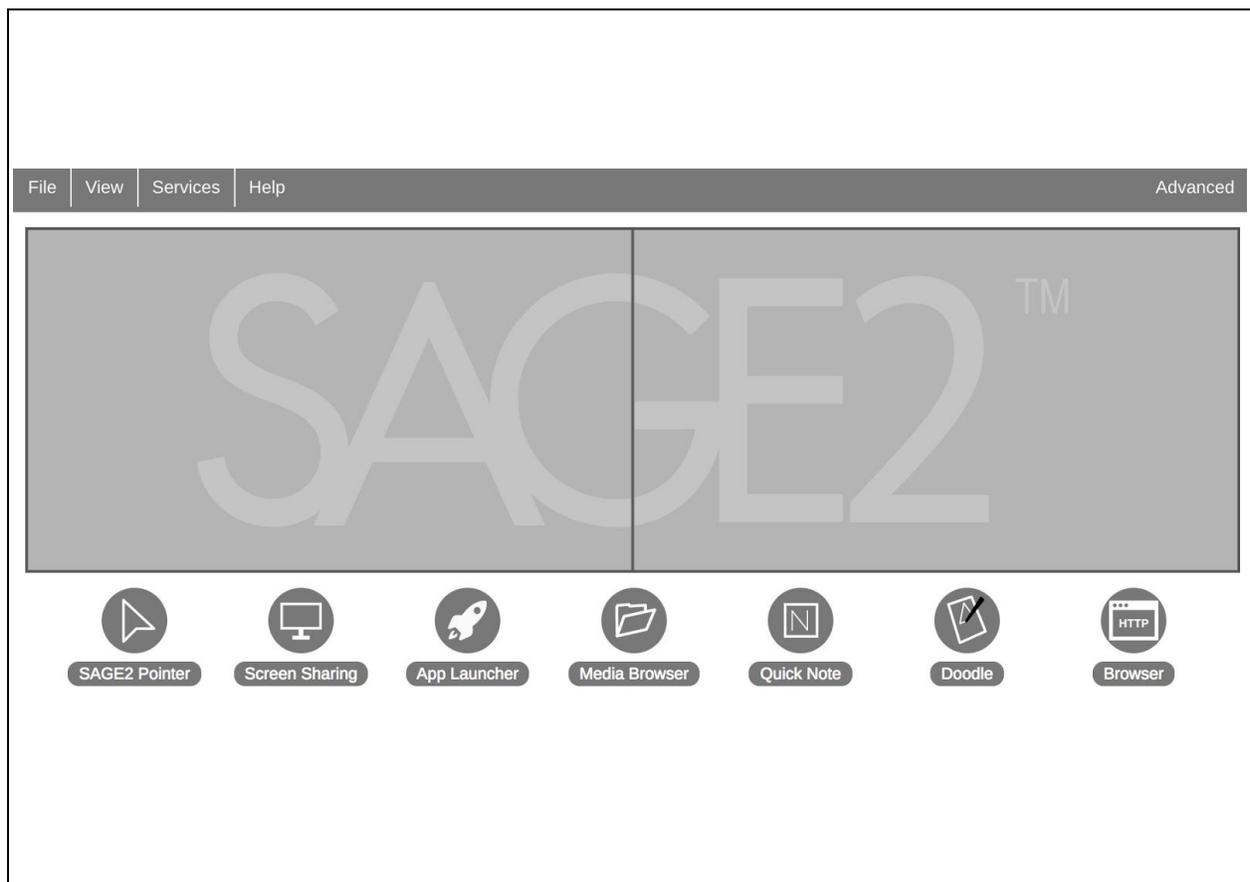# SAGE2 User Interface V3

November 2017

1. Introduction

This is a walkthrough of the SAGE2 web user interface. The Chrome browser is the most supported browser for end-user interaction.
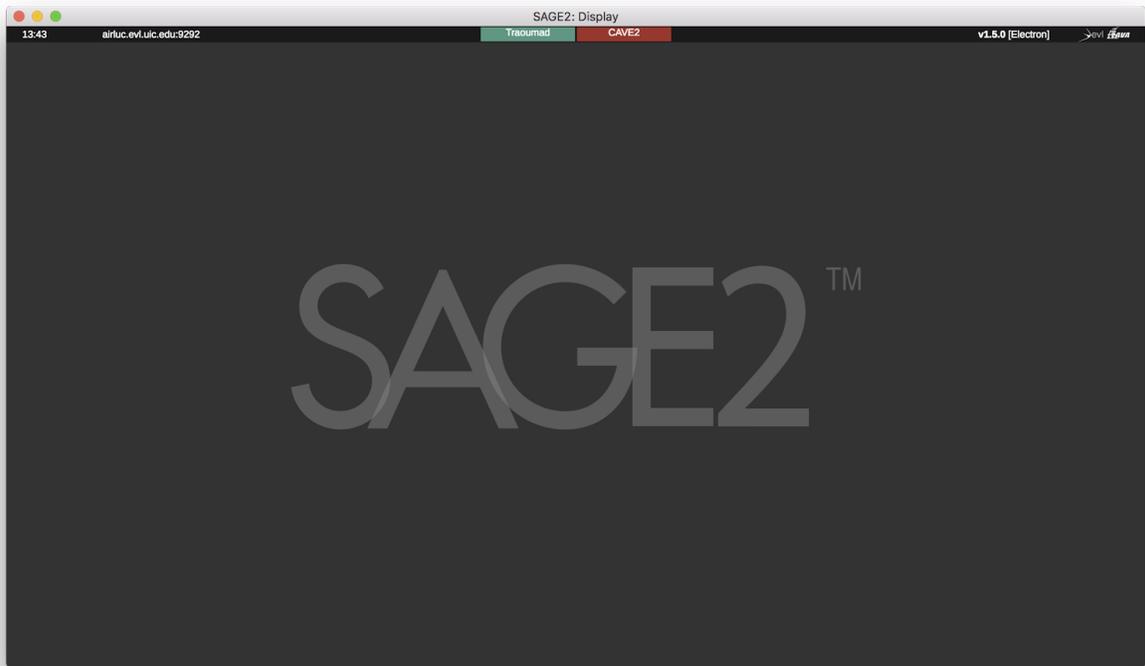
If you run a local SAGE2 server, the web interface can be found at:
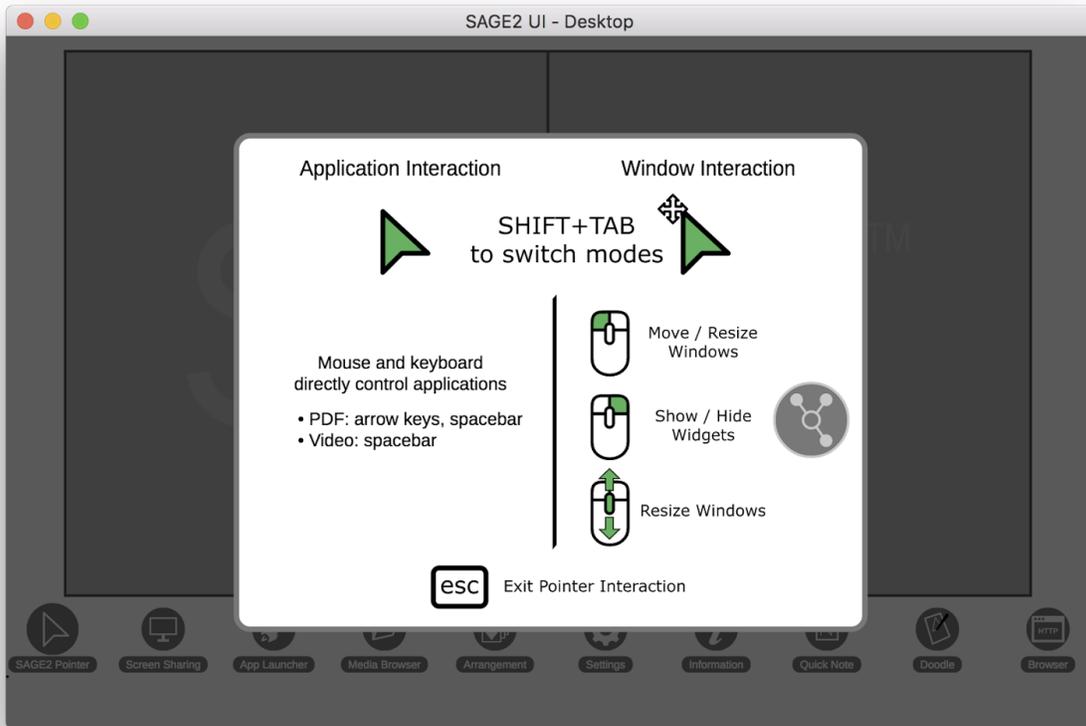- https://localhost:9090/index.html

2. Web Interface

Main user interface, with representation of the wall and quick function buttons below.
The interface shows a grid representing the monitor configuration.

