primary environment	Gather & record evidence to develop a conservation plan Gather evidence to develop an argument Record a scholarly argument Produce an artifact that helps make a scholarly argument Produce a transcribed document	Predictability Minimal visual noise Minimal steps to set up and return to a workspace Non-destructive workspace actions
Curator	The curator selects, organizes, and orders collections, content, and metadata. Curator work facilitates the work of other roles; particularly the researcher and viewer.	primary environment	Collect and manage content Facilitate exploration and understanding of a collection Build course materials Enable discovery and identification of images	Transparency of technical structure
Transcriber	The transcriber... transcribes. She creates a text equivalent or companion to the image. Her focus is the text and its meaning; the image is in a supporting role. She is most effective when she achieves a state of flow.	primary environment	Produce an artifact that completes an assignment Produce a transcribed document Gather evidence to develop an argument	Enabling flow, minimizing distractions Efficiency of movement; quick keyboard access to essential steps
Viewer	The viewer has a more passive relationship with Mirador. She experiences content without modifying, organizing, or deep exploration. She wants to understand meaning.	transient experience	Improve understanding of a topic Read a primary source as an e-book Enhance perception of details Experience a recreated text as close to the original as possible	Expectation of standard UI elements and behaviors

Context

The context in which a person uses Mirador affects their expectations of the user experience. The context is determined by their focus, how immersive their task is, and how much their workflow interacts with external tools.

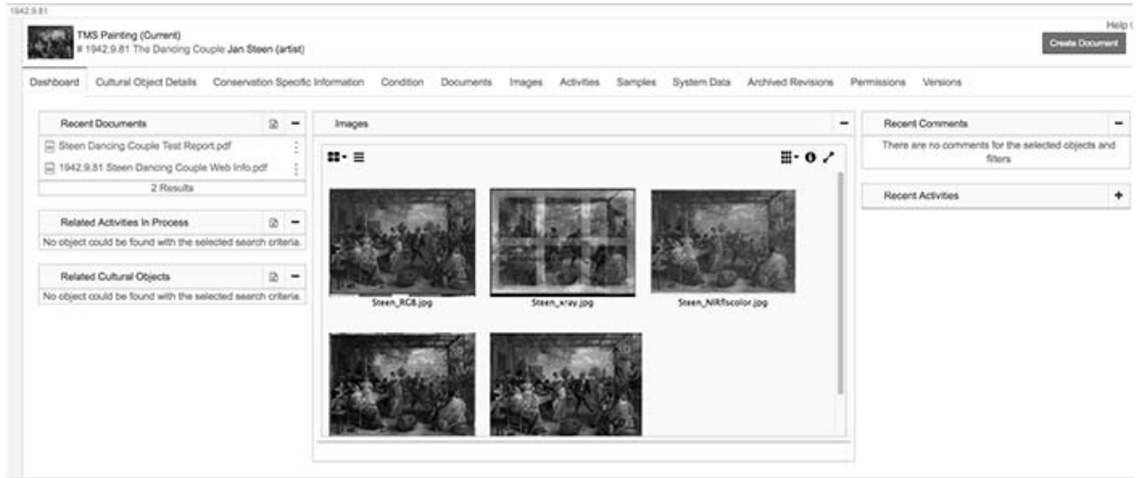
Primary environment

Mirador is the user's primary focus and complete environment while working on a task. A user who spends a lot of time in this context will develop expertise and kinetic memory; but working in this context in itself *does not imply* expertise.

Sinai Palimpsests Project

Ancillary tool

Mirador is used in the context of other tools. For example, it might be embedded in CourseWork or ConservationSpace; or used intermittently to create data in a format that can be analysed elsewhere. The user may not be aware of Mirador as a separate "thing"; she expects it to behave consistently with her other tools.

