

mScope Education

version 3.7

User Guide

April 15, 2011

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Contents

1. Introduction	4
2. mScope Components and Concepts	4
2.1. mScope Overview	4
2.2. What is Media	6
2.3. mScope Portal Overview.....	6
2.4. mScope Viewer Overview	7
3. mScope FAQ.....	8
3.1. Hardware and software requirements	8
3.2. Language Setting.....	8
3.3. Logging in and out.....	9
3.4. Forgot my password	10
3.5 Settings not supported	11
4.0 User Profile.....	12
4.1 Change Password	12
4.2 User Configuration.....	13
5. mScope Portal.....	14
5.1 Portal Header	15
5.2 Home.....	16
5.3 Media Library	16
5.3.1 Sort/Approve media.....	18
5.3.2 Personal folders	19
5.3.3 Share media	20
5.3.4 Copy Media	21
5.3.5 Upload media.....	21
5.3.6 Modify Media Properties	22
5.4 Cases	23
5.4.1 Case “Edit”	25
5.4.2 Case Move.....	26
5.4.3 Case Copy.....	26
5.4.4 Case Sharing.....	27
5.4.5 Case “Add Existing Media”	28
5.4.6 Upload New Media	29
5.4.7 Attributes	29
5.4.8 Attachments.....	30
5.4.9 Diagnosis Votes	31

5.4.10 Comments.....	31
5.5 Course Materials.....	32
5.5.1 Creating an online course.....	33
5.5.2 Edit.....	33
5.5.3 Move.....	34
5.6 Atlas.....	34
5.7.2 Evaluations.....	35
5.7.1 My Pending Evaluations.....	36
5.7.2 View Test Results.....	37
5.7.3 Create Questions.....	37
5.7.4 Tests.....	41
5.7.5 Scheduling & Assignment.....	43
5.7.6 Grading.....	45
5.8 Search.....	47



1. Introduction

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

This document describes the functionality and implementation of the mScope Education Suite v3.7.0, addressing the needs of users.

2. mScope Components and Concepts

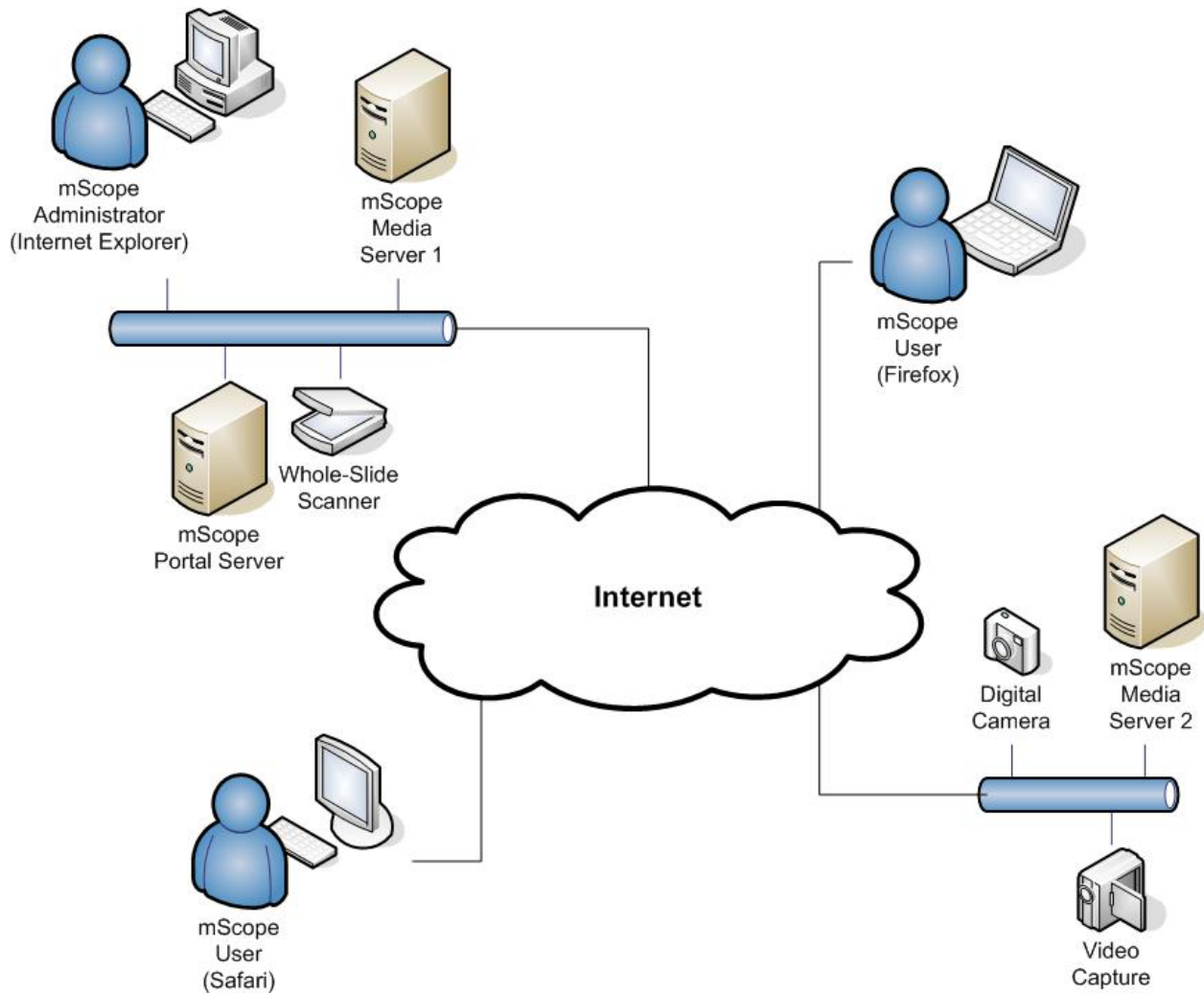
This section describes the main components of the mScope Education Suite, how they interact, and their primary functions.

2.1. *mScope Overview*

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

- manages all forms of media and information required to support medical education
- uses a centralized mScope Portal server to organize and share medical 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 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, Safari, Mozilla Firefox, etc.)
- supports many image formats (all major whole-slide scanner manufacturers, DICOM, digital video, digital cameras, etc.)

The following diagram illustrates a typical mScope implementation:



2.2. What is Media

In the context of the mScope Education Suite, media is defined as any file containing visual information. mScope supports hundreds of media formats. Examples include:

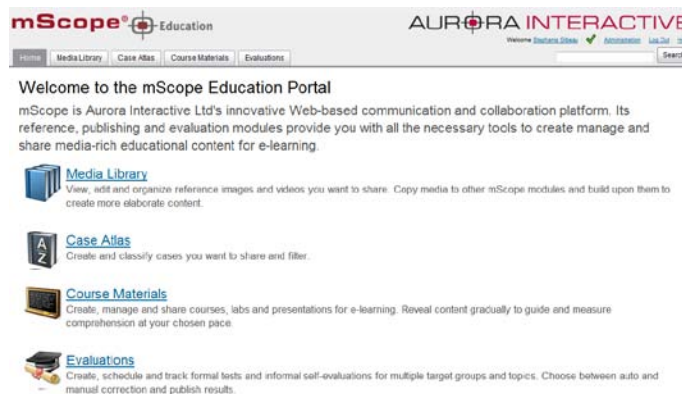
- 2D images (e.g. .jpg, .gif, etc.)
- video (e.g. .mpeg)
- whole-slide images produced by slide scanners (e.g. Aperio, Hamamatsu, Zeiss, etc.)

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, Mozilla 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.



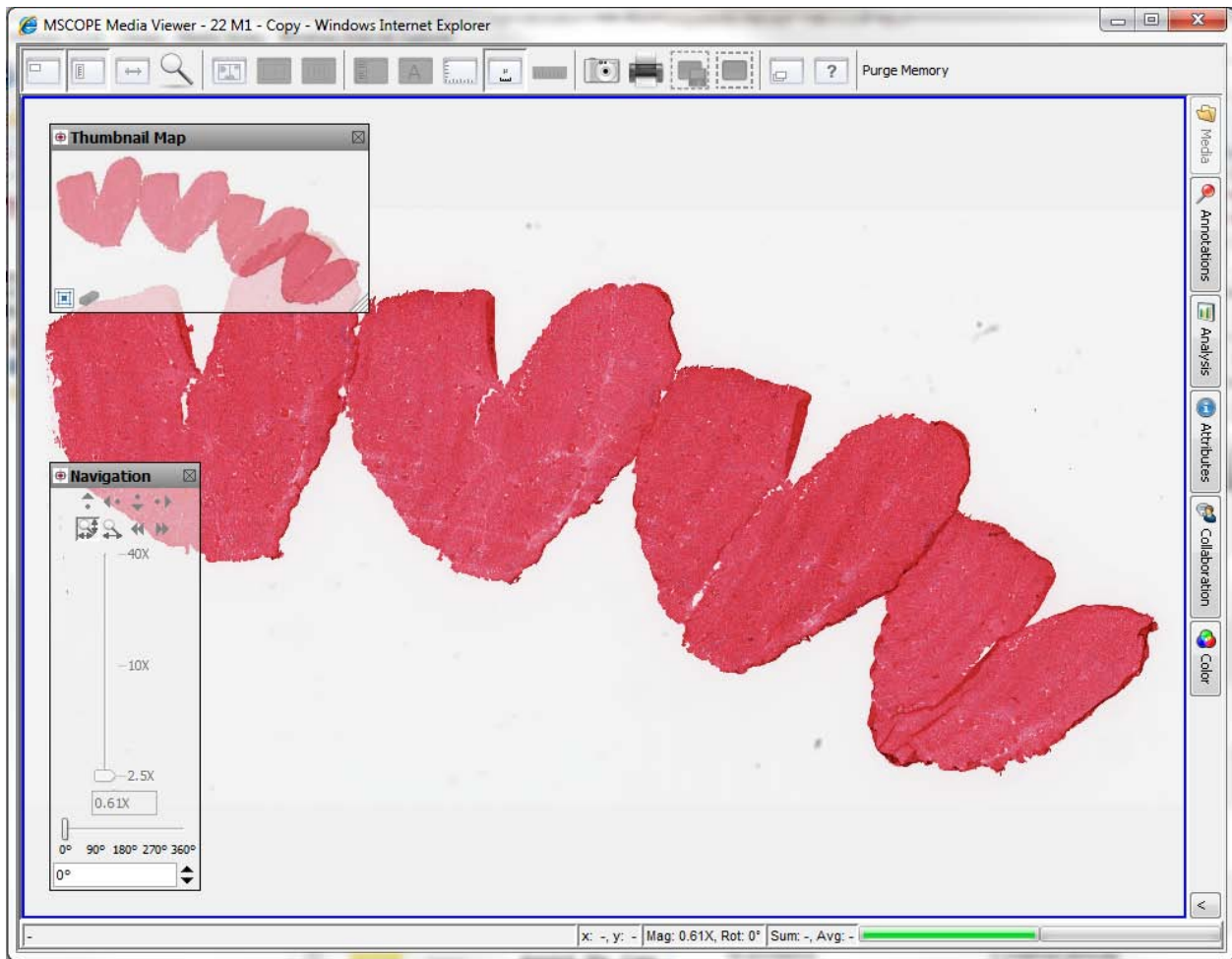
The Portal may be configured to include all or some of the following modules (tabs):

- Home
- Media Library
- Case Atlas
- Course material
- Evaluations
- Administration

For a detailed description of the mScope Portal, its modules and their features, please refer to *Section 5.0 mScope Portal*.