Screenshot of the display view, with background icon and toolbar on top showing remote sites (green is active site, red is inactive site).
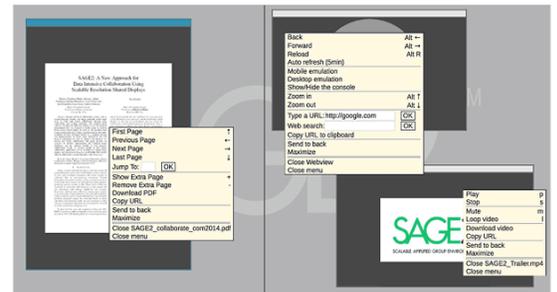
Click 'SAGE Pointer' to activate your pointer onto the wall. A popup shows the instructions on how to use the pointer and the various modes.

SAGE2 Cheat Sheet – Mouse and keyboard operations & shortcuts

Pointer modes	
Application	Application interaction mode: directly control applications with keyboard and mouse (*titlebar* and *corner* active)
Window	Window interaction mode: move and resize windows
Shift-TAB	Switch modes
ALT	Temporary switch (while pressed)
Spacebar	Activate the pointer
ESC	Exit pointer mode

Window Interaction		
	Left button	Move/Resize window
	Right button	Show/Hide menu
	Wheel (scroll)	Resize window (2-finger scroll gesture)

This pictures show the commonly used operations and shortcuts for SAGE2 operation.

Pointer Modes

	Application	Application Interaction Mode: *directly control applications with keyboard and mouse (titlebar and corner active)*
	Window	Window Interaction Mode: *move and resize windows*
	Shift-TAB	Switch Mode
	ALT	Temporary Switch (while pressed)
	Spacebar	Activate Pointer
	ESC	Exit Pointer Mode

Window Interaction

	Left button	Move/Resize Window
	Right button	Show/Hide Menu
	Wheel (scroll)	Resize Window *(2-finger scroll gesture)*

Back   Alt ←
Forward   Alt →
Reload   Alt R
Auto Refresh (5min)
Mobile Emulation
Desktop Emulation
Show/Hide Console
Zoom In   Alt ↑
Zoom Out   Alt ↓
Type URL: http://google.com   OK
Web Search: OK
Copy URL to Clipboard
Send to Back
Maximize
Close Webview
Close Menu

First Page   ↑
Previous Page   ←
Next Page   →
Last Page   ↓
Jump To: OK
Show Extra Page   +
Remove Extra Page   -
Download PDF
Copy URL
Send to Back
Maximize
Close SAGE2_collaborate_com2014.pdf
Close Menu

Play   P
Stop   S
Mute   M
Loop video   L
Download video
Copy URL
Send to Back
Maximize
Close SAGE2_Trailer.mp4
Close Menu

SAGE2 UI - Desktop

CSV File Reader   UIC crime   JqueryUIDemo   US Weather   Webview   a d3 event pass

D3 example: Voronoi Geometry   WhiteboardPalette   emperor   emperor2   Car in Three.js   Smarter Google Maps

Close   Open

SAGE2 Pointer   Screen Sharing   App Launcher   Media Browser   Arrangement   Settings   Information   Quick Note   Doodle   Browser

Application launcher: The 'App Launcher' button opens a panel showing the applications installed in your SAGE2 system.
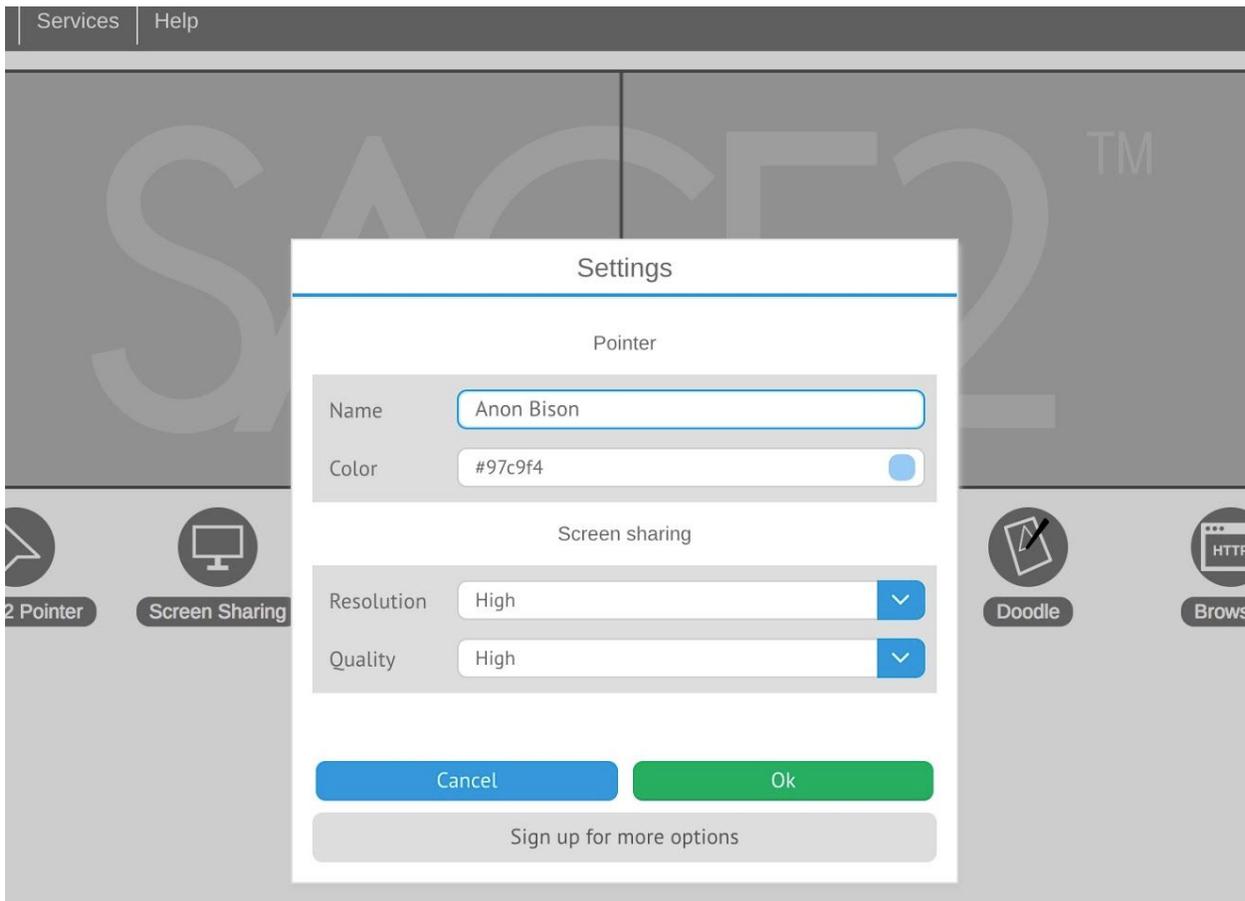
The *'Settings'* panel shows your user name and the color of your pointer. You can change these settings at any time. The screen sharing panel lets you select quality (compression level) and resolution used when using desktop sharing. Default values are the most commonly used. Lower resolution to improve responsiveness on low-bandwidth networks.

