# mScope Research version 3.8

# **User Guide**

September 2011

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### **1.** Introduction

Aurora Interactive's mScope Research Suite enables organizations to easily and intuitively view, manage, distribute, enrich, share and collaborate around digital imaging content using any Web browser connected to the Internet.

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This document describes the functionality and implementation of the mScope Research application v3.8.

### 2. mScope Components and Concepts

This section describes the main components of the mScope Research application, how they interact and their primary functions.

#### mScope Overview 2.1.

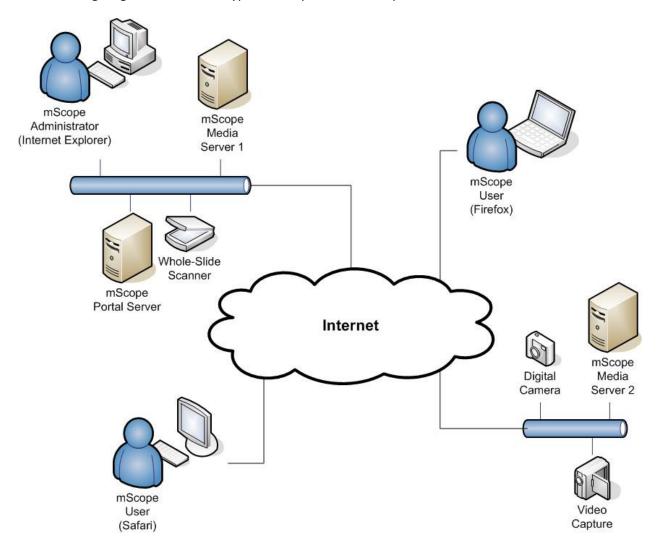
The mScope Research application is a Web-based thin-client application that:

- manages all forms of media and information required to support research
- uses a centralized mScope Portal server to organize and share media and information and route • user requests to view media stored on one or more distributed Media Servers
- uses the mScope Viewer to allow users to view, enrich and collaborate around media without ٠ displacing it from its Media Server
- operates on multiple operating systems (e.g. Windows, Mac) •
- may be launched within multiple browser types (e.g. Internet Explorer, Chrome, Safari, Firefox, • etc.)
- supports many media formats (all major whole-slide scanner manufacturers, DICOM, digital video, digital cameras, etc.)

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The following diagram illustrates a typical mScope Research implementation:

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### 2.2. What is Media?

In the context of the mScope, media is defined as any file containing visual information. mScope supports a wide array of media formats. Examples include:

- 2D images (e.g. .jpg, .gif, etc.)
- video (e.g. .mpeg)
- whole-slide images produced by slide scanners (e.g. Aperio, Hamamatsu, Zeiss, etc.)

Media is displayed in the mScope Portal using thumbnails



### 2.3. mScope Portal Overview

The mScope Portal may be accessed through any Web browser (e.g. Internet Explorer, Chrome, Firefox, Safari, etc.) and is the primary work area for users and administrators of the mScope Education Suite. It is through the mScope Portal that users and administrators access, upload, manage, link, enrich and share content.

/ 🖶 n	P mScope Portal - Welcome ( × 100)										
← ·											
									Welcome Fabrice Helpir		
			the mS	cope Res	earch	Portal					
	🕽 My stu	udies							ig My personal folders		
	Org. unit	Code	Name	Attribute template	Start date	End date	# Medias	# Attachments	Name	Access path	# Medias
	QC	QC-A	Sample Search	None	None	None	٥	0	Personnal Folder #2	/ Personnal Folder #2	1
	NCE	762	Search Meta Biomarkers	None	07/10/2011	20/01/2012	2	0	Personnal Folder #1	/ Personnal Folder #1	٥
	MTL	R1-001	Research #1 Study #1	None	18/08/2011	31/08/2011	3	Ō			Show all
								Show all			
4								Þ	4		•
_											
								0	pe Research Portal 3.8.1 urora Interactive Ltd. o: Research License (10 user)		
									: 26-Aug-2011 11:39:22 AM		

The Portal may be configured to include all or some of the following modules (tabs):

- Dashboard •
- Media Library

Studies

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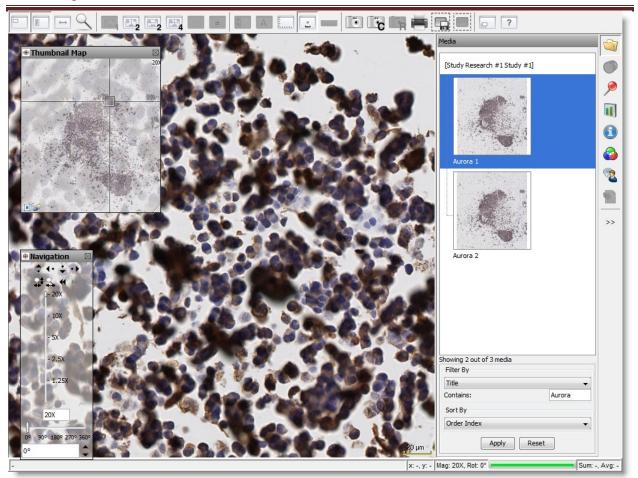
Administration

For a detailed description of the mScope Portal, its modules and their features, please refer to Section ?5.