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.



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 *Viewer User Guide*.

3. mScope FAQ

This section addresses frequently asked questions (FAQs) from mScope Education Suite users and administrators.

3.1. *Hardware and software requirements*

The following table highlights the minimum and recommended hardware and software configurations for administrators and users of the mScope Education Suite v3.7:

	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	IE 7+, Firefox 3.0+, Safari 3.0+
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+

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 setting is not supported, English will be displayed as the default language.

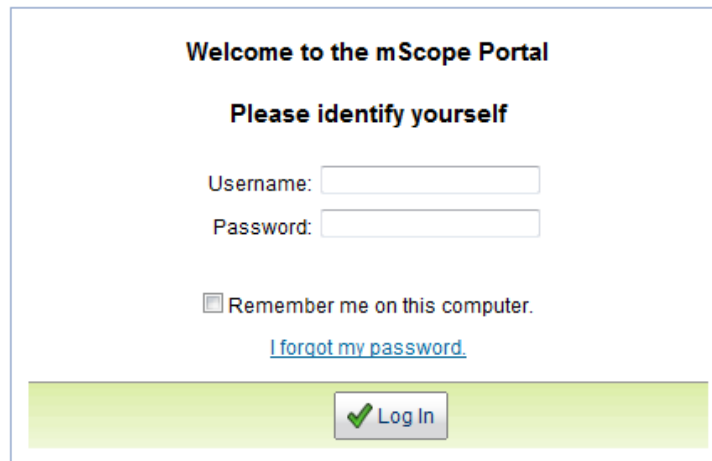
The mScope Education Suite v3.1 currently supports the following Internet browser language settings:

- English
- French
- Spanish
- German
- Portuguese

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:

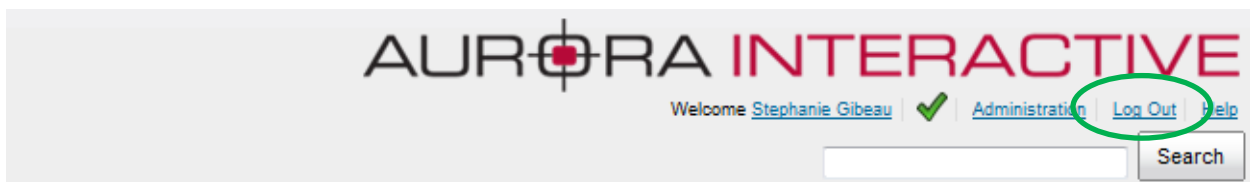
Password:

Remember me on this computer.

[I forgot my password.](#)

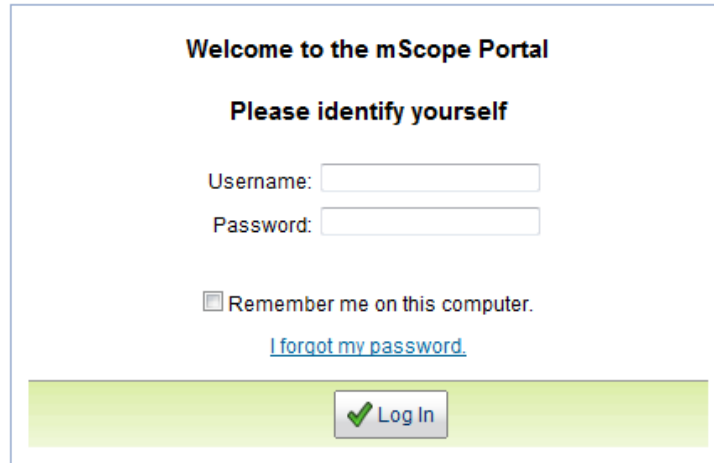
Tip: By selecting the "Remember me on this computer" checkbox, the next time the user visits the login page; his or her password will automatically be entered when the username has been typed in.

To conclude a session, the user must click on the "Log out" link located in the upper right corner of the screen. The user is then automatically redirected to the log in page.



3.4. *Forgot my password*

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



Welcome to the mScope Portal

Please identify yourself

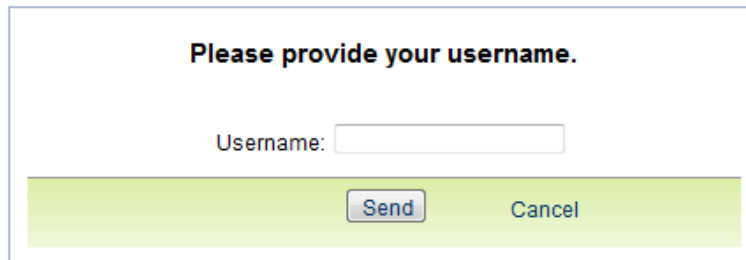
Username:

Password:

Remember me on this computer.

[I forgot my password.](#)

Enter your user name and click "Send" to receive for a new password sent to the email address associated to your mScope user profile.



Please provide your username.

Username:

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:

⊗ Not Certified means that your settings do not meet the minimum settings.

⚠ Warning means that your settings do not meet the recommended settings, but meet the minimum settings.

✓ Certified means that your settings meet the recommended settings.

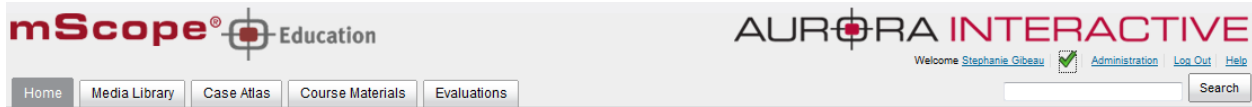
Settings Information					
Setting Name	Minimum Settings	Recommended Settings	Your Settings	Result	Links
Browser	MSIE 7.x+, Firefox 2.x+, Safari 3.x+	MSIE 8.x+, Firefox 3.x+, Safari 3.x+	msie 8.0	✓	
OS	Windows NT 5.1+, MAC	Windows NT 5.1+, MacOS 10.4.x	windows nt 6.1	✓	
Javascript	JavaScript 1.x+	JavaScript 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.

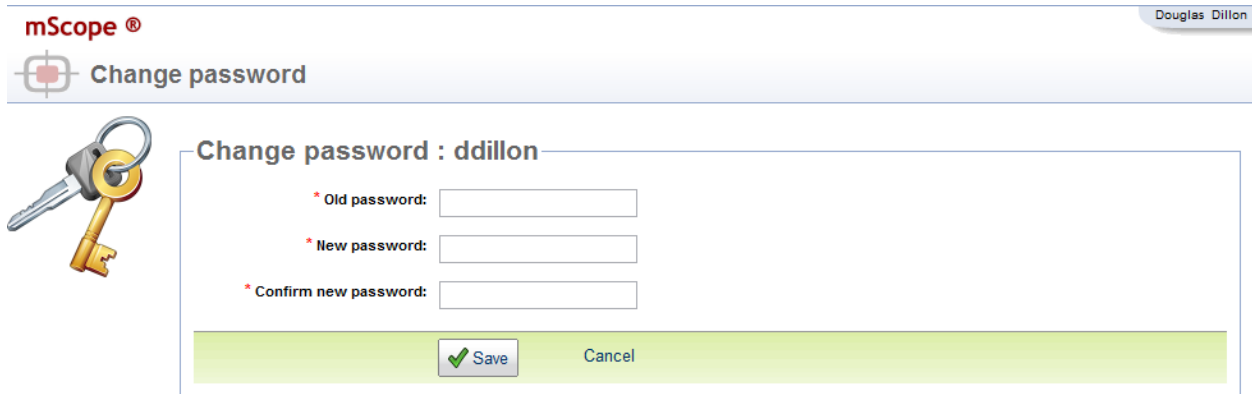
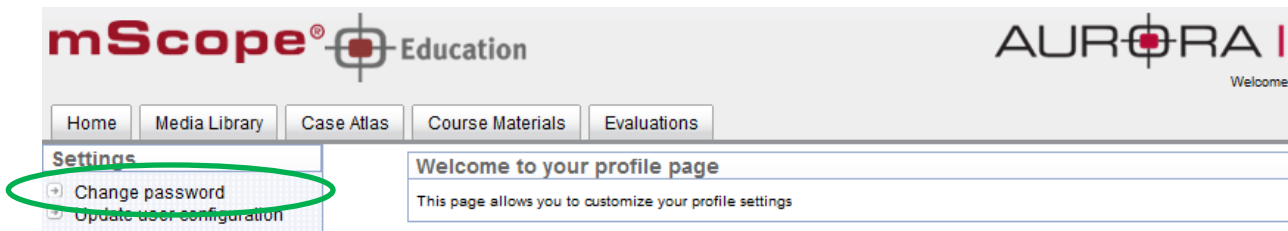
4.0 User Profile

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



4.1 Change Password

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



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.

