

Content Conversion Specialists

# User guidelines



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# What is dWValidator?

**dWValidator** is a tools package used to automatically validate digital objects, such as image files, PDF files, XML data (METS, ALTO) and other derivatives. Validation is the process of checking if something satisfies certain criteria. Examples would include checking if a statement is true (valid), or if data is compliant with a certain standard. For digital objects there are many variations for output data.

The validation is typically performed in two steps: Automated validation and Manual validation.

- The Automated Validation is checking all files for specific parameters and integrity and ensures all data is of consistent quality.
- The Manual Validation is performed by operators using the Validator user interface, checking samples for image quality, meta data, text quality or other parameters that cannot be validated by a machine (subjective criteria).

The dWValidator software provides reports and statistics of the results.

The dWValidator's benefits:

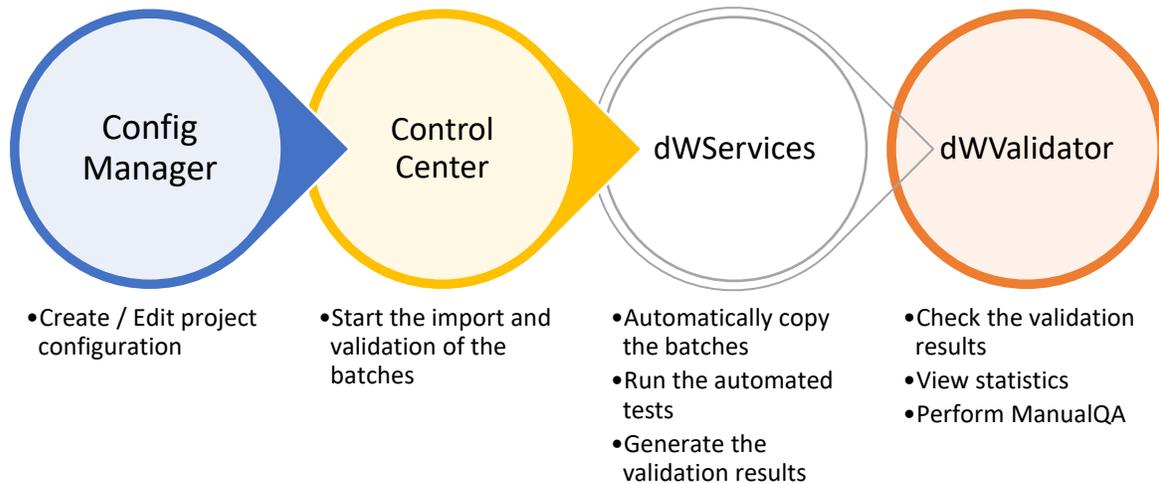
- Independent quality assurance tool
- Detailed reporting as XML, HTML, PDF, custom format
- Integrates customizable automated tests
- Integrates customizable selection for manual QA data set
- Specific tools for manual QA (combined views, color picker, measurement tools, histograms, etc.)
- Multithread testing for higher performance

The dWValidator is developed as a QA tool for digitization services in order to:

- Reduce QA costs
- Avoid human errors from manual QA process
- Merge different tools we use for QA
- Ensure 100% accuracy for measurable properties
- Create reports to be submitted with deliveries

# Get started

## Basic workflow



The standard workflow for the validation process consists in 4 stages:

1. Create / Edit the project configuration that will be used.



With [Configuration Manager](#) you can create and edit project configurations. Use this application to group files on specific categories (docblocks), create automatic and manual tests and define the manual QA selection rules. *For more details, see [Configuration Manager Help](#).*

2. Start the import and validation of the batches.



In [Control Center](#) you simply add the path of the batch, the destination path and project configuration that will be used and trigger the validation process. *For more details, see [Control Center Help](#).*

3. Check the progress of the automatic validation.



The [dWServices](#) are background services – they perform the tasks automatically, without any user interaction. The services will automatically copy the batch to the destination path and create the validation tasks. These tasks are also automatically processed by the services and the results are added to the Database. *For more details, see [dWServices Help](#).*

4. Check the results and statistics.



Use [dWValidator](#) to check the automatic tests results and statistics. There are detailed reports on every level – from batch level to file level – that can be used to check what tests failed and why. The file itself can also be inspected to double check the results. The same application can be used to perform the manual tests, each file type having a set of tests to be performed, defined in project configuration. *For more details, see [dWValidator Help](#).*

# dWValidator

With **dWValidator** you can check the validation results and statistics, inspect the validated files and perform manual tests.

The screenshot displays the dWValidator application interface. The main window shows a file explorer on the left with a tree view of folders like 'SampleCCS\_01', 'SAMPLE01\_000000002\_1\_02', and 'ACCESS'. The central area shows a preview of a document page with the text '1ste Jaargang', 'Zaterdag 1 October 1898.', and 'DELETSCH'. A 'Batches' dialog box is open in the foreground, displaying a table of batch information.

Batch ID	Project name	Batch name	Status	Path	Import date
17370121	SampleCCS_01	SAMPLE01_000000002_1_02	Validated	\\dss3\dl\docworksSupport\Images\IN7\docWor...	4/28/2017 3:41:07 ...
18706959	SampleCCS_Newspaper_Chin...	Batch01	Validated	\\suport\dwshare\OUT\Presentation files\Presen...	2/12/2018 9:05:04 ...
18707765	SampleCCS_Newspaper_Chin...	Batch02	Validated	\\suport\dwshare\OUT\Presentation files\Presen...	2/12/2018 10:20:4...
18709625	SampleCCS_Newspaper_Germ...	SampleCCS_Batch01	Validated	\\suport\dwshare\OUT\Presentation files\Presen...	2/12/2018 2:25:22 ...
19194173	BKT2_Boeken_v_5_0	MMDBNL01_000000001_1_01	Explored	\\dss3\dl\Validator\KBNL_GOOD\MMDBNL01_00...	4/27/2018 7:30:13 ...
19295435	TestPDF	TEST_PDF_2	Validated	\\dss3\dl\Validator\TEST_PDF_2	4/30/2018 4:33:18 ...

The dialog box also includes a 'Project' dropdown set to 'All', a 'Manual QA' button, a 'Delete batch' button, and a 'Search ID' field. At the bottom of the dialog are 'Open' and 'Cancel' buttons.

## The interface

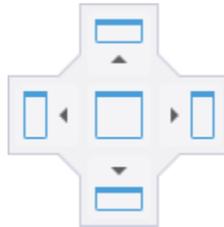
### Window styles

dWValidator is built in the same style as Configuration Manager, so you can customize the windows (resize, reposition, close or hide). The interface has the same two basic window types: *tool window* (Explorer tree, Toolbox window, Tasks list window) and *document window* – or view (Image windows, XML windows, PDF windows, reports windows, statistics windows...).

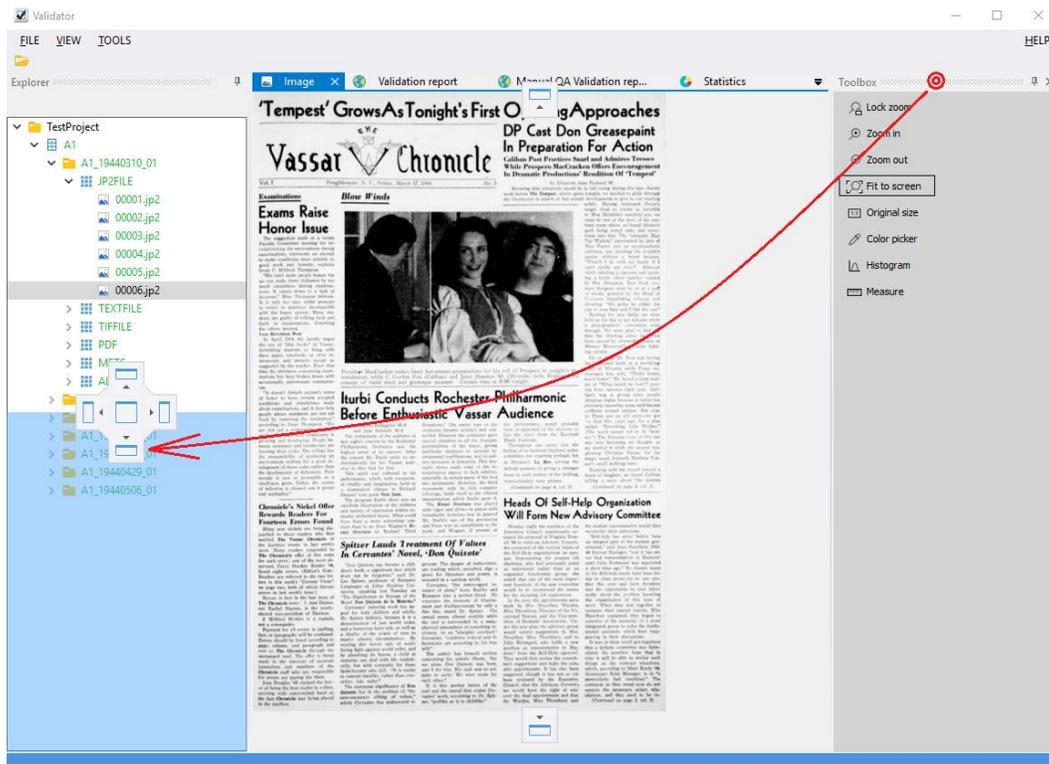
Tool windows can be resized and dragged by their title bar, but their docking positions are more restrictive and they cannot be left floating. Document windows can be dragged by their tab and docked anywhere, they even can be left floating.

### Docking

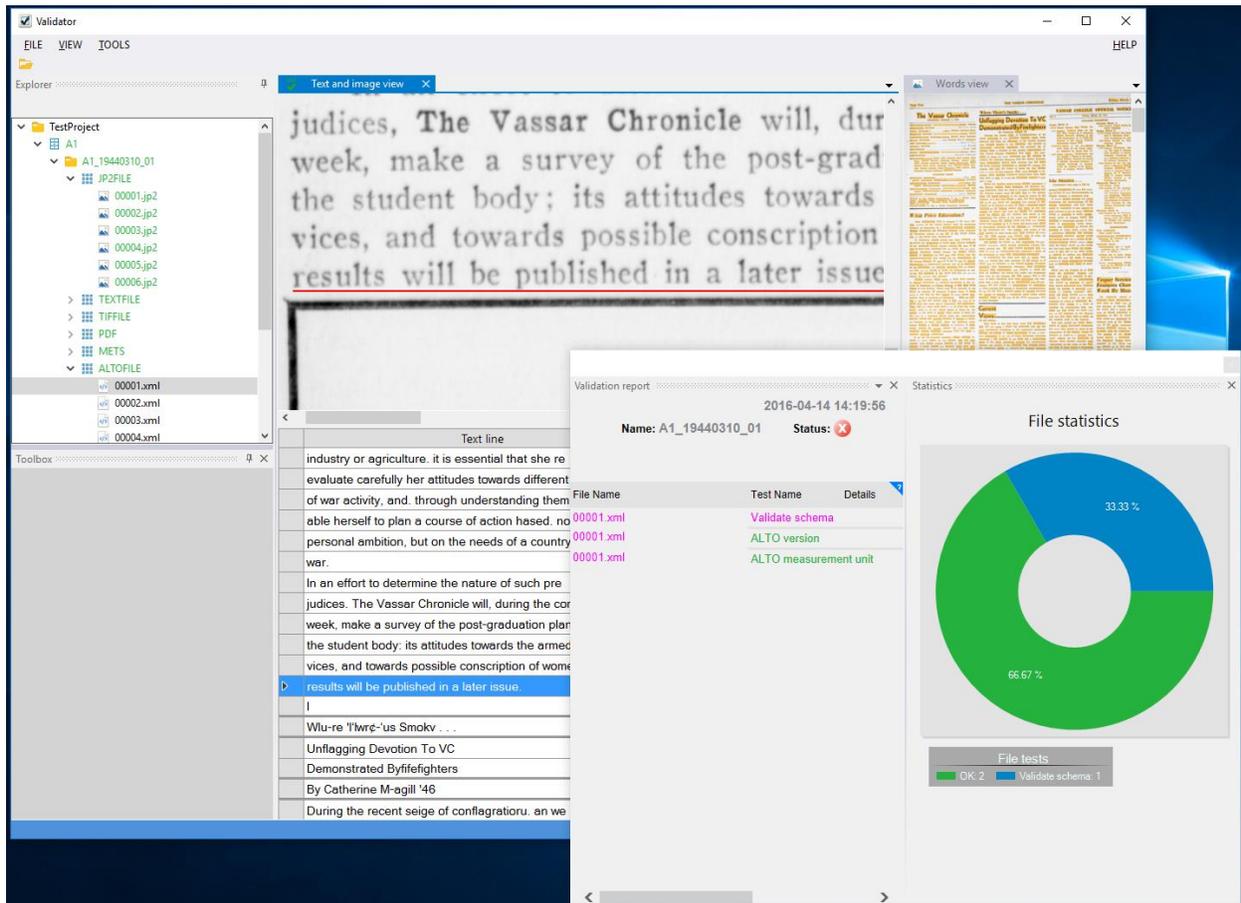
While dragging a window, check for a dock indicator where it can be dropped and hover that indicator. A blue highlighted area will appear, showing you where the window will be docked if you release the mouse button now.



Example of how to dock Toolbox under Explorer:



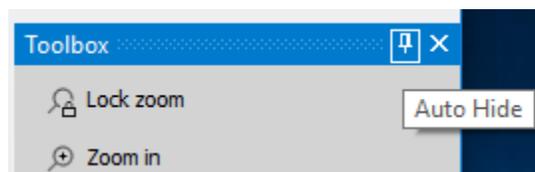
Because dWValidator has multiple document windows for each file, there are numerous ways to arrange them on screen, or even leave them floating on a second screen.



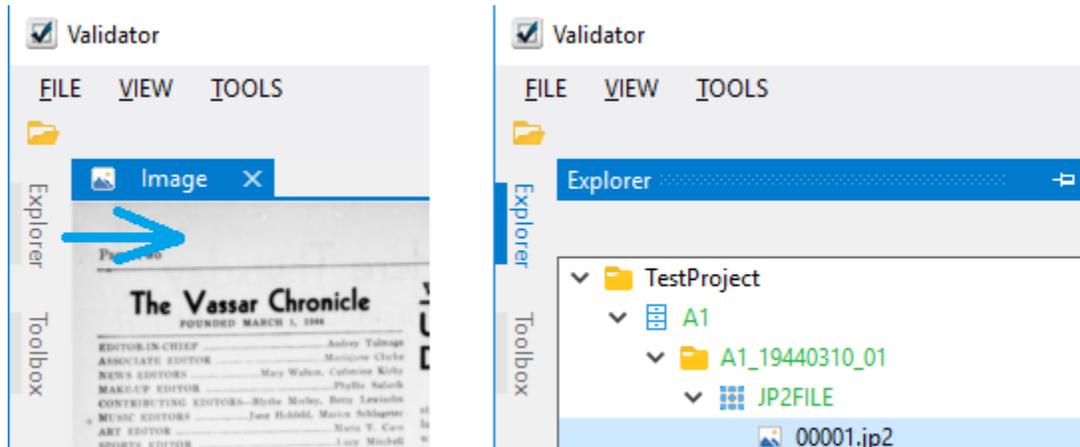
To move a dockable window without snapping it into place, hold the **Ctrl** key while you drag the window. This will prevent the window to dock to a position, leaving it floating (if the window allows it).

## Closing and auto-hiding

Tool windows have an “auto-hide” feature, which will make a window slide out of the way when you use a different window. To hide a window, press the “pin” button from the title bar:



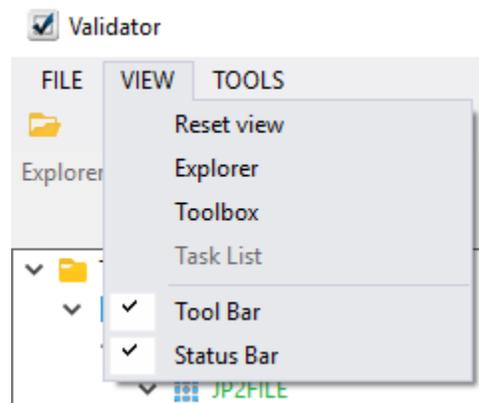
When a tool window is auto-hidden, its name appears on a “hide bar”, a tab on the edge of the application. To use that window again, point to the tab so that the window slides back into view.



When the mouse cursor leaves the window area, it will automatically hide again. To make the window active again (stop it from auto-hide), press the “pin” button.

Any window from dWValidator can be closed by clicking the X on the upper right corner of the title bar (or tab), except the Explorer tree – this window doesn’t have a close button.

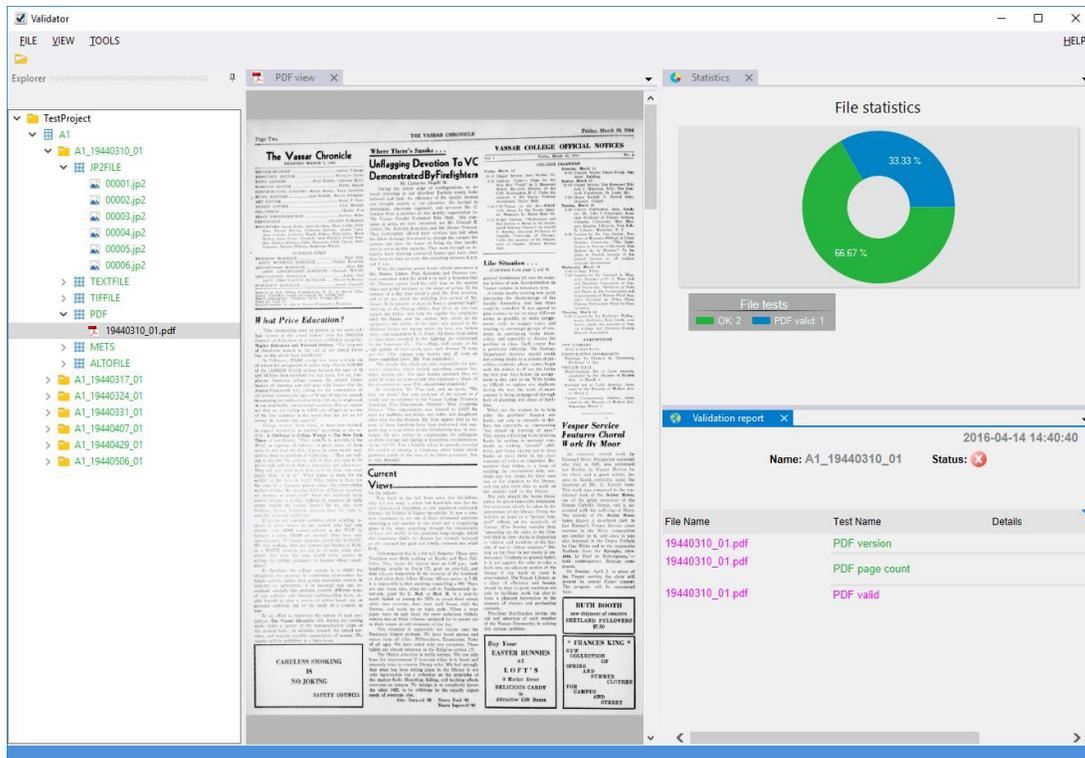
If a tool window is closed or not displayed, it can be opened from the **View** menu:



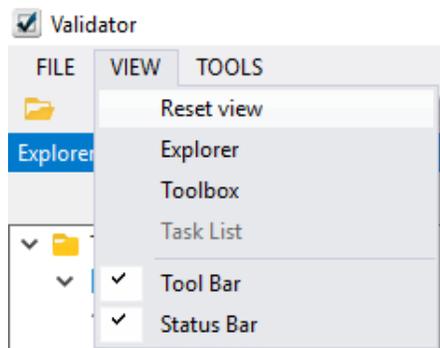
## Save the windows layout

When first opening dWValidator, the window layout is default: Explorer on the left side, all document windows are docked as tabs on top of each other. You can change the way the windows are arranged and the new layout will be automatically saved when you close the application.

Because each docblock has its own number and type of document windows (views), it’s possible to arrange the views differently for each docblock. The application will save the new layout for each docblock, and when you reopen the application, the views will be in the same place.

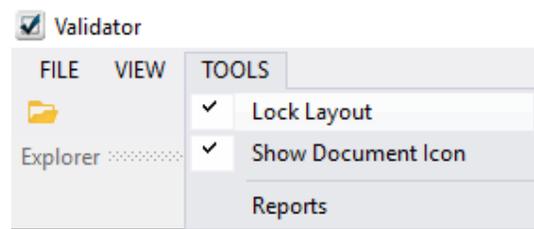


Unlike tool windows, document windows don't have a menu entry to display them again once they are closed. If you close a document window, this will remain closed. To reopen them, select **Reset view** entry from the **View** menu:

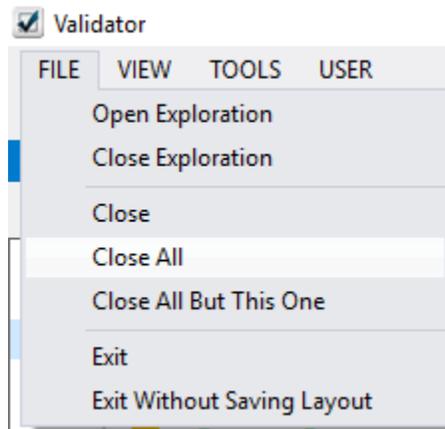


This will reopen all closed windows for the selected file type, but will also reset the layout. You can use **Reset view** also for returning to the default window layout.