#### 2.4. mScope Viewer Overview

The mScope Viewer is a Java applet that is launched when a user clicks on a media thumbnail in the Portal. In order to eliminate the requirement to download the entire media file (which in some cases is several GBs in size), it selectively and intelligently loads the data corresponding to the region within the viewing area. The mScope Viewer includes tools to allow users to navigate, zoom, annotate, synchronize and collaborate around media.

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The Viewer may also be configured to include all or some of the following modules (tabs):

- Attributes
- Color
- Collaboration

- Annotations
- Analysis
- Media

For a detailed description of the mScope Viewer, its modules and their features, please refer to the mScope Viewer User Guide.

### 3. mScope FAQ

This section addresses frequently asked questions (FAQs) from mScope Research application users and administrators.

#### Hardware and software requirements 3.1.

The following table highlights the minimum and recommended hardware and software configurations for administrators and users of the mScope Research Suite v3.8:

	Minimum	Recommended
Operating System	Windows XP, Mac OS 10.4	Windows XP+, Mac OS 10.4+
Internet Browser	MSIE 6.0, Firefox 2.0, Safari 3.0, Google Chrome	Google Chrome
Cookies	Enabled	Enabled
Additional Software (plug- ins)	Java 1.5+	Java 1.6+
Java Virtual Memory	64 MB	128 MB+
CPU	2GHz single core	Dual core+
RAM	1 GB	2 GB+
Hard Drive Space	Not applicable	Not applicable
Screen Resolution	1024 x 768	1024 x 1280+
Network Connection	3 Mbps	10 Mbps+

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#### 3.2. Language Setting

The mScope Education Suite is designed to detect the language setting of the user's Internet browser and display the appropriate translation. In the event the user's Internet browser language setting is not supported, English will be displayed as the default language.

The mScope Education Suite v3.8 currently supports the following Internet browser language settings:

- English
- French
- Spanish •

- German
- Portuguese

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### 3.3. Logging in and out

To enter the mScope Portal users must authenticate themselves by logging in:

- 1. Clicking the "Log in" button at the top right of the mScope Portal window will bring up the page shown below.
- 2. The user must then enter their username and password and click on "Log In"

Welcome to the mScope Portal Please identify yourself
Username: Password:
Remember me on this computer. I forgot my password.
V Log In

1. **Tip:** By selecting the "Remember me on this computer" checkbox, the next time the user accesses mScope he will not need to enter his username and password and will be automatically logged in.

To unset this automatic behavior, the user must click on the "Log out" link located in the upper right corner of the screen. The user will then be automatically redirected to the log in page.





#### 3.4. Forgot my password

If you forgot your password you may select the "I forgot my password" link.

Welcome to the mScope Portal Please identify yourself				
Username: Password:				
Remember me on this computer. I forgot my password.				
✔ Log In				

Enter you user name and click "Send" in order to receive a new password at the email address associated to your mScope user profile.

Please provide your username.					
Username:					
	Send	Cancel			

#### 3.5. Settings not supported

When a user logs in the system performs a check to verify that the user's computer has all the required components and software to run mScope. If this process is successful, they will be brought to their home page. If the process fails, a warning message is issued.



By clicking the link "View more information" you will be directed to a Setting Summary page highlighting your settings as they compare to system requirements:

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X Not Certified me	ans that your settings do no	t meet the minimum settings.			
\Lambda Warning means	that your settings do not me	et the recommended settings, but r	neet the minimum settings.		
Certified means	that your settings meet the	recommended settings.			
Settings Infor	mation				
Setting Name	Minimum Settings	Recommended Settings	Your Settings	Result	Links
Browser	MSIE 7.x+, Firefox 2.x+, Safari 3.x+	MSIE 8.x+, Firefox 3.x+, Safari 3.x+	msie 8.0	<b>«</b>	
os	Windows NT 5.1+, MAC	Windows NT 5.1+, MacOS 10.4.x	windows nt 6.1	<b>«</b>	
Javascript	JavaScript 1.x+	JavaScript 1.2+	Javascript 1.2	<	
Java	Java 1.5+	Java 1.6+	Java 1.6.0_17	∢	
Cookie	Enabled	Enabled	Enabled	<	
Screen Resolution	1024x768+	1024x768+	1688x949	∢	
User Agent	Mozilla/4.0 (compatible; MSIE 8.0; Windows NT 6.1; WOW64; Trident/4.0; SLCC2; .NET CLR 2.0.50727; .NET CLR 3.5.30729; .NET CLR 3.0.30729; Media Center PC 6.0; MDDC; .NET4.0C)				

Clicking on the "Links" will redirect you to a website that supplies the required fix for the settings issue. Note: It is possible that your network administrator may prevent you from applying the updates. You'll need to consult with them if this occurs.

One common cause of the "Settings not supported" message that is not highlighted in the Setting Summary above is when the Web browser's security settings are too high. In this case, reduce them by one increment and refresh the Log in page to see if that corrects the problem.