The screenshot shows the mScope Education user interface. At the top, there are navigation tabs: Home, Media Library, Case Atlas, Course Materials, and Evaluations. A 'Settings' menu is open, with 'Update user configuration' highlighted. Below the menu, a 'Welcome to your profile page' message is displayed. The main content area is titled 'Update user configuration' and contains several settings:

- Navigation map visible at startup:** Default (dropdown). Description: This setting defines whether or not to display the navigation map at viewer startup. Visible by default?: [Visible](#)
- Zoom control visible at startup:** Default (dropdown). Description: This setting defines whether or not to display the zoom control at viewer startup. Visible by default?: [Visible](#)
- Zoom behaviour:** Default (dropdown). Description: This setting defines where the viewer will zoom in on mouse clicks and mouse wheel turns. Default behaviour: [Zoom in at mouse location by default, at center with ALT-key](#)
- Default zoom level:** Default (dropdown). Description: This setting defines what zoom level is initially applied to slide images when opened. Default behaviour: [Zoom to fit](#)
- Default document zoom level:** Default (dropdown). Description: This setting defines what zoom level is initially applied to document images when opened. Default behaviour: [Zoom to width & navigate to top](#)
- Viewer memory (MB):** Default (dropdown). Description: This setting sets the amount of virtual memory dedicated to your image viewer. The higher the setting, the more image tiles you can keep in memory and the faster your experience when navigating images. Current default memory setting (MB): [128](#)

At the bottom of the settings area, there are 'Save' and 'Cancel' buttons.

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:** center based on the screen or mouse location by default at startup
- **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

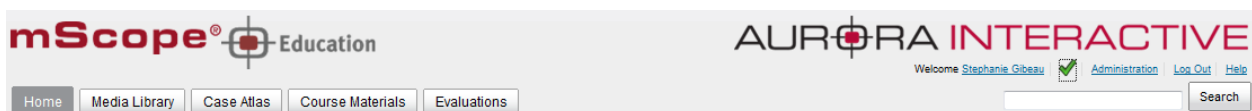
Warning: Increasing mScope’s viewer’s memory could slow down concurrent applications on your computer. If this was the case, decrease the selected value of this parameter.

5. mScope Portal

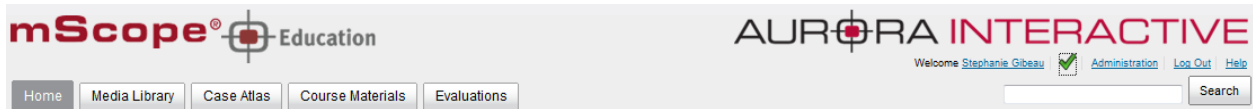
The mScope Portal may be accessed through any Web browser (e.g. Internet Explorer, Mozilla Firefox, Safari, etc.) and is the primary work area for users and administrators of the mScope Education Suite. It is through the mScope Portal that users and administrators access, upload, manage, link, enrich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

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

- Home
- Media Library
- Case Atlas
- Course Materials
- Evaluations



5.1 Portal Header



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

User Profile: 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.

Home & Requirements: Clicking "Home" in the top right of the Header is identical to clicking "Home" in the Module Navigation menu and redirects the user to the mScope Education Suite Home page.

Administration: 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.

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

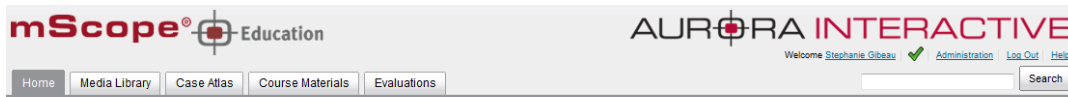
Help: Clicking "help" redirects the User to Aurora MSC's mScope Help website, where documentation and technical support can be obtained.

Search: The "Search" tool allows Users to Search Media, Folders, Projects and Cases and returns all results that contain the characters entered. Example: a search for "pro" will return "project", "protein", "prohibit", etc.

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

5.2 Home

The Home page can be reached by selecting "Home" in the Portal Header or Module Navigation menu (tabs). It is a Public page whose information is displayed to anyone visiting its URL without requiring them to Log In.



Welcome to the mScope Education Portal

mScope is Aurora Interactive Ltd's innovative Web-based communication and collaboration platform. Its reference, publishing and evaluation modules provide you with all the necessary tools to create manage and share media-rich educational content for e-learning.



Media Library

View, edit and organize reference images and videos you want to share. Copy media to other mScope modules and build upon them to create more elaborate content.



Case Atlas

Create and classify cases you want to share and filter.



Course Materials

Create, manage and share courses, labs and presentations for e-learning. Reveal content gradually to guide and measure comprehension at your chosen pace.



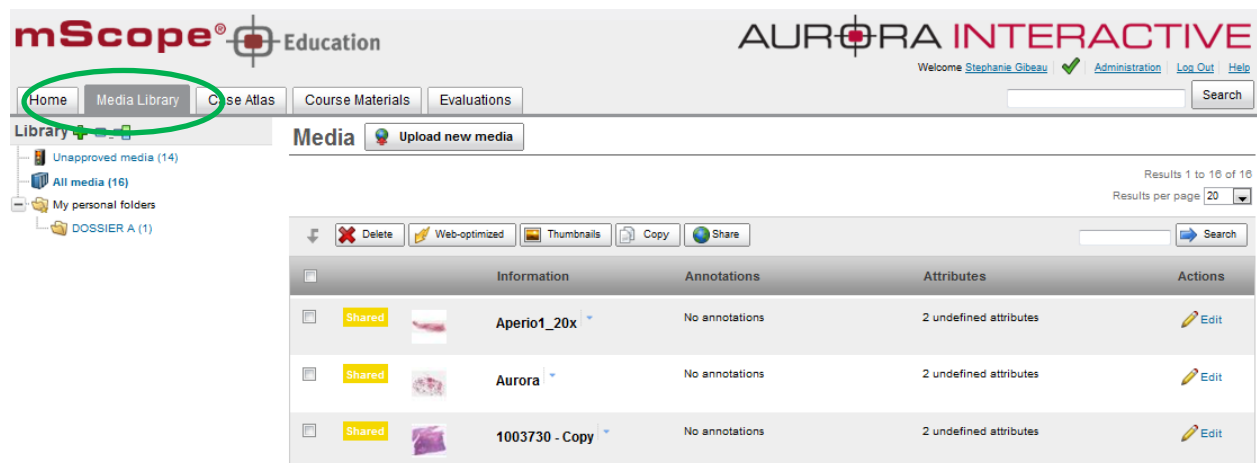
Evaluations

Create, schedule and track formal tests and informal self-evaluations for multiple target groups and topics. Choose between auto and manual correction and publish results.

5.3 Media Library

The library contains a massive storage unit "All media" available to all users and groups. All media are stored in the library, whether they are awaiting approval, public or private. Folders can also be created here, allowing a user to organize images as required.

Media are added to the library (with or without annotations as desired) following their classification from the Unapproved Media section or following an upload. Media may also be exported from the library (again with or without annotations) to other modules.



Media Library Navigation (left side menu):

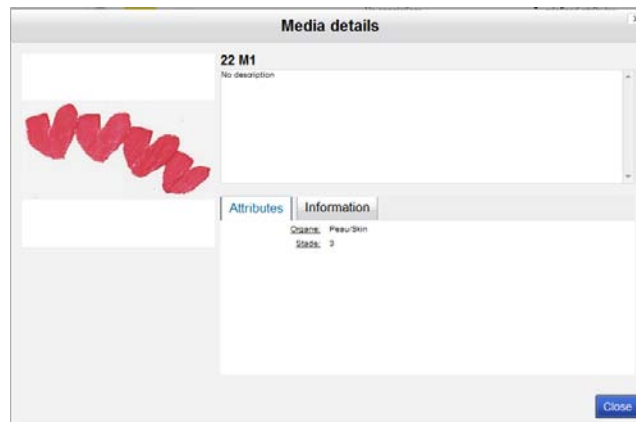
- **Unapproved Media:** Storage zone for newly acquired images awaiting approval or rejection. Section usually reserved for administrators.

mScope's configuration includes media servers identification. Those servers may automatically be scanned, making any new media available under this section where it can be opened with the viewer for quality assurance purposes before it is transferred in the appropriate tab. *See section 5.3.1*

- **All media:** access to all approved medias, no filter.
- **My personal folders:** Allows the user to classify personal images. *See section 5.3.2*

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

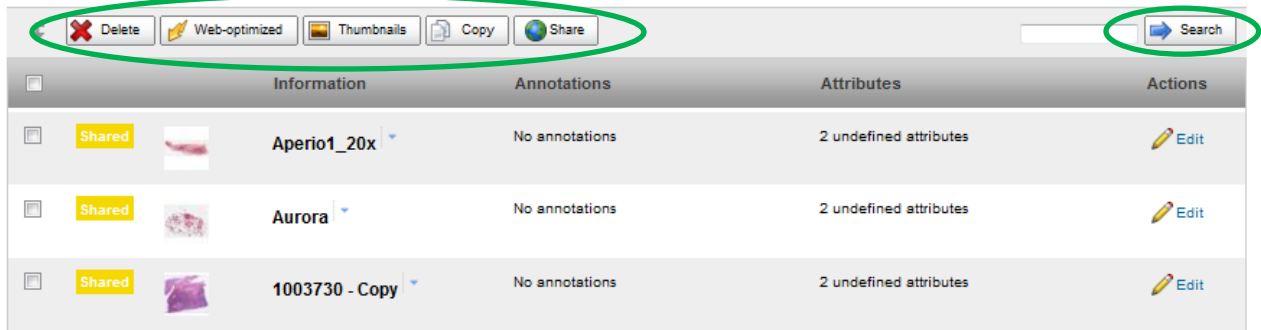
Media details: Click on the blue triangle located on the right side of a media's name to display more information about such media as well as a bigger preview.