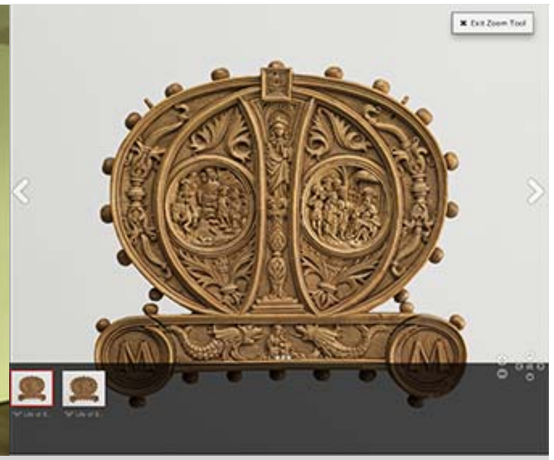


Mirador in ConservationSpace (NGA)

Transient experience

Mirador is in presentation mode. The user likely experiences Mirador without knowing what it is. She may use it once, or occasionally; she sees minimal features and institutional branding. She is not motivated to learn skills or actions unique to Mirador.

Harvard large screen interactive display.



Single image in AGO Boxwood Project

Objects

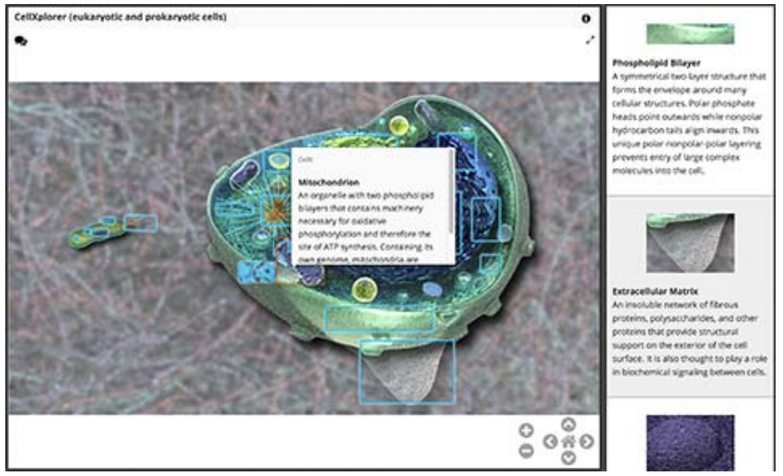
A person acting in a given role focuses her attention and actions on specific objects. She will certainly touch other objects in the course of her task, but she is primarily interacting with a smaller set. For example, a transcriber may open a collection/manifest to begin work - but her primary focus is the transcription, with the manuscript as the support to that task. The combination of objects a role is working with helps determine which features should be grouped, and which should be readily available or might be a step further away.

	Author/Producer	Researcher	Curator	Transcriber	Viewer
Annotations transcriptions and in-place annotations	●	●	○	●	◉
Images	●	●	●	○	◉
Manuscripts sequenced images with structural navigation	○	●	○	◉	◉
Layers	◉	●	○	○	○
Collections	○	○	●	○	○
Books	○	○	○	○	◉

Role: Author/Producer

The author/producer creates artifacts for use elsewhere. She arranges content to present an argument; configures and arranges elements for presentation in an exhibition or a course. Her focus is the presentation.

Context	ancillary tool; occasionally primary environment
Objects	annotations, images



Example scenarios

1 Geography Researcher is writing a scholarly article for an online journal. To illustrate a point he's making in his narrative, he wants to enable readers to compare details of two maps. He opens the two map objects into separate windows and adjusts the zoom level to highlight the salient aspect of each map. Because the selected images are the only ones in the objects relevant to his narrative, he just wants the reader to see and interact with those. Similarly, he'd like to prevent the reader from being distracted by features such as annotation or image enhancement. With the viewer set up the way he wants, he'd like to copy a URL that he could then paste into the web publishing environment in which he's editing his article to display an embedded viewer with his map comparison.