View panel enables the user to clear the wall of any running application, to tile all the windows on the wall, The *File* menu lets the user save the current layout as a session (that can be loaded at a later date). Session files are available in the file manager panel.
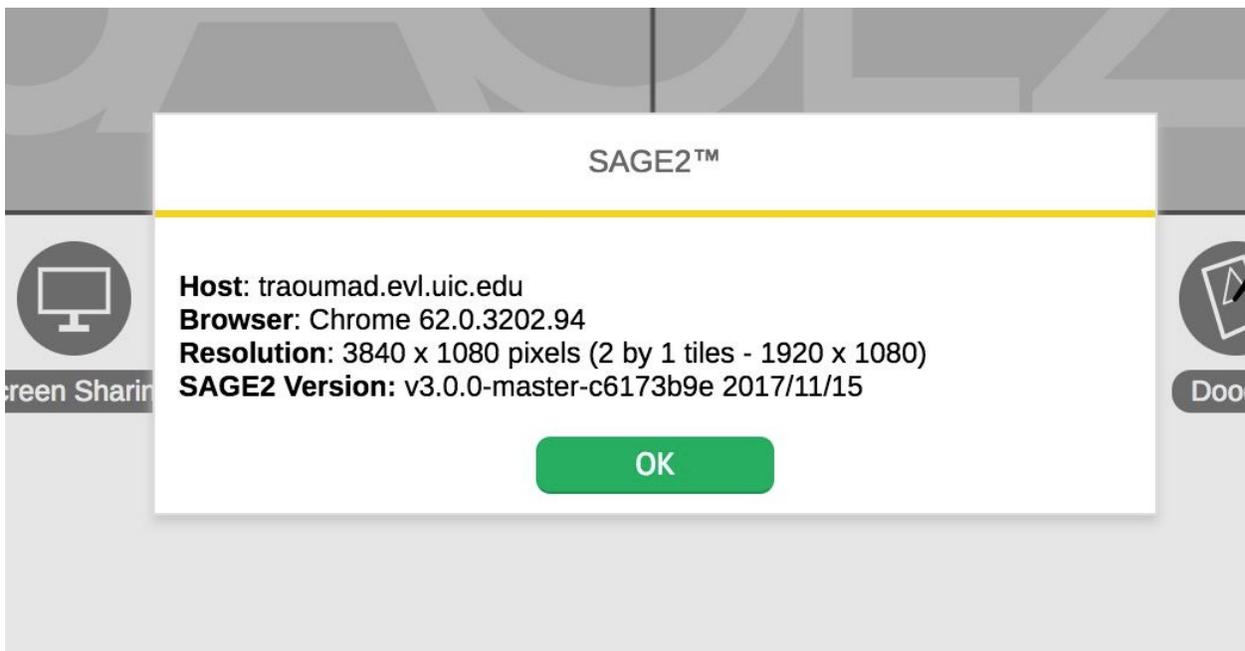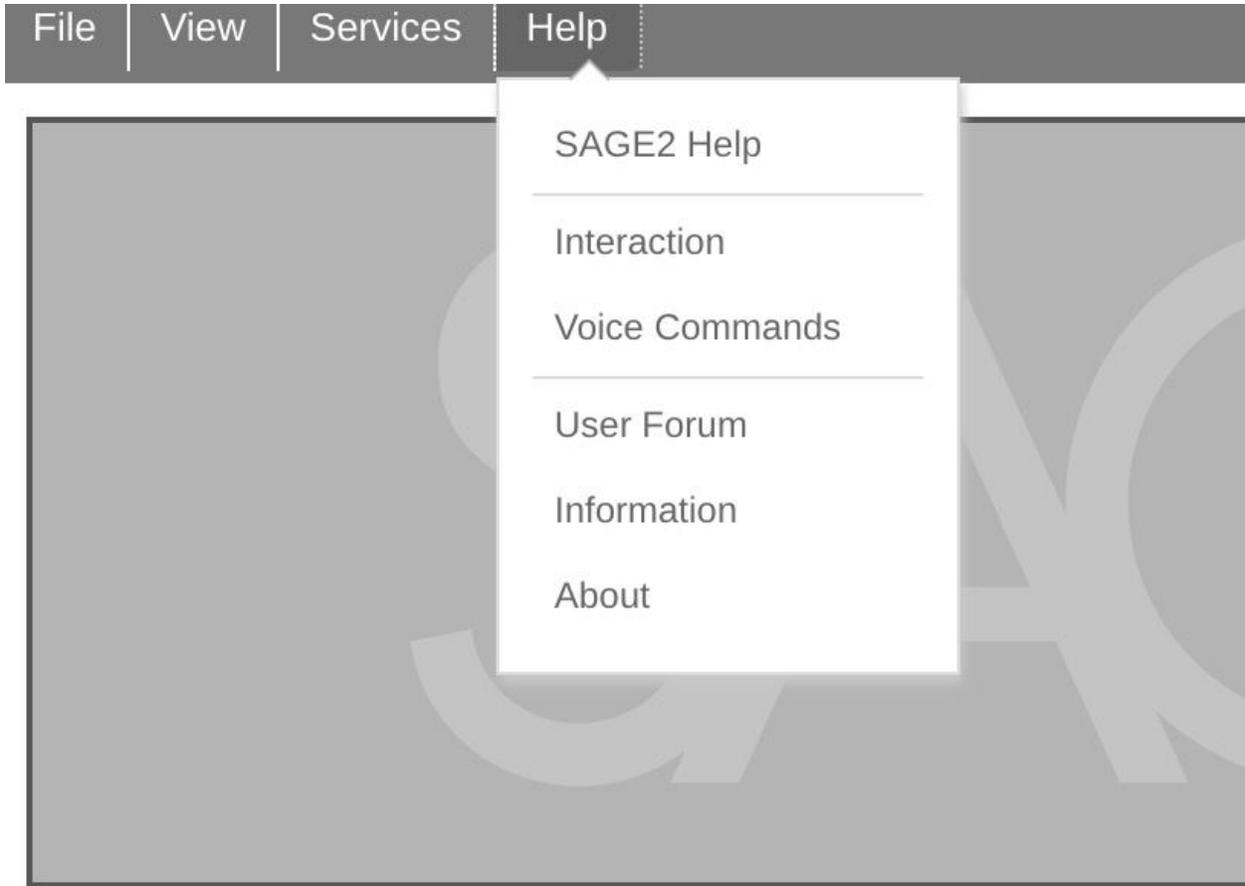
The *About* panel displays the current settings of your wall (hostname, resolution, SAGE2 version and your current browser version). It also lets you access some help and administration pages.