Media toolbar: Lists available operation in the Media Library

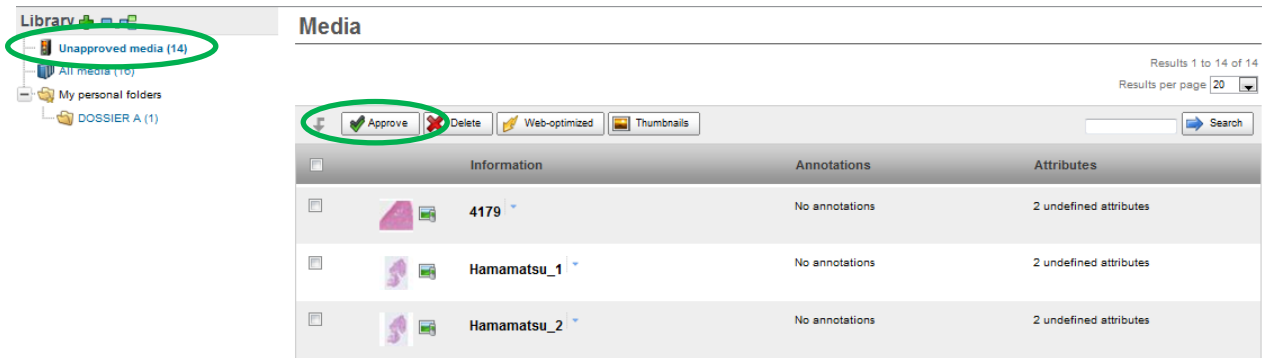
- **Delete**
- **Web-Optimized:** A "light" version of a media may be generated in order to improve its efficiency. This function is particularly useful for formats where tiles overlap. Light images will correct overlapping issues, reducing the amount of information stored and improves viewing performance.
Note: This functionality is currently available solely for ZEISS images.
- **Thumbnails:** This function allows the user to generate a thumbnail in the case of a missing/broken thumbnail for a media already ingested in mScope.

- **Copy:** Please refer to *Section 5.3.4*
- **Share:** Please refer to *Section 5.3.3*
- **Search:** Multi criteria research, key words oriented



5.3.1 Sort/Approve media

Click on “Unapproved media”.



Select all images to approve and click on “Approve”.

Select appropriated attribute values and click “Approve”

Approve media
Warning ! This command will approve the media.
Edit media names, owner and access

Name	Copyright owner	Read access
All media	-- Select --	Owner only (private)
4179	-- Select --	Owner only (private)
Hamamatsu_1	-- Select --	Owner only (private)

Edit attributes

Organe:

Stade:

Select destinations

Course Materials

Name	Actions
No destinations	

5.3.2 Personal folders

The personal folders section is private to the individual's workspace.

The screenshot shows the 'Library' sidebar on the left with a tree view containing 'Unapproved media (14)', 'All media (16)', 'My personal folders' (circled in green), and 'DOSSIER A (1)'. The main 'Media' section displays a table with columns for 'Information', 'Annotations', and 'Attributes'. The table lists three items: '4179', 'Hamamatsu_1', and 'Hamamatsu_2', each with 'No annotations' and '2 undefined attributes'.

Click on the green plus to create as many folders and sub-folders as desired.

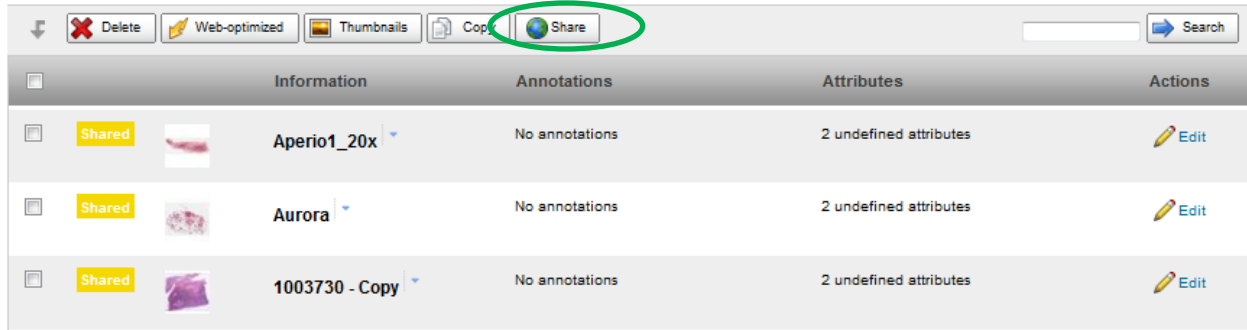
The 'Create folder' dialog box is shown with a sidebar on the left containing a folder icon with a green plus sign. The main form has a 'Name' field, an 'Icon' dropdown with options like 'Folder', 'Course', 'Project', 'Seminar', and 'Laboratory', a 'Parent folder' dropdown set to 'No parent', and a 'Description' field with a rich text editor toolbar.

When media are copied to a subfolder, the information is also displayed under the general media list.

The screenshot shows a media list with a toolbar at the top containing 'Delete', 'Web-optimized', 'Thumbnails', 'Copy', and 'Share'. The table below has columns for 'Information' and 'Annotations'. A folder icon labeled 'DOSSIER A' is circled in green, and it contains a media item 'Hamamatsu_7 - Copy' with a 'Private' status indicator.

5.3.3 Share media

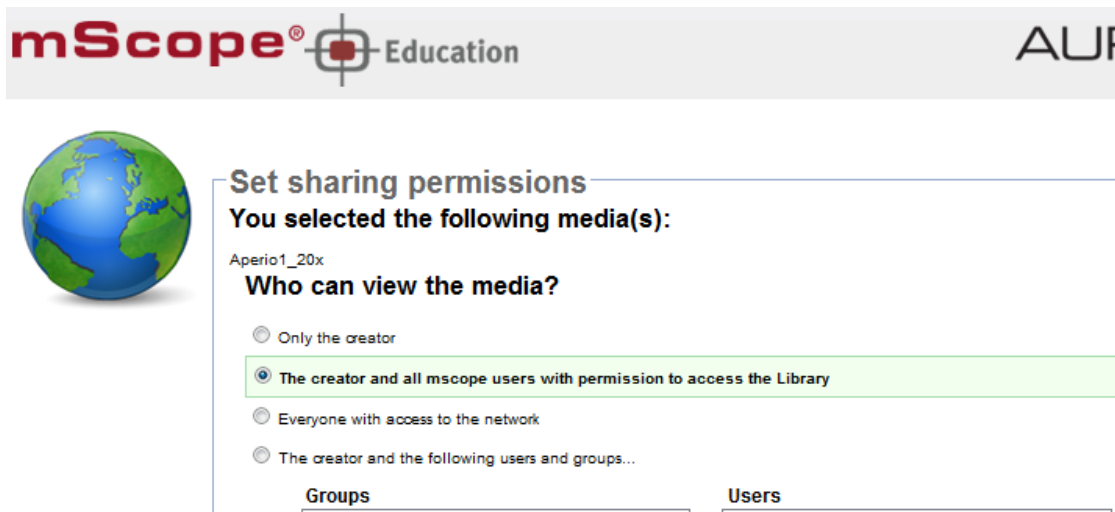
The library has an open space where visitors can access media. Users must define who to share images with by defining them as either public or private.



Warning! Media shared with everyone are not subject to any security and visible to anyone who can access the site.

Two privileges must be defined:

- Who may view the media (read-only)
- Who may modify the media (description, annotations and attributes)



5.3.4 Copy Media

This section describes how to copy one or several images to one or several mScope modules.

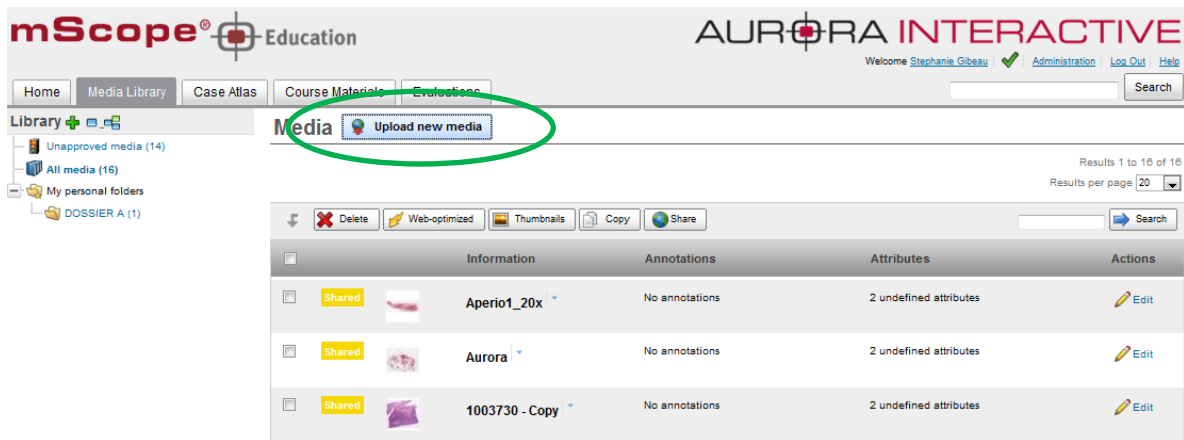


In the case where a media contains annotations, you can define whether to copy them or not.

In the case where one image is copied, individual annotations may or may not be copied. However, if multiple annotations are copied, all or no annotations must be selected.

5.3.5 Upload media

Click "Upload" to launch mScope's uploading tool.