2 Post-doc Researcher has a large collection of photographs that she is annotating to identify wildlife. In addition to annotations, the photographs often have other resources associated with them, such as text documents and bibliographic citations, so she manages the collection in Zotero. After creating a new batch of annotations, she wants to export her annotations and their corresponding image regions to Zotero so that the new annotations can be easily associated with the corresponding items managed in Zotero.

3 Post-doc Researcher has a large collection of photographs that she is annotating to identify wildlife. She tags annotations using a controlled vocabulary of common themes and categories. To analyze the annotations she wants to export them in CSV format so that when she loads them into Excel the tags and associated annotations are in a structured format. She can then produce basic reports, such as the number of annotations by tag, and search to find all annotations with a given phrase or category.

4 Art History Student is writing a paper on the evolution of a particular painter's brush technique. After examining in close detail a couple of dozen images of the artist's paintings, she has six open windows that are each zoomed to show a particular brushstroke detail. To illustrate the painter's distinct developmental periods discussed in her paper, she wants to export the image regions shown in each window, in the native image format, at maximum quality, and with filenames based on the object's title. In order to download maximum quality, she is prompted to log in with her institutional credentials.

5 Instructor teaching the history of the book has assigned an exercise involving identifying and describing aspects of the physical binding of a 15th c. MS. On a single detailed image of the spine, she adds outlines and pointers to specific elements she wants the students to identify and describe. She embeds the exercise in the course website, with instructions for completion.

6 Student has been assigned an exercise in a course on the history of the book to identify elements of a physical book. He accesses the exercise through the course website. He sees an image of a book spine, with marked regions. He selects a region, and the annotation editor opens adjacent to the region. He describes what he sees in that region, and moves to the next. When he's completed all the regions, he reviews and revises his annotations, saves his work and shares it with the instructor.

7 Conservator is working with a set of conservation images of a painting. She wants to mark a spot where a flaw in the support has caused some damage to the painting. In separate windows, she finds and centers the spot in the front, back, and x-ray images, and adds an annotation that links the three images. She wants her colleagues to be able to select the annotation and see the three connected images in their current zoom/pan state.

Role: Author/Producer (continued)

Example scenarios

8 Conservator is building the conservation report for a painting at a gallery. Working within ConservationSpace, she adds new x-ray and infrared images to the set for this painting. In addition to examining these images side-by-side with the original, she layers them over the original. She adjusts the placement of each layer by moving, resizing, and rotating so the images are closely aligned. The original image is protected so she can't accidentally adjust it. She sets the order of the layers so they are consistent with her team's practice, then saves the complete set of new and layered images for her colleagues to view in the conservation report.

9 Research Assistant has an ancient city map to annotate. He has shoulder mobility issues and a lot of detailed work to do on this map, so he expects to be sore by the end of the day. In full-screen mode, he zooms to an area to work on. He begins by making a polygon around a building. The annotation text box appears immediately adjacent to, but not covering, the finished polygon, with the text box in focus. He types the building name into the annotation, and tags it as "public building". He repeats this for all the buildings on the block. When he zooms out to check his work, he realizes the outlines are not clearly visible at the default size. He changes each polygon to a thicker outline and higher-contrast colour. Next, he creates a couple of dozen points to identify in a single annotation. After saving, he notices he has incorrectly included several points that should be annotated separately. He selects a point, clicks its "delete" icon, removes the incorrect points one at a time. As he continues through his work, it's the extraneous movements and clicks that begin to bother him. He appreciates "undo" rather than a confirmation on each action; "copy style" rather than styling each item in turn; delete several selections at one time.

10 Cultural Institution is presenting individual images and image collections in highly-branded, curated exhibits. Curator wants to present the viewer in a very controlled way, suitable to each exhibit. She wants be able to control the viewer size; match the font/size to the surrounding page; suppress the image title; suppress sidebars and features; adjust the border width and colour of the viewer and the windows within it; show or hide panels by default; select whether to display annotations as hovers or a sidebar list; select a default multi-image view. In one exhibit, for example, she has an "invisible" viewer with 4 zoomed regions displayed in a grid with no borders, so one image appears to flow into another.