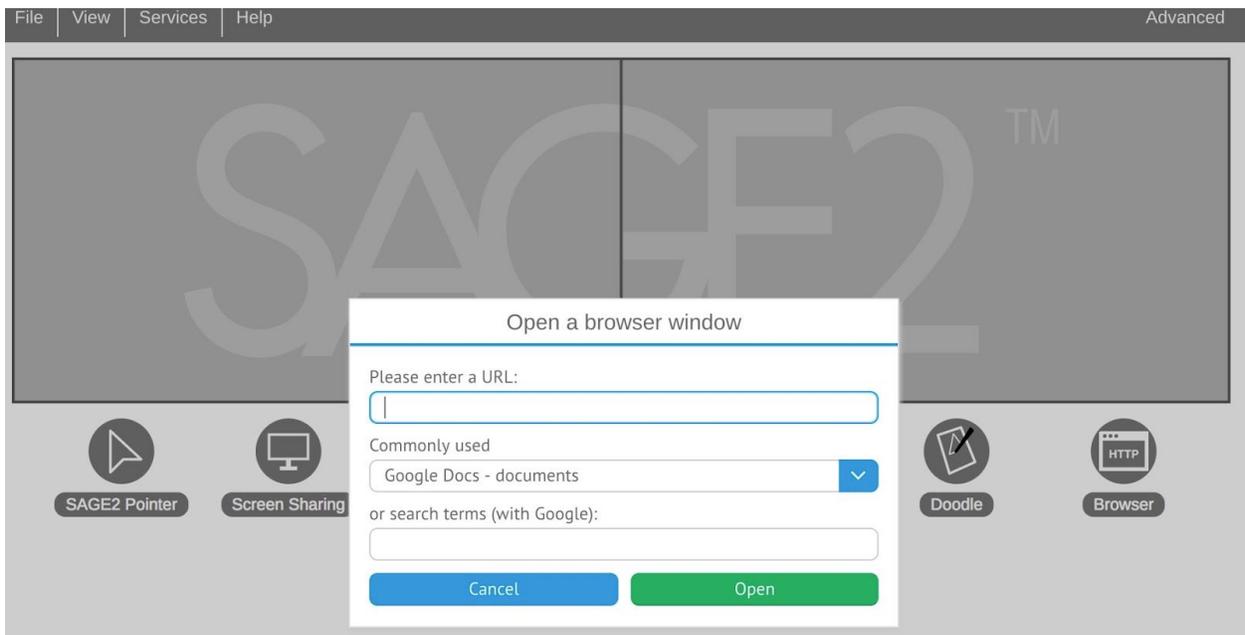
The 'Browser' button lets you open a webview onto the wall: you can either type a URL into the textbox, or a few keywords into the search box (Google search engine will be used). A window will open on the wall showing the selected web site.
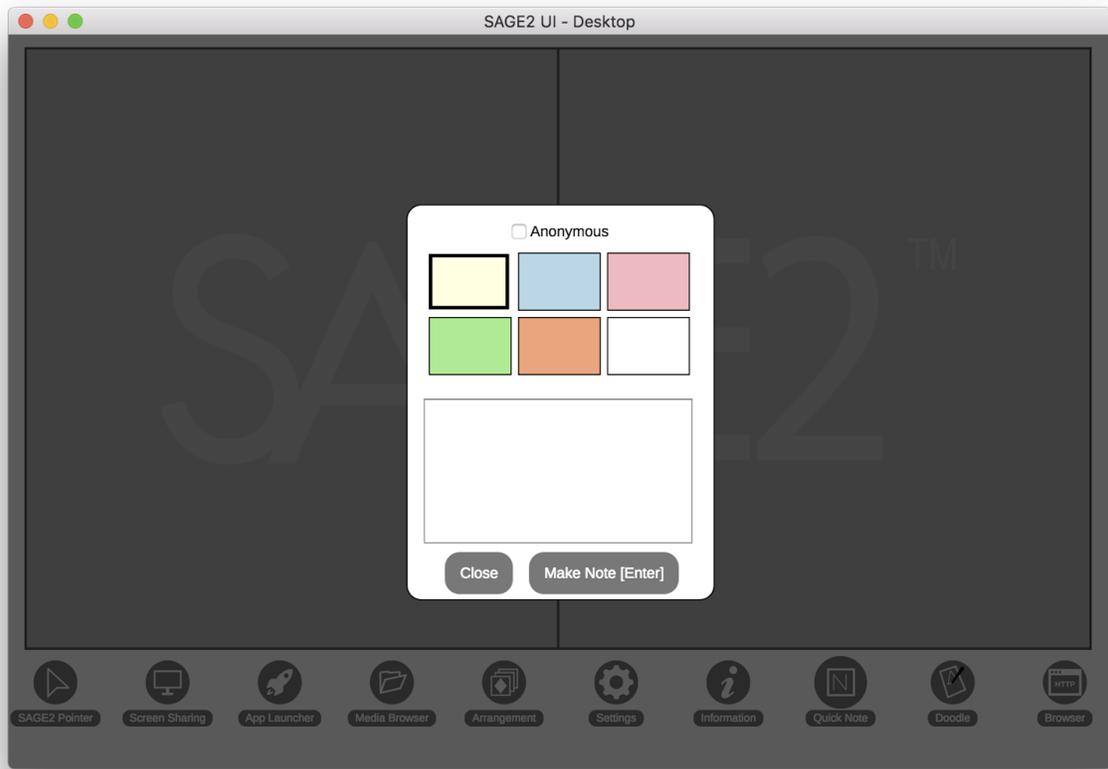
Quick note creates a text note on the wall, with a selected color. Notes can be made anonymously, if needed.
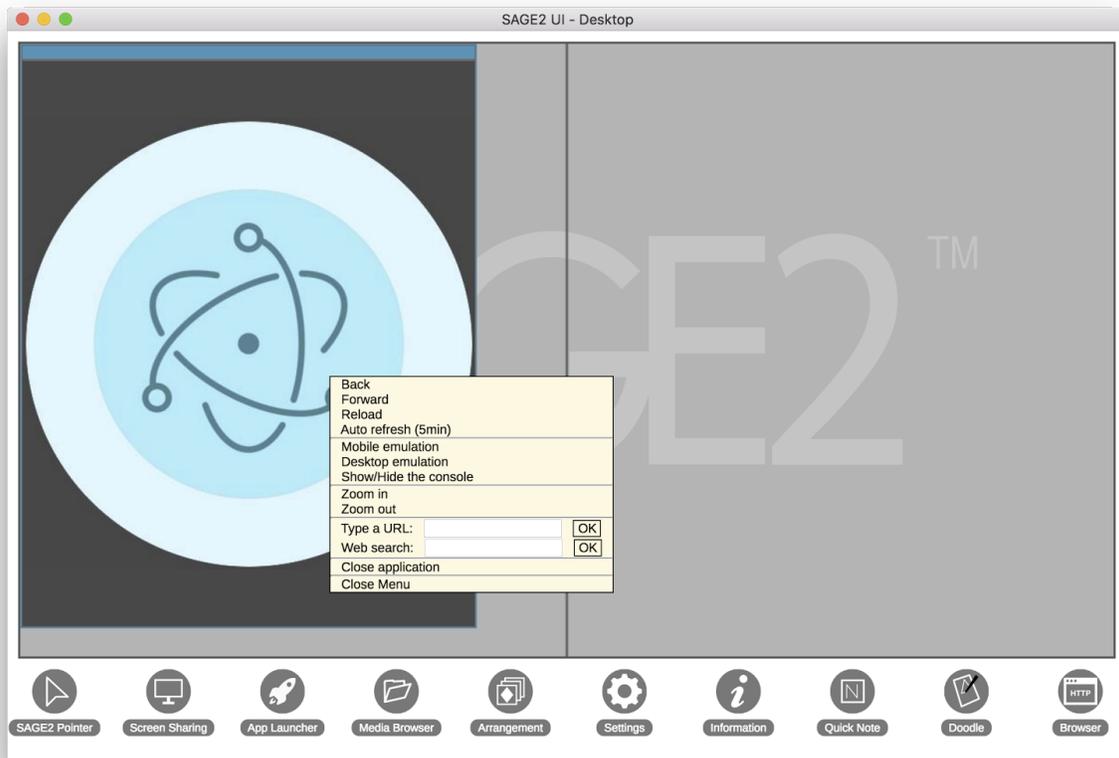
Once a webview is opened, you can right-click on its icon and open a menu to perform various operation:

- Back: navigate to the previous page
- Forward: navigate to the next page
- Reload: refresh the page
- Auto refresh: reloads the page every 5 minute.
- Emulation: select desktop or mobile emulation (various sites give a better scalable layout in mobile mode).
- Zoom: zoom in or out the page (equivalent of zoom in desktop browser)
- Type a URL: select a new site for this webview.
- Web search: Google search
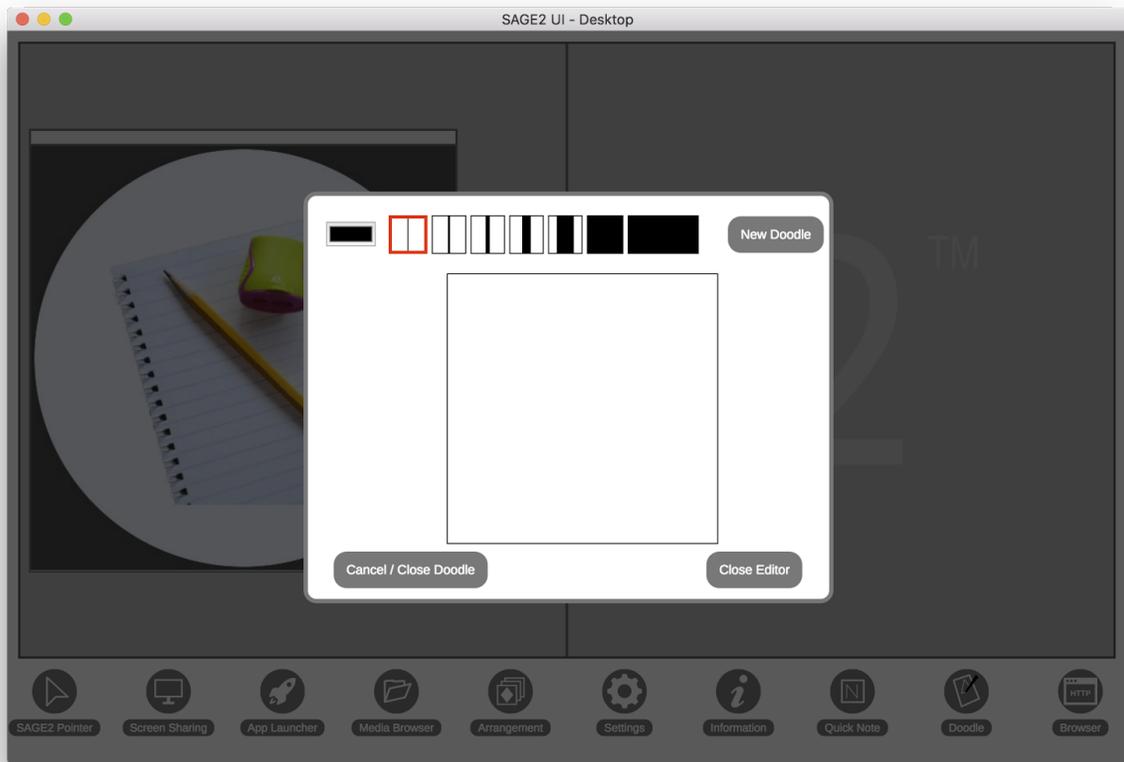
Make a 'doodle' using the 'Doodle' button. Draw a quick note using your mouse, and select various pen thickness.
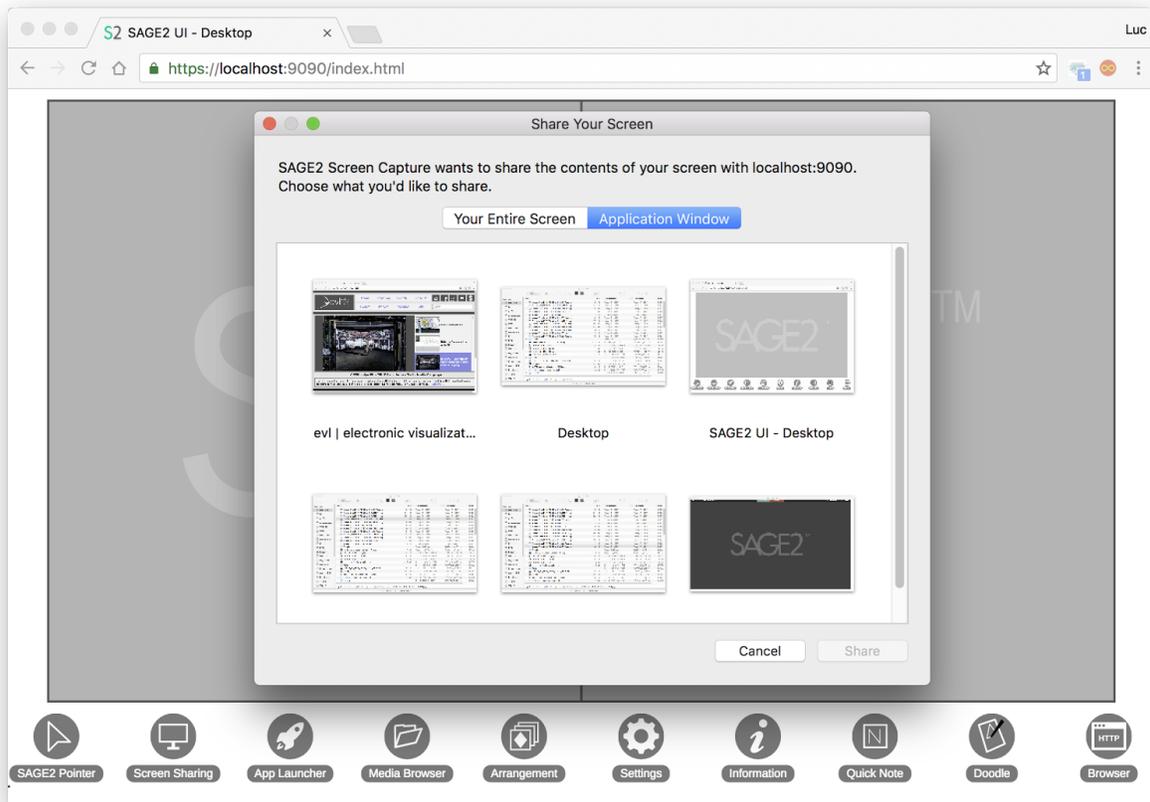
The 'Screen sharing' button lets you share your screen on the wall, using a Chrome browser. The first time, it will ask you to install a Chrome extension. Then you can share either your whole desktop or a specific window. Several users can share their screen at once. But one user can only share one window (or screen).
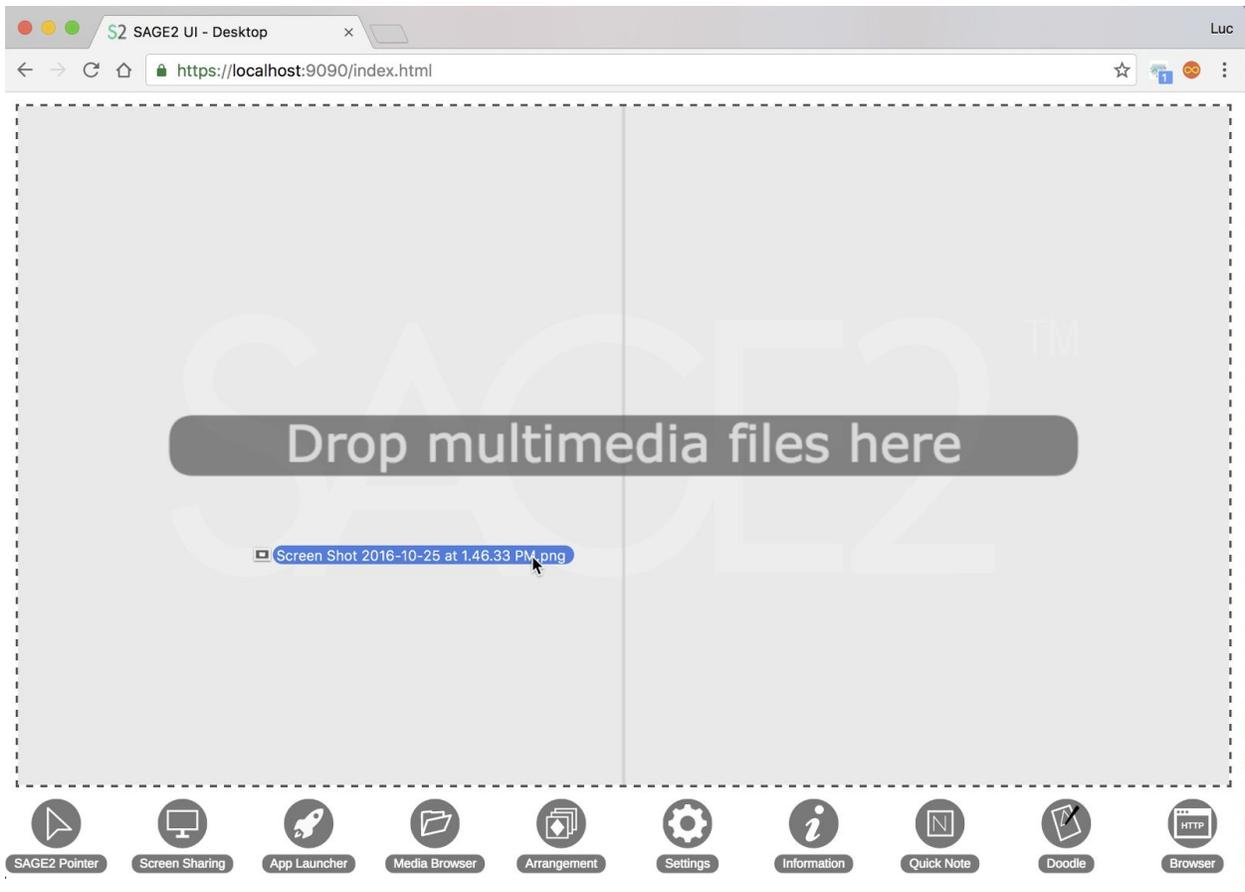
To add content to the SAGE2 wall, you can drag and drop content onto the UI. The content will be opened automatically. Various formats are supported depending on the installed applications. Default formats are 'web compatible' image formats (PNG, JPEG, …), movies (MP4 format preferred), PDF documents.