To prevent layout changes made by mistake, you can enable **Lock Layout** entry from **Tools** menu:

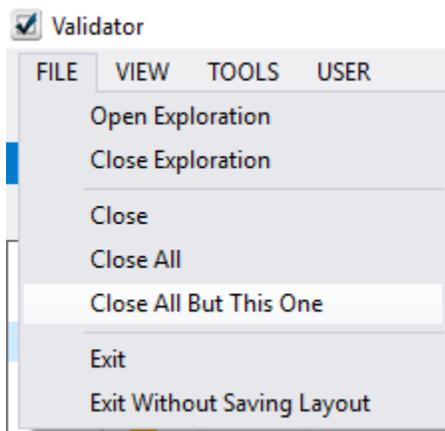


Another possibility to reset the layout and reopen closed views is **Close all** option from **File** menu:



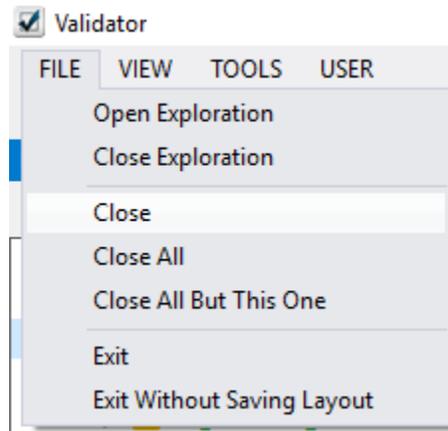
This action will close all the views of the current selected node from Explorer. Select another node to have all the views displayed again with the default layout.

If you are interested only in one view for a certain file type, you can use **Close all but this one** option from **File** menu:



This action will close all the views, except the selected one, and will keep this style of display for all files of this type. It can be very helpful when performing manual QA – keep only the file displayed, there is no need for statistics or reports view (they are not relevant for the process).

There is also the option to close only one view, by selecting **Close** option from **File** menu:

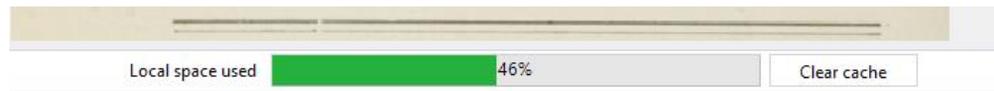


Opposite to **Close all but this one**, this action will close the current selected view.

All the *Close* actions will apply only to document windows, tool windows will not be affected by these. Also, tool windows are not influenced by **Reset view** action either. Closing and opening tool windows is strictly done with X button and menu entry.

## Cache clearing

In case the location where the low-resolution images will be kept is the local temporary folder, on the status bar is displayed a progress bar representing the amount of space occupied by the cache files. You can configure the total amount of space used by dWValidator in **Options** dialog (*for more details, see [Cache settings Help](#)*).



If you cannot see the status bar, click on **Status bar** option from **VIEW** menu to enable it.

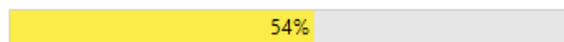
When inspecting batches and documents in dWValidator, low-resolution images are regularly created in advance and saved on disk to make Thumbnail view (*for more details, see [Thumbnail view Help](#)*) or the navigation between files a lot faster. Once created, they are used every time that batch is opened. They are automatically deleted when the batch is deleted, accepted or rejected.

You can, however, manually delete low-res images, especially when you have set a smaller storage space for cache. The progress bar will indicate the percentage of space occupied and will gradually change the color when approaching the maximum storage set:

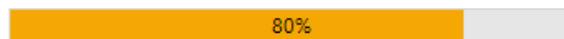
- Smaller than 50% - green



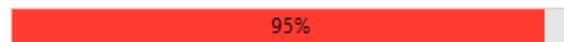
- Between 50% - 75% - yellow



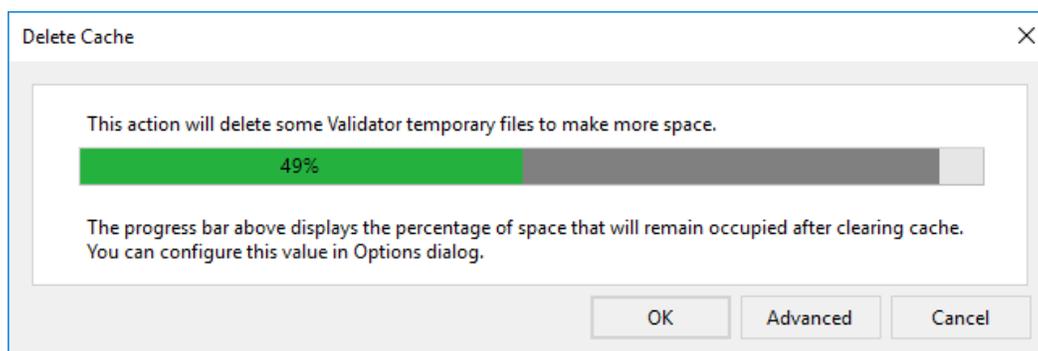
- Between 75% - 90% - orange



- Over 90% - red



To delete the cache files, click on **Clear cache** button next to the progress bar. This will open a dialog where, based on occupied space and Clear cache percentage, you can free up space.

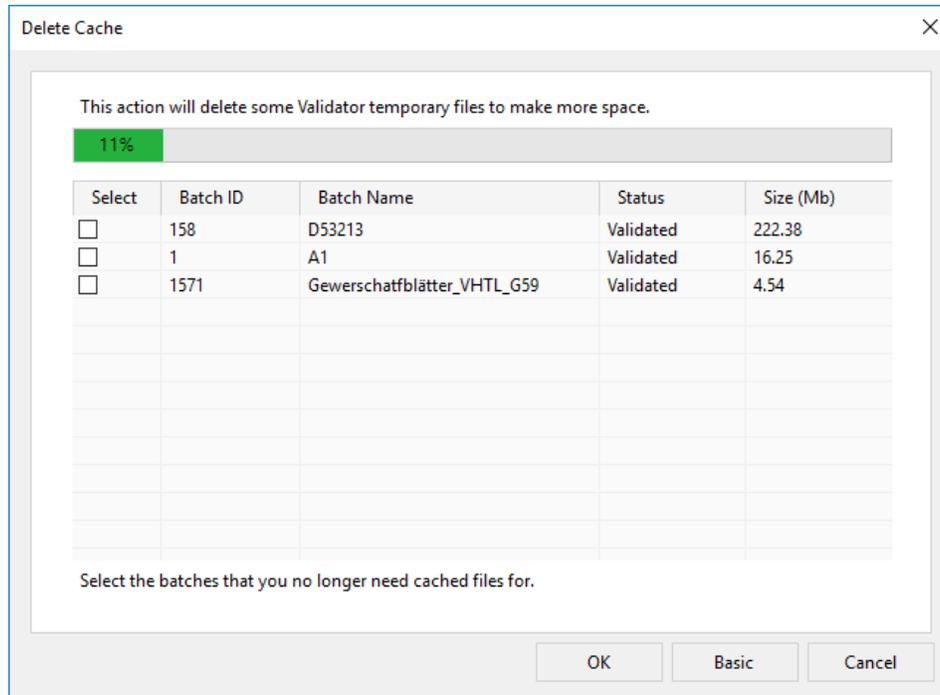


In the basic version of the dialog, an algorithm is applied to first determine if any files are deleted. To do this, it checks:

$$(100 - \text{Clear cache percentage}) < \text{current space used}$$

If this is not true, then no low-res images will be deleted. Otherwise, the oldest cached files are deleted – the files of an entire document at a time.

The advanced version of the dialog can be activated by clicking **Advanced** button. This will extend the dialog, showing a list of batches for which low-res images are available on disk.



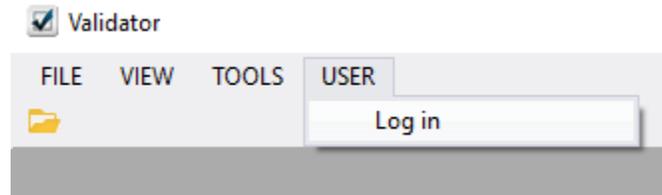
The batches also contain details like batch name, status and the size on disk of its low-res images. You can select the batches you no longer use and delete the low-res images for it.

## Users

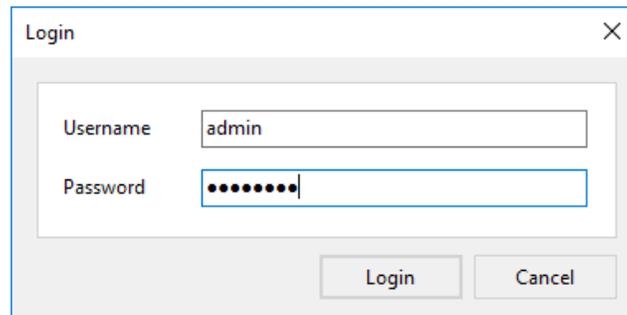
dWValidator requires credentials for performing ManualQA and setting the status of a batch. For ManualQA, the necessary right is “**User can perform manual QA**” and for the batch status, the right necessary is “**User can accept or reject batches**”.

### Log in / out

You can log in using **Log in** option from **USER** menu:

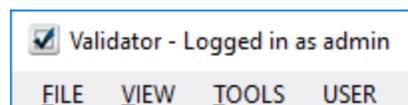


This will prompt you with a dialog for entering your credentials:

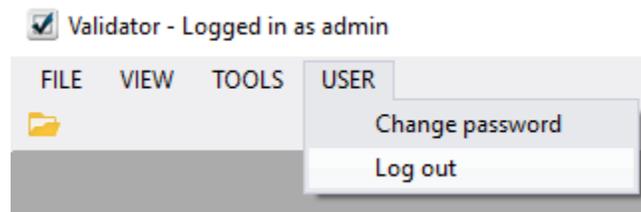


Error messages will appear if the user name you're trying to log in with doesn't exist or the provided password is incorrect.

Once you're successfully logged in, your username will appear in the application title bar.



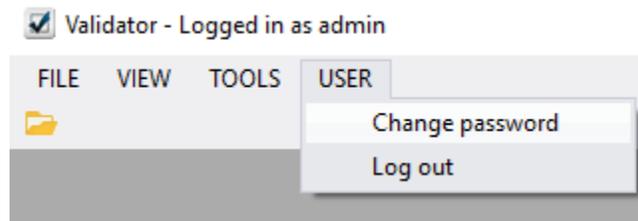
You can always log out from the application by selecting **Log out** option in **USER** menu:



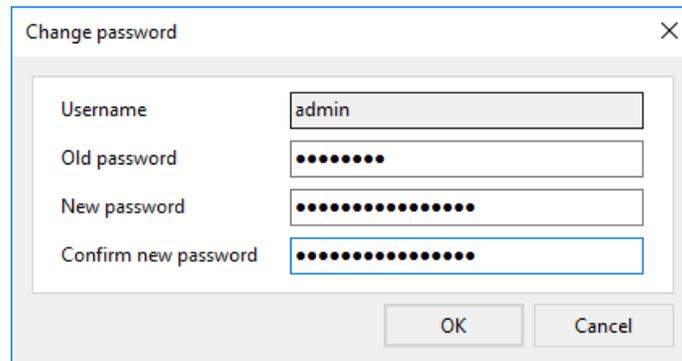
*In case you have a batch opened when logging out, the exploration will be closed.*

## Changing your password

You also have the option to change your password by selecting **Change password** from the same menu.



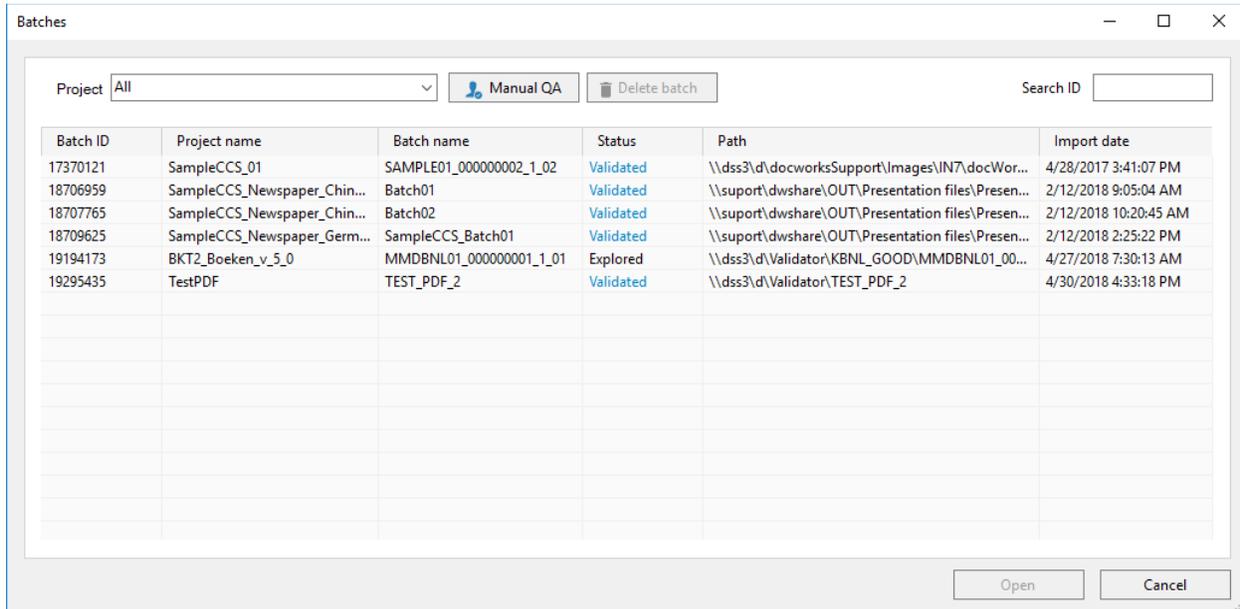
This action will open a dialog where the old password is required, the new password and a confirmation for the new password:

A screenshot of a "Change password" dialog box. The dialog has a title bar with "Change password" and a close button (X). Inside, there are four input fields: "Username" with the text "admin", "Old password" with 7 dots, "New password" with 12 dots, and "Confirm new password" with 12 dots. At the bottom right, there are "OK" and "Cancel" buttons.

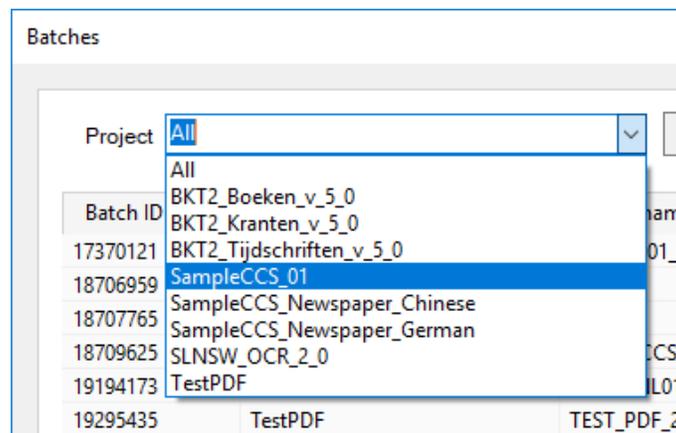
The only password restriction is that it must contain at least **5** characters.

## Open a batch

To view validation results of a batch, press **Open** button  from the toolbar or select **Open exploration** entry from the **File** menu. This will open the **Batches** dialog, from where you can choose the desired batch:

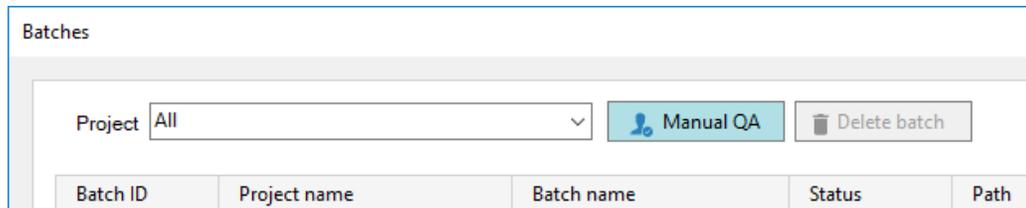


The dialog has a **Projects filter** that you can use to narrow down your search:

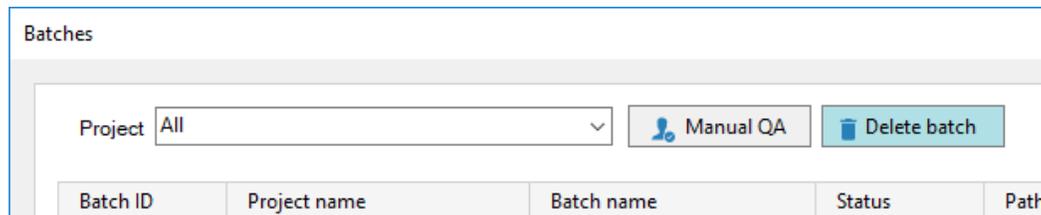


There is also a filter for **Manual QA**<sup>1</sup> (for more details, see [Open a batch for Manual QA Help](#)), that will display in the batches list only the batches that are marked for Manual QA (for more details, see [Define manual QA selection Help](#)).

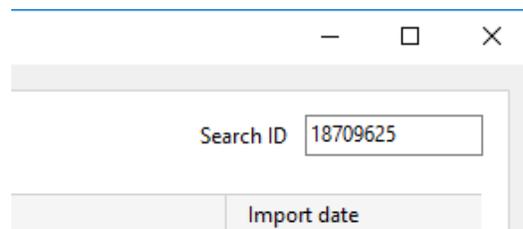
<sup>1</sup> The button is enabled only if you have the **Can perform manual QA** right



The next button is **Delete batch** (for more details, see [Deleting Batches Help](#)). If you have enough rights, you can use it to delete one or more batches you no longer need. To delete multiple batches at a time, selected them using Ctrl or Shift keys.



You can search for a certain batch by its ID, using the search box:



After typing a batch ID, press Enter key – the batch will be highlighted in the list. If the batch is not available, a message will be displayed.

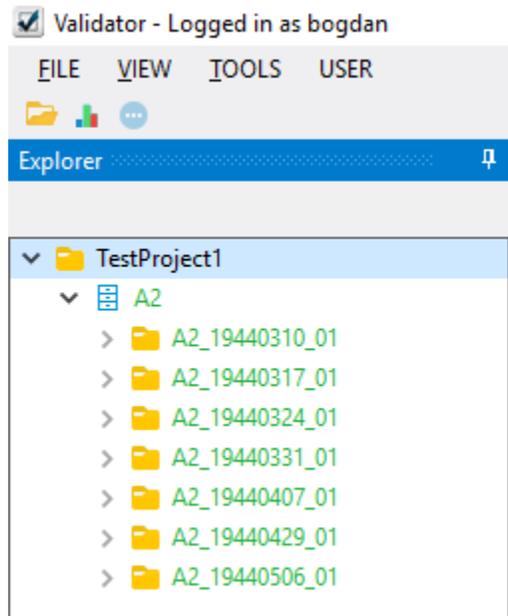
The batches list will display all the batches available for selected filters. For each batch, its details will be filled in the list's columns:

Batch ID	Project name	Batch name	Status	Path	Import date
17370121	SampleCCS_01	SAMPLE01_00000002_1_02	Validated	\\dss3\d\docworksSupport\Images\IN7\doc...	4/28/2017 3:41:07 PM

- **Batch ID** – is an ID automatically assigned to the batch when it is added to Database
- **Project name** – the name of the project that the batch belongs to
- **Batch name** – the name of the batch, given by the folder name that was imported
- **Status** – displays the current status of the batch
- **Path** – is the storage path of the batch
- **Import date** – the date when the batch was imported in Database

If you can't find the batch you're searching for, check in Control Center if all the validation tasks were performed correctly (if there are no failed tasks) – for more details, see [dWServices Help](#). Another possible cause is the project's availability – check Configuration Manager to see if the project is hidden (for more details, see [Handling projects Help](#)).

Once you find the desired batch, press **Open** button or double click it – this will populate the Explorer tree with the elements of the batch:

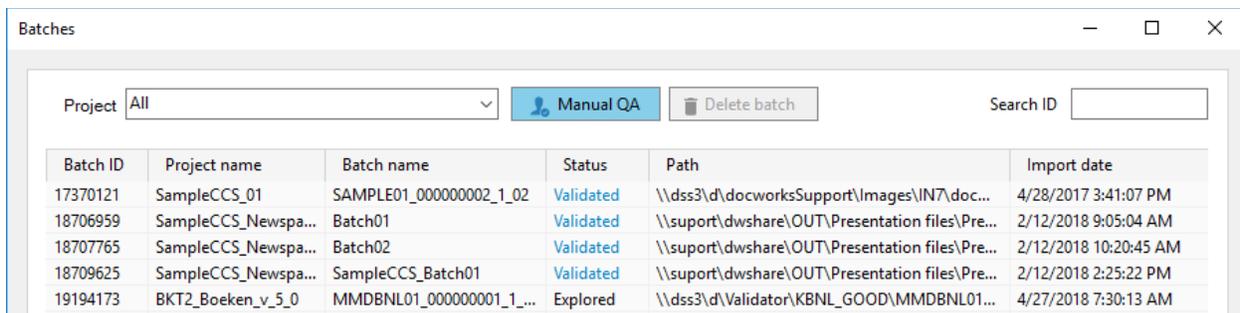


The font color of the nodes in tree are set based on the validation results. If everything is **green**, it means that all the files passed all the defined tests successfully. *For more details on the colors used, see [Automatic tests results Help](#).*

To close an exploration, select **Close Exploration** option from **FILE** menu.