11 Museum Curator is compiling a collection of highlights from the museum's collections. The collection has some descriptive text about the scope of the selection. Each image has its own metadata: artist, title, date, medium, scale. She wants the patron to see the image metadata by default, but easily hide it in order to see the images without distraction. Patrons will be able to select an image in the set by its metadata. Curator is also adding audio annotations to the images, each with text transcription. The individual audio segments combine into a narration of the collection as a whole. Patrons can listen to the audio for a specific image, or choose to play the full sequence. The viewer automatically navigates to each image as it is referenced in the narration.

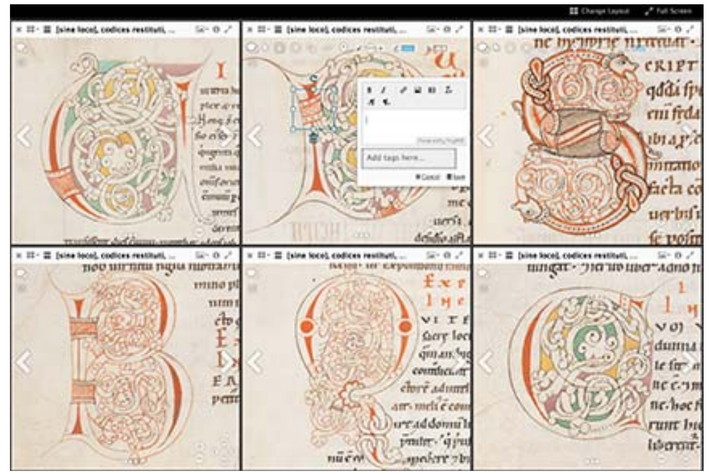
12 The local aquarium has started a project on their website to crowd-source counts and identification of marine life in images of the shoreline. Community member registers on the aquarium's website, then logs in to give it a try. She scans the available images, and selects one of a rocky beach with dozens of seals and pups. The instruction is to identify pups from adult seals. She clicks a pup, sees the counter increase to 1, then continues to click on as many pups as she can identify among the rocks, zooming to see detail when she's not sure. Each counted pup is marked with a small marker so she won't double-count. She saves the set, and moves on to another image. Aquarium staff analyze the annotations to determine an "official" count, and evaluate the accuracy rates of participants. They won't ask a volunteer to leave the program, but they may exclude their counts from future analyses.

13 A number of experts have been asked to review a digitized scroll to verify or correct computer-generated annotations of specific elements. Expert opens the scroll to full screen and begins examining, moving slowly along the scroll. She turns the annotation outlines on and off to see the image without distraction. She finds a questionable marked region and zooms in to examine it closely. She determines the annotation is incorrect, so she adds a comment to it. She spends an hour at this then has to set it aside; she saves her spot in the scroll so she can pick up easily the next day.

Role: Researcher

The researcher examines and analyses content in depth; her focus is the intellectual work of discovery. As researcher, she engages with more advanced features of Mirador than in any other role, but does not want to have to be a Mirador expert.

Context	primary environment
Objects	annotations, images, manuscripts, layers



Example scenarios

1 Art Historian wants to compare decorative illustrations within a large manuscript. She selects the manuscript, and scans the gallery view for the types of illustrations she wants. She selects the folios she wants to compare, and opens each in a separate window. She zooms & pans each window to center on the illustrations, then locks the windows. She adjusts the arrangement of windows so similar illustrations are side by side. After recording her conclusions in a separate document, she saves the visible regions of the images to her laptop for offline use, and bookmarks the set so she can easily return to it.

2 Conservator is looking at a cultural object in the viewer. She has access to scientific images of the same object, and comparable objects by the same artist. She compares alternative images side by side with the original, using deep zoom to examine details. She makes annotations on the primary image, and tags the annotations with a controlled vocabulary for later discovery.