If appropriate applications are installed, you can visualize CSV files, JSON files, PDB files. URLs will be opened using a webview.

3. Media Browser

The 'Media Browser' lists all the content currently available on your SAGE2 installation. You can organize your content in folders and see the metadata associated with each file
Click the 'Media Browser' button again to close the panel.
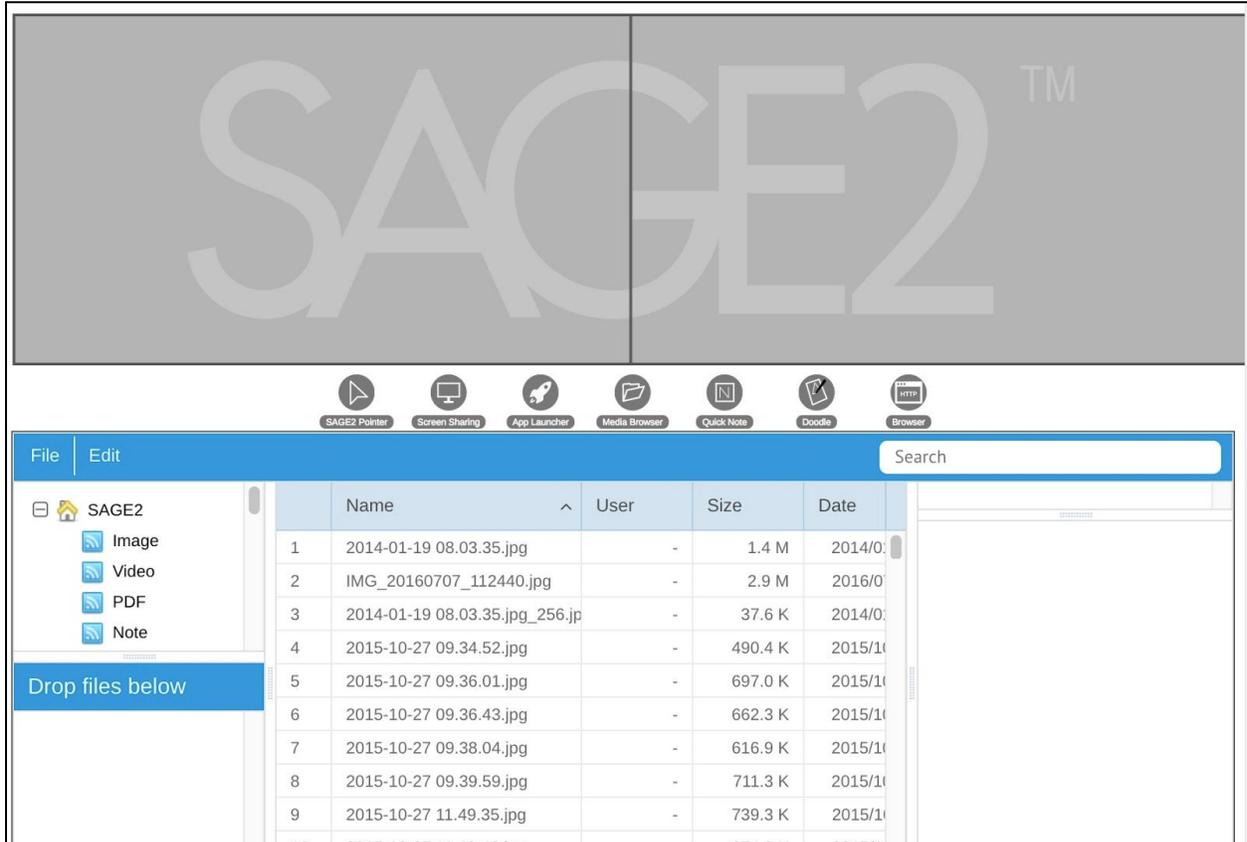
4.   Applications
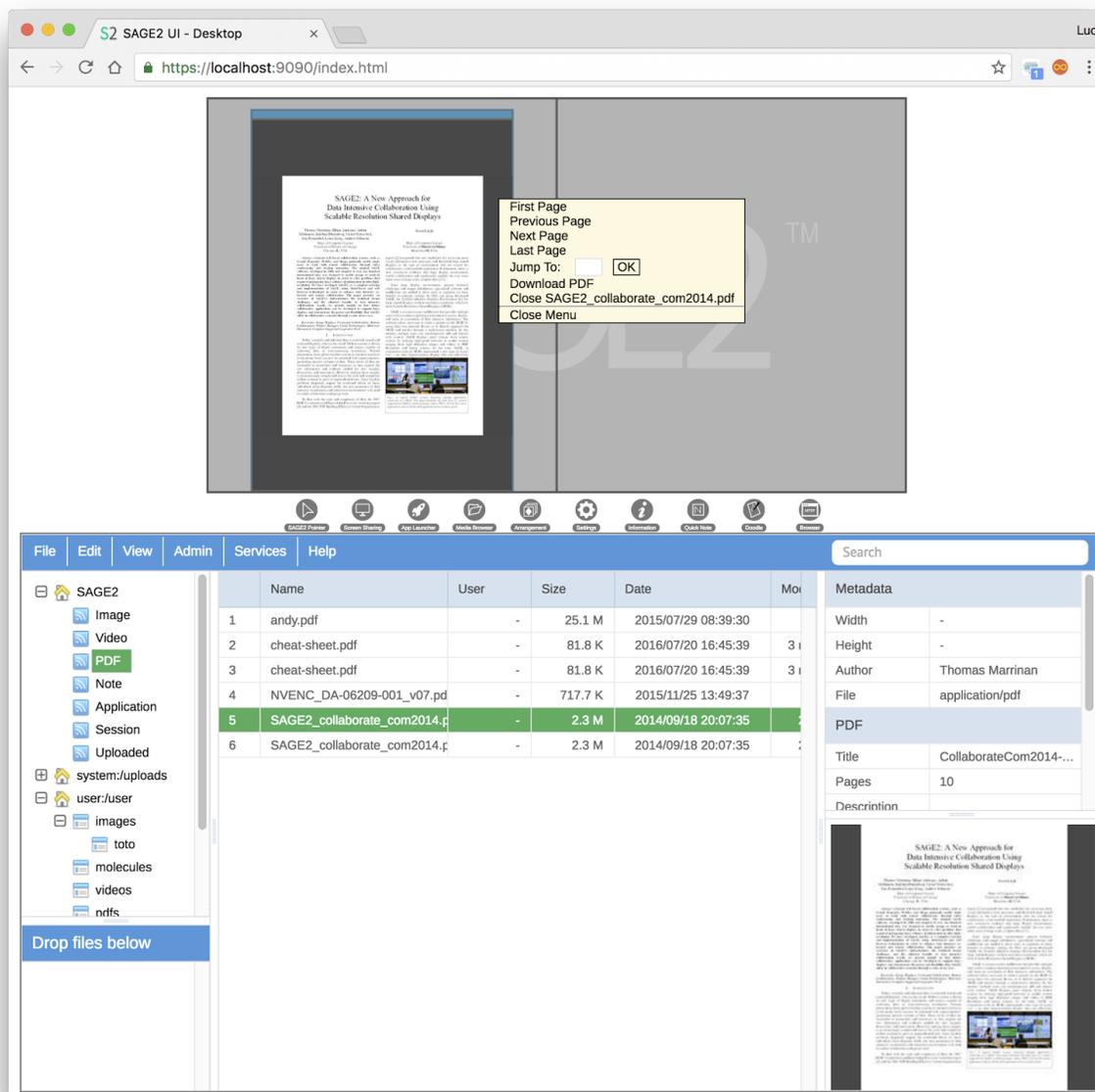
PDF viewer: right-click for operation of the PDF application (includes page navigation and download of the PDF document).
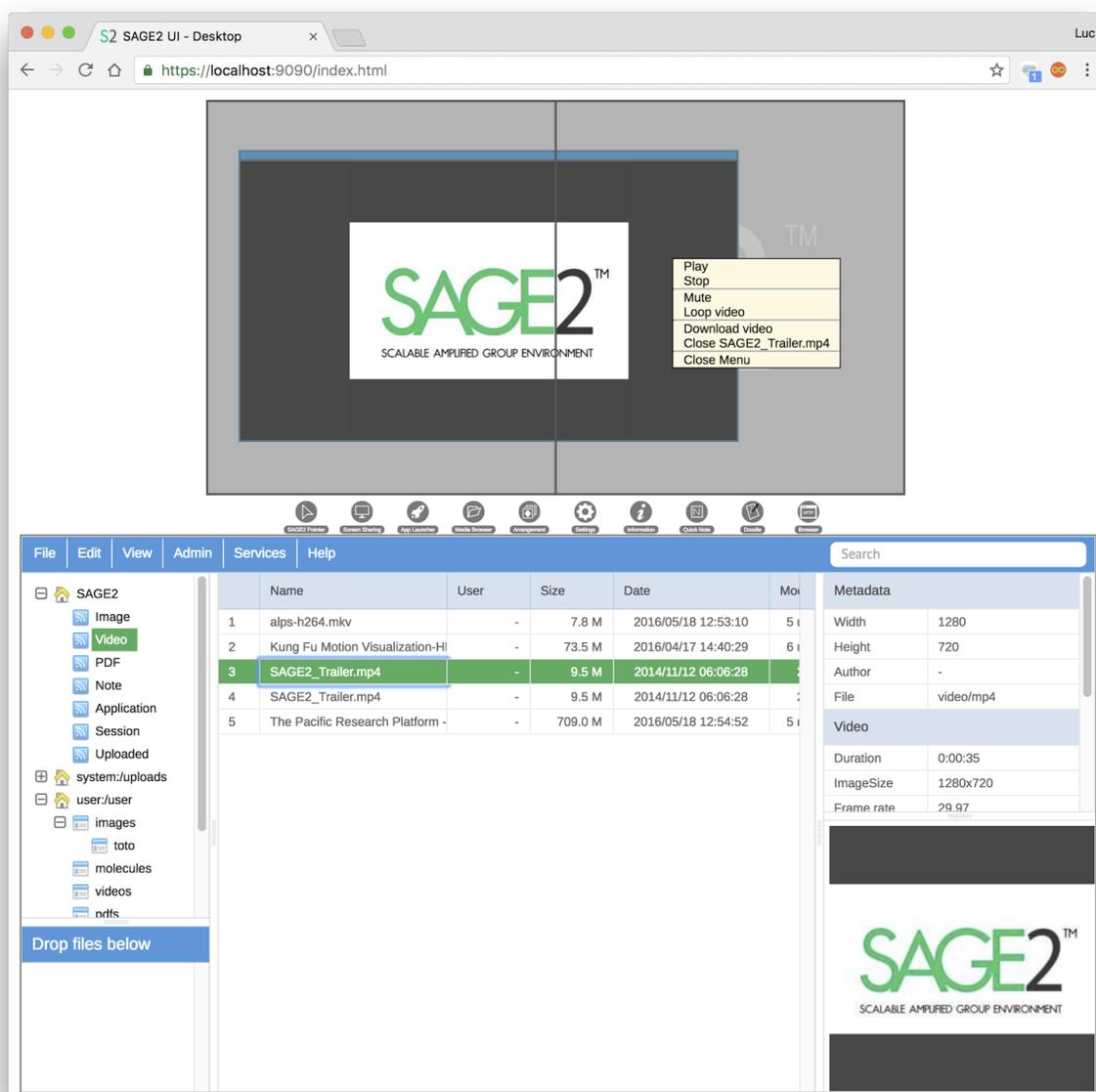
Movie player interface lets you start and pause the playback. You can mute and loop the video. Users can also download the video file.

