

**Use Case Document**  
**For**  
**Libre Health DICOM Viewer Interactions**

<b>1a. Use Case Number:</b>	<b>UC01</b>	<b>1b. Use Case Title:</b>	<b>Manually editing the region of interest</b>
<b>2. Level:</b>	Summary	User-level	Subfunction
<b>3. Actor:</b>	Radiologist		
<b>4. Goal:</b>	<p><b>Abstract:</b> As a radiologist, I want to edit the region of interest in the DICOM viewer, so that I ensure making final decision along with the AI predicted ROI.</p> <p><b>Explanation:</b> In chest x-ray diagnosis, there might be many studies which can be filtered based on modality and need to be diagnosed and documented for further study. There might be scenarios where series in the images have multiple region of interest or segments depending on the anomalies detected. If the AI identifies and draws a segment around anomalies, radiologist should be able to edit the segment and save the edited diagnostic information <b>example:</b> Size of the tumor.</p>		
<b>5. Preconditions:</b>	<p>A radiologist should have access to login to libre health radiology module.</p> <p>A radiologist should have access to edit the study.</p> <p>A study must be available to be diagnosed. (Unlocked)</p> <p>DICOM viewer should support key object selection or annotating in the presentation state feature.</p>		
<b>6. Success Guarantee:</b>	Allowing the radiologist to edit the region of interest and display a save success dialog.		
<b>7. Main Success Scenario (MSS):</b> <i>(use more numbers if necessary)</i>	<ol style="list-style-type: none"> <li>1. Radiologist initiates to edit the region of interest in the DICOM viewer's viewport by clicking on the AI suggested ROI.</li> <li>2. Drag the region by zooming in or zooming out.</li> <li>3. Save the edited ROI or segment.</li> <li>4. Confirm on the edited changes.</li> </ol>		

<p><b>8. Extensions:</b> <i>(renumber to match the corresponding MSS step)</i></p>	<p>1a. If the radiologist feels that he/she does not want to save the changes made to the ROI, then the system should revert the changes back.</p> <p>1b. If the radiologist opens the study with the edited ROI, then the system should display the last made changes to the region of interest.</p> <p>1c. If the radiologist tries to close the edited region of interest without saving, the system should alert to confirm the changes to edited ROI.</p>		
<p><b>9. Notes/Issues/ Reviewer Comments:</b></p>			
<p><b>Completed by:</b></p>	<p>Geetha Priya</p>	<p><b>Date:</b></p>	<p>02/27/2020</p>
<p><b>Reviewed by:</b></p>		<p><b>Date:</b></p>	

<b>1a. Use Case Number:</b>	<b>UC02</b>	<b>1b. Use Case Title:</b>	<b>Importing study from other DICOM viewers</b>
<b>2. Level:</b>	Summary	User-level	Subfunction
<b>3. Actor:</b>	Radiology technician		
<b>4. Goal:</b>	<p>As a radiologist technician, I want to import the studies from other DICOM viewer, so that I ensure compatibility standards between DICOM Viewers and make it available for the radiologists to diagnose.</p> <p>The import can be a DICOM image with annotations or an XML/JSON holding all the annotations and key object selection details.</p>		
<b>5. Preconditions:</b>	<p>DICOM viewer should allow the admin/radiologist technician to login to libre health radiology module.</p> <p>DICOM viewer should allow importing feature</p> <p>DICOM viewer should allow only importing files in the form of xml/json/DICOM images.</p>		
<b>6. Success Guarantee:</b>	Allowing the radiology technician to successfully import the DICOM images or .xml/json files.		
<b>7. Main Success Scenario (MSS):</b> <i>(use more numbers if necessary)</i>	<ol style="list-style-type: none"> <li>1. Radiologist clicks on the import feature on the task panel.</li> <li>2. Import option allows the user to import set of allowed files types (.XML, JSON, DICOM)</li> <li>3. Notification on successful import.</li> </ol>		
<b>8. Extensions:</b> <i>(renumber to match the corresponding MSS step)</i>	<p>1a. If the import has failed, a notification should indicate that the import has failed.</p> <p>1b. If the import is successful, a banner should show indicating that the import was successful.</p>		
<b>9. Notes/Issues/ Reviewer Comments:</b>			
<b>Completed by:</b>	Geetha Priya	<b>Date:</b>	02/27/2020
<b>Reviewed by:</b>		<b>Date:</b>	

<b>1a. Use Case Number:</b>	<b>UC03</b>	<b>1b. Use Case Title:</b>	<b>Exporting xml or JSON of selected key object</b>
<b>2. Level:</b>	Summary	User-level	Subfunction
<b>3. Actor:</b>	Radiology technician		
<b>4. Goal:</b>	As a Radiology technician, I want to export the details of the key object or Region of interest I created on the DICOM study/series, so that I have a common file that can be passed on along with the DICOM images to other DICOM viewers.		
<b>5. Preconditions:</b>	<p>DICOM viewer should allow the admin/radiologist technician to login to libre health radiology module.</p> <p>DICOM viewer should allow exporting feature</p> <p>DICOM viewer should have the option to export the key object selection or annotation on the presentation layer via .xml or .json format.</p>		
<b>6. Success Guarantee:</b>	Export complete notification with the path the exported folder is saved to.		
<b>7. Main Success Scenario (MSS):</b> <i>(use more numbers if necessary)</i>	<ol style="list-style-type: none"> <li>1. Radiology technician initiates exporting the DICOM image with the annotated region of interest i.e., the details on the presentation layer.</li> <li>2. Chooses a path/creates a new folder to export.</li> <li>3. Receives export notification.</li> </ol>		
<b>8. Extensions:</b> <i>(renumber to match the corresponding MSS step)</i>	<p>1a. The system should provide an option to cancel/discard the export that is initiated.</p> <p>1b. The system should indicate if the export is failed.</p>		
<b>9. Notes/Issues/ Reviewer Comments:</b>			
<b>Completed by:</b>	Geetha Priya	<b>Date:</b>	02/27/2020
<b>Reviewed by:</b>		<b>Date:</b>	