3 Medieval Scholar is comparing letterforms throughout a single manuscript to determine how many scribes were involved. On a large monitor, she creates a grid of 12 closely-zoomed letter "C"s from different parts of the MS. As she compares, she wants to drag a letter to new location in the grid; measure the relative size of each letter with as much accuracy as possible; adjust contrast and brightness to exaggerate details of pen strokes; overlay one letter over another to reveal small differences. She needs to see the location of each image in the overall MS ("f.27r"). Sometimes it's helpful to include images from a different manuscript or from her saved collection in the comparison. She annotates and tags specific characteristics of letters. Once she's worked through the complete MS, she wants to pull together all the "C"s tagged "scribe 1". Finally, she selects the best representative forms to save as future comparanda.

4 Early Manuscript Scholar is working on a palimpsest to identify the erased texts bound into the manuscript. Each page has 30-60 layers of spectral images. She browses these layers to select several that appear to show significant differences. As she quickly and repeatedly flips between the selected layers she begins to see a distinctive undertext. She adjusts the opacity of the layers and continues flipping between layers until the undertext is more clear. When she feels she has an optimal representation of the undertext, she saves and describes the current state of the image.

5 English Professor is collaborating with a medievalist at another University. They speak online regularly, looking at the same manuscript together. When they work individually, they make several types of annotations: transcriptions, commentary, tagging of features, and informal questions to each other. When her colleague wants to share what he's looking at, he bookmarks the object or group, and shares the bookmark. When Professor opens the bookmark, she can choose to include it in her current workspace or open it in a new workspace. When they have completed their work on the manuscript, they want to export all the transcription annotations, and the commentaries with attributions to the author of each annotation.

6 Researcher is analyzing a complex manuscript, with erasures and marginalia, damage, binding and re-binding, etc. The manuscript has multispectral images layered over the natural images. She views the manuscript in the thumbnail gallery view, and zooms/pans the gallery as a whole. She wants to turn layers on and off in the gallery - for example, to show the infrared layer for all images at once - to look for patterns in one wavelength that aren't visible in another. When she finds something of interest in an image, she opens it in a separate window outside the gallery, then continues her analysis in the gallery view.

Role: Researcher (continued)

Example scenarios

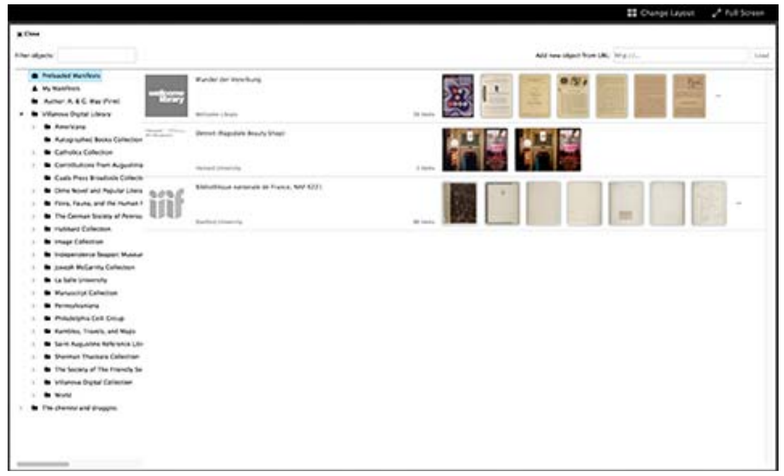
7 Researcher is studying a manuscript with multiple transcriptions, translations, and commentaries, focusing on disagreements about the original text. She selects a region in the manuscript to find all transcriptions of that region. She explores the related commentaries and translations to see how different scholars have interpreted the text. The manuscript itself becomes secondary; she is focused on the texts she now has open in multiple windows. She wants to filter and sort the texts by scholar, language, and date to see if she can identify patterns of thought.