## Open a batch for Manual QA

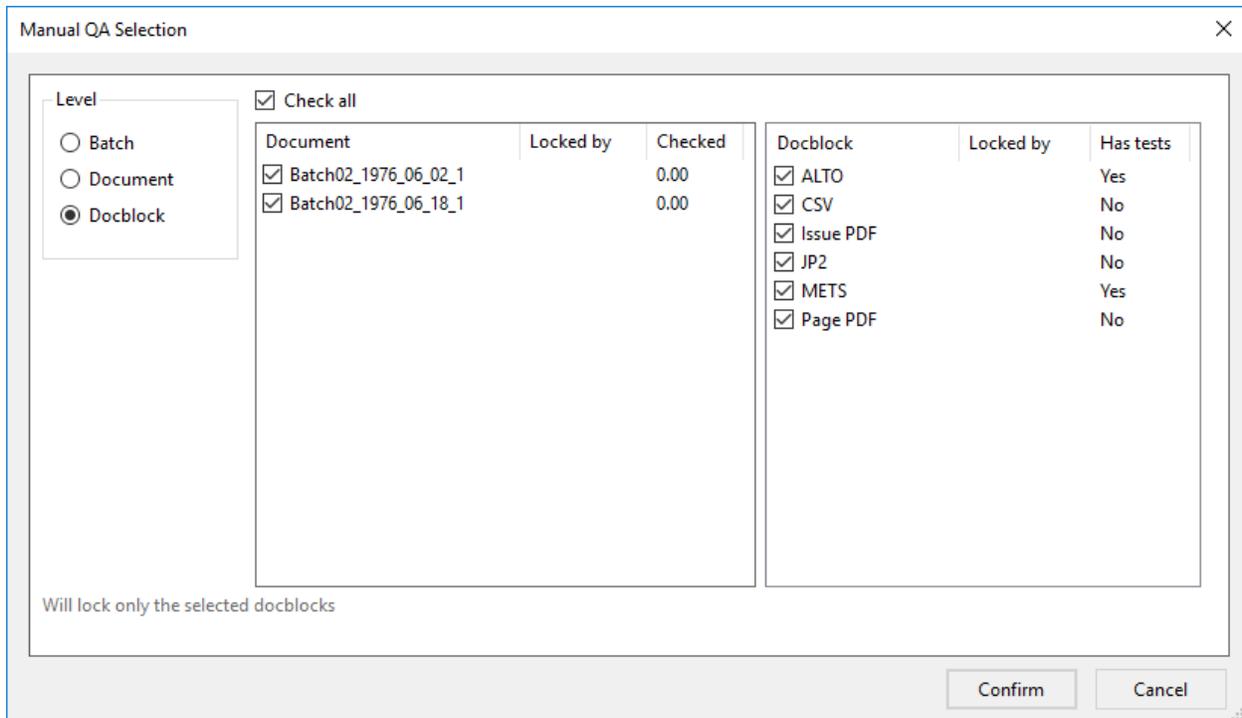
In the **Batches** dialog, click **Manual QA** filter to see the batches marked for manual QA:



If the button is not available for you (disabled), it means that you're either not logged in or you do not have the **Can perform manual QA** right enabled.

If you can't find the batch you're searching for, check the configuration for manual QA selection (see [Define manual QA selection Help](#)). It might be that you haven't enabled manual QA for your project or dWServices haven't finished processing (see [dWServices Help](#)).

Once you find the desired batch, press **Open** button or double click it. This will open a new dialog, an additional filter for the Manual QA process:

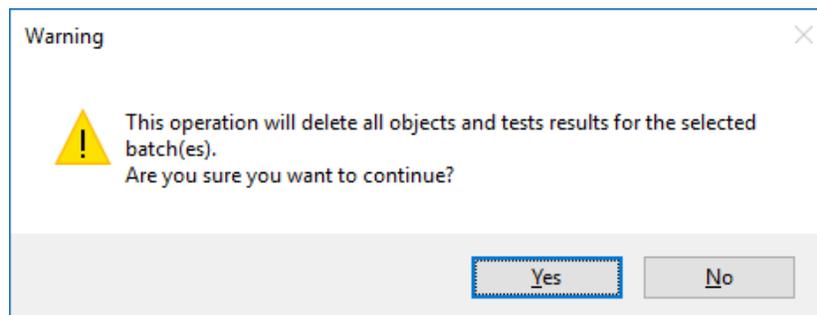


Set the filters to your needs (for more details, see [Performing manual QA Help](#)) and press **Confirm** button.

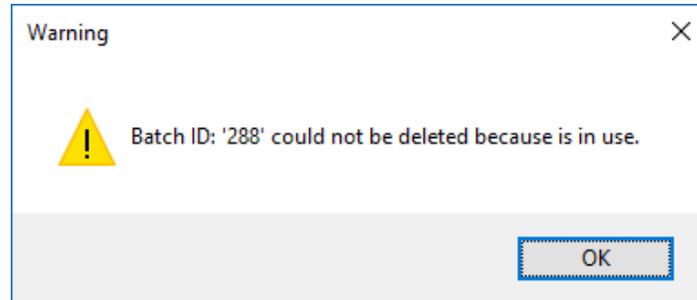
## Deleting batches

If **Delete batch** is not available for you (disabled), it means that you're either not logged in or you do not have the **Can import batches** right enabled.

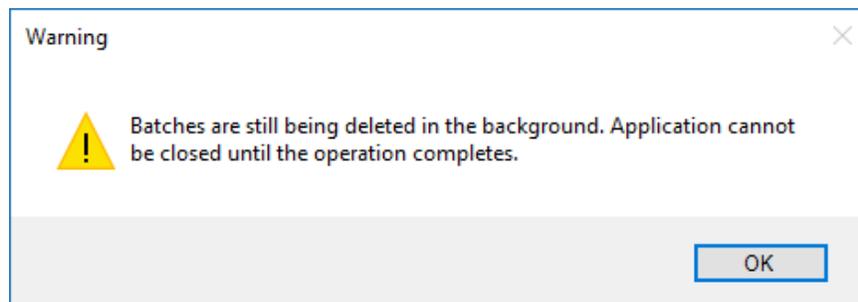
To delete a batch, select it from the list and press **Delete batch** button. A warning message is displayed, to announce you that all objects and test results related to this batch will be deleted too.



In case the batch (or one of the batches) you selected for deleting is opened by someone else on another machine, the delete operation will not be completed. A warning message will be displayed, letting you know that someone is using it.



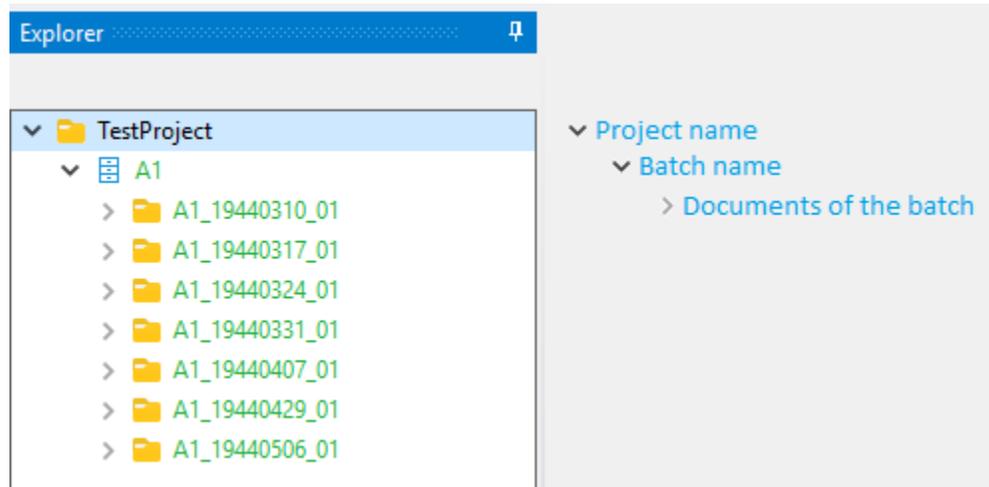
The delete operation is done in background, so you are free to use Validator while the selected batches are deleted. However, the application cannot be closed until the deletion is completed. Trying to close Validator will display this message:



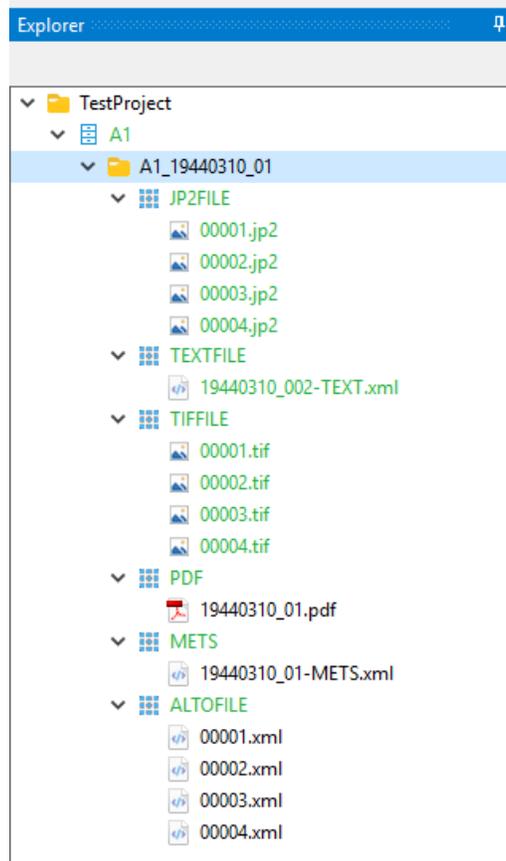
## Explorer

Explorer window is the most restricted window of dWValidator – it cannot be closed and can be docked on the left or the right side of the application.

It contains a tree-like structure of a batch, having as root node the Project name:



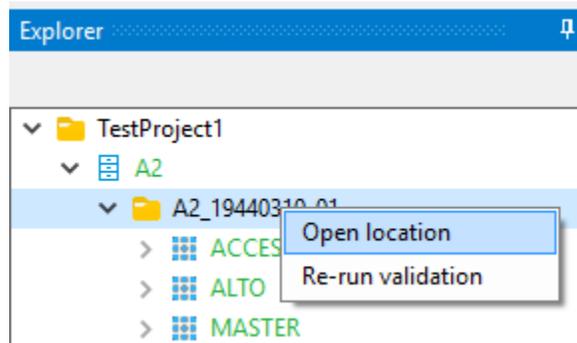
A document will have the structure as it was defined in Configuration Manager. *For more details, see [Define the exploration rules Help](#).*



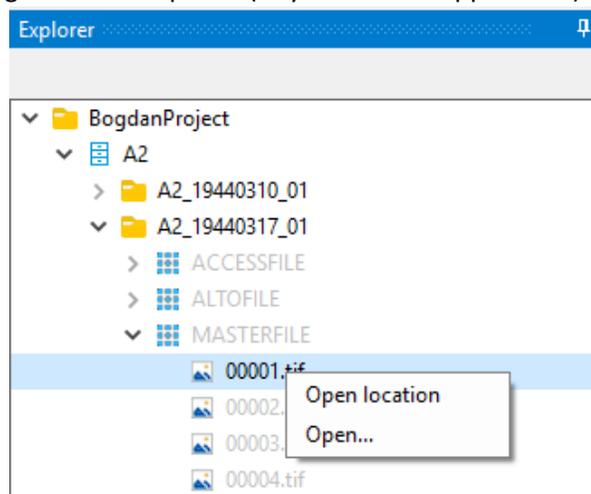
When selecting a node from Explorer, the right-hand side is updated, displaying all views of the node, in the default (or custom) layout. *For more details, see [Save the windows layout Help](#).*

Context menu actions are available for some of the tree elements:

- For batch and documents:
  - o **Open location** – that will open the selected node as a folder using Windows Explorer (or your default application)



- o **Re-run validation** – will generate the validation task for the selected document / batch that will be processed by dWServices. All the automatic tests will be run again and when the task is finished, the new results will be added. In case the option is disabled, either you don't have the **Can import batches** right, or Validator configuration is not correct (in this case, contact dWSupport).
- Files have **Open...** action in context menu, that will open the selected file using the external application you have set for that file type and **Open location** that will display the folder containing the file using Windows Explorer (or your default application)

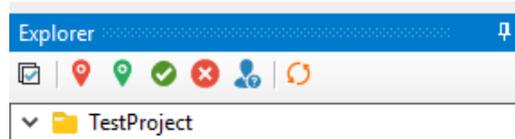


The nodes of the tree have different font colors, based on the results on the validation or manual QA process. *For more details, see [Automatic tests results Help](#) and [Manual tests results Help](#).*

Opening a batch in Manual QA mode (see [Open a batch Help](#)) will display additional buttons on top of Explorer tree, used to filter the nodes of the tree. *For more details, see [Explorer for Manual QA Help](#).*

## Explorer for Manual QA

When opening a batch in manual QA mode, the Explorer tree is populated with the elements you selected. On top of the Explorer, there are filter buttons available, so you can view exactly what you are interested in. By default, all filters are enabled.



**All**  – shows all the files and enables all the filters

**Not visited**  – displays only files that haven't been at least viewed (displayed) by the operator. This is also the default status for all files, when opening the batch for the first time.

**Visited**  – displays only the files that were viewed by an operator, but without modifying any test result. This status is automatically set when the operator selects another file.

**OK**  – displays the files that have at least one test with status “OK”, no matter the statuses of the other tests.

**Failed**  – displays all the files that have at least one test with status “Failed”, no matter the statuses of the other tests. This includes both “minor” and “major” types that are set for the tests (*for more details, see [Add manual QA tests Help](#)*).

**For review**  – displays all the files that have at least one test with status “For review”, no matter the statuses of the other tests.

**Refresh**  – refreshes the tree and re-applies the selected filters.

While navigating the files and changing the statuses of tests, the colors of the tree elements changes based on the “worst status” set for that file. The “severity rule” of the status is:

**Not visited < Visited < OK < For review < Minor test failed < Major test failed < Test crashed.**

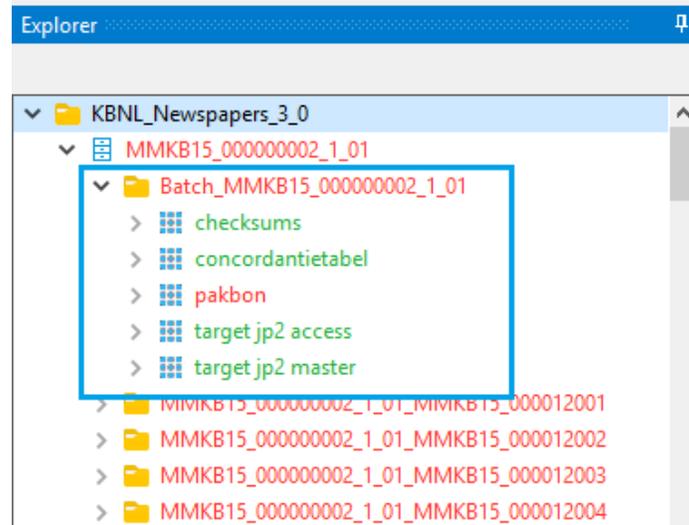
The colors for the tree elements are:

- Gray – for Not visited
- Light green – for visited
- Green – for OK
- Blue – for Review
- Orange – for Minor test failed
- Red – for Major test failed
- Magenta – for Test crashed

## Virtual document

In some cases, the provider will deliver additional files for the batches, alongside the documents. These files can be checksums, target files etc.

If the configuration for the project includes these files also (*for more details, see [Batch configuration Help](#)*), a separate document will be created, that will contain the extra files. The name of this “virtual” document will be “*Batch\_[name of the batch]*”.



The virtual document behaves the same as any document: it is split in docblocks that contain the files, has reports and statistics and all other features of a normal document (*for more details, see [Explorer Help](#)*).

## Performing manual QA

When you open a batch to perform manual QA (see [Open a batch for Manual QA Help](#)), you need to set your selection filters in the **Manual QA Selection** dialog.

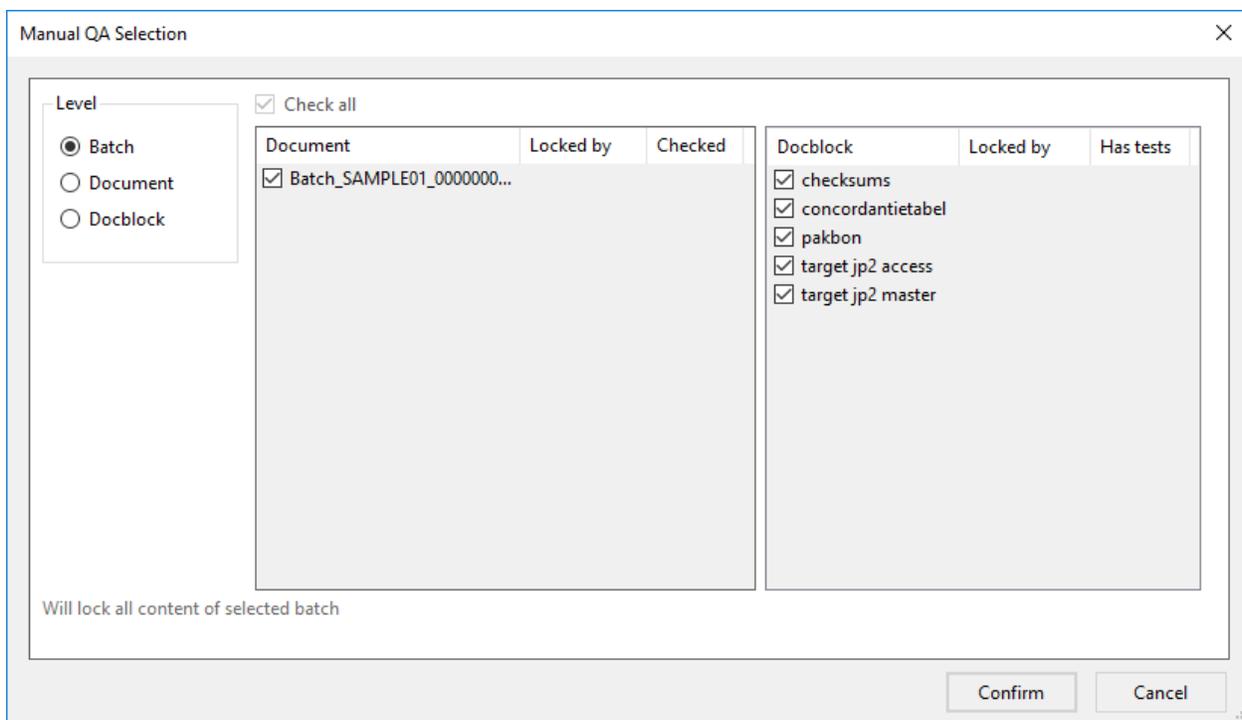
You first select the **Level** of the batch on which to do the manual tests. There are 3 levels available: Batch, Document, Docblock.

After you've made the selection, the tree will be filled with the elements. Some of the content you select however, might not be displayed, due to the manual QA selection configuration. For example, if you use a script to mark for manual QA only certain files of a docblock, only those files will be displayed, not the entire content of the docblock.

## Selection levels

### Batch

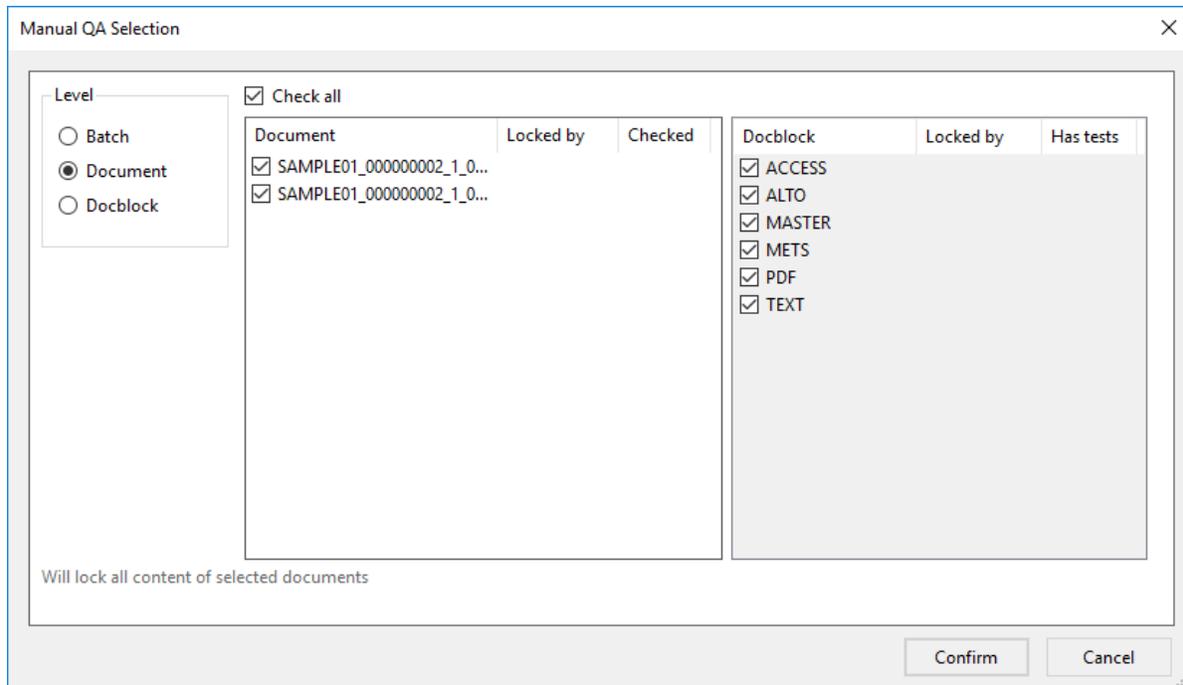
This will open all the content of the batch and will give you access only to the manual tests defined at batch level and virtual document. *For more details, see [Virtual document Help](#).*



### Document

This option will “lock” only the documents you select in the Documents list, together with all their contents. No other person will be able to open any of the selected documents at the same level, but they will have access to the documents you haven't select. The virtual document will not be available on this level – it is available only on batch level.