### 4. User Profile

Access your user profile at any time during a session by clicking on your username, displayed at the upper right corner of your browser. This allows you to update your password or modify your configurations.

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mScope <sup>®</sup>	
Home Media Library Case Atlas Course Materials Evaluations	Search

#### 4.1 Change Password

Users can change their password by clicking their username in the top right of the mScope Portal beside "Welcome". This will load the Profile page. Simply click "Change Password" in the left menu and enter your old and new passwords:

mSco	ope° 🔶						
Home Media I	Library Case Atlas	Course Materials Evaluati	ons				
Change passwor     Opdate user cont		Welcome to your profile This page allows you to customize yo	-				
mScope ®	mScope ® Change password						
	* Old pa	word : ddillon					
		Save Cancel					

#### 4.2 User Configuration

Users can change viewer properties by clicking on the "Update user configuration" link from the "Settings" menu of their user profile.

m <b>Sco</b> pe	<sup>©</sup>					
Home Media Library	Case Atlas Course Materials Evaluations					
Settings	Welcome to your profile page	2				
Change password	This page allows you to customize your pro	file settings				
Update user configuration						
mScope <sup>®</sup> Research	1	AUR®RA INTERACTIVE				
Vupdate user configuration map visible at startup:	Default	. Welcome Fabrice Helor				
Zoom control visible at startup:	Vable by default: Vable Default This setting defines whether or not to display the zoom control at viewer startup Vable by default. Vablet					
Zoom behaviour:	Default In this setting defines where the viewer will zoom in on mouse clicks and mouse wheel turns. Defaul behaviour: Zoom in at mouse location by default, at center with ALT-Key	E				
Default zoom level:	Default  This setting defines what zoom level is initially applied to side images when opened. This setting defines whether or not to display the zoom control at viewer startup Valke by default? Walkit					
Zoom behaviour:						
Default zoom level:	Default  This setting defines what zoom level is initially applied to slide images when opened. Default behaviour: Zoom to fift					
Default document zoom level:	Default This setting defines what zoon level is nisaly applied to document images when opened. Default behaviour: Zoom to width & navigate to top					
Viewer memory (MB):	Default This setting sets the amount of virtual memory dedicated to your image viewer. The higher the setting, the mo Current default memory setting (IIIB) 128	re image tiles you can keep in memory and the faster your experience when navigating images.				
Viewer Image Streaming System Default  This setting: This setting defines the method used to brander image data (like) between the miscage Viewer and the miscage Viewer and the miscage Viewer depending on your network environment. Default setting: 2 parallel threads (one tile per thread) Initial list position for new  Default  This setting defines where new annotations will be inserted in the annotation list: Bottom of list						
	Save Cancel					
	mScope Research Portal 18.1 © Aurona Interaction, LLA Locanced To: Statearch Locase UT Last login: 26-Aug-2011 918:594					

The following aspects of the viewer may be configured:

- Navigation Map Visibility: on or off by default at startup
- Zoom Control Visibility: on or off by default at startup
- Zoom behavior: at center or at mouse location by default at startup

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- **Default zoom level:** to fit, to width, to layer closest to fit, bottom layer by default at startup
- **Default document zoom level:** to width & navigate to top, to fit, to width, to layer closest to fit, to bottom layer by default at startup
- Viewer memory: increases performance by allowing the viewer to download data before you need it. The table below displays the recommended configurations based on your computer's RAM memory:

User computer's RAM memory	mScope's recommended setting
Less than 1 Go	128 Mo
Between 1Go and 3Go	256 Mo
More than 3 Go	512 Mo

Warning: Increasing mScope's viewer's memory could slow down concurrent applications on your computer. If this is the case, decrease the selected value of this parameter.

### 5. mScope Portal

The mScope Portal may be accessed through any Web browser (e.g. Internet Explorer, Chrome, Firefox, Safari, etc.) and is the primary work area for users and administrators of the mScope Research application. It is through the mScope Portal that users and administrators access, upload, manage, link, enrich and share content.

The Portal may be configured to include all or some of the following Modules (tabs):

- Dashboard
- Media Library

- Studies
- Administration









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The mScope Portal Header is accessible from all pages of the Portal and includes the following elements:

<u>User Profile</u>: By clicking the username after "Welcome" in the top right of the Header, the user is redirected to the Profile page where his or her password can be changed.

**Requirement validation indicator:** Additionally, mScope displays requirement validation to the left of the Home link. A check mark denotes that your computer has the recommended requirements for browser, java, and screen resolution. If any are not met an "x" will appear. NOTE: You may still be able to utilize all of the features of the mScope Portal even if an "x" is present (e.g. you meet all minimum requirements). Click on the "x" to see a summary and get links to update your system to recommended settings.

<u>Administration</u>: The "Administration" link in the top right of the Header may or may not appear depending on whether or not the User has administrative privileges. If it does appear, clicking it redirects the User to the Administration page where Users, Groups, Servers, Licenses, Media Attributes and Media Links are managed. For more details, please refer to the mScope Administrator User Guide.