8 English Professor has collected hundreds of images of scribal details. They come from dozens of manuscripts at different repositories, but for his research he's not interested in the manuscripts as objects in themselves; only in the details illustrated in the specific page regions he's collected. He wants to organize the images by type - scribal errors, corrections, etc. - then open his collection of "erasures" to see the images in a thumbnail gallery with their identifying metadata. Most of his work happens in the gallery view: he zooms and pans the gallery as a whole, looking for patterns and anomalies. When he sees a similarity between images, he creates an annotation to link them. He wants to sort the images in the gallery by their metadata - date, manuscript, scribe - or manually re-order them. At any point in his work, he wants to be able to bookmark the current state so he can refer back to it later, or share it with a colleague.

Role: Curator

The curator selects, organizes, and orders collections, content, and metadata. Her work facilitates the work of the researcher and viewer.

Context	primary environment
Objects	images, collections



Example scenarios

1 Small Museum presents an overview of its public collection on a large, multi-panel, interactive display in one of its gallery spaces. Museum visitors can see a list of the galleries in the museum, with thumbnails of the artworks in that gallery. They can select an individual gallery to explore in sequence, or select images within and across galleries to compare in a grid layout. Museum staff creates themed comparisons to encourage visitors to interact with the device, and to explore the collection holistically.

2 Art Instructor has grouped a large selection of paintings into topics for his course. Each topic (expressed in a single object) may include a dozen or more paintings by a handful of artists, held at several different institutions. He wants his students to easily see the basic metadata - title, artist, date, owner institution - associated with each painting so they can unambiguously refer to a specific work.

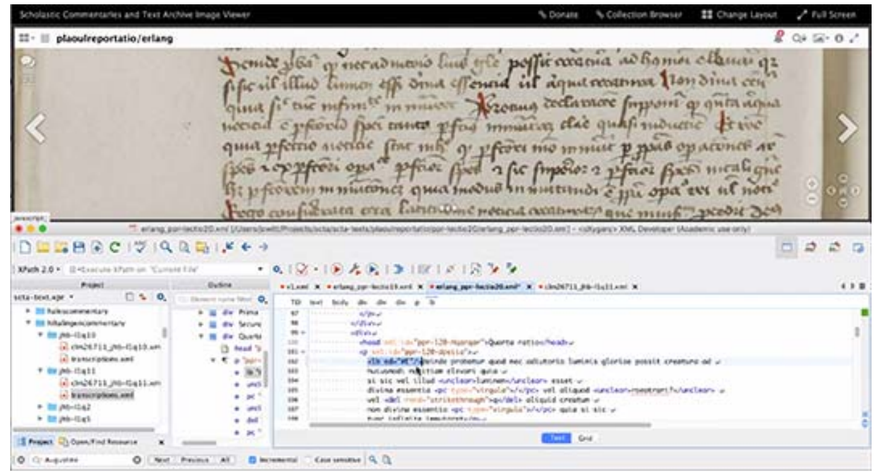
3 Art History Instructor is compiling groups of thematically-related images, using a combination of local and remote images. She wants to easily select known images from several existing IIIF collections, open known images from her local stash, add metadata for the local items, arrange the combined set in the order she wants, and save the set for her own use and to share with her students. Finding the images across the web can be difficult; she wants an easy way to capture an individual image from anywhere, even if it's part of a large multi-image object.

4 Historian working in textual criticism has amassed a very large collection of manuscript variations of original texts. He has grouped the variants into folders by author/title, but the folder list is still long enough to be cumbersome. He'd like to further group the folders by categories. He wants to be able to search and filter the complete list of manuscripts by their metadata, tags, and folder names. When he opens a folder, it can take a long time to load the manuscripts, and he’s not always sure when it’s finished or if one is missing. He’d like to see how many variants should be present in each folder. When he finds a new manuscript, he wants to easily add it to a folder and retain it.