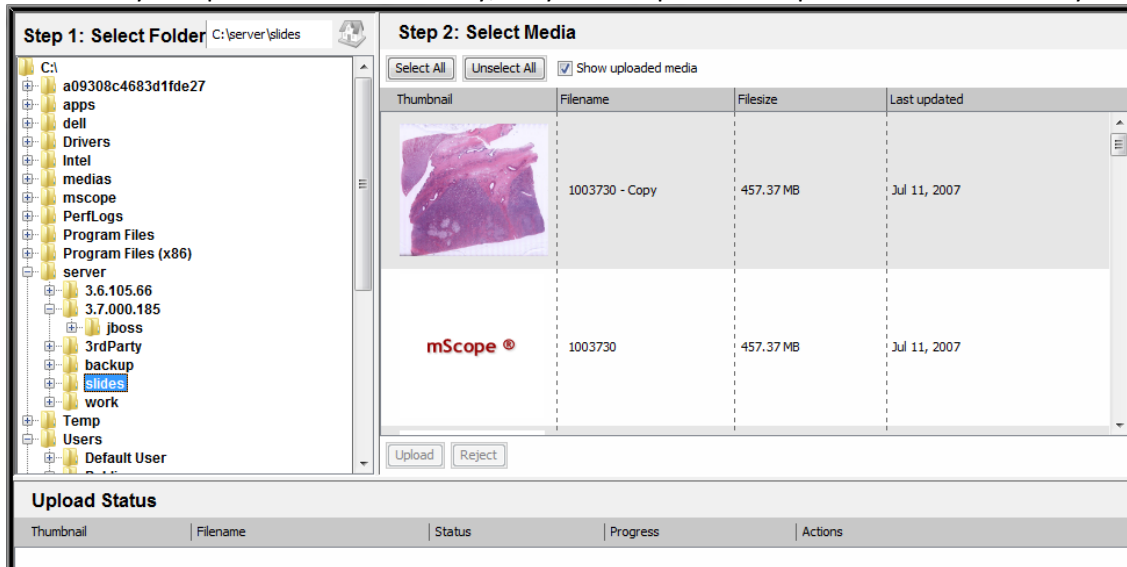


A new window opens.

This window is separated in three zones/steps:

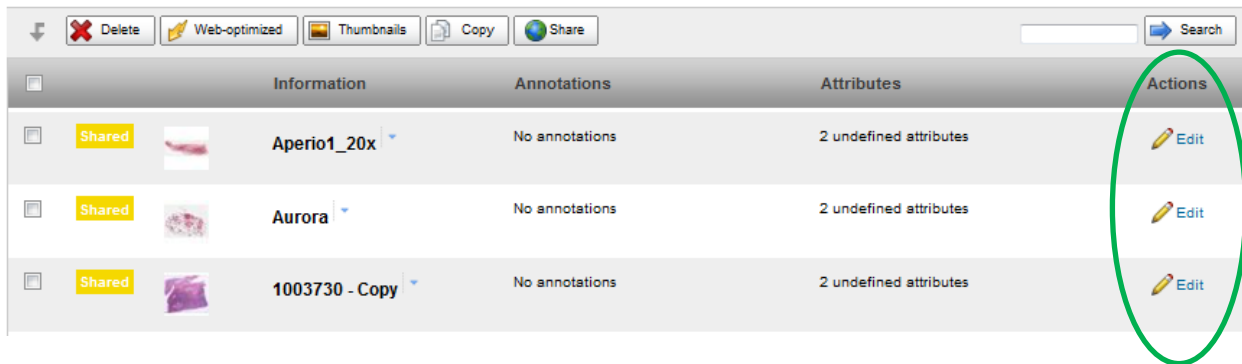
- Step 1: Browse through your computer's folders (left side)
- Step 2: Select all images to upload from your computer to the mScope server (right side)
- Step 3: Lists all transferred images as well as their status (bottom)

If a power failure or a shutdown from your computer interrupts the upload process it may be resumed. Several files may be uploaded simultaneously, they will be queued and processed automatically.

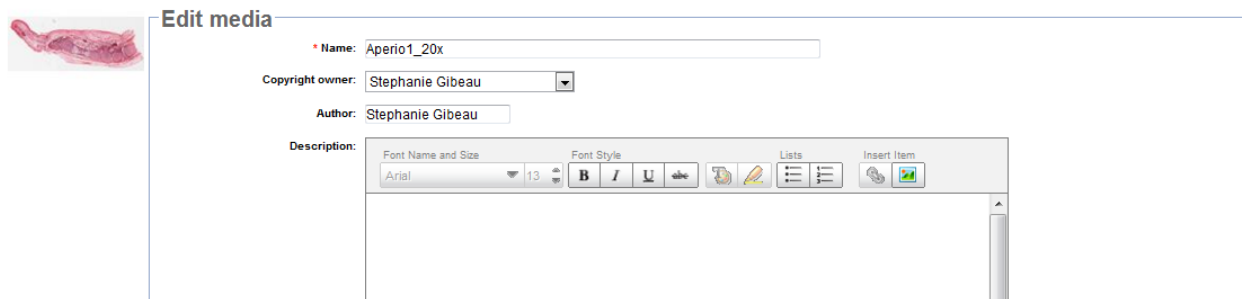


5.3.6 Modify Media Properties

Media properties may be modified by clicking on the “Modify” link under the “Actions” column.



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



5.4 Cases

Cases are the core content organization element containing media, documentation, and files. They may be created in the Course Materials and Atlas modules.

Case Structure

Cases are organized as follows:

1. **Title:** displays the creation date, author, and links to jump to the next or previous case.
2. **Tools:** operations that may be performed on the case. These are:
 1. **Edit**
 2. **Move**
 3. **Copy**
 4. **Delete**
 5. **Share**
 6. **Set visibility**
3. **Clinical Information:** is the area reserved for details about the case. In addition to text it supports images and web links. **Note:** can be edited by selecting the “Edit” button located at the far right of the section.
4. **Media:** lists all media associated with the case as well as notes, annotations, and attributes. You can modify these values by selecting the edit button in the actions heading.
5. **Media Tool bar:**
 1. **Add existing media:** allows you to include media on the server you have access to.
 2. **Upload new media:** allows you to add media from your computer to the server.
 3. **Remove all media**
 4. **Sort media:** Click on the “Dots” above a media’s number and drag and drop it to the desired position.
6. **Gross observations:** is the area reserved details about the gross specimen if applicable. In addition to text it supports images and web links. **Note:** can be edited by selecting the “Edit” button located at the far right of the section.
7. **Microscopic observations:** is the area reserved for slide details. In addition to text it supports images and web links. **Note:** can be edited by selecting the “Edit” button located at the far right of the section.
8. **Diagnosis Information:** is the area reserved for the case diagnosis. In addition to text it supports images and web links. **Note:** can be edited by selecting the “Edit” button located at the far right of the section.
9. **References:** is the area reserved for connecting to internal and external sources. In addition to text it supports images and web links. **Note:** can be edited by selecting the “Edit” button located at the far right of the section.
10. **Attributes:** displays all attributes and the assigned values (if any).
11. **(Course Materials only) Sharing Permissions:** allows you to open the case to users & groups.
12. **(Atlas only) Comments:** displays comments added by users. Users may comment on other comments.
13. **Attachments:** allows for audio recordings/dictations and additional files such as word documents files that are not directly displayed by mScope.
14. **(Course Materials only) Diagnosis Voting:** lists all student submitted diagnosis.

Note: tools such as edit, copy, and share will not be available if you do not have authoring rights to a case.

1A

Created by Stephanie Gibeau on 15-Feb-2011 12:56:40 PM, Last modified by Stephanie Gibeau on 15-Feb-2011 12:56:40 PM

Private

[Return to list](#)
 Displaying 1 of 2
[Next >](#)

[Edit](#) [Move](#) [Copy](#) [Delete](#) [Share](#)

Clinical information
 [Edit](#)

No clinical information

Media

[Add existing media](#) [Upload new media](#) [Remove all media](#)

	Information	Annotations	Attributes	Actions
1*		22 M1 - Copy-K1	No Annotations	
2		22 M1 - Copy	No Annotations	
3	 <small> Full version Mobile version </small>	Hamamatsu_1 - Copy	No Annotations	

Gross observations
 [Edit](#)

No gross observations

Microscopic observations
 [Edit](#)

No microscopic observations

Diagnosis information
 [Edit](#)

No diagnosis information

References
 [Edit](#)

No references

Attributes
 [Edit](#)

Organe:	No value
Stade:	No value

Sharing Permissions

[Attachments \(0\)](#)

[Diagnosis votes \(0\)](#)

[Share](#)

You are the ONLY person to VIEW and EDIT this case.

5.4.1 Case “Edit”

The “Edit” tool of the case allows you to set or change:

- Case ID
- Parent Folder
- Clinical Information (Rich text editor)
- Gross observations (Rich text editor)
- Microscopic observations (Rich text editor)
- Diagnosis Information (Rich text editor)
- Reference Information (Rich text editor)

mScope® Administrator User

Update Case

Update Case

Case Information

* Case ID: Case Study #1

Parent folder: Pathology 101

Clinical information

Font Name and Size: Arial 13

Font Style: B I U abc

Lists: [Bulleted List] [Numbered List]

Insert Item: [Link] [Image]

5.4.2 Case Move

The “Move” tool allows you to change its location in the content.

mScope® Administrator User

Move case(s)

Move case(s)

You selected the following case(s):

- Case Study #1

Where would you like to move the case(s)?

Atlas

Course materials

-- Select a folder --

Move Cancel

5.4.3 Case Copy

The “Copy” tool allows you to make another instance of the case.

mScope® Administrator User

Copy case(s)

Copy case(s)

You selected the following case(s):

- Case Study #1

Where would you like to copy the case(s)?

Atlas


Course materials


-- Select a folder --

Copy Cancel

5.4.4 Case Sharing

Access to cases is granted by assigning permission to a user or group. Cases support permissions for viewing and modifying cases.

 **Set sharing permissions**



Set sharing permissions

You selected the following case(s):

- Case Study #1

Who can view the case?


Only the creator
 The creator and all mscope users with permission to access the Course Materials
 Everyone with access to the network
 The creator and the following users and groups...

Groups	Users
demo_limited_access	Alvin Telsler
demo_withSpace	Amy Verrinder
Histo-tech Group A	Antoine Lemieux
msmith	Carolyn Cambor
Northwest Prof	Carolyn Cambor
Pathologist Group A	Doug Dillon
Pathologiste QC - Chaudière-Apalaches	Dr. Doglioni
Pathologistes de garde au Québec	Fabrice Guilbault
Specialist Group A	Fabrice Heloir
students	François Boillard

Who can update the case?

Only the creator
 The creator and the following users and groups...

Groups	Users
Demo Movie	Alvin Telsler
Histo-tech Group A	Amy Verrinder
Northwest Prof	Antoine Lemieux
Pathologist Group A	Carolyn Cambor
Pathologiste QC - Chaudière-Apalaches	Doug Dillon
Pathologistes de garde au Québec	Fabrice Guilbault
Technologistes QC - Gaspésie	Fabrice Heloir
UofPenn Profs	François Boillard
	Harriet Brown
	Histotech Heloir

 Save
Save & set visibility
Cancel

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Page 27

Visibility

The Sharing tab located at the bottom of the case lists all groups and user along with which sections of the case they can see. Clicking a section will show or hide it.