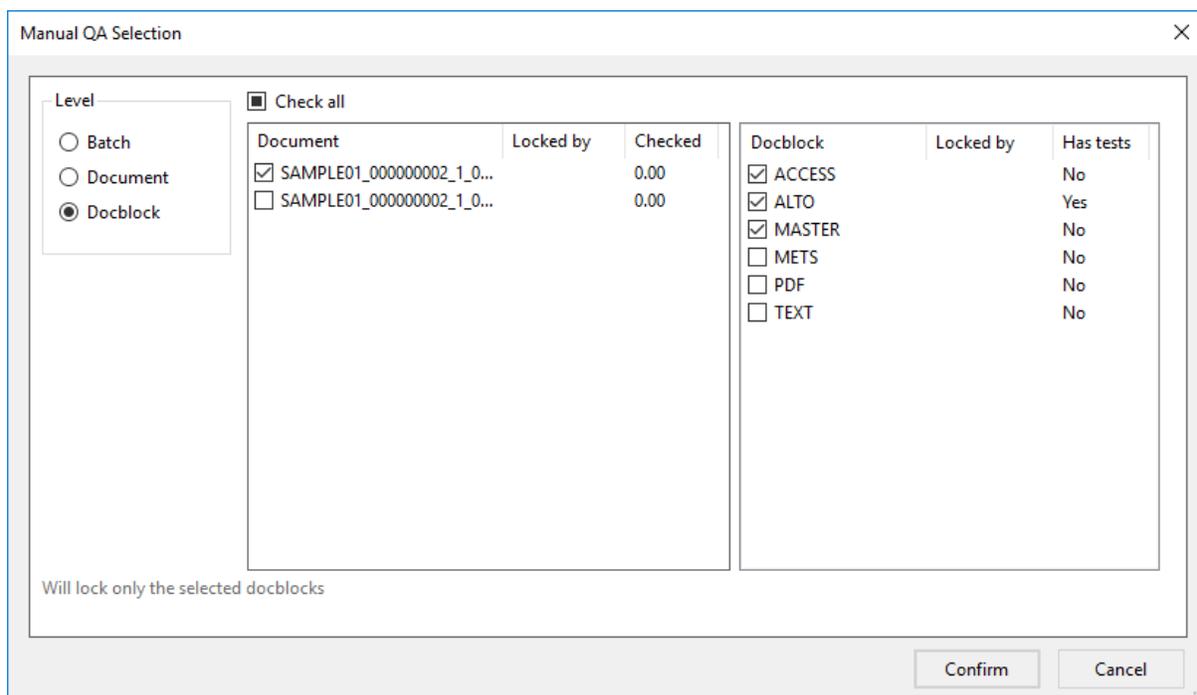
Selecting this level will give you access to manual tests defined at document level.



In the screenshot above, when pressing **Confirm**, the tree will contain only the two selected documents, with their entire content.

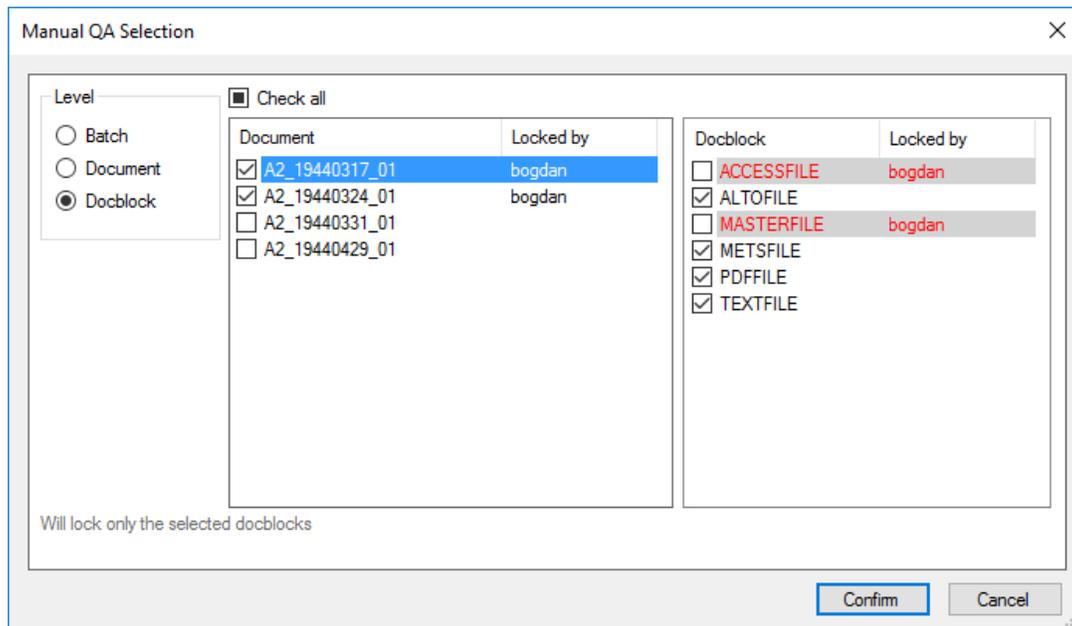
### Docblock

Selecting **Docblock** as level will give you the option to choose which docblocks of which documents you want to manually tests. The “lock” will be applied only to the selected docblocks of the selected documents, leaving the rest available for other users.



In the screenshot above, after pressing **Confirm**, the tree will contain only the selected document, having only the three selected docblocks available.

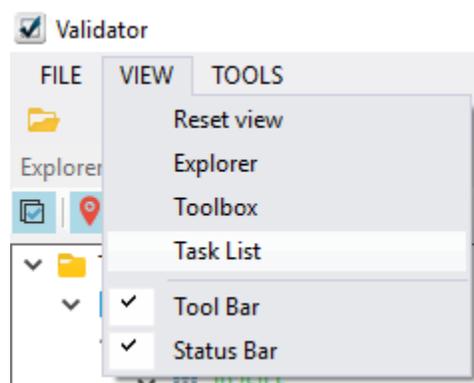
The name of the user will appear under **Locked by** column in case a document / docblock is already locked by someone else.



## Task list

Task list									
Test code	Test info	Severity	Status	Comment	Screenshot	Checked by	Checked at	Details	
CAB	Check ALTO blocks	ERROR	Visited			florin	10/10/2017 10:08:53 AM	Check if ALTO blocks overlap properly over image	
CAW	Check ALTO words	ERROR	Visited			florin	10/10/2017 10:08:54 AM	Check if ALTO words overlap properly over image	
CAT	Check ALTO text	ERROR	Visited		NLBD_Newspapers_1_0_18	florin	10/10/2017 10:08:53 AM	Check text quality into ALTO files	

The Task list is automatically opened in Manual QA mode, but can also be opened from **View** menu, by selecting **Task list**:



The list will open to the last saved position for that docblock, or on the top part of the application, if it's the first time you open it. The docking positions available are Top and Bottom, but the list can also be hidden or left floating.

Task list has four buttons on its toolbar:

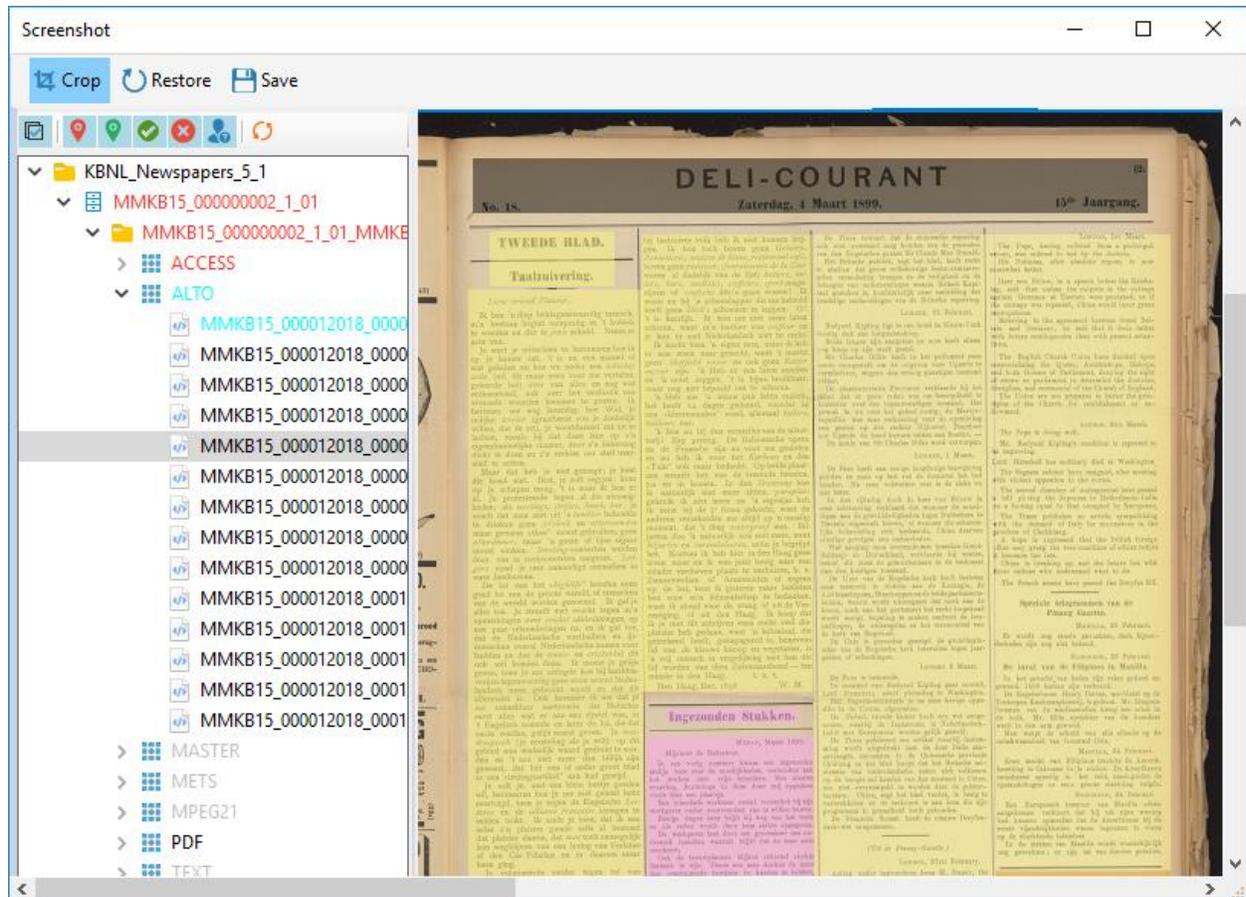
 **Status: OK** – Use this button to mark a test as passed

 **Status: Failed** – Used for marking tests as failed

 **Status: For Review** – This can be used as a status for tests that you are not sure whether they are passed or failed, and you need someone (a project manager) to have a second look over the file.

You (or the project manager) can later reopen the batch and use the Explorer filters to recheck the files with status **For Review**. *For more details, see [Explorer for Manual QA Help](#).*

 **Print screen** – creates a screenshot of the application and displays it into a new window, where you can crop and save it.



Use **Crop**  button to crop only the portion of the screenshot that you're interested in. If you're not satisfied with the cropping, you can restore the initial screenshot using **Restore**  button. Once you are done with the changes to the screenshot, press **Save**  to save the screenshot and close the window.

The relative path of the saved image will be added to the selected test from Task List.

Under the toolbar you will find the list of tests that were defined for the selected file in Configuration Manager (for more details, see [Add manual QA tests Help](#)).

Test code	Test info	Severity	Status	Comment	Screenshot	Checked by	Checked at	Details
CAT	Check ALTO text	ERROR	Ok			admin	10/10/2017 10:39:04 AM	Check text quality

The information available are:

- The three-letter code defined for the test
- The test information
- The severity of the test
- The current status of the test
  - o If is the first time displaying the file in ManualQA mode, the status will be empty
  - o If the file has been previously displayed, but no manual change of a test's status was done, the displayed status will be "visited"

- After the status is manually changed, the status selected by the operator will be displayed: either “OK”, “Failed” or “For review”.
- Screenshot relative path
- Which user checked the test and when.

Depending on the selection level you’ve made (*for more details, see [Selection levels Help](#)*), only some tests will be displayed in Task list.

For example, choosing **Batch** as the selection level will only give you access to the manual tests defined at batch level and virtual document. Even though you have access to all the files of the batch, the tests will not appear in the Task list.

### Manual QA history and screenshot options

You have the option to view the history of a test or of the file that you’re currently inspecting. You can use this history to view which user changed something and when.

Right clicking on a test from Tasks list will open a context menu:

Test code	Test info	Severity	Status	Comment	Screenshot	Checked by	Checked at	Details
CAT	Check ALTO test	ERROR	Ok			admin	10/10/2017 10:39:04 AM	Check test quality into ALTO files
CAB	Check ALTO blocks	ERROR	Failed		NLBD_Newspapers_1_0_18065015Te	scjp_ admin	10/10/2017 10:39:04 AM	Check if ALTO blocks overlap properly
CAW	Check ALTO words	ERROR	For review	Please double	NLBD_Newspapers_1_0_18065015Te	scjp_ admin	10/10/2017 10:39:04 AM	Check if ALTO words overlap properly

- Entry history – displays the history (all the changes made) of the selected test:

Name	Status	User	Date	Comment
Check OCR quality	Failed	CCS-ROMANIA\bogdan	5/31/2016 1:48:56 PM	OCR quality is 94.87
Check OCR quality	Ok	CCS-ROMANIA\bogdan	5/31/2016 1:47:44 PM	
Check OCR quality	Visited	CCS-ROMANIA\bogdan	5/27/2016 11:27:04 AM	

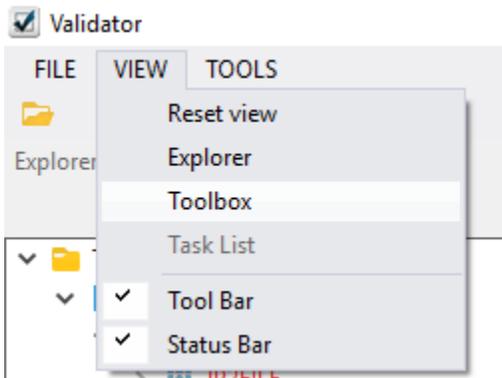
- Object history – displays the history of the current file (the history of each test):

Name	Status	User	Date	Comment
Check OCR quality	Failed	CCS-ROMANIA\bogdan	5/31/2016 1:48:56 PM	OCR quality is 94.87
Check for overlapping zones	For review	CCS-ROMANIA\bogdan	5/31/2016 1:47:52 PM	
Check OCR quality	Ok	CCS-ROMANIA\bogdan	5/31/2016 1:47:44 PM	
Check for overlapping zones	Failed	CCS-ROMANIA\bogdan	5/31/2016 1:47:44 PM	
Check OCR quality	Visited	CCS-ROMANIA\bogdan	5/27/2016 11:27:04 AM	
Check for overlapping zones	Visited	CCS-ROMANIA\bogdan	5/27/2016 11:27:04 AM	

- Open screenshot – will open the screenshot attached to the selected test with the default application for viewing pictures
- Open folder – opens the folder where screenshots are stored
- Remove screenshot – removed the screenshot from the selected test and deletes the screenshot file.

# Toolbox

The Toolbox is a tool window that can be opened from **View** menu:



# Tools available for images

The buttons available on the Toolbox will appear when the selected view is an image:

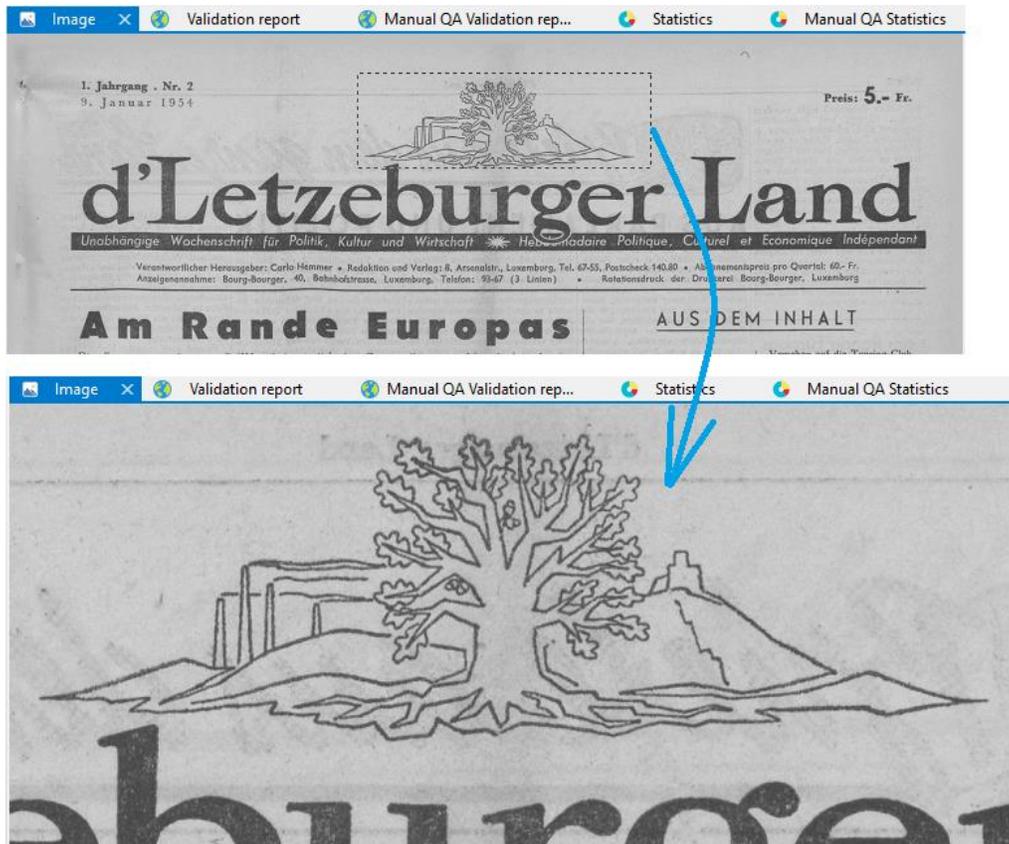


## Zoom actions

**Lock zoom** - will disable **Zoom in**, **Zoom out**, **Fit to screen** and **Original size** buttons and will keep the same zoom level existing on the current image onto other images.

**Zoom in** - zooms in on the selected image

To zoom in on a specific portion of the image, you can create a “zoom rectangle” using right-click mouse button. To do this, right-click and hold, and move the mouse cursor – a rectangle will be displayed over the image, highlighting the area that will be zoomed.

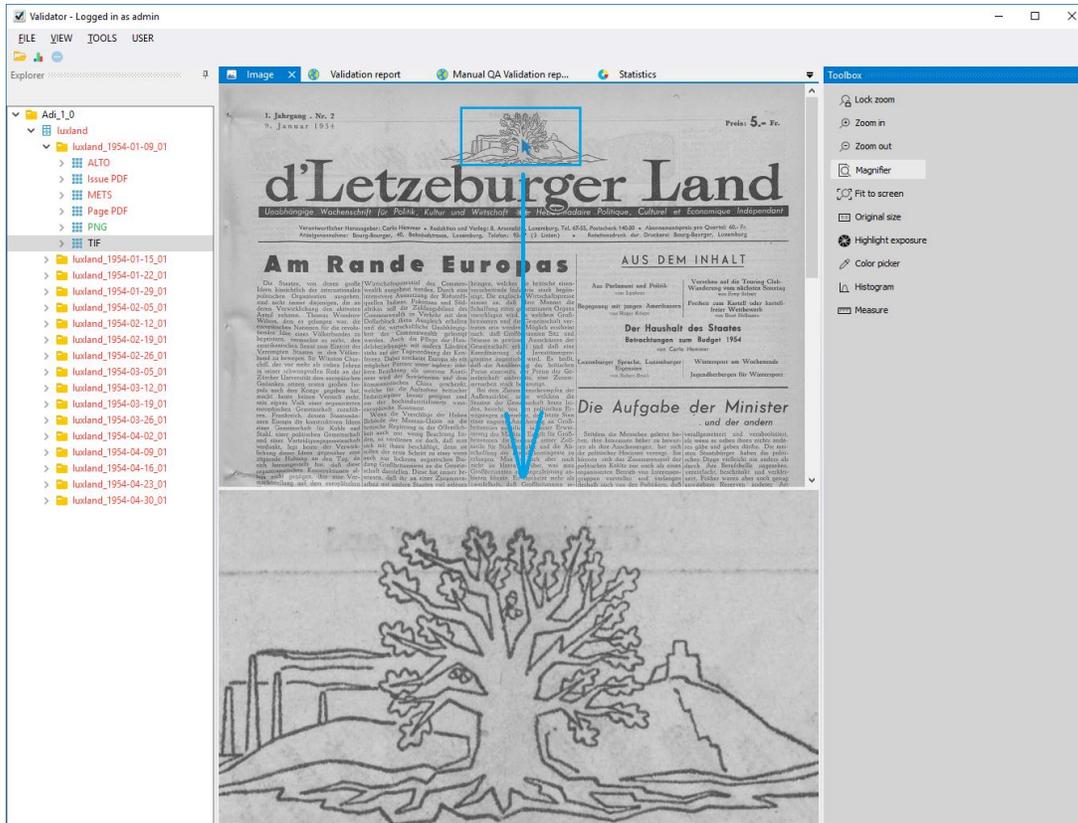


When the image is zoomed in, the image can be moved using the scroll bars or by holding down the CTRL key and using click-and-drag with the mouse.