**Log Out:** Clicking "Log Out" in the top right of the Header logs the User out and redirects them to the Home page.

Help: Clicking redirects the User to Aurora MSC's mScope Help webpage, where documentation and technical support can be obtained.

**Module Navigation menu (tabs):** By clicking the Module Navigation menu tabs, the User is redirected to the desired Module. Note that the Module the user is currently in is displayed above the Module Navigation menu beside the mScope bullseye. Some Modules shown above may not be displayed. Which ones appear will depend on your system license and User Permissions.

#### 5.2 Dashboard

This page can be reached by selecting the "Dashboard" tab. It displays widgets giving you quick links to your studies ("My studies") & media ("My Personal Folders").

Scope® Research AUR® RAINTERACT	mScope Portal - Welcome t × 🕑										
Open of Code         Name         Attribute template         Start date         # Medias         # Medias<					board/displ	ayDashboa	rd.action				<u>አ</u>
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Org. unit         Code         Name         Attribute template         Start date         End date         # Medias         # Attachments           0C         0C.4.         Samoki Scarch         None         None         0         0         Attribute template         None         0         0         0         Attribute template         None         0         0         0         Attribute template         None         0	_			cope Rese	earch l	Portal					
OC         OC-A         Sancia Sancia         None         None         0         0           NCE         762         Sancia Mata Bromanera         None         071/02011         2001/2012         2         0         1         Personal Folder #2         1         Personal Folder #2         1         0         3         0         3         0         3         0         3         3         0         3         3         0         3 <td>🕖 My stu</td> <td>Idies</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>ig My personal folders</td> <td></td> <td></td>	🕖 My stu	Idies							ig My personal folders		
NCE         762         Search Meta Bornaters         None         07/10/2011         2/001/2012         2         0           MTL         R1-001         Brasserch #1 Stody #1         None         18/08/2011         3/108/2011         3         0           Show #L         Show Show Show Show Show Show Show Sho	Org. unit	Code	Name	Attribute template	Start date	End date	# Medias	# Attachments	Name	Access path	# Medias
Bomarkers         Energies         Energies         Energies         Energies         Energies         Show all	ac	QC-A	Sample Search	None	None	None	٥	0	Personnal Folder #2	/ Personnal Folder #2	1
MTL         R1-001         Besearch zi         None         1808/2011         3108/2011         0           Study_zi	NCE	762		None	07/10/2011	20/01/2012	2	0	Personnal Folder #1	/ Personnal Folder #1	٥
	MTL	R1-001	Research #1 Study #1	None	18/08/2011	31/08/2011	3	0			Show all
								Show all			
								F	•		F
								@ At	rora Interactive Ltd.		
mScope Research Portal 3.8.1								Licensed to Last login	Research License (10 user) 26-Aug-2011 11:39:22 AM		

### 5.3 Media Library

The library is a media storage area available to all users and groups.

All media are stored in the library, accessible via the link "All media".

Folders can also be created here, allowing a user to classify images as required.

Media are added to the library using a shared ingestion folder or a Drop-Box folder with enhanced security settings (Please contact your system administrator to ask where your folder is located).

You can also add meta-data files (in CSV format) for each media in order to associate them with structured, searchable data in the mScope database.

Each imported media must be associated to a study when ingested (see further details about studies in Section 5.4 of this guide)

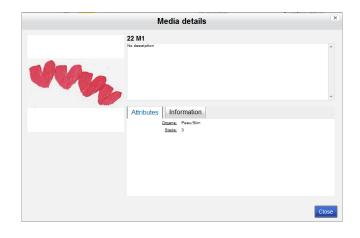
	_	earch				Welcome Fabrice Heloir 💥 Administratio	
All media (6) My personal folders (1)		edia				Results	Results 1 to 6 o
Personnal Folder #1 (0) Personnal Folder #2 (1)	<i>6</i> *2	Search:			Go Advanced		
ap 1 010011101001112 (1)	£	💢 Delete 💋	Web-optimized	Thumbnails 😝 Download	Viewer Copy	ort	
		Parent		<u>∱≜Name</u>	Annotations	Attributes	Actions
		B Research #1 Study #1		Aurora 1	Group1 + Annotation + Arrow + 2 other annotation(s)	<u>i1 many number reg</u> :514 <u>i1 many text reg</u> :Text1 <u>i1 many tree oth reg</u> :TreeOther1 1 other attribute(s)	
		I Research #1 Study #1	<. =	Aurora 2	No annotations	<u>i1 many number reg;</u> 450 <u>i1 many text reg;</u> Text2 <u>i1 many tree oth reg;</u> TreeOther2 1 other attribute(s)	
		<u>Biomarkers</u>		DG	No annotations	4 undefined attribute(s)	🥟 Edit
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		Search Meta Biomarkers		testfluo	No annotations	<u>i1 many number req;</u> 1 <u>i1 many text req;</u> text1 <u>i1 many tree oth req;</u> tree1 1 other attribute(s)	🌽 Edit

#### Media Library Navigation (left side menu):

- All Media: displays the list of all media that you have permission to see based on the Org-unit(s) you belong to and the studies you own.
- \_ My personal folders: Allows the user to group and/or classify personal images. See Section 5.3.1.