The following users and groups can VIEW and EDIT this case

- admin

The following users and groups can VIEW this case

Content that have a line through are hidden. Mouse over and click on the specific content to toggle the visibility.

- students
 - Case visibility:**
 - Clinical information ~~Diagnosis information~~ Diagnosis vote
 - References ~~Attributes~~ ~~Attachments~~
 - Media visibility:**
 - ~~Name/Description~~ ~~Attributes~~ Annotations: Titles

5.4.5 Case “Add Existing Media”

"Add Existing Media" allows you to add media to the Case from any Module, Folder, or Case of the portal you have access to. Select the appropriate module using the filters and then the desired image in the result list.

Add Media

Filters

Module:

Folder / Case:

Contains text:

Results 1 to 11 of 11
Results per page

Information	Annotations	Attributes
4179 - Copy	No annotations	Organs: Peau/Skin Stade: 2
22 M1 - Copy	No annotations	2 undefined attributes

5.4.6 Upload New Media

Please refer to section 5.3.5

5.4.7 Attributes

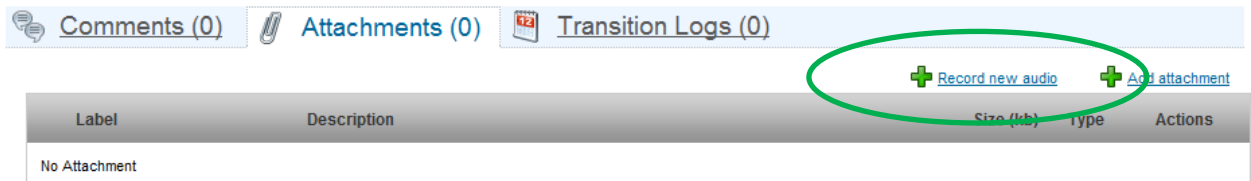
There are three (3) types of attributes available, editable according to available choices:

1. Free text
2. Value list (including free choice if required)
3. Value tree lists (including free choice if required)

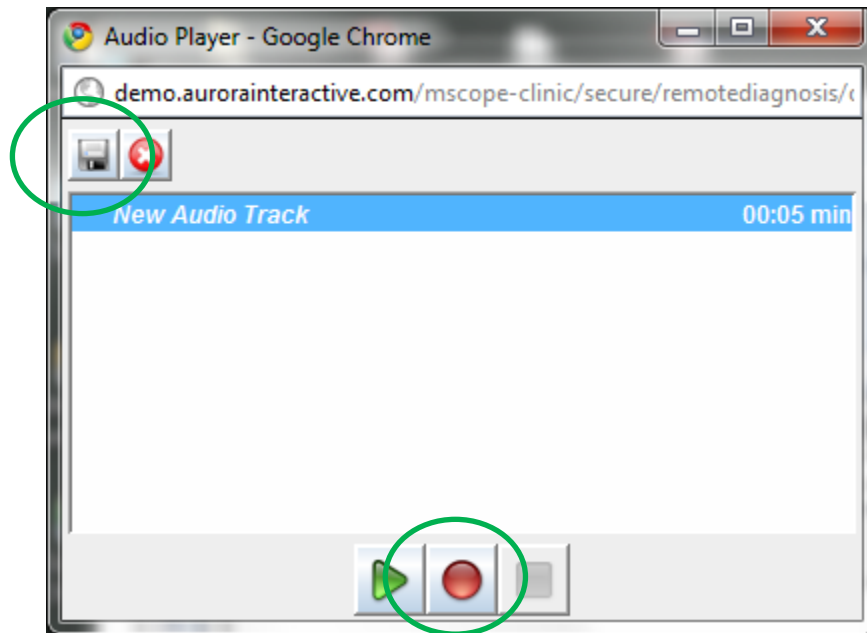
The screenshot shows the 'Attributes' section of a software interface. At the top left, there is a header 'Attributes' with a small icon. On the top right, there is a green circular button with a pencil icon and the text 'Edit'. Below the header, there are two rows of attribute values: 'Organe: No value' and 'Stade: No value'. Below these is a section titled 'Update Attributes' which contains two rows of input fields. The first row is for 'Organe:' and the second for 'Stade:'. Each row has a 'Select...' button and a 'Clear' button. At the bottom of the 'Update Attributes' section, there is a green bar containing a 'Save' button with a checkmark icon and a 'Cancel' button.

5.4.8 Attachments

Additional documentation and dictation is contained in the attachments section of the case. This is for non media files not supported by the viewer. Uploading attachments from your computer is done by selecting “Add attachment”. Selecting “Record new audio” allows you to add sound segments to the case that can later be transcribed.



Adding audio clips is done by selecting the 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.



5.4.9 Diagnosis Votes

Diagnosis voting allows users to enter an opinion for review by the professor. The list of answers appears in the Diagnosis votes tab. It is only available in Course Materials. You can clear the list using the reset button on the far right of the tab.

 [Sharing Permissions](#)
 [Attachments \(1\)](#)
 [Diagnosis votes \(1\)](#)
 [Reset diagnosis votes](#)

Diagnosis #1: test anonymous

5.4.10 Comments

Comments may be added to cases in the Atlas by selecting the "Add Comment" Operation or by replying to an existing comment. Comments support images as well as hyperlinks.

 [Comments \(2\)](#)
 [Attachments \(1\)](#)

Administrator Admin 13 Aug 10:02	The following was imported from Path 201. Reply
--	--

Administrator Admin 13 Aug 10:04	Details are available here . Reply
--	---

5.5 Course Materials

The “Course Materials” module is the mechanism for creating and sharing learning materials by providing a robust organizational system for cases. Content is made up of “Cases” and “Folders”.

The screenshot shows the mScope Education interface. At the top, there are navigation tabs: Home, Media Library, Case Atlas, Course Materials (selected), and Evaluations. A search bar is on the right. Below the navigation, a sidebar shows a folder hierarchy: HISTO 101, NOUVELLE SECTION, SEMESTRE A2010, and SEMESTRE H2011. The main content area is titled 'HISTO 101' and contains a 'Cases' section with a 'New case' button. Below this is a table of cases with the following data:

Permissions	Case ID	Attributes	Media	Actions
Public	1A	Organe: No value Stade: No value		
Shared	A2	Organe: No value Stade: No value		

An organizational hierarchy of folders may be created to order, structure and organize courses.

A directory may take one of the five existing icons:

1. Default folder
2. Course
3. Project
4. Seminar
5. Laboratory


The differences between icons are strictly graphical, any of the icons presented may hold a substructure.

5.5.1 Creating an online course

There are two ways to create a Folder.

- Selecting  next the Course Materials title at the top left of the menu.



- Selecting  [New](#) from the tools of the Folder.

This opens the creation page. In addition to specifying a name you can:

- select the icon you wish to display
- select the folder in which it should be located
- add a description including images and web links

Create folder

* Name:

Icon : Folder Course Project Seminar Laboratory

Parent folder:

Description:

Font Name and Size: Arial 13

Font Style: **B** *I* U abc

Lists:

Insert Item:

The following is an example folder structure.



5.5.2 Edit

The edit folder tool allows you to change the folder’s name, the icon, the parent folder as well as the description.

Update folder

* Name: HISTO 101

Icon : Folder Course Project Seminar Laboratory

Parent folder:

Description:

Font Name and Size: Arial 13

Font Style: **B** *I* U abc

Lists:

Insert Item:

5.5.3 Move

The move folder tool allows you to change the position of the folder in the tree.

5.6 Atlas

The "Atlas" Module allows you to create and store cases without the need for folders as is required by "Course Materials". Cases may be filtered via User-defined Attributes. These Attributes may be selected on the left of the window as seen in the image below.

Cases are listed in the order they are created and may be sorted by the "Case ID". This is done by selecting the "Case ID" heading above the case.

The screenshot shows the mScope Education interface. On the left, a sidebar contains two filter menus: 'Organe' (listing Coeur/Heart, Cerveau/Brain, Poumon/Lung, Rein/Kidney, Sein/Breast, Peau/Skin) and 'Stade' (listing 5, 4, 3, 2, 1). A green circle highlights these menus. The main content area is titled 'Cases' and includes a '+ New case' button. Below this are 'Share', 'Move', and 'Copy' icons. A table lists three cases:

Permissions	Case ID	Attributes	Media	Actions
Private	ATLAS 01	Organe: Poumon/Lung	No Media	[Share] [Move] [Copy] [Delete]
Private	ATLAS 02	Organe: Sein/Breast	No Media	[Share] [Move] [Copy] [Delete]
Private	ATLAS 03	No Attribute	No Media	[Share] [Move] [Copy] [Delete]

Case Operations

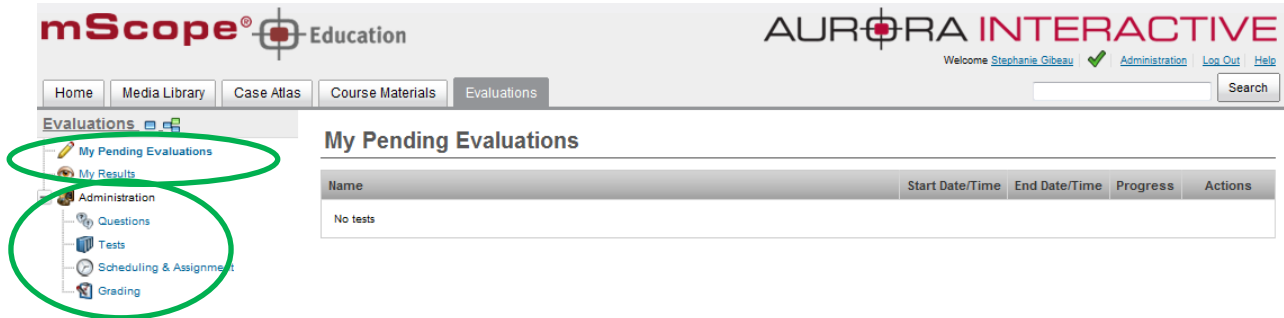
Available actions are:

1. Share
2. Move
3. Edit
4. Delete

Such actions are available based on user access to cases. Please refer to section 5.4 for more details.