When holding down CTRL key, the mouse cursor will change into a hand  to let you know that you can move the image. When you click the mouse, the cursor will change into a closed hand , meaning you can start moving the image.

 **Zoom out** - zooms out of the selected image (scroll wheel down)

 **Magnifier** – opens a new panel under the image view where the portion of the image that is currently hovered with the mouse is displayed at its original size.

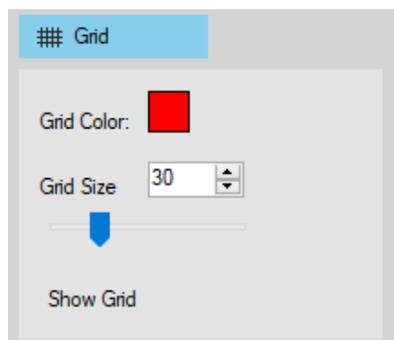


**Fit to screen** – will set the necessary zoom level on the selected image, so that it will fit in the image view, no matter the dimensions of it

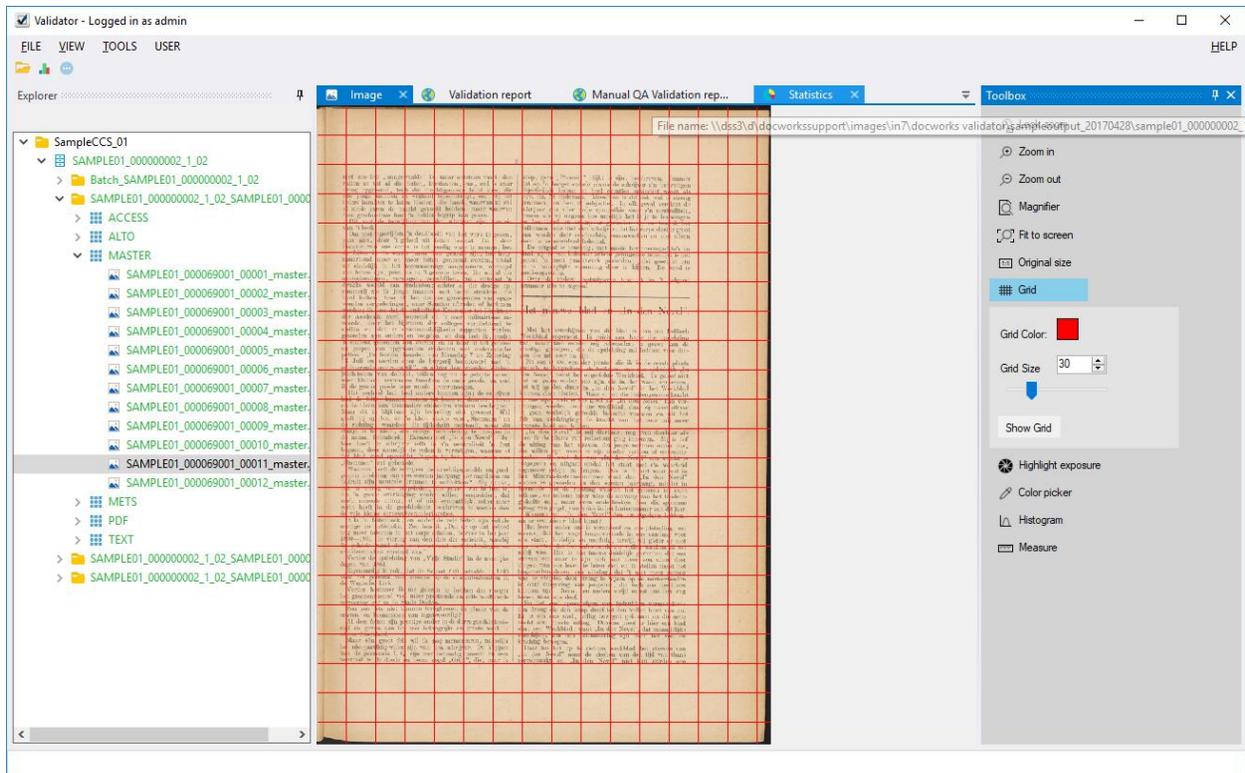
**Original size** – will zoom in on the image to the level where the image will be displayed at the original size

*Grid*

Pressing the button will open a panel under the button in Toolbox.

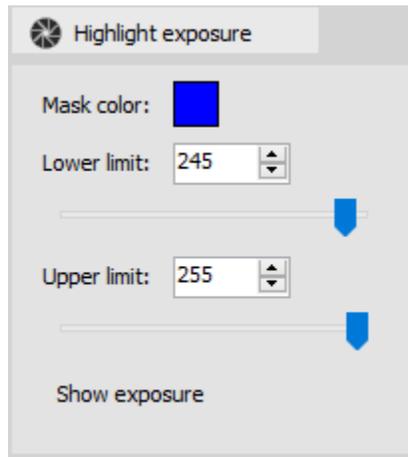


In the panel, you can select the color and size of the grid. Pressing **Show grid** button will display a grid over the image, having the distance between the lines as selected in the Grid size box. The grid size is not affected by the zoom level of the image.

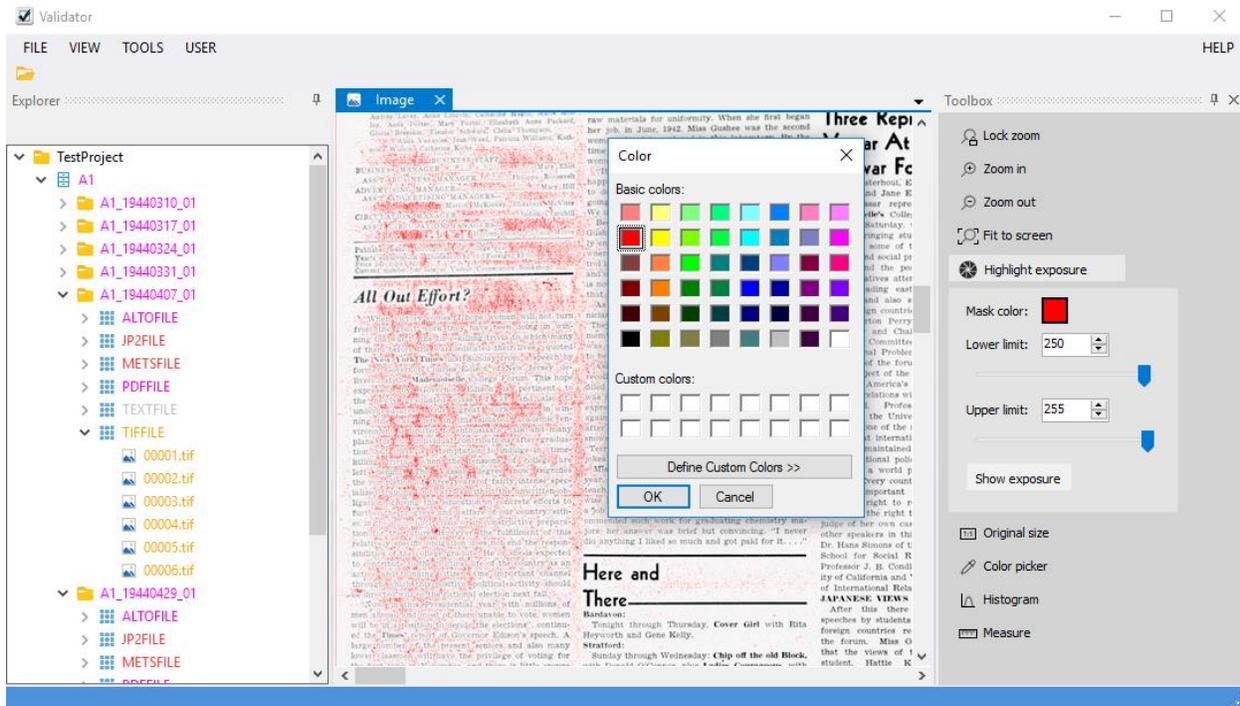


### Highlight exposure

It opens a panel under the button in Toolbox.



The panel contains a button to select the mask color, that opens a color dialog to select the desired color.



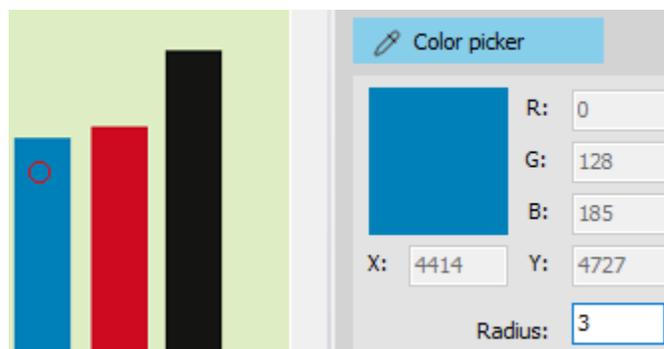
Two sliders are available to set the “exposure range” – two gray colors, a lower limit and an upper limit. After setting these limits, use “Show exposure” button to highlight the pixels of the image that have the RGB in that range.

For example: setting the lower limit to 245 and the upper limit to 255 will highlight all pixels that have the RGB value between (245, 245, 245) and (255, 255, 255) – very light colors.

The same can be used to highlight dark zones – just set the limits very low (for example: lower limit: 0 and upper limit: 10).

### Color picker

It opens a dialog under the button inside the Toolbox and changes the mouse cursor into a cross. Click anywhere on the image and a red circle will appear. The contents of the dialog will be filled with a color sample, the RGB code of the color and the XY position of the point inside the image.

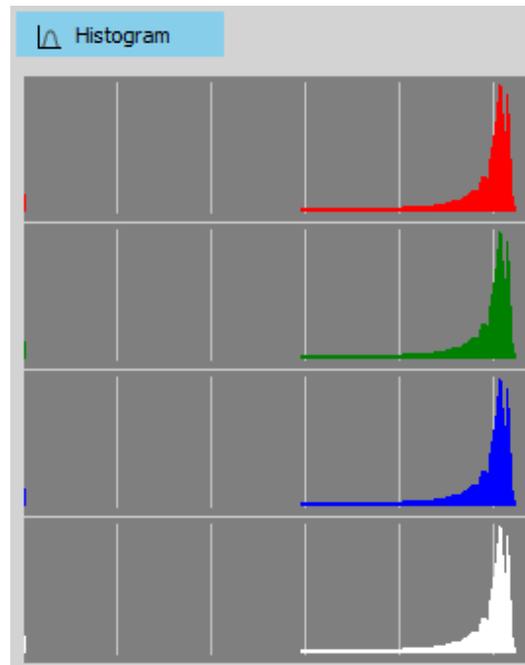


You can select a radius for the color picker, which will calculate the average color around the clicked point by the selected radius.

To close **Color picker**, click again on its button or right click anywhere on the image.

### *Histogram*

It opens a panel with four boxes. Each of the boxes contains a different histogram: first one is for Red color, second one for Green color, third one is for Blue color and the last one is for Color brightness.



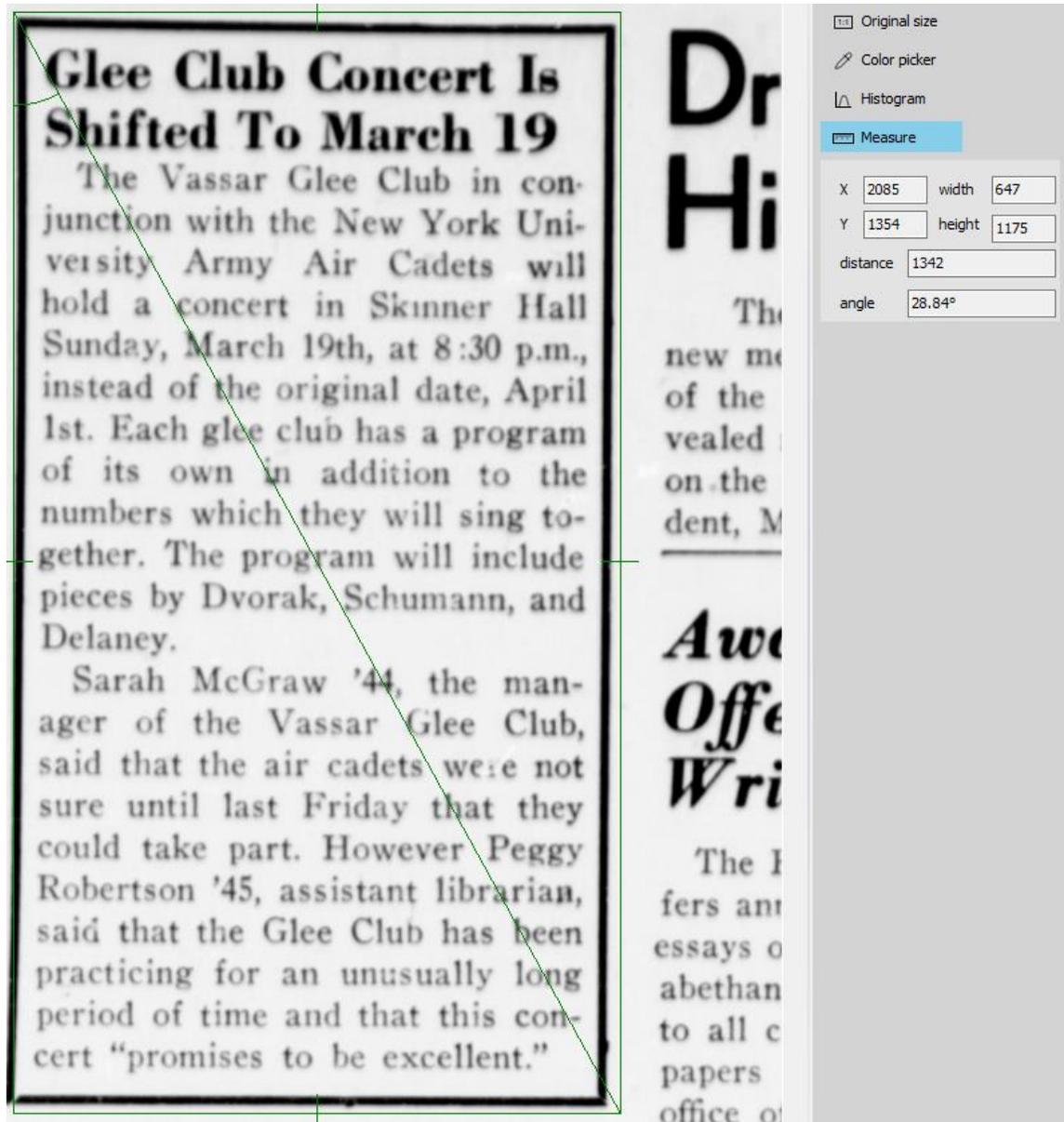
For the Color brightness histogram, the formula used is:

$$((\text{Red value} \times 299) + (\text{Green value} \times 587) + (\text{Blue value} \times 114)) / 1000$$

The histogram is automatically closed when selecting a different image from tree. The reason is that calculating the histogram might take a long time, especially on large images.

### *Measure*

It opens a dialog under the button in Toolbox and changes the mouse cursor to a cross. When first opened, a green rectangle will be anchored to the top left corner of the image; this rectangle automatically changes its shape and size when moving the mouse, to follow the cursor.

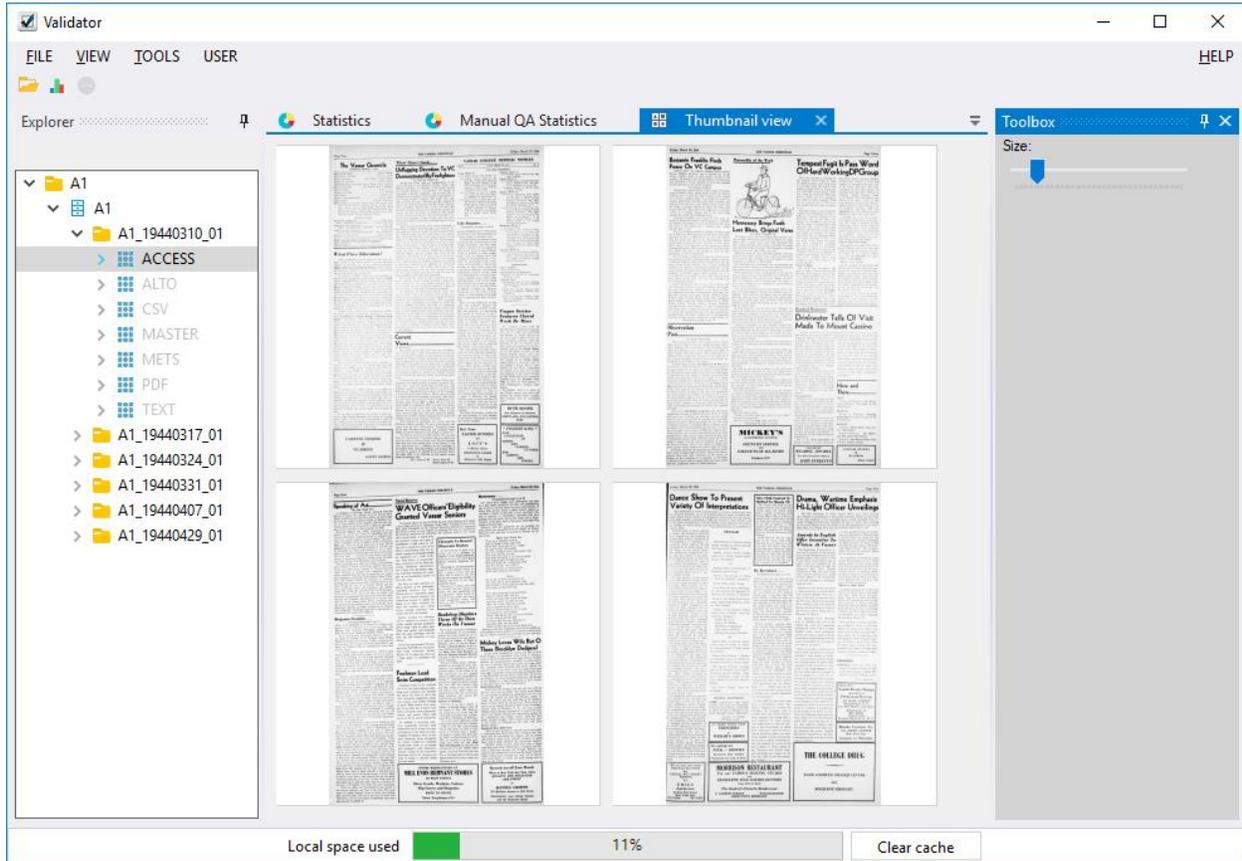


The values from the dialog are automatically updated whenever the mouse is moved. They display:

- The current XY position of the mouse
- The width and height of the rectangle
- The distance between the point where click was made and current mouse position
- The angle difference between the two points.