Viewing a media: Click on a thumbnail to display an image in mScope's universal viewer. For more information on the viewer, please refer the mScope Universal Viewer user guide.

Media details: Click on the blue triangle located on the right side of a media's name to display more information about it as well as a larger preview.



Media toolbar: Lists available operations in the Media Library

Delete: the media is not physically deleted yet, it is only removed from the mScopeLibrary. File deletion will occur based on the cleanup schedule defined by your administrator.

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- Web-Optimized: A "light" version of a media may be generated in order to improve its Web • viewing performance. This function is particularly useful for formats where tiles overlap. "Light" images will reduce the amount of information streamed to the viewer. Note: This functionality is currently only available for ZEISS images.
- Thumbnails: This function allows the user to generate a thumbnail in the event it is missing/broken.
- **Copy**: Copy selected media into one or more of your personal folders •
- Download : Download the complete file of selected image(s) to your computer in order to use them outside of mScope
- Viewer : Open selected images in the mScope Universal Viewer
- **Export** : Create a CSV file containing all of the meta-data of the selected image(s) •
- **Tools:** Launch external tool, with or without selected image(s).
- Search : find media using a simple or advanced search form

Dashboard Media Studies		"	
Filters 🖶 🖻 🕞	Media		
Personnal Folder #1 (0)	Search:	Go Advanced	
	🗜 💢 Delete 🧭 Web-optimized 🔲 Thumb	nails 😝 Download 🔯 Tools 📄 Viewer 📄 Copy 🎒 Export	$\triangleright$
	Parent Jrana	Annotations	Attributes
	Research #1 Study #1	Annotation +	<u>i1 many number req;</u> 514 <u>i1 many text req;</u> Text1 <u>i1 many tree oth req;</u> Tre 1 other attribute(s)

#### 5.3.1 Personal folders

The personal folders section consists of a private user workspace. You can't see other users' personal folders and vice versa.

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Library 🛖 😑 🚅	Med	ia			
Unapproved media (14)					Results 1 to 14 of 14 Results per page 20
L 🏐 DOSSIER A (1)	Ŧ	Approve	Delete 🧭 Web-optimized 🔛 Thumbr	nails	Search
		_	Information	Annotations	Attributes
		<u>/</u>	4179	No annotations	2 undefined attributes
		3 =	Hamamatsu_1	No annotations	2 undefined attributes
		1	Hamamatsu_2	No annotations	2 undefined attributes

Click on the green "plus" icon to create as many folders and sub-folders as you need.

	Unapproved media (14) All media (16) My personal folders
Create folder * Name: Icon : Parent folder:	ම 😋 Folder © 🐺 Course © 🧊 Project © 🖵 Seminar © 🔰 Laboratory
Description:	Font Name and Size Arial Font Style B I U

When media are added to a subfolder, the information is also displayed in the general media list.

### 5.3.2 Copy Media

You can copy one or more media to one or more of your personal folders.

Select one or more media from the current page and click "Copy". This action creates a "logical copy" of the media in the mScope database (i.e. to avoid wasting disk space no actual "files" are duplicated).

÷	🗶 Delete 🔰	ダ Web-optimized	Thumbnails	Download Tools Viewer Copy & Expor	t
	Parent		<u>¶∄Name</u>	Annotations	Attribut
	B Research		Aurora 1	<u>Group1</u> +	<u>i1 many</u> i1 many

You may then:

- Rename the media (optional) -
- Select any existing annotation(s) you want to include in the copy (optional, "All" selected by default)
- Choose the destination of the copy (mandatory) -
- Click the "Copy" button to validate. \_

🔿 mScope Portal - Libr	rary - C · X 🕑	
← → C ③ 192.	.168.1.103:8080/mscope-research/library/bulkMedias.action	☆ 🔒 🔧
mScol	pe Research AUR RAIN	TERACTIVE Welcome Fabrice Heloir
	Copy media Warning ! This command will copy the media. Any changes to the original media will NOT be pro copy. Edit media names & select annotations	opagated to the new
	* Name	Annotations
	Aurora I	<ul> <li>✓ Group1</li> <li>✓ Annotation</li> <li>✓ Arrow</li> <li>✓ Group 2</li> <li>✓ measure</li> </ul>
	Aurora 2	No Annotations
	Select destinations	
	Personal Folder #1     No destinations	Actions
	Cancel	
	mScope Research Portal 3.8.1 ● Aurora Interactive Lid. License do IC Research License (10 user) Lest login: 26-Aug-2011 11:39:22 AM	
192.168.1.103:8080/mscope	e-research/library/bulk/Medias.action#	



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### 5.3.3 Modify Media Properties

Media properties may be modified by clicking on the "Edit" link in the "Actions" column.