5.7.2 Evaluations

The "Evaluation" Module provides tools to create, administer, and grade tests leveraging media. Student actions are listed on the left under "My pending evaluations" and "My Results" and testing administration options are available under "Administration":



The screenshot shows the mScope Education interface. The top navigation bar includes 'Home', 'Media Library', 'Case Atlas', 'Course Materials', and 'Evaluations'. The 'Evaluations' module is active, showing a sidebar with 'My Pending Evaluations', 'My Results', and 'Administration' circled in green. The main content area displays 'My Pending Evaluations' with a table containing one row: 'No tests'.

Name	Start Date/Time	End Date/Time	Progress	Actions
No tests				

Basic principle:

1. The professor creates questions and identifies correct answers (text and images)
2. The professor creates exams using questions created in step 1, adding grade points for each question
3. The professor schedules the exams (identify group of students, add beginning and end date)
4. The student takes the test
5. mScope automatically corrects all auto-correctable questions
6. The professor manually corrects all open questions
7. The professor publishes results

5.7.1 My Pending Evaluations

Selecting "My Pending Evaluations" lists all upcoming and running tests. When a test is ready to begin the action will become available to the user. Picking the "Take" action will open the test for the user.

My Pending Evaluations

Results 1 to 1 of 1
Results per page 20

Name	Start Date/Time	End Date/Time	Progress	Actions
QUIZ A	07/03/2011 14:30	Open	0%	Take

Note: Expired exams will not be displayed on this page.

Test 'Quiz'

Questions
Progress: Answered: 1 | Not Answered: 3 | Total: 4

25%

- QUESTION 1 (10 Pts) [Checked]
- QUESTION 2 (10 Pts) [Warning]
- QUESTION 3 (10 Pts) [Warning]
- QUESTION 6 (0 Pts) [Warning]

QUESTION 1 (10 Points)
Qu'est-ce que la pathologie numérique? / What is digital pathology?
xxx

Save Save & Next

Once in the test, a green check will appear next to each answered question. As well, a progression bar displays what percentage is complete (answered questions/exam's questions.)

Based on the options selected by the creator of the test:

- A test may be taken once or several times
- Feedback on answers may be displayed after each question or when the evaluation is completed.

Feedback is displayed according to the selected answer.

Feedback may include direct links to annotations. Clicking on such a link will redirect the user to the annotation on the image.

5.7.2 View Test Results

Each student may access their evaluation results.

By clicking on “My Results”, a list of corrected exams is displayed along with the results. Clicking on “Review” will allow the user to see answers, details, as well as correction feedback when available.

Auto-evaluation exams are available under the same section as soon as they are completed.

Name	Start Date	End Date	Grade	Actions
QUIZ 1	12/01/2011 09:40	12/01/2011 09:41	38/50	Review
EVALUATION FINALE H2011	13/01/2011 06:00	13/01/2011 06:30	37/50	Review
QUIZ 2	13/01/2011 06:00	13/01/2011 06:05		

5.7.3 Create Questions

Click on “Questions” to display the question management page. This page allows the user to create 4 types of questions:


- Short Answer: the student must submit an answer in an open text form
- Annotation: the student is asked to add one or several annotations on an image to answer the question
- Multiple Choice: the student must select the correct answer(s) from proposed choices
- True or false: The student determines whether the statement is true or false

Name	Question	Actions
01 Type: Short Answer	Determine the region of interest of the following slide	Edit Remove
QUESTION 1 Type: Short Answer	Qu'est-ce que la pathologie numérique? / What is digital pathology?	Edit Remove

Once questions are created, they can be deleted by clicking on “Remove” or updated by clicking on “Edit”.

A bank of questions is therefore available, allowing questions to be used in several evaluations.

All questions allow images associations. Annotations may be added. Annotations may be visible through the evaluation process or at review time as correction notes. Annotations are displayed in the annotation table below each question. For annotations to be displayed at review time only, check the “For correction” box from the annotation table.

Links to annotations may be inserted in the correction notes next to available answers. To add a link, first click in the correction note text box and then click on  under the “Annotations” column from the annotation table.

IMPORTANT NOTICE: In order for annotations to be displayed either in questions or correction notes, such annotations must be created in the image while opened from the question page.



Example: If an annotation is created while looking at an image in the library the annotation will not be available from in the evaluation module.

The correction note field is not editable with rich text capacities. To enable rich text editing, click on the edit icon (pen icon.) To preview the correction note, click on the eye icon.

*Answers:


Answer	Correction Notes
<input checked="" type="checkbox"/> 1. Good answer	

Allow free text entry

Update Correction Notes

Font Name and Size: Arial 13 | Font Style: B, I, U | Lists | Insert Item

Annotations:  1

Update Correction Notes | Cancel

Short Answer Questions

Short Answer questions are defined as follows:

1. **Name:** required value that uniquely identifies the question
2. **Question:** required description of what the question is asking
3. **Correction Notes:** optional information for whoever marks the Question
4. **Media:** optional image to be displayed (either by uploading a new media or associating an existing one)
5. **Attachments:** enables attaching reference documents to the question (PPT, Word, Excel,...)



Media:

Warning! The media and the annotations are saved in real-time. In other words, the cancel link below will NOT undo the changes you made to the media and the annotation while in the question form.

[Upload new media](#) [Add existing media](#)

Information	For correction	Annotations	Actions
	Aperio1_20x	No annotations	

Attachments:

*Label	Description	Actions
No Attachment		

True or False Questions

True or False questions are defined as follows:

1. **Name:** required value that uniquely identifies the question
2. **Question:** required description of what the question is asking
3. **Answer:** required value defining the correct answer. Used for auto-correction.
4. **Correction Notes:** optional information for the student
5. **Media:** optional image to be displayed (either by uploading a new media or associating an existing one)
6. **Annotation display:** enables attaching reference documents to the question (PPT, Word, Excel,...)




Multiple Choices Questions



Multiple Choice questions are defined as follows:



1. **# of Possible Selections:** if greater than 1 the student may select multiple answers
2. **Name:** required value that uniquely identifies the question
3. **Question:** required description of what the question is asking
4. **Answers:** An unlimited number of answers may be added using the green plus
 - o Good answer(s) are identified by checking the box left of the number identifying a choice. Used for auto-correction purposes.
 - o It is possible to allow students to add details to their answer to a multiple choice question. To do so, check the “Allow free text entry” box below appropriated answers.
6. **Media:** optional image to be displayed (either by uploading a new media or associating an existing one)
7. **Annotation display:** enables attaching reference documents to the question (PPT, Word, Excel,...)



Media:

 **Warning! The media and the annotations are saved in real-time.** In other words, the cancel link below will NOT undo the changes you made to the media and the annotation while in the question form.

 [Upload new media](#)  [Add existing media](#)

Information	For correction	Annotations	Actions
 Aperio1_20x		No annotations	

Attachments:

*Label	Description	Actions
No Attachment		

Annotation Questions

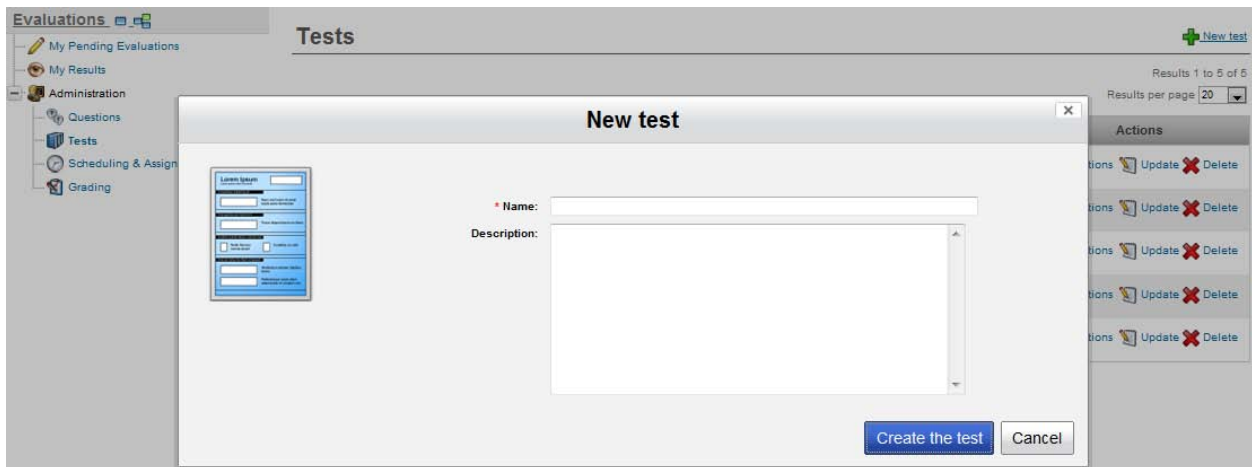
Annotation questions are defined as follows:

1. **Name:** required value that uniquely identifies the question
2. **Question:** required description of what the question is asking
3. **Correction Notes:** optional information for whoever marks the Question
4. **Media:** image to be displayed (either by uploading a new media or associating an existing one)
5. **Annotation display:** enables attaching reference documents to the question (PPT, Word, Excel,...)

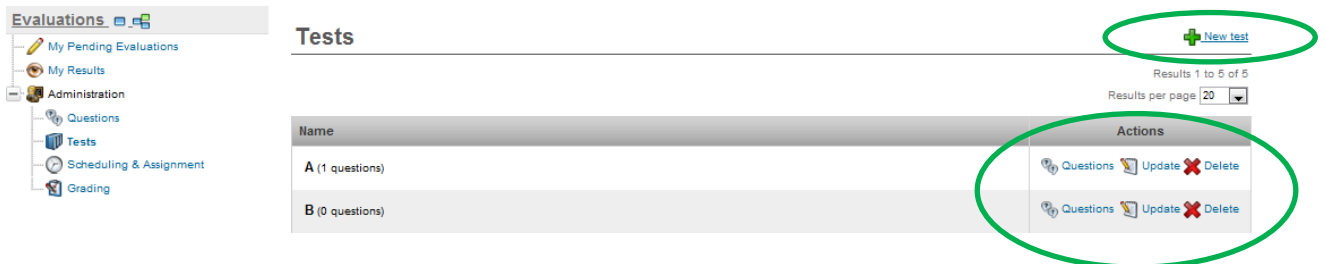


5.7.4 Tests

An exam is composed of a name, a description and a list of questions. To create an exam, click on “New Test”.