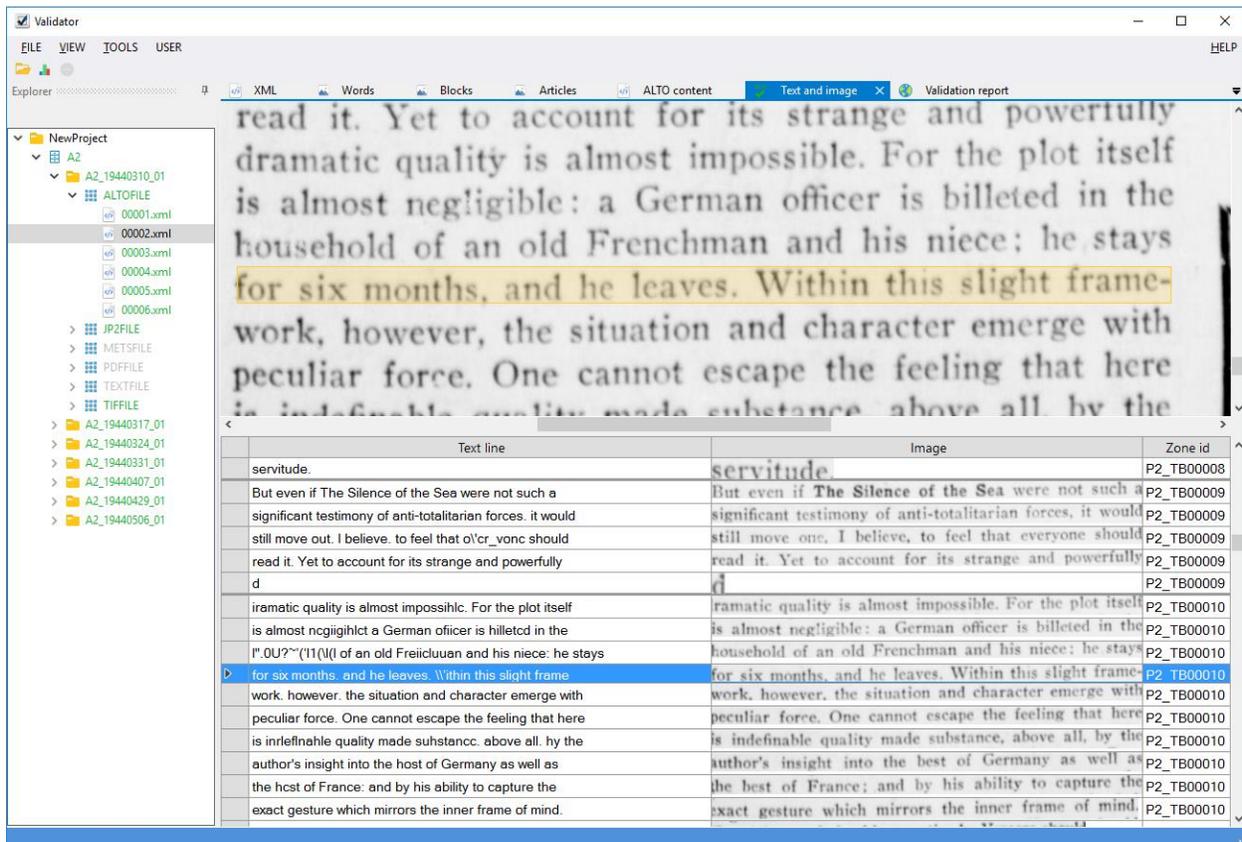
To close **Measurement tool**, click again on its button or right click anywhere on the image.

## Tools available for Thumbnail view

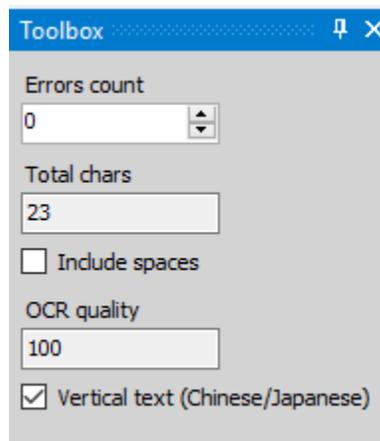


For Thumbnail view, in Toolbox you have available a slider that you can use to control the size of a thumbnail. Depending on the level of details you're interested in, you can increase or decrease the size of the thumbnail.

## Tools available for ALTO – Text and Image view



When the selected view is **Text and image view** for an ALTO file, the Toolbox content is changed, displaying controls helpful for OCR quality check:

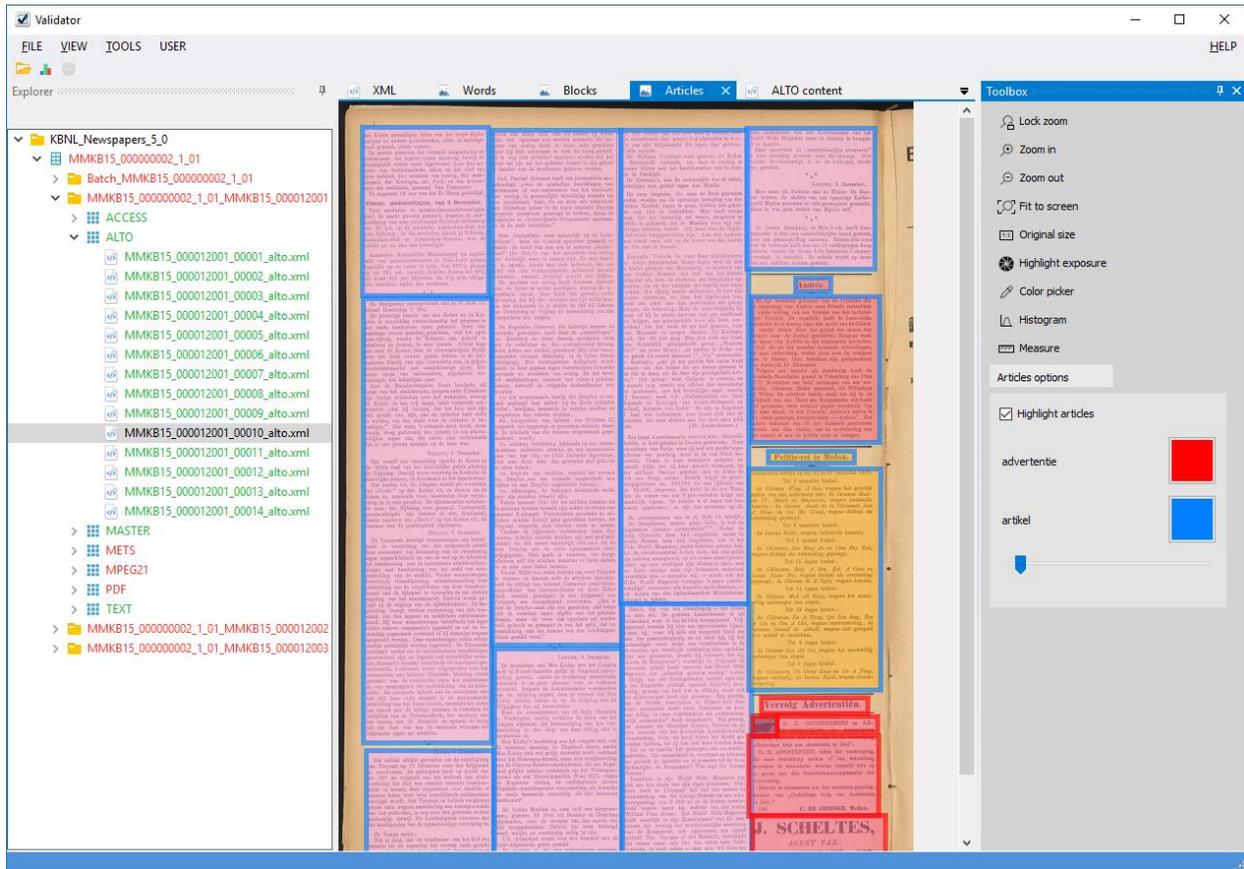


While checking the correctness of the text, you can count the errors found by modifying **Errors count** control. In **Total chars** control are displayed all the characters of the current image. You have the option to include the spaces as characters or not. Based on the number of errors found, the **OCR quality** is automatically calculated, using this formula:

$$(1 - \text{Errors count} / \text{Total chars}) * 100$$



## Tools available for ALTO – Articles view



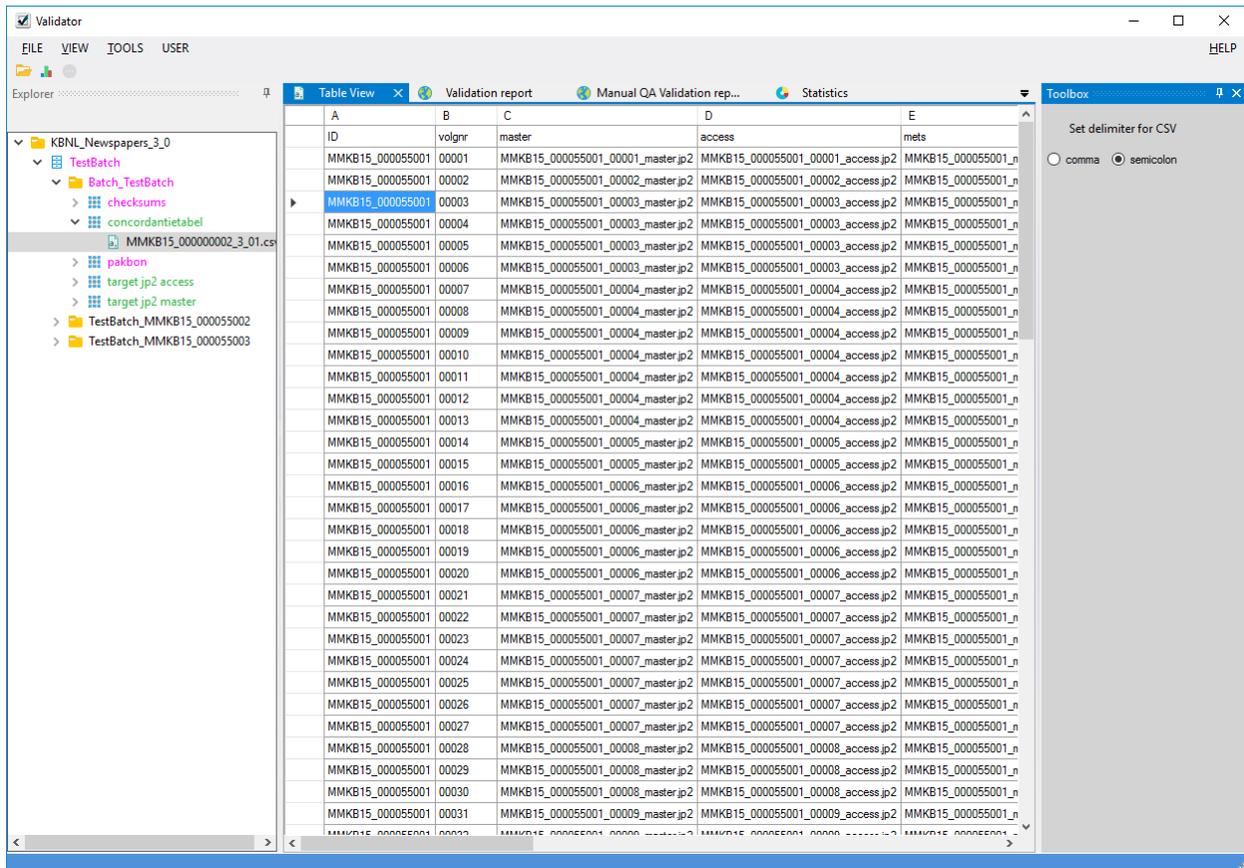
When checking **Articles view**, a new group appears on the Toolbox: **Articles options**.



The article categories are automatically detected and, for each category found on the displayed page, a button for color selection is displayed. There is also a slider available to control the thickness of the outlining of a zone.

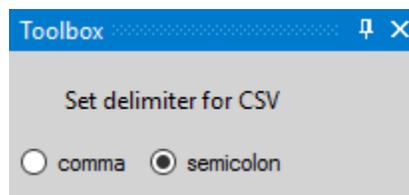
All the options you select (article category color, outline thickness) are saved so you don't have to change them all the time.

## Tools available for CSV files



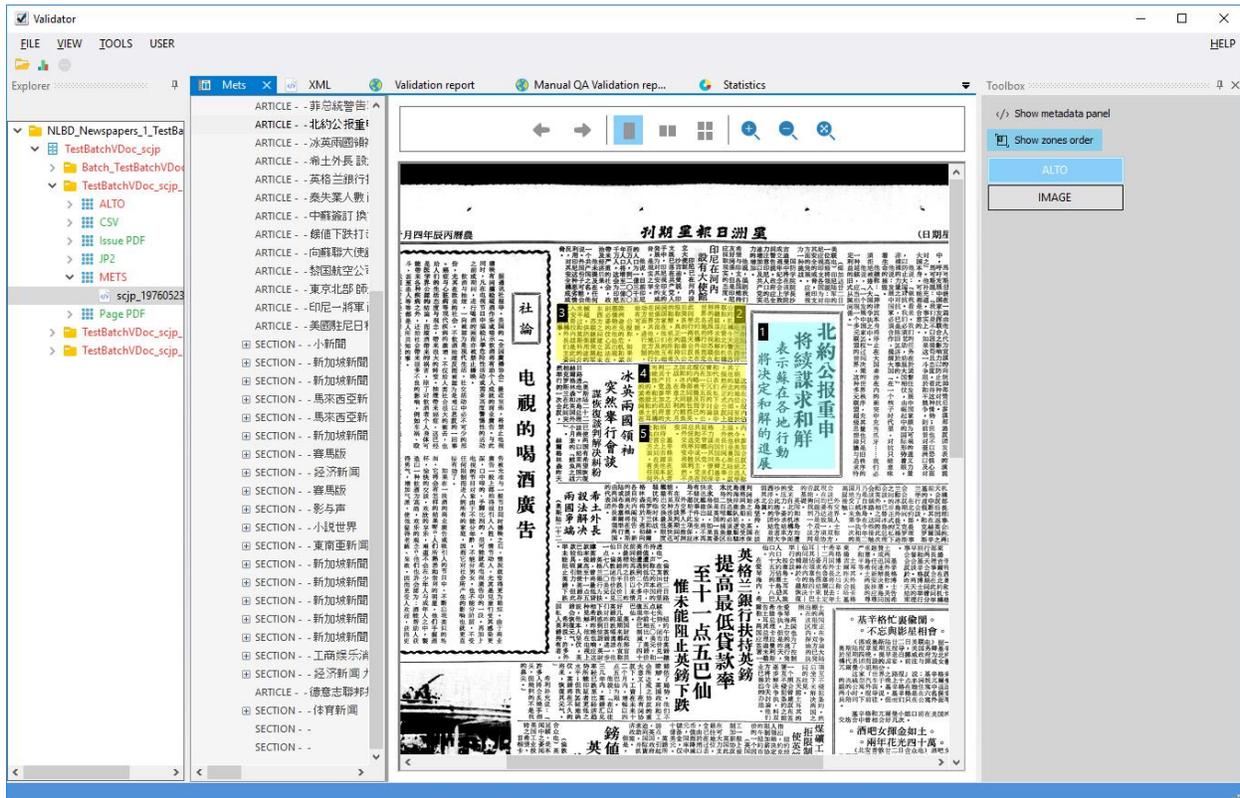
A .csv file (comma separated values) uses, as the name suggests, a comma to separate the values inside it. But since there is no standard for csv files, any separator can be used.

Right now, in dWValidator we have two separators that can be set to display the file as a table: the comma “,” and the semicolon “;”.

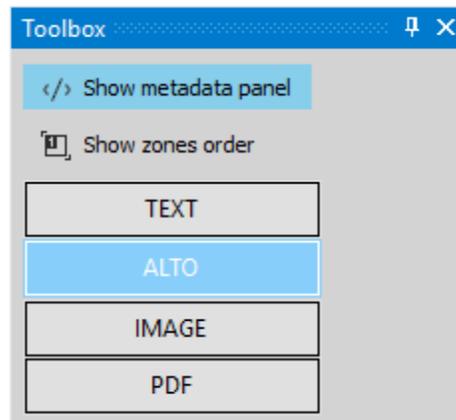


In case the file is not displayed correct (only one column is shown) or a warning message appears, you need to change the delimiter that is used.

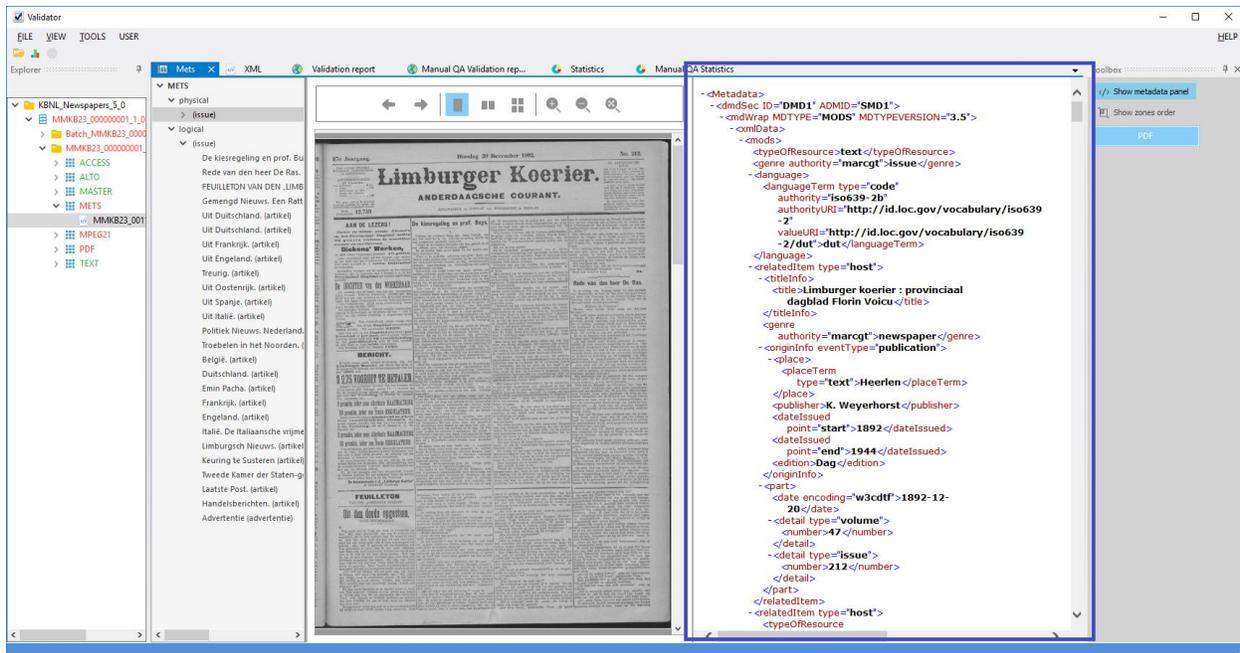
## Tools available for METS



The METS viewer has its own set of actions on Toolbox.



**Show metadata panel** will bring up a new panel inside the Mets viewer, where a node's linked metadata is displayed.



When displaying articles as ALTO, you can see the zones order inside the article by enabling **Show zones order** button.



Depending on the representations available for each METS node, one or more buttons are available to select how to display the node.

The representations available are:

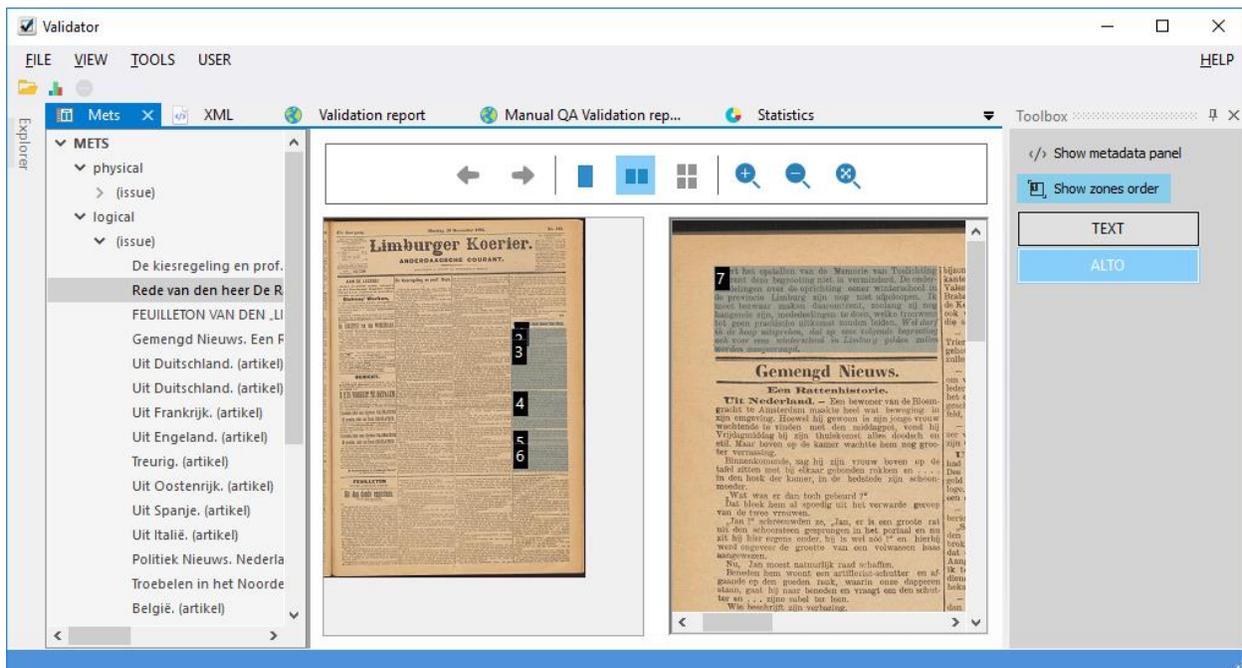
- ALTO – shows the zones of the node displayed over the image
- IMAGE – shows the image linked to the node
- TEXT – shows the text file linked to the node
- PDF – shows the PDF file linked to the node

Another toolbar is available for METS files and is displayed inside the central panel.