Image viewer lets you download the image and to convert it into a doodle for drawing.
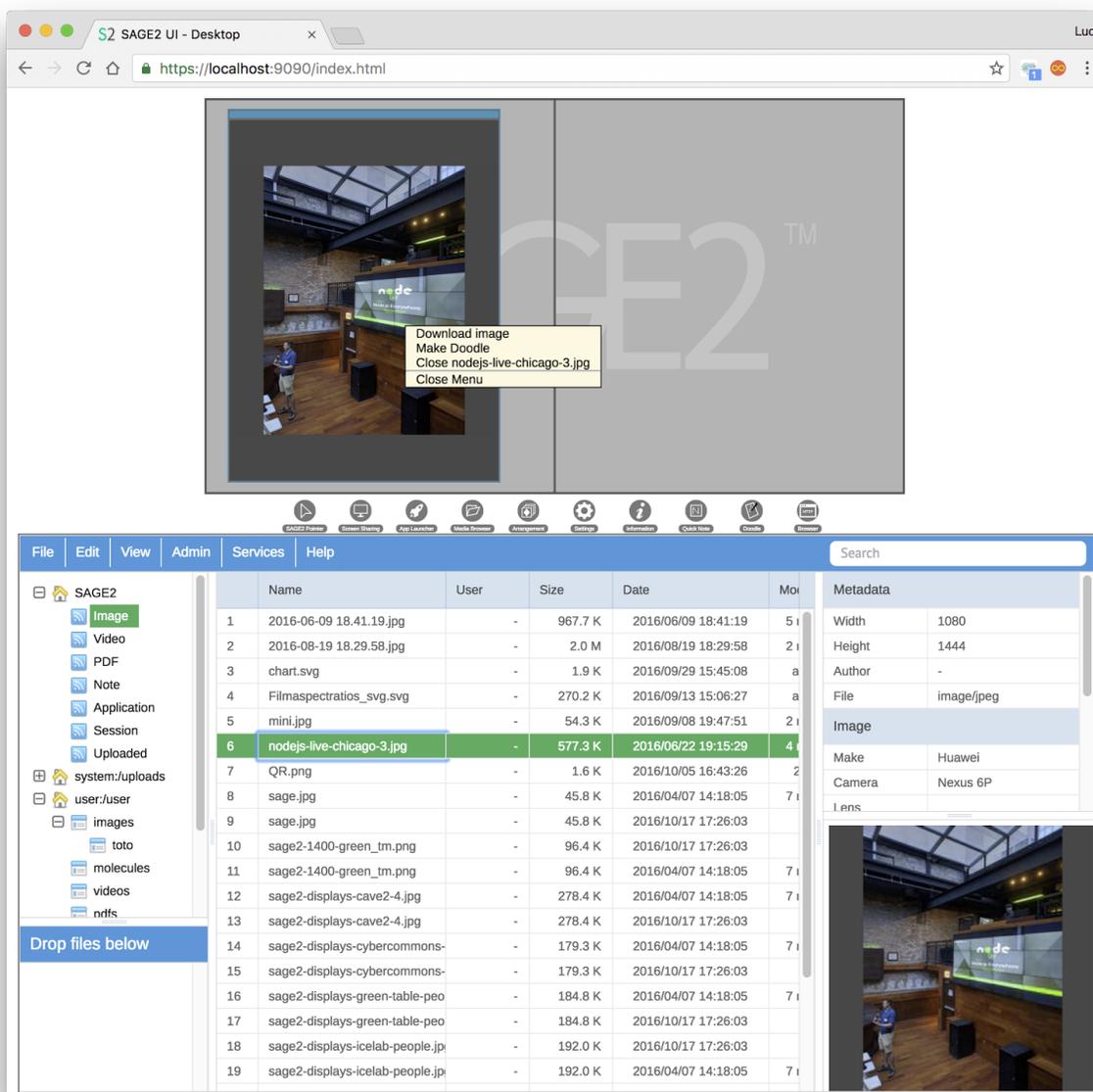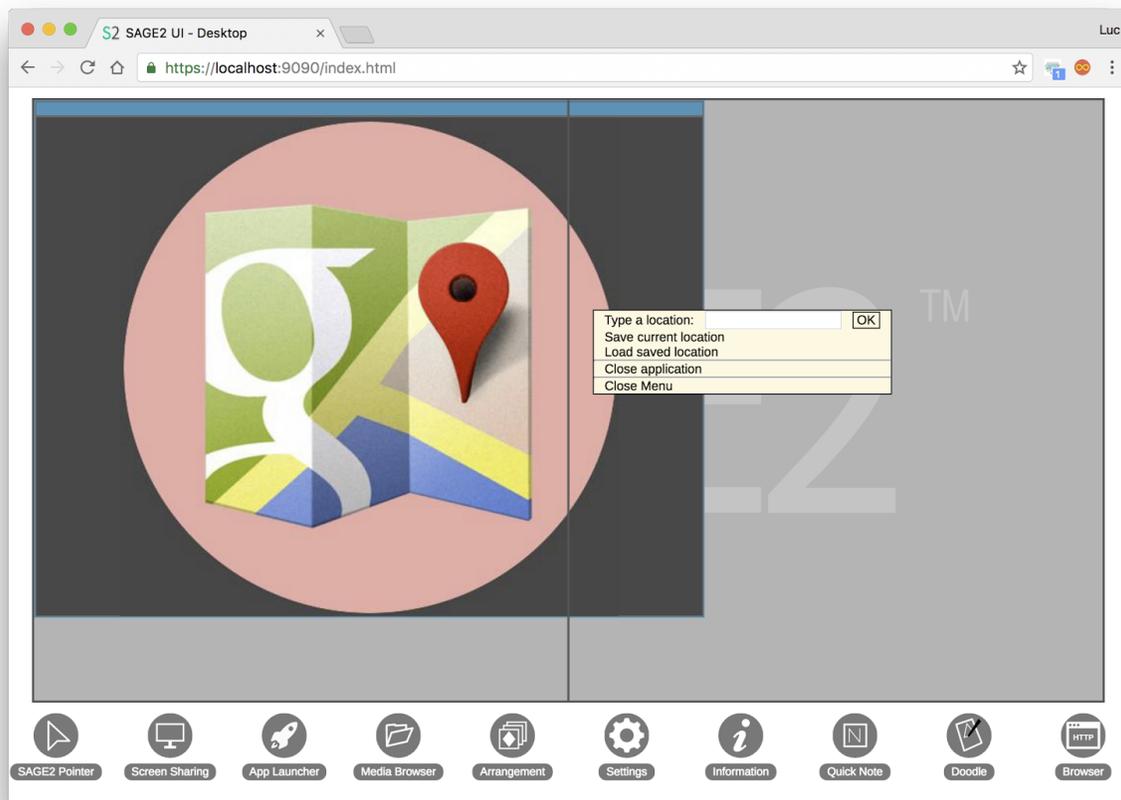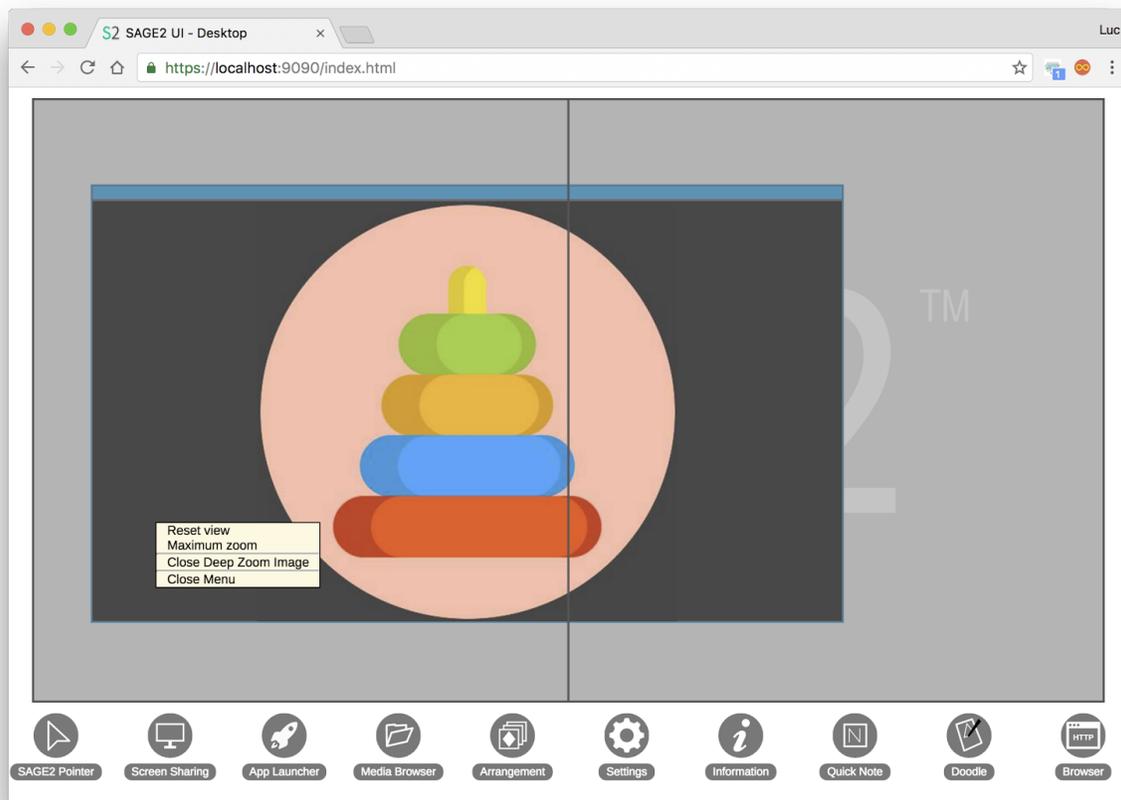
Google maps lets you type a location (using Google map engine). One location can be saved and restore for all Google maps application instances.
Use the SAGE2 pointer to navigate the map (drag to pan, mouse wheel to zoom in/out).