Role: Transcriber

The transcriber... transcribes. She creates a text equivalent or companion to the image. Her focus is the text and its meaning; the image is in a supporting role. She is most effective when she achieves a state of flow.

Context	primary environment
Objects	annotations, manuscripts



Example scenarios

1 Historian is producing an edition of a 14th century text. He opens the manuscript, zooms the text to a readable size, and sizes the window so only 3 lines of text are visible. He locks this zoom level so he can't accidentally change it. In a text editor placed immediately below the manuscript, he transcribes one line at a time, marking up TEI as he goes. It's helpful to keep the transcribed text as physically close as possible to the associated manuscript line. He keeps his hands on the keyboard for efficiency, using a familiar sequence of keystrokes to nudge the manuscript to reveal the next line of text, then continue typing in the editor. When he moves to the next page of the MS, he wants the zoom level to be maintained.

2 Language Scholar is transcribing an 11th century text for analysis. She opens the manuscript on one side of her monitor, and navigates directly to the folio she wants to work on. She opens her working document beside the manuscript: she is transcribing into a single document, retaining page/folio and line breaks. She touch-types her transcription in the document, while focusing only on the manuscript. Occasionally she adds comments about the manuscript for her own reference, not to be included in the transcription. She works for several hours in this mode; at the end of the day, she wants to mark exactly where she left off.

3 Students in a study group are cooperatively transcribing a manuscript. It's an ongoing project that they work on individually as they have time. When they log into the group's workspace, they select their project to open the manuscript at the last line transcribed, with the transcription panel open below the line. They work line by line, committing each line as they complete it and automatically moving to the next one. The active line is clearly outlined, and the image position adjusts to keep the active line in view. If they are unable to decipher a word, they mark the line as incomplete before moving on. Another student can then review the incomplete lines and edit the transcription in place. From time to time, they will highlight a specific feature in the manuscript and add a comment or question for the other students. When the transcription is complete, they export the transcriptions into a single file, leaving out the questions & comments, and submit their work to the instructor.

Role: Viewer

The viewer has a more passive relationship with Mirador. She experiences content without modifying, organizing, or deep exploration. She wants to understand meaning.

Context	transient experience
Objects	annotations, images, manuscripts, books

Example scenarios

1 Student is assigned to work with primary sources, specifically medical textbooks from the 1960s. The full text of her chosen textbook is available, but she prefers to reads the page images as a book, to see the text and figures in context. She uses the table of contents to start at a given chapter, then closes all navigation and information panels, so she has only the pages laid out in book mode. She toggles to full screen to read. She uses full text search to find all discussions of a specific concept or procedure, or to find something she read earlier in the book. She wants the search results to indicate the location in the book, as well as a snippet of text so she can determine whether it's relevant. When she selects a result, she wants the search term to be highlighted on the page.

2 As Art Gallery Patron ages, his vision is less acute but his interest in art is undiminished. He visits the gallery in person to experience the physical size and impact of the works, then uses the gallery's website to explore specific works in detail, zooming and adjusting contrast and brightness to reveal the details of the work that he could not see in person. He would like to be able to do this exploration in the gallery, while he is physically near the work.

3 Student is looking at a highly-annotated city map. She is analyzing the distribution of certain public features across the city - parks, statues, fountains, etc. She searches the list of tags to find all the statues. A number of pins appear scattered across the map, and a list of the annotated names/descriptions appears in the sidebar. She scrolls down the list of annotations. When she focuses on one, its associated pin is highlighted in the map. The pins are small and numerous, so sometimes she toggles an animation to draw her attention to the right place. When she focuses on an annotation that is not visible in the current window, the image moves to bring that pin into the viewable area.

4 Early Manuscript Scholar has identified several undertexts bound into a new manuscript. She is following the sequence of an erased text on folios that have been inverted and re-bound out of order. The images are rotated to the original orientation of the undertext. When she reaches the end of a page, she wants to navigate to the next page of the undertext in its logical sequence, not the next physical page in the current manuscript.