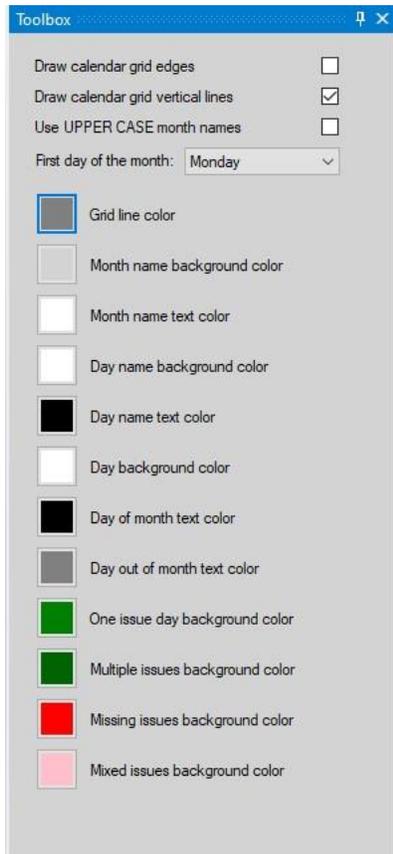


The buttons on this toolbar can be used to navigate through the files of a representation, display multiple files at the same time, or perform zoom actions on the images.

When viewing more than one file for a Mets node (for example, an article spread on two pages), the zoom actions are applied to the selected panel. This is highlighted with a thicker border of the panel.



## Tools available for Calendar



You can choose whether or not to draw the lines that delimit the days of the month (vertical lines) and the edges of the calendar.

You can customize the color of the lines that delimit the days of the month.

You can customize the background and text colors for the part where the month and year names are displayed. There is also the option to display them in the UPPER CASE.

The first day of the week can be changed and the calendar will be updated according to the selection.

You can customize the background and text colors for the part where the name of week days is displayed.

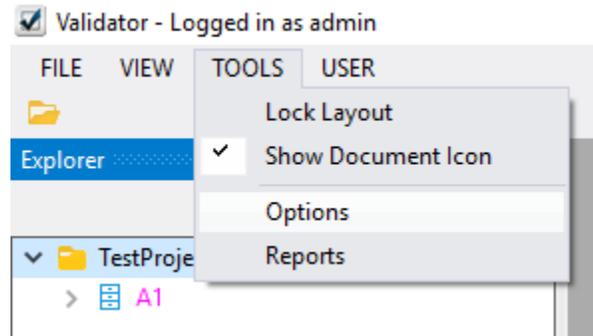
You can customize the background color for the days of the month.

You can choose different colors for the days of the displayed month and those outside the month.

You can choose the background color for days that contain one issue, multiple issues, missing issues and mixed issues (missing and multiple issues)

## Options

In **TOOLS** menu there is the **Options** entry that opens the dWValidator Options window.

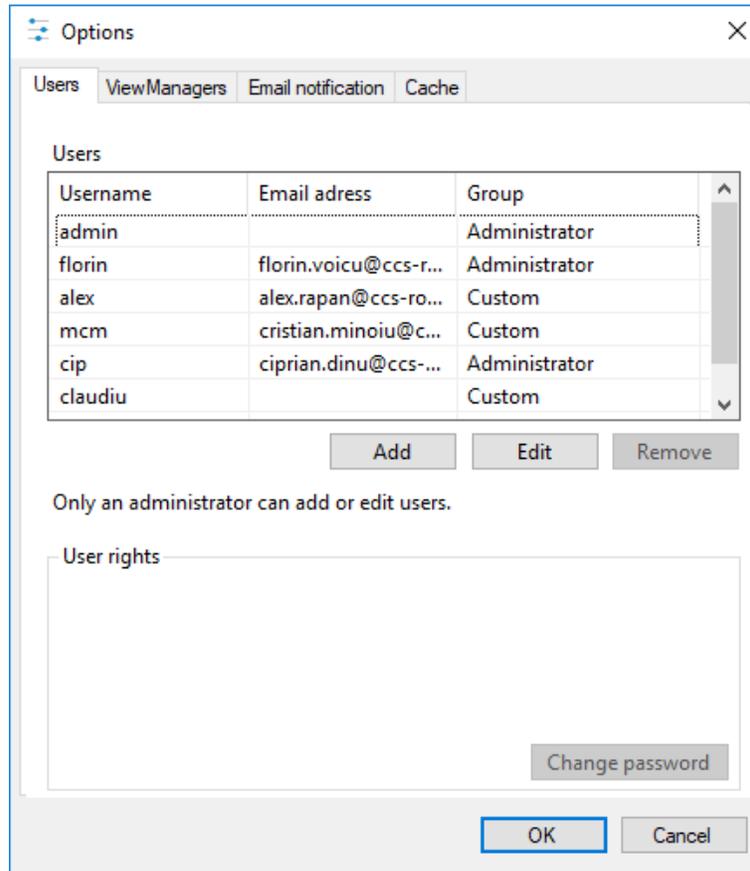


The options window has three tabs:

- User – *for more details, see [User settings Help](#).*
- View managers – *for more details, see [View manager settings Help](#).*
- Email notification – *for more details, see [Email notification Help](#).*
- Cache settings – *for more details, see [Cache settings Help](#).*

Only **View managers** settings can be changed even if you are not logged in. For **Users** and **Email notification** you need special rights to change them. *For more details, see [User rights Help](#).*

## User settings



The Users settings tab contains a list with all the users of the application and their access level (group). In the bottom part the rights of the selected user are displayed. If you do not have an administrator account, you will see the **Add**, **Edit**, **Remove** and **Change password** buttons disabled.

### *Add / Edit users*

As administrator, you can add, edit and remove users. To add a new user, use **Add** button that will open a new window where you can fill the necessary information of the new user.

**Add user**

Username: bogdan

Password: ●●●●●●●●

Confirm password: ●●●●●●●●

Email adress: bogdan.cornescu@ccs-romania.ro

What level access do you want to grant to this user?

Standard user (Standard group)  
The standard user can do manual QA.

Administrator (Administrators group)  
The administrator can do anything.

Custom  
Please select the desired rights

- Can perform manual QA
- Can receive mail notifications
- Can change settings in project configuration
- Can import batches
- Can accept or reject batches
- Can add new users or edit existing ones

OK Cancel

In the top part of the window, you need to fill the username, the password, the password confirmation and an email address<sup>2</sup>. In case there is a mismatch between the passwords, you will not be able to save the new user.

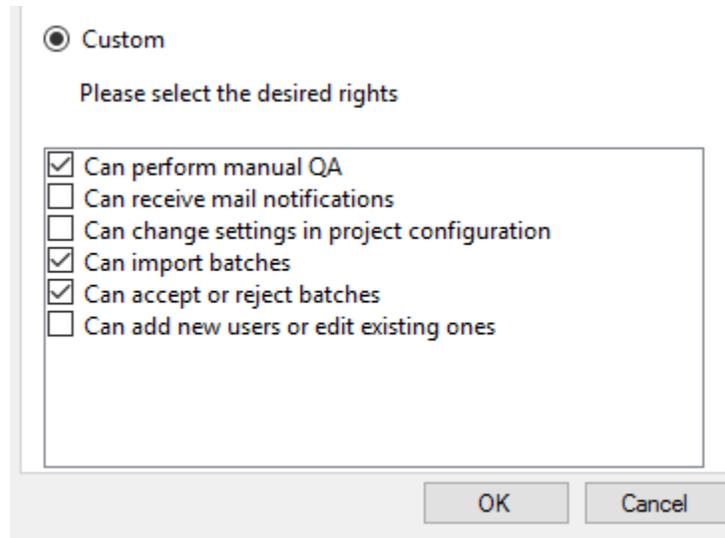
In the middle part you can select the user group:

- **Standard** – the standard user can only perform Manual QA
- **Administrator** – the administrator user has all the rights available, including the right to alter or add users.

The bottom part becomes active if **Custom** group is selected. Here you can select only the desired rights for the new user or add / remove rights for existing users.

---

<sup>2</sup> The email address is required only if the user has **Can receive mail notification** right enabled.



Custom

Please select the desired rights

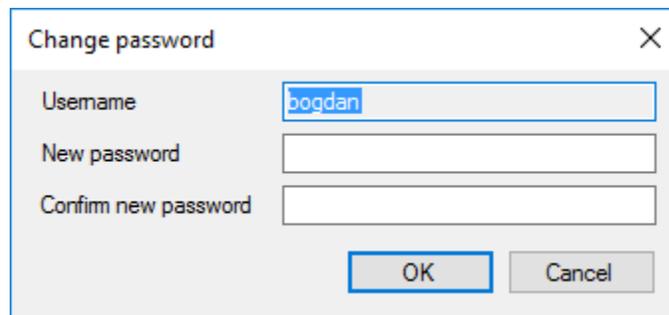
- Can perform manual QA
- Can receive mail notifications
- Can change settings in project configuration
- Can import batches
- Can accept or reject batches
- Can add new users or edit existing ones

OK Cancel

The users must have at least one right selected, otherwise you will not be allowed to save the changes for that user.

### *Changing the password for a user*

The users have the possibility to change their own passwords once they are logged in (*for more details, see [Changing your password Help](#)*). But in case a user forgets his password, as administrator, you can reset the password for that user. Select the user from the Users list and press **Change password**. This will open a dialog where you can add a new password for the user:



Change password X

Username

New password

Confirm new password

OK Cancel

## User rights

When a new user is created, he / she can have different levels of access across the applications. The user rights available are:

- **Can perform manual QA**
  - o Allows user to open a batch in manual QA mode (dWValidator)
  - o User can generate reports (dWValidator)
- **Can receive mail notification**
  - o If this right is checked, the user will require an email address to receive notifications
- **Can change settings in project configuration**
  - o This right allows user to modify the configuration for projects (Configuration Manager)

- **Can import batches**
  - Allows the user to import batches (Control Center)
  - Allows the user to re-validate a document / batch (Validator)
  - Allows the user to delete batches (Validator)
- **Can accept or reject batches**
  - Allows the user to modify the status of a batch (dWValidator)
- **Can add new users or edit existing ones**
  - Allows the user to create new users or modify existing ones (dWValidator).

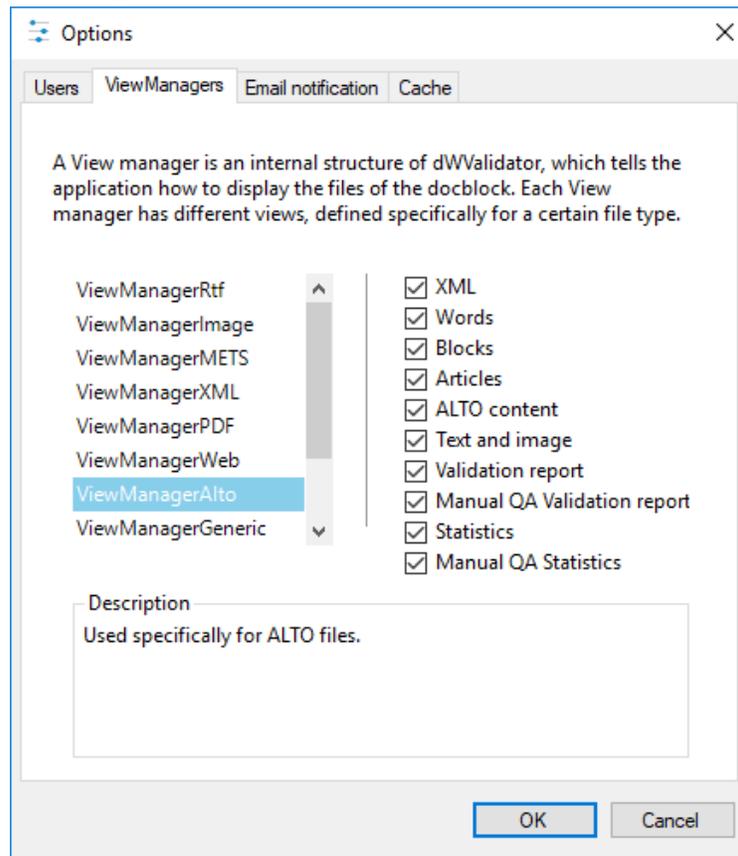
Without being logged in, a user is restricted in UI:

- In Configuration Manager, the user can only view the settings of projects, but cannot modify anything.
- In dWValidator, the user can open batches but not in Manual QA mode and can only view the reports and statistics.

*User rights matrix*

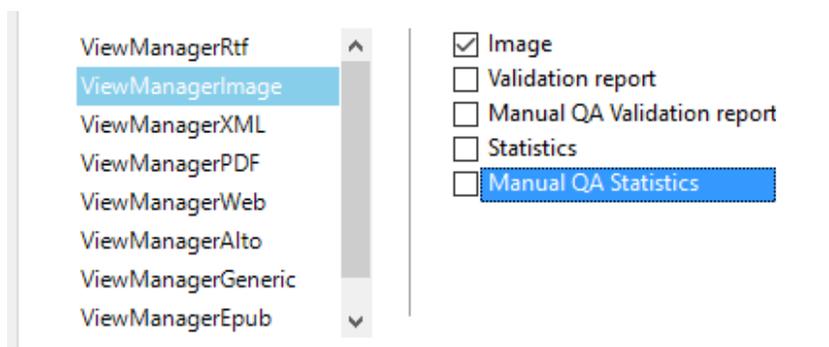
	<b>dWValidator</b>	<b>Configuration Manager</b>	<b>Control Center</b>
<b>Can perform manual QA</b>	yes	no	no
<b>Can receive mail notification</b>	yes	no	no
<b>Can change settings in project configuration</b>	no	yes	no
<b>Can import batches</b>	Yes	no	yes
<b>Can accept or reject batches</b>	Yes	no	no
<b>Can add new users or edit existing ones</b>	Yes	no	no

## View manager settings

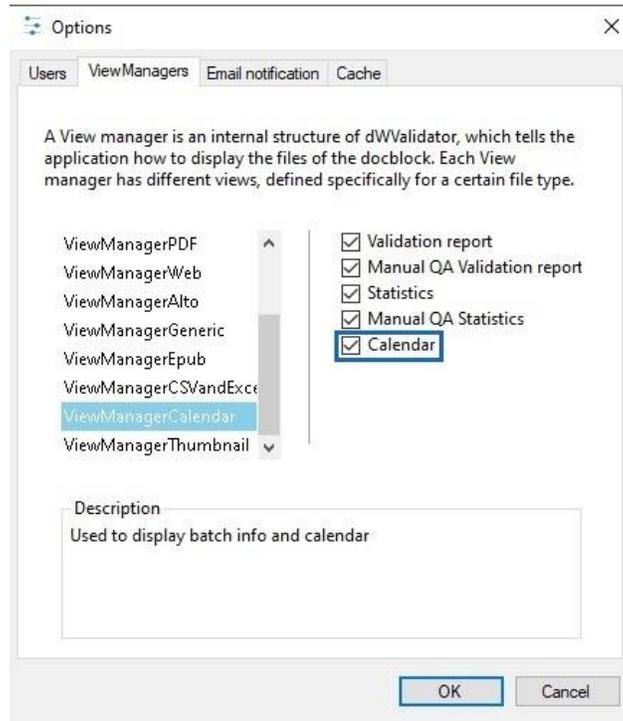


This tab contains two lists: one with all the view managers available in dWValidator and one with all the views available for the selected view manager. In the bottom part of the window is displayed a description for the selected view manager.

In this tab you can disable the views that you are not interested in when using dWValidator. For example, if you perform manual QA, you can disable the reports and statistics view to focus only on the files that you have to check.



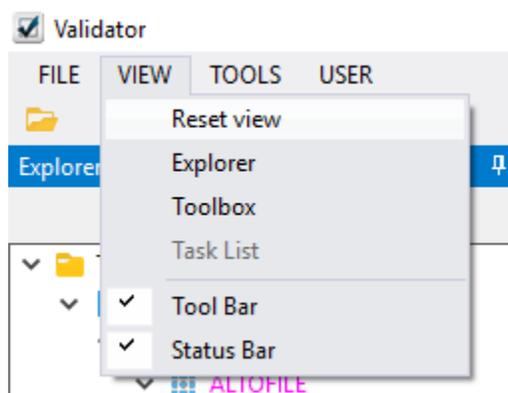
All changes made for view managers will be saved in a file in TEMP folder, and will be used next time when you'll use dWValidator.



ViewManagerCalendar is now available in ViewManagers list.

You can enable the check box Calendar only with special configuration done on project level. For more details, see [ViewManagerCalendar](#).

Once you've made a change in View manager settings, you need to reset the view in order for the change to be applied. To do this, use **Reset view** option from **VIEW** menu:



The reports and statistics views displayed at batch / document / docblock level do not have entries in Settings.

## Email notification

Email Notification System is used to send emails to Validator users whenever a batch validation is completed. Only users that have **Can receive mail notification** right will receive the emails.

The screenshot shows a dialog box titled "Options" with a close button (X) in the top right corner. It has four tabs: "Users", "ViewManagers", "Email notification" (which is selected and highlighted with a dotted border), and "Cache". Below the tabs, there is a text instruction: "Add here the details for the account that will sent the emails. Only Administrators can change this." Below this instruction are four input fields: "Email account" containing "validator@ccs-romania.ro", "Password" containing a series of dots, "Email server" containing "mail.ccs-romania.ro", and "Port" containing "25". At the bottom of the dialog, there is a text block: "The Email Notification System uses Simple Mail Transfer Protocol (SMTP). This will be used to send emails to users that have the 'Can recieve mail notification' right enabled." (Note the typo "recieve" in the original image). At the bottom right of the dialog are two buttons: "OK" and "Cancel".

In this tab, you need to fill the details of an account that will send the email notifications.

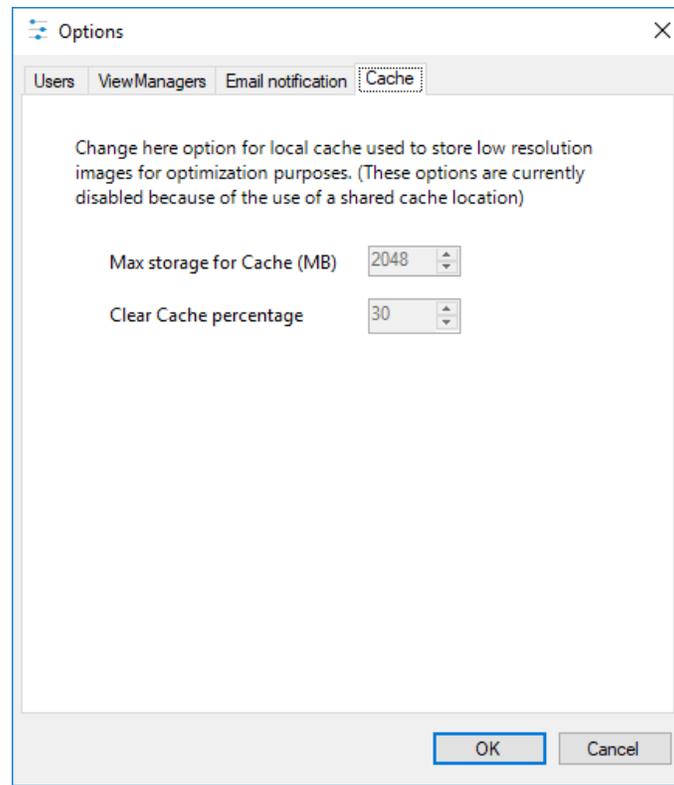
- **Email account** – the account that will be used to connect to the server and send the emails
- **Password** – the password of the account
- **Email server** – the mail server used
- **Port** – the mail server port to connect (by default, is set to 25).

As specified on the tab, only users of Administrators group can change these settings.

## Cache settings

dWValidator creates for each image a low-resolution copy of the image – this makes the loading much faster and the full-size image is only loaded when it is really needed (for actions like zooming in, using the color picker or opening the magnifier). These copies of images are stored either locally, in the user temporary folder, or on a shared storage, from where they can be used by other users.

Cache settings are only available when the low-resolution images are stored locally. In case a shared location is used, the settings will be disabled.



In this tab, you can:

- Select the maximum storage space allocated for dWValidator to keep the temporary files. The control is restricted between 512 Mb and 10 Gb of space.
- Select the cache percentage that will be cleared (*for more details, see [Cache clearing Help](#)*).

## Validation results

Each node from tree will have four tabs of reports and statistics:

- Two for automatic tests
- Two for manual tests.

All four tabs are automatically open, but you can close the ones that you are not interested in or dock them as you like (*for more details, see [The interface Help](#)*).

Depending on the node you select, you can see the results for the entire batch, a document, a docblock or a file.

## Automatic tests results

The two views you can use to check the automatic tests results are **Validation report** and **Statistics**.

The screenshot displays the dWValidator application interface. On the left, a file explorer shows a tree structure under 'TestProject1' with a sub-folder 'A2' containing several sub-folders. The main window is split into two panes. The left pane, titled 'Document statistics', shows a donut chart with a green segment representing 77.78% and a blue segment representing 22.22%. Below the chart, a legend indicates 'Document tests' with 'Check number of layers: 6' (blue) and 'OK: 21' (green). The right pane, titled 'Validation report', shows a table of test results for a specific file named 'A2\_19440310\_01'. The table has columns for 'File Name', 'Last Modified', and 'Validator Version Test Name'. The test results are color-coded: green for 'Check image resolution' and red for 'Check number of layers'.