£	🗶 Delete 🥖	Web-optimized Thumbnails	Copy Share		Search
		Information	Annotations	Attributes	Actions
	Shared	Aperio1_20x 🎽	No annotations	2 undefined attributes	🥖 Edit
	Shared	Aurora 👻	No annotations	2 undefined attributes	🥟 Edit
	Shared	1003730 - Сору 📍	No annotations	2 undefined attributes	n Edit

A modification window is then displayed, allowing you to update the media properties.

	Edit media	
Carro	* Name:	Aperio1_20x
	Copyright owner:	Stephanie Gibeau
	Author:	Stephanie Gibeau
	Description:	Font Name and Size Font Style Lists Insert Item
		Arial 🖤 13 🏶 I U 🛶 🐚 🖉 🖼
		·



#### 5.3.4 Launch External Tools

An "external tool" is any third-party application that you want to launch directly from mScope, with or without selected media from the mScope library.

Without images: simply click the "Tools" button and then select which application you want to launch in the pop-up window

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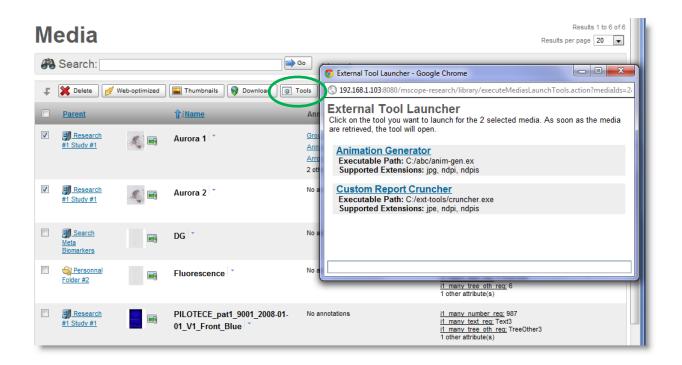
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- With media:
  - select the media you want to open in an external tool 0
  - click on the name of the application you want to load with the selected images 0

If you need more details on the available external tools, please contact your system administrator





#### 5.3.5 Export Attributes to a CSV File

Each media in mScope can be tagged with meta-data. These meta-data are stored as mScope attributes.

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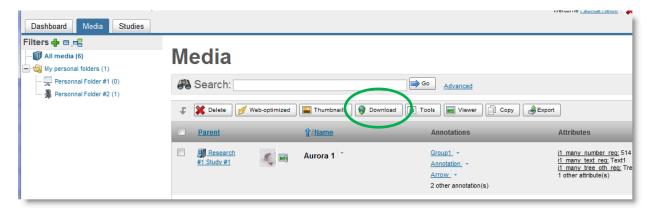
Using the "Export" button you can generate a CSV file (useable in Microsoft Excel for example) that includes all meta-data values for the media you selected.



#### 5.3.6 Download Native File

If you need to save a copy of a media file to your computer, you can select it in the media Library and then click the "Download" button. This will prompt a "Save" window where you can choose the destination for the file.

Note: If the file size is very large or if the network speed is too slow, an mScope "processing" logo will appear before the window appears.



#### 5.3.7 Simple search

A simple search field is displayed at the top of the Media Library page. Searches may be based on one or more keywords or parts of keywords (see example below).

Μ	edia			Resu	Results 1 to 1 of 1 Its per page 20 💌
<i>8</i>			• Advanced		
÷	🗶 Delete 🧭 Web-optimized 🔚 Thur	mbnails 💿 Tools 📄 Viewer	Copy		
	Parent	<u> </u>	Annotations	Attributes	Actions
	Second Folder #2	Fluorescence	No annotations	<u>i1 many number req;</u> 1 <u>i1 many text req;</u> 3 channels <u>i1 many tree oth req;</u> 6 1 other attribute(s)	🥟 Edit

Search results will display the list of media with fields containing the serached text.

The following media text fields are looked at by mScope's search engine:

- Media name
- Media filename
- Media attribute values
- Media annotations (titles & descriptions)
- Media folder name
- Media study name

#### **Simple Search Tips:**

1. Use characters such as "\*" to search on parts of key words only. You are also allowed to type spaces between two stars.

#### Examples:

- Enter "acc\*" in the search field to see "acc1" and "acc123" included in the search results.
- Enter \*Front Blue\* will return all the images that contain the string "Front Blue" (space included)



2. Search for exact text using a double quote.

Example: Enter "fluo UV" (including the "") in the search field to return matches to the exact string "fluo UV". Without the "" the search engine will assume it has 2 keywords: Fluo AND UV, not one.

*Warning:* Do not combine double guotes and stars because stars are allowing space. Note: Do not use double quotes in advance form, use the "Equals" operator instead

3. If you search multiple keywords separated by spaces for the simple search will return media that match both criteria, but not necessary in all in the same data field.

Example: Enter "fluorescence bio" to return media that contain "fluorescence" in the name and "bio" in an attribute.

4. Search for media with a wider range of results using the OR operator.

Example: Entering "foot OR hand" will return media that contain "foot" OR "hand" across all searchable text fields.

Note: you can't use the AND and OR operators in a single simple search.