The 'Zoom' application let the user to show multi-resolution images. It loads '.dzi' files (small XML file specifying image location and information). Users can pan and zoom using the SAGE2 pointer.

Large images can be processed with VIPS library into a pyramidal representation. An online web service is provided. Drop your image at:

https://sage2rtt.evl.uic.edu:3043/

When the image is processed, you can click the 'Download' button to get the '.dzi' file which you can drop onto the SAGE2 UI.

For non-interactive use (remote data server), you can use a 'curl' script to upload the image:

- curl -# -m 900 -L -o $2.dzi -v -F upload=@"myimage.tiff"
  http://sage2rtt.evl.uic.edu:3000/upload

5. Voice Commands

Common Commands

Voice commands for the wall	
Action	**Phrase to activate**
Tile all open applications	Tile the wall
Close all open applications	Close everything
Restore closed applications	Restore everything *Restores applications closed by the previous command*
Launch an application	Open [phrase] *Opens the application with the most word matches in [phrase] compared to title, description, or keywords.*
Make a note	Make a note [phrase] *Will create a note with the [phrase] as the note contents*
Save session	Save session as [phrase] *Saves all open applications as session with name [phrase]*
Load session	Load session [phrase] *Loads the session where the name has the most word matches in [phrase]*
Search on the web	Web search for [phrase] *Starts a web search using [phrase]*
Image search on the web	Web image search for [phrase] *Starts a web image search using [phrase]*
Share to remote site	Share with [phrase] *Shares the application under the pointer to the remote site name with the most words matches in [phrase]*

Wall Commands

Action	Invocation Words Required
Tile all open applications	Clean wall Clean this up Cleanup Organize Tile content Tile everything Tile wall Tile windows
Close all open applications	Clear everything Close everything Get rid everything Toss everything Toss it all
Restore closed applications	Restore view Restore everything Bring back everything This will restore applications closed by the previous command.
Launch an application Open file from media browser	Launch [phrase] Load application [phrase] Open [phrase] Start [phrase] Based on the [phrase], the application with the most matches within the tile, description, or keywords (described in instructions.json) will be launched. If any phrase contains the word: pdf, image, picture, video, or movie. Instead of an application, it will search for a name match within the corresponding folder of the media browser.
Make a note	Make a note [phrase] Make a reminder [phrase] Write down [phrase] Creates a note with the [phrase] as the contents.
	Save applications as [phrase]

Save session with a name	Save content as [phrase] Save session as [phrase] Save state as [phrase] Save wall as [phrase] Save applications name [phrase] Save content name [phrase] Save session name [phrase] Save state name [phrase] Save wall name [phrase] Creates a saved session with [phrase] as the name visible within the media browser.
Restore all applications that were part of a saved session	Restore session [phrase] Load session [phrase] Bring back [phrase] Restores a session with the most word matches within the given [phrase].
Open a Webviewer application and search using Google	Web search [phrase] Google search [phrase] Will first open a new Webview application, then perform a Google search with the given [phrase]. If "image" is said after web or google, image search will be done instead of text search Ex: Google image search [phrase].
Share an application to a remote site	Share with [phrase] Send to [phrase] Will share the application directly under the pointer to the remote site who's name has the most word matches within [phrase].

For wall commands, each of the words of an invocation must be present. For commands with phrases, the phrase must follow the preceding word, otherwise the phrase will be incorrectly detected. Aside from the phrase and the word before it, the invocation words can be in any order.

Application Commands

Applications can be issues commands from their context menu. The menu entry activated will be the one with the most word matches. When multiple applications are

open, the application directly under the pointer will be checked first. If no matches are found, the rest of the applications will be checked starting from the oldest.

For entries that take user input, the word before the input area is used to identify the start of input. Anything after that word will be sent as input.

UI client Commands

The following commands can be activated from within the client UI. They do not reach the server for evaluation.

Action	Invocation Words Required
Tell the time	What time is it
Tell the data	What is today's date
Open the help page	Help Will open in a new tab the quick reference for voice commands. This may be prevented by pop-up blockers.

Youtube video

https://youtu.be/9atA_h_t5pM