File Name	Last Modified	Validator Version Test Name
00001.jp2	24-aug-2016 14:20	6.9-1(#0) Check image resolution
00002.jp2	24-aug-2016 14:20	6.9-1(#0) Check number of layers
00003.jp2	24-aug-2016 14:20	6.9-1(#0) Check image resolution
00004.jp2	24-aug-2016 14:20	6.9-1(#0) Check number of layers
00005.jp2	24-aug-2016 14:20	6.9-1(#0) Check image resolution
00006.jp2	24-aug-2016 14:20	6.9-1(#0) Check number of layers
00001.xml	24-aug-2016 14:20	6.9-1(#0) Check measurement unit
00002.xml	24-aug-2016 14:20	6.9-1(#0) Check measurement unit
00003.xml	24-aug-2016 14:20	6.9-1(#0) Check measurement unit
00004.xml	24-aug-2016 14:20	6.9-1(#0) Check measurement unit
00005.xml	24-aug-2016 14:20	6.9-1(#0) Check measurement unit
00006.xml	24-aug-2016 14:20	6.9-1(#0) Check measurement unit
00001.tif	24-aug-2016 14:20	6.9-1(#0) Check image resolution
00002.tif	24-aug-2016 14:20	6.9-1(#0) Check image resolution
00003.tif	24-aug-2016 14:20	6.9-1(#0) Check image resolution
00004.tif	24-aug-2016 14:20	6.9-1(#0) Check image resolution

### Validation report

The validation report is a HTML report, in which all the tests and their results are displayed, having the font color set based on the test result.

The top part of a validation report displays its details:

- The name of the file / docblock / document / batch you selected
- Its status (passed / failed)
- The date when it was generated
- A “navigation” bar, that you can use to see specific results. This is only available for batch and document levels.

Validation report × 2016-08-24 14:21:46

Name: A2\_19440310\_01 Status: ❌

All Errors All Files ACCESS ALTO MASTER METS PDF TEXT

File Name	Last Modified	Validator Version	Test Name	Details
00001.jp2	24-aug-2016 14:20	6.9-1(#0)	Check image resolution	300
	24-aug-2016 14:20	6.9-1(#0)	Check number of layers	3
00002.jp2	24-aug-2016 14:20	6.9-1(#0)	Check image resolution	300
	24-aug-2016 14:20	6.9-1(#0)	Check number of layers	3
00003.jp2	24-aug-2016 14:20	6.9-1(#0)	Check image resolution	300
	24-aug-2016 14:20	6.9-1(#0)	Check number of layers	3

In the screenshot above, document **A2\_19440310\_01** was validated on 24/08/2016 and it failed at least one test.

Click on **All Errors** from the navigation bar to see the tests that failed and on which files, or select a docblock to see the results only for the files of that docblock.

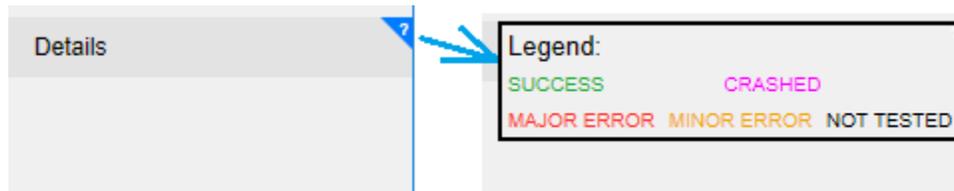
Validation report × 2016-08-24 14:21:46

Name: A2\_19440310\_01 Status: ❌

All Errors All Files ACCESS ALTO MASTER METS PDF TEXT

File Name	Last Modified	Validator Version	Test Name	Details
00001.jp2	24-aug-2016 14:20	6.9-1(#0)	Check number of layers	3
00002.jp2	24-aug-2016 14:20	6.9-1(#0)	Check number of layers	3
00003.jp2	24-aug-2016 14:20	6.9-1(#0)	Check number of layers	3
00004.jp2	24-aug-2016 14:20	6.9-1(#0)	Check number of layers	3
00005.jp2	24-aug-2016 14:20	6.9-1(#0)	Check number of layers	3

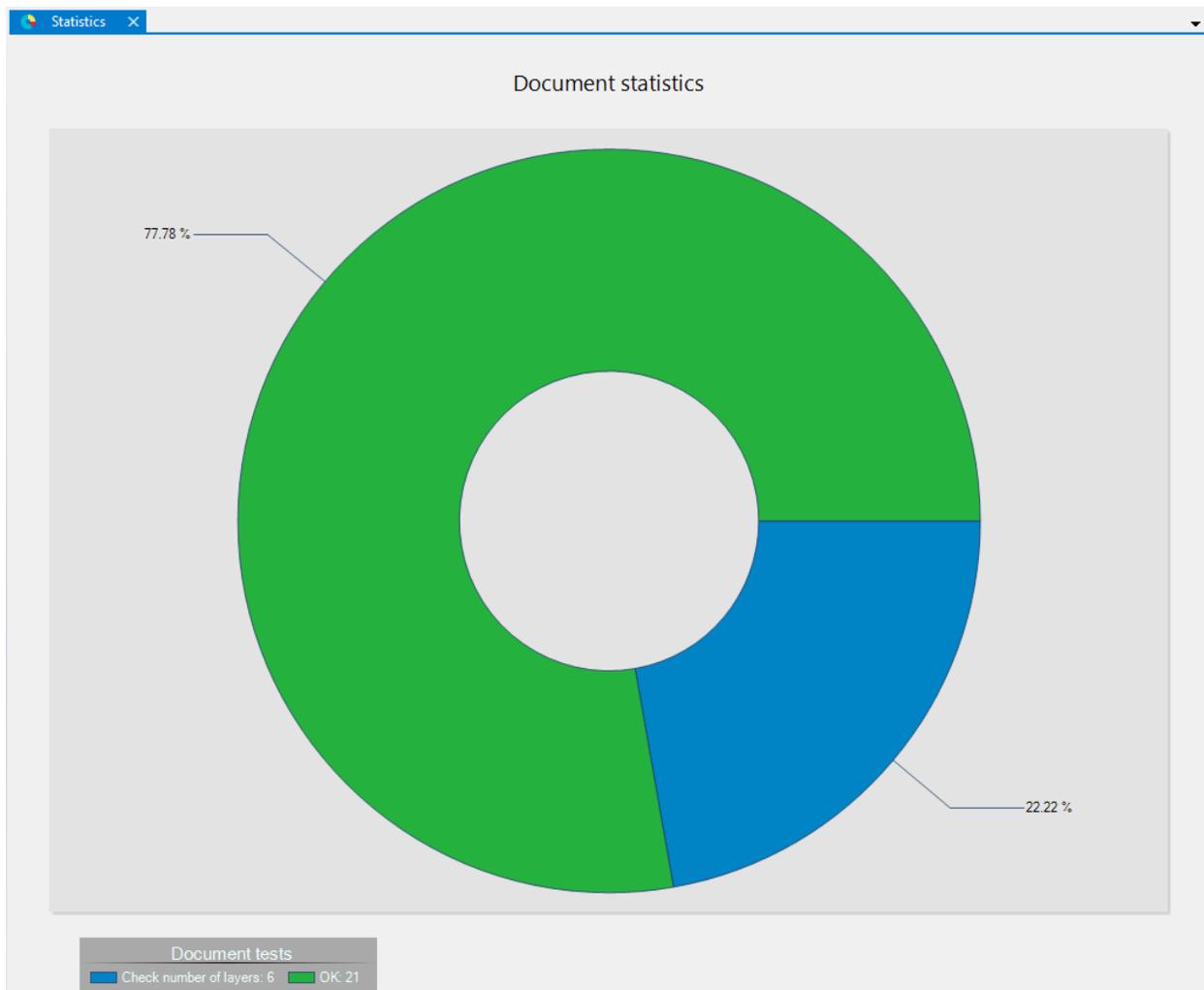
You can check what the colors of the font represent, by hovering the question mark (?) from the right side. It will display a legend with the description of each color.



### Statistics

The Statistics view consist in a pie chart that displays, depending on the level you are checking:

- The number of Tested documents vs Not tested documents and number of Valid documents vs. Invalid documents (at batch level)
- The number of Passed tests vs Failed tests (at document, docblock and file level)



For all the pie charts that display Passed tests vs. Failed tests, the tests that passed are all grouped under "OK". An entry is added for each failed test, with the number of files that failed that test.

In the screenshot above, on the document were performed a total of 27 tests:

- 21 were successful
- 6 failed “Check number of layers”

## Manual tests results

There are also two views for displaying manual QA results: **Manual QA report** and **Manual QA statistics**.

The screenshot shows the dWValidator interface. The top part displays a table of test results for a document named 'A2\_19440317\_01'. The table has columns for File Name, Last Modified, Validator Version, Checked By, Checked on Machine, Status, Test Name, and Details. Below the table is a 'Manual QA Statistics' section featuring a donut chart titled 'Document statistics' and a legend for 'Document tests'.

File Name	Last Modified	Validator Version	Checked By	Checked on Machine	Status	Test Name	Details
00001.jp2	24-aug-2016 17:15	1.0.0.0	bogdan	BOGDAN3	VISITED	Check for folded corners	
00001.jp2	24-aug-2016 17:15	1.0.0.0	bogdan	BOGDAN3	VISITED	Check for laser on images	
00002.jp2	24-aug-2016 17:15	1.0.0.0	bogdan	BOGDAN3	OK	Check for folded corners	
00002.jp2	24-aug-2016 17:15	1.0.0.0	bogdan	BOGDAN3	OK	Check for laser on images	
00003.jp2	24-aug-2016 17:15	1.0.0.0	bogdan	BOGDAN3	OK	Check for folded corners	
00003.jp2	24-aug-2016 17:15	1.0.0.0	bogdan	BOGDAN3	FOR REVIEW	Check for laser on images	
00004.jp2	24-aug-2016 17:15	1.0.0.0	bogdan	BOGDAN3	FAILED	Check for folded corners	

**Document statistics**

Document tests

- MAJOR: 2
- FOR REVIEW: 2
- OK: 6
- VISITED: 4
- NOT VISITED: 6

### Manual QA report

The validation report is also a HTML report, in which all the tests and their results are displayed, having the font color set based on the test result.

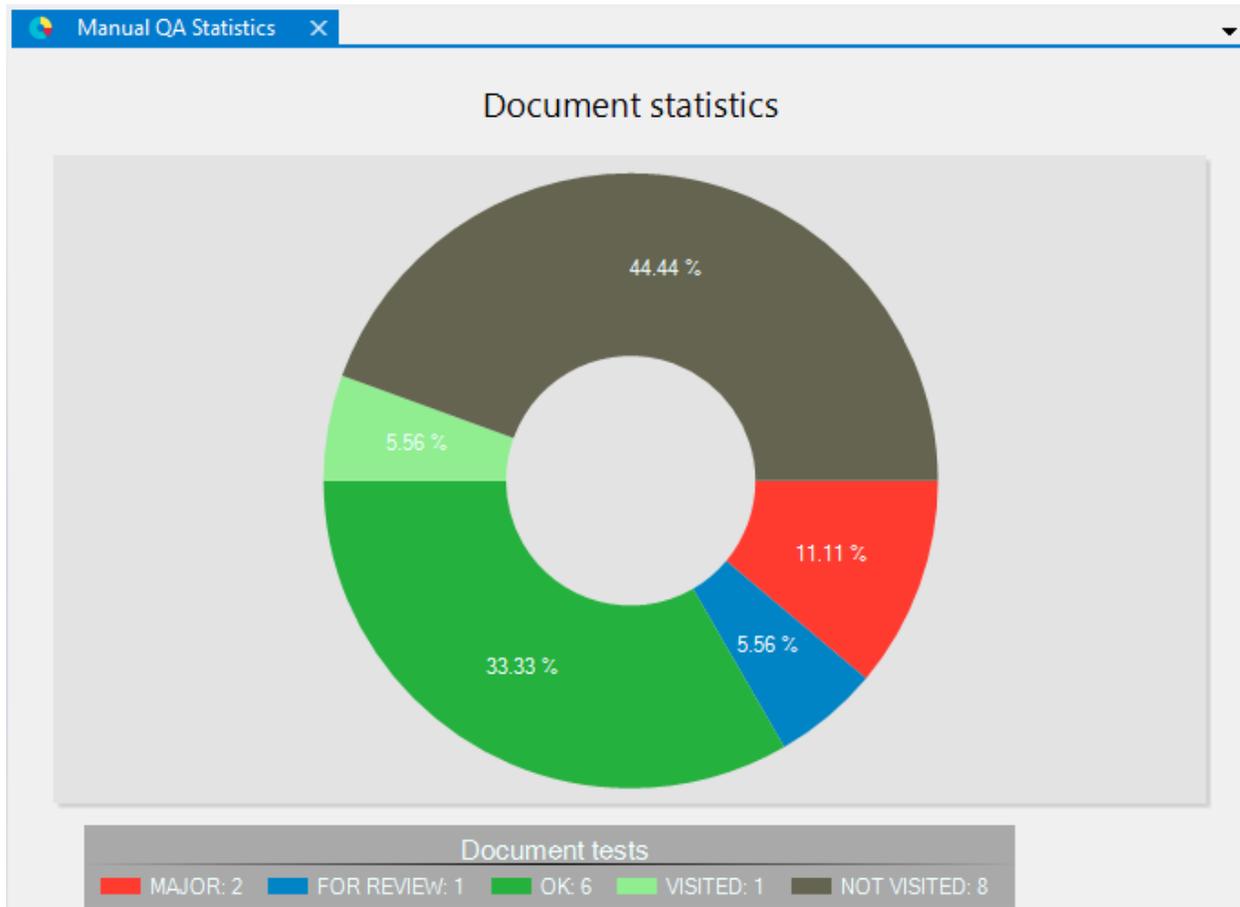
The report has the same structure as the report for Automatic validation (see [Validation report Help](#)), the only differences being some extra columns in the report (Checked by, Checked on Machine, Status) and the font colors. You can check the legend to see the significance of each color:



### Manual QA statistics

This view shows a pie chart, in which the manual QA test results are displayed. The chart can have a maximum of six entries:

- OK
- For review
- Major error
- Minor error
- Visited
- Not visited



In the example above, there were 18 tests to perform on that document. From these, 6 were OK, 2 Major error, 1 for Review, 1 Visited and 8 Not visited.

# View managers

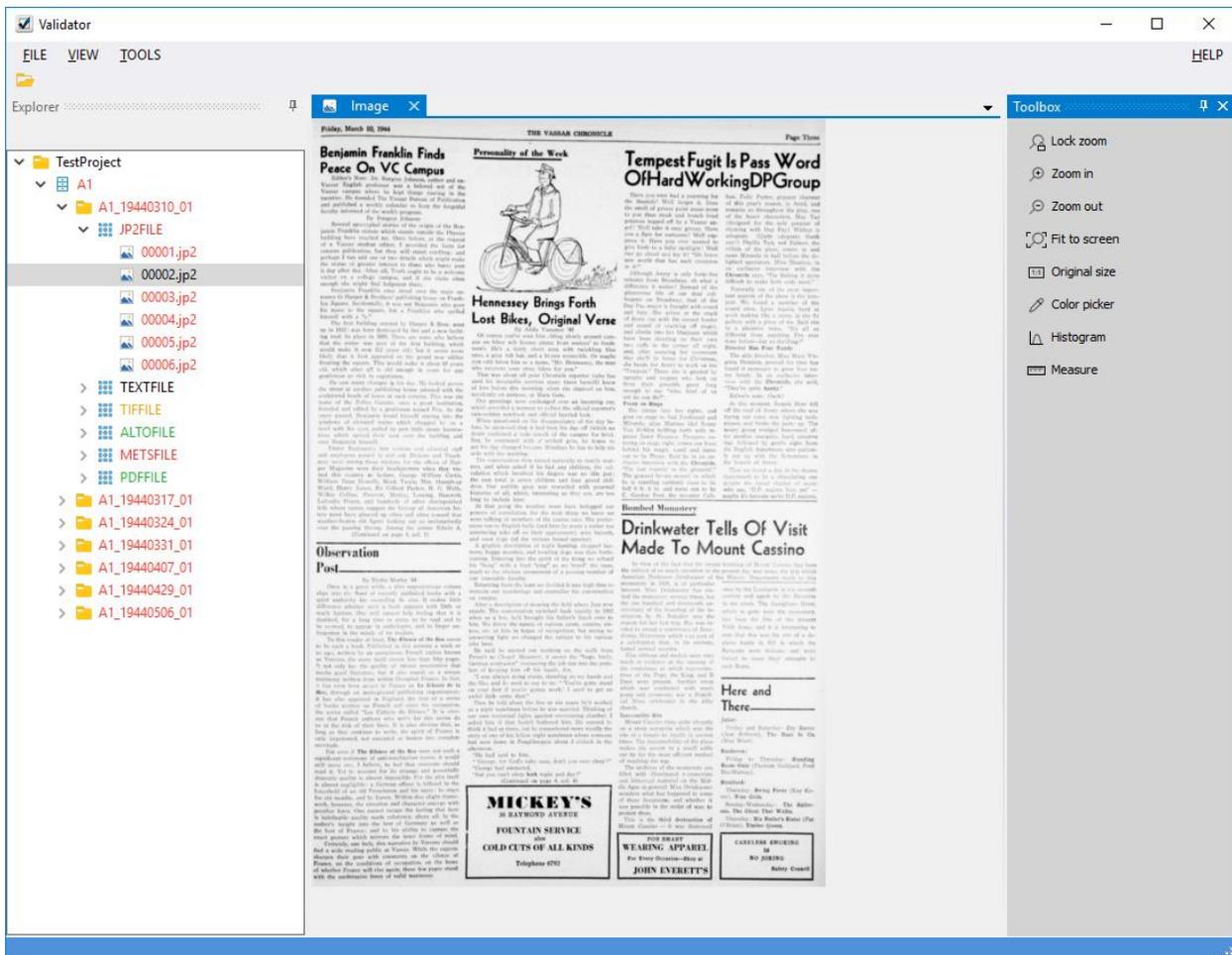
A View manager is an internal structure of dWValidator, which tells the application how to display the files of the docblock. Each View manager has different views, defined specifically for a certain file type.

For all the selected nodes, four additional views are displayed (beside the standard views of the View manager): two reports views and two statistics view. *For more details, see [Validation results Help](#).*

## ViewManagerImage

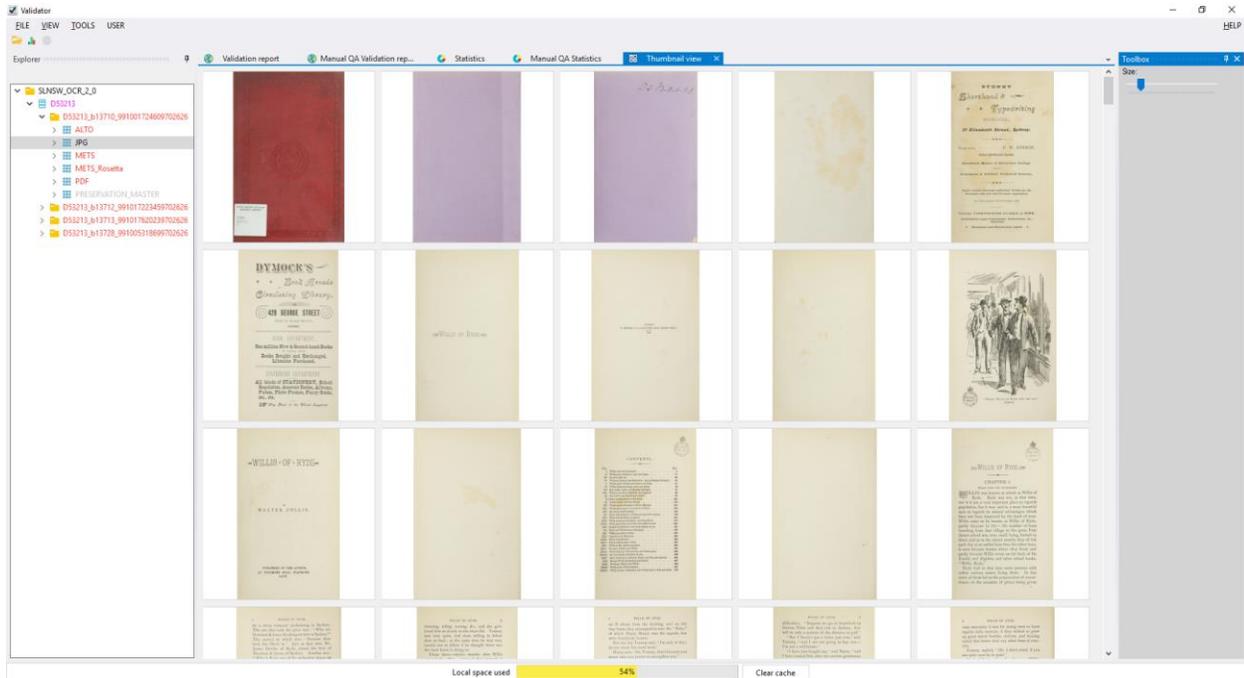
This is used to display all supported image types: \*.jpeg, \*.jpg, \*.bmp, \*.png, \*.ico, \*.tif, \*.jp2, \*.cr2, \*.gif.

When selecting an image in tree, it will be displayed using the **Image view** tab:



### Thumbnail view

Each docblock configured to use **ViewManagerImage** will have a special view, displayed when selecting the docblock in the **Explorer** tree.