- 5. If you want to share a search result list with one of your colleagues simply copy/paste the URL of the results page into an email or document (the search results page is defined by a permanent URL). Note: your colleague needs permission to see these media (shared study).
- 6. Underscore and dash characters ( \_ and ) are considered normal characters and are not replaced with spaces from your query. Example: If the user searches media using the string "CP R" in simple search, this won't find the media named "CP R Fluo".
- 7. When you type only one keyword in the simple search field, the search engine will search for :
  - a. that exact string, or
  - b. a part of a string that includes underscore and dash characters ( \_ and )

#### Example:

- Type "Blue" and the media named "Blueberry" won't be returned.
- Type "Blue" and the media named "CP R Blue" will be returned.

#### 5.3.8 Advanced Search

When you execute more complex searches you may choose to use the advanced search form. To do so, click on the "advanced" link beside the simple search field.

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Media			Res	Results 1 to 1 of 1
Search: Fluorescence		do <u>Advanced</u>		
↓ Delete 🖉 Web-optimized	Thumbnails 💿 Tools 💽 Viewe	r Copy Export		
Parent	<u>î¶≟Name</u>	Annotations	Attributes	Actions
Personnal Folder #2	Fluorescence	No annotations	<u>i1 many number req</u> : 1 <u>i1 many text req</u> : 3 channels <u>i1 many tree oth req</u> : 6 1 other attribute(s)	🥜 Edit

The form will then be expanded. To return to the simple search form, click on the "basic" link (A).

Media	
🚜 Advanced Search 🔤 Basic	Summary
Match All 💌 of the following rules:	Query: medialnfo.filename:Fluorescenc AND project.code:NCE AND annotations.title:*Cells*
AND Study Code Equals NCE	Sorted By: name ASC
Annotation Title Contains Cells	

- 1. Choose the type of search:
  - Match ALL of the rules (i.e. use the AND logical operator)
  - Match ANY of the rules (i.e. use the OR logical operator)
- 2. Select the search field, the operator and the value. Using the "+" and "X" buttons will allow you to add or remove search rules.
- 3. Click the "Go" button to find and display the results

The "Reset" link (B) removes all the rules in the search form.

The summary zone (C) is the mScope search engine translation for your advanced search. This "Database Query" can be used directly in the simple search field if needed.

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#### **Studies** 5.4

A "study" contains descriptions, media and files related to a research project.

Each user can create one (and become its owner) and enrich it:

- Import media
- Import media meta-data
- Describe the study with study attributes
- Attach files
- **Record dictations**

Your study is automatically shared with same organizational unit that you created the study for.

Clicking on the "Studies" tab brings you to the list of studies you are permitted to access across your organization.

		arch/sec	ure/project/listProjects.act							상 🔒 기
Dashboard Media Studies			and project near of contact		Al	JR¢		OT THE PARTY OF TH	ERA(	
Filters =	Stu	dies	New study						Resu	Results 1 to 3 of Its per page 20
Montreal (1)	Org. unit	<u>Code</u>	<u>¶≟Name</u>	<u>Owner</u>	Attribute template	Start date	End date	# Medias	# Attachments	Actions
🖺 Nancy (0)	MTL	R1-001	Research #1 Study #1	Research User #1	None	18/08/2011	31/08/2011	3	0	
	QC	QC-A	Sample Search	Fabrice Heloir	4 None	None	None	<u>0</u>	0	🦉 Edit 💥 Delete
	NCE	762	Search Meta Biomarkers	Fabrice Heloir	None	07/10/2011	20/01/2012	2	0	/ Edit

- 1. List of the organizational units, and how many studies are in each.
  - Click on of the org. unit name to show the studies list for that org. unit only.
- 2. Buttons that collapse / expand the org, unit list
- 3. Brings you to the study creation form
- List of studies. 4.
  - Click on the column headers to sort the studies. 1<sup>st</sup> click implements ascending order, 2<sup>nd</sup> click implements descending order (the arrow indicates the current ordering).

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- Click on the name of the study to access the content of the study page (read or write access, based on your permissions for this study)
- Click on the media number of a study to directly access the list of all the study media without going to the Media page.
- 5. The "Actions" column allows you to modify a study without having to enter the study details page. From the study list you can:
  - Edit the study info by clicking the "Edit" link.
  - Delete a study by clicking the "Delete" link. A study can only be deleted if it contains . no media. If you really need to get rid of such a study, please contact your system administrator.

5.4.1 Study Structure

Dashboard Media Studies	-Research				
Filters	Created by Re	Code: R1-001 Owner: Researc ganization unit: NTL Description: None Start date: 31/08/20 End date: 31/08/20 ibute template: None # Medias: 3	g-2011 11:05:19 AM, Last modified by Rese h User #1 11	arch User ≇1 on 18-Aug-2011 11:05:19 AM	E
	Label	Desc	ription	Owner	Size (kb) Type Actions
	No Attachment				
	🤘 Import Lo	gs			
	Status	Import	Date	Туре	Success / Total
	<b>v</b>	Import-5	18/08/2011 11:21 AM	Attributes	<u>5/5</u>
	~	Import-4	18/08/2011 11:21 AM	Media	<u>1/1</u>
	×	Import-3	18/08/2011 11:14 AM	Media	<u>0/1</u>