Once an exam is defined, it might be modified or deleted using available links under the “Actions” column.



Once an exam is created, an unlimited number of questions can be added by clicking on the “Questions” link from the actions column.

To add a question:

1. **Name:** Select a question to be added to the exam
2. **Weight:** Select the maximum number of points that can possibly be awarded for a correct answer to the question
3. **Display to:** By default, questions are displayed to students. However, if a marker is required to evaluate technical work performed by a student, questions intended for a marker may also be added to a test.

These questions must be created as a question for a student would be. When adding the question to a test, simply select “Marker only (correction grid)” from the “Display to” section to see the question appear under the “Questions asked to marker” section.

Add Question to Test

Name*: 01

Weight*: 0

Display to*: Student Marker only (correction grid)

Questions asked to student

Weight	Name	Question	Actions
10	QUESTION 1	Quelle est que la pathologie numérique? / What is digital pathology?	<input type="button" value="Edit"/> <input type="button" value="Remove"/>
Type: Short Answer			

Questions asked to marker

Empty List

When grading a test, the marker will be prompted to answer all marker-defined questions for every student who took the test. Points are granted the same way as for a student question and points cumulated under the marker questions section are added to the student questions section ones.

Modify or delete a question using the links available under the “Actions” column.

5.7.5 Scheduling & Assignment

mScope offers 2 types of evaluations:

- **Auto-corrected tests:** The system will automatically correct all true/false and multiple choices questions (answers previously determined);

While open answer questions (short answer, annotations, and multiple choices allowing free text entry) will be auto-corrected by the student with the help of correction notes.

Feedback and point allocation will be performed either once a test is complete or following each question, to be determined by the user assigning the exam.

- **Manually corrected tests:** The system will automatically correct all true/false and multiple choices questions (answers previously determined);

While open answer questions (short answer, annotations, and multiple choices allowing free text entry) will be corrected by a marker, using mScope’s “Grading” section.

Feedback and points allocation will be performed either once a test is complete or following each question, to be determined by the user assigning the exam.



To add an exam, click on the link “Schedule & Assign an evaluation”. Then define:

- Users requiring access to the test
- Availability period of the test: From date/hour, To date/hour
- In the case of an auto-corrected test:
 - o Feedback options (after each question or once the test is completed)
 - o Define whether students may take the test once or several times

“Closed” exams may be accessed by clicking on the “Closed” link available at the top of the evaluation list. Click on the designated link to come back to open evaluations.

The screenshot shows a 'New Evaluation' window with the following fields and options:

- Evaluation:** (Empty text field)
- Test:** Demo Quiz for Dr Rojo (Dropdown menu)
- Group:** Everyone (Dropdown menu)
- Graded by:** Self (radio), Other (radio, selected)
- Display answers & details:** After each answered question (during test) (Dropdown menu)
- One try only?:**
- Start date (dd/mm/yyyy):** 11/08/2010 (Text field with calendar icon)
- Start time (hh:mm):** 11:00 (Text field)
- [Clear end date & time](#) (Link)
- End date (dd/mm/yyyy):** (Empty text field with calendar icon)
- End time (hh:mm):** (Empty text field)
- Buttons:** Save, Cancel

Once assigned the following actions are available:

- Preview the test by clicking the test’s name
- Modify the schedule by clicking “Update”
- Close the exam by clicking “Close” (Available solely for auto-corrected tests)
- Delete the exam by clicking “Delete”
- Generate a report listing all users assigned to the test, a completion percentage as well as a global score by clicking on “Generate a report”
- Add a reference page (rich text editor and allowing attachments), published at the end of a test, by clicking on “References”.

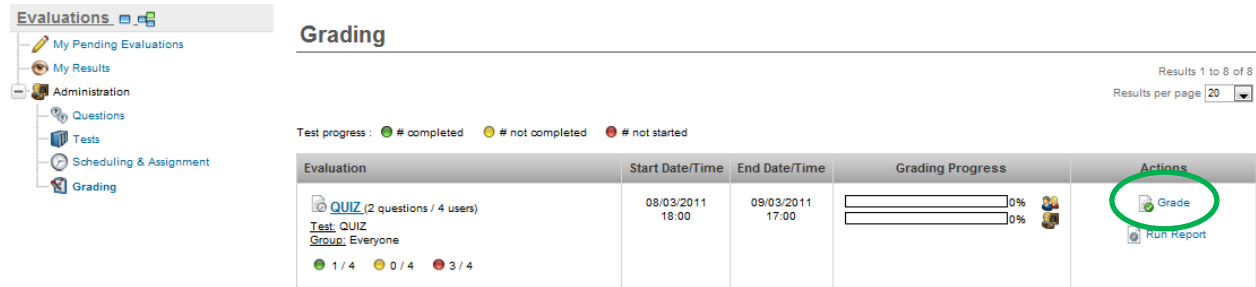
Note: Reference pages are only displayed once a student has completed a test in order to prevent displaying references to a student who would’ve missed a first schedule of a test when a second one may be available in the future.

Following the same logic, the end date/time must be expired for the reference page to be displayed.

5.7.6 Grading

Tests requiring manual correction are displayed under the “Grading” section. Access this section to correct student oriented open type questions as well as technical work evaluation questions assigned to a marker.

To initiate the grading process, click on “Grade”.

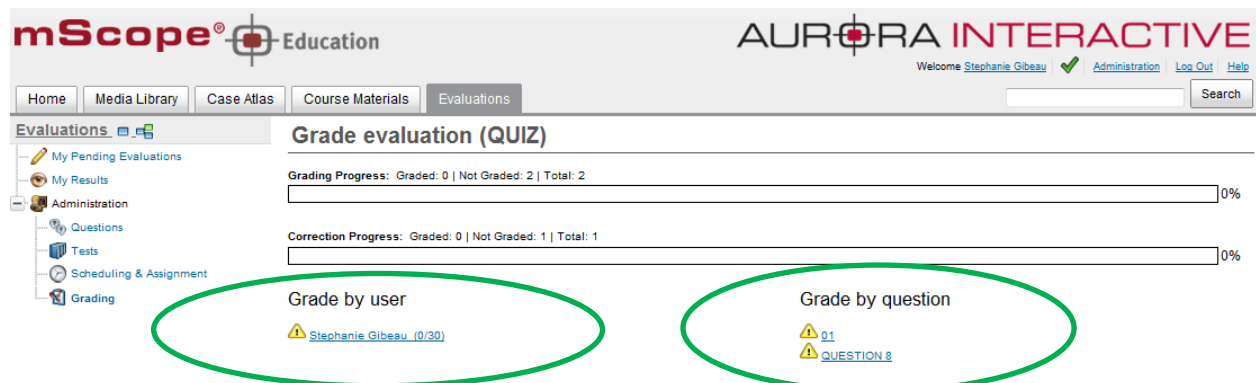


Correction may be conducted:

- By student: i.e. by correcting all questions for a single student before moving to the next one
- By question: i.e. by correcting all submitted answers to a specific question (Note: not available for marker intended questions, such questions must be corrected through the “by student” mode.)

Legend: A yellow triangle identifies a question/exam requiring grading, while a green check identifies a corrected question/exam.

Question automatically corrected by mScope’s (true/false, multiple choices) will therefore always be identified by a green check, still allowing for a marker to review them.



Note: Distinct correction progress bars are provided for both students and the marker.


When grading questions you will see the question along with any correction notes provided by the author. To assign a mark select the dropdown list on the left above the question. You can provide the student details as to the correct response in the comments section.

Marking '01' for 'QUIZ' [Grade another user or question](#)

Questions
Grading Progress: Graded: 0 | Not Graded: 1 | Total: 1

Stephanie Gibeau (0 / 10)

01 (10 Points)
Determine the region of interest of the following slide



XXXXX:

Grade: 0 / 10 Points

Correction Notes

Comments

Save Save & Next

Publishing results

Once the grading process is completed, results and comments may be published to students. To do so, click on the “Publish” link.

Evaluations

- My Pending Evaluations
- My Results
- Administration
 - Questions
 - Tests
 - Scheduling & Assignment
 - Grading

Grade evaluation (QUIZ) [Publish](#)

Grading Progress: Graded: 2 | Not Graded: 0 | Total: 2 100%

Correction Progress: Graded: 1 | Not Graded: 0 | Total: 1 100%

Grade by user: Stephanie Gibeau (28/30)

Grade by question: 01 QUESTION 8

Grading

Results 1 to 8 of 8
Results per page 20

Test progress: ● # completed ● # not completed ● # not started

Evaluation	Start Date/Time	End Date/Time	Grading Progress	Actions
QUIZ (2 questions / 4 users) Test: QUIZ Group: Everyone ● 1 / 4 ● 0 / 4 ● 3 / 4	08/03/2011 18:00	09/03/2011 17:00	100% 100%	Grade Publish Run Report

Once published, results may also be unpublished by clicking the “Unpublish” link.

5.8 Search

A search engine is available at the upper right corner of the page. Searches may be based on one or several key words or part of words.

Home | Media Library | Case Atlas | Course Materials | Evaluations | Search

Search Results

Cases (1) | Medias (2)

Cases [Export case list](#)

Results 1 to 1 of 1
Results per page 20

Case ID	Attributes	Media	Actions
ATLAS 01	Organe: Poumon/Lung	No Media	

Search results will display the list of cases with the text keyed in the search engine.

The following fields are looked at by mScope’s search engine:

- Case name
- Diagnostic
- Clinical Information
- Patient name
- Patient ID
- Attributes values
- Macroscopic stations
- Video cameras
- Scanner

Use characters such as “?” and “*” to increase the efficiency of your search results.

Example: Enter “acc*” in the search field to see “acc1” and “acc123” included in the search results.