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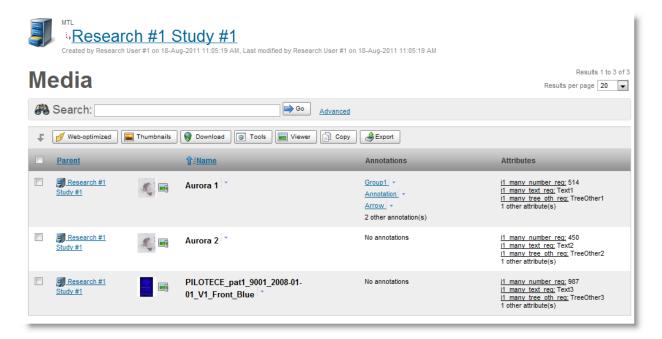
A study is composed of the following elements:

- 1. Code: The study code. Code uniqueness is enforced by the organizational unit to which the study belongs
- 2. Name: The name of the study.
- 3. Organizational Unit: The organizational unit the study belongs to.
- 4. **Owner:** Name of the user that the study belongs to. Only the owner has the right to modify the content of a study (WRITE access). All other users belonging to the study org. unit have Read-Only access.
- 5. Start & End date: The start and end dates of the study.
- 6. Attribute Template: This template will define the list of that attributes that will be used as descriptive study fields and media meta-data. Contact your administrator if you require different attribute templates than those currently available.
- 7. **Description:** The overall description of the study.
- 8. List of attributes: The structured description of the study. The list of attributes is defined by the attribute template you choose at the time of study creation.
- 9. Attachments: Additional files (such as word documents, etc.) that are not directly displayed by mScope. You can also record audio files directly from your computer in the study to take quick notes. (Click the corresponding links on the right of the screen to attach or record file)
- 10. Import Logs: These are the logs of all file imports (via simple ingestion or secure drop-box). To access reports for each batch of imported files click the links in the "Success" column.



#### Media import status:

- Green = 100% successful
- Yellow = partially done, with warnings (please read the import report for more details)
- Red = failed (please read the import report for more details)
- 11. Media: Number of media currently available in the study. Click on the link and the list of all these media will be displayed so you can view, annotate or analyze them directly from mScope.





#### 5.4.2 Create & Edit Studies

To create a study click the "New Study" button, on the top of the study list landing page. Complete all the mandatory fields in the form and click on the "Create Study" button. For more information regarding the fields please refer to Section 5.4.1.

Create study	
* Code:	
* Name:	
* Owner:	Select an owner •
* Organization unit:	Select an organization unit 💌
Attribute template:	Select an attribute template 💌
Description:	Fort Name and Size Fort Style Like In Fort Name And Size I and Siz
Start date:	
End date:	
	Create study Cancel

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To edit an existing study, click on the "Edit" link at the top of the study details page. Note: tools such as edit and delete will not be available if you do not have authoring permissions.

💮 mScope Portal - Update stu × 😥	
← → C (© 192.168.1.103:8080/mscope-resea	
Update study	762
* Name: * Owner:	Search Meta Biomarkers Fabrice Heloir
Organization unit:	Nice
Attribute template: Description:	- Select an attribute template - •
	For Name and Size For Siyle Lills I and To 20 Explored them
Start date:	07/10/2011
End date:	20/01/2012
	Vpdate study Cancel

Please be aware that only the mScope Super-User can change the owner of a study.

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#### 5.4.3 Attributes

There are three (3) types of attributes available:

- 1. Free text
- 2. Value list (including free text entry if appropriate)
- 3. Value tree lists (including free text entry if appropriate)

27 Attributes	, Edit	)
Organe:	No value	
Stade:	No value	
Update Attributes		
Organe: Stade:	Select Clear	
<b>√</b> .S	ave Cancel	

#### 5.4.4 Attachments

Additional documentation and dictations are displayed in the "Attachments" section of the study. This is for non-media files not supported by the mScope viewer. Uploading attachments from your computer is accomplished by selecting "Add attachment". Selecting "Record new audio" allows you to add audio files to the study that can later be transcribed.

Attachmer	nts	$\langle$	Record	new audio	Advattachme
Label	Description	Owner	Size (kb)	Туре	Actions
1. <u>Commentary</u>	L Encoded Audio Dictation	Fabrice Heloir	658854	audio/ogg	🦉 Edit 💥 Delete
2. <u>Notes</u>	Encoded Audio Dictation	Fabrice Heloir	452466	audio/ogg	🦉 Edit 💥 Delete

Recording audio clips is achieved by selecting the red record button. Selecting record again will allow you to add additional clips. Clips can be saved or removed from the list using the buttons at the top left.

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	Audio Player - Search Meta Biomarkers - Google								
	9 192.168.1.103:8080/mscope-research/secure/project/openAudioPlayer								
	Track Name Commentary	Owner Fabrice Heloir	Length 00:07						
	Notes	Fabrice Heloir	00:05						
	<u> </u>								
	00:01								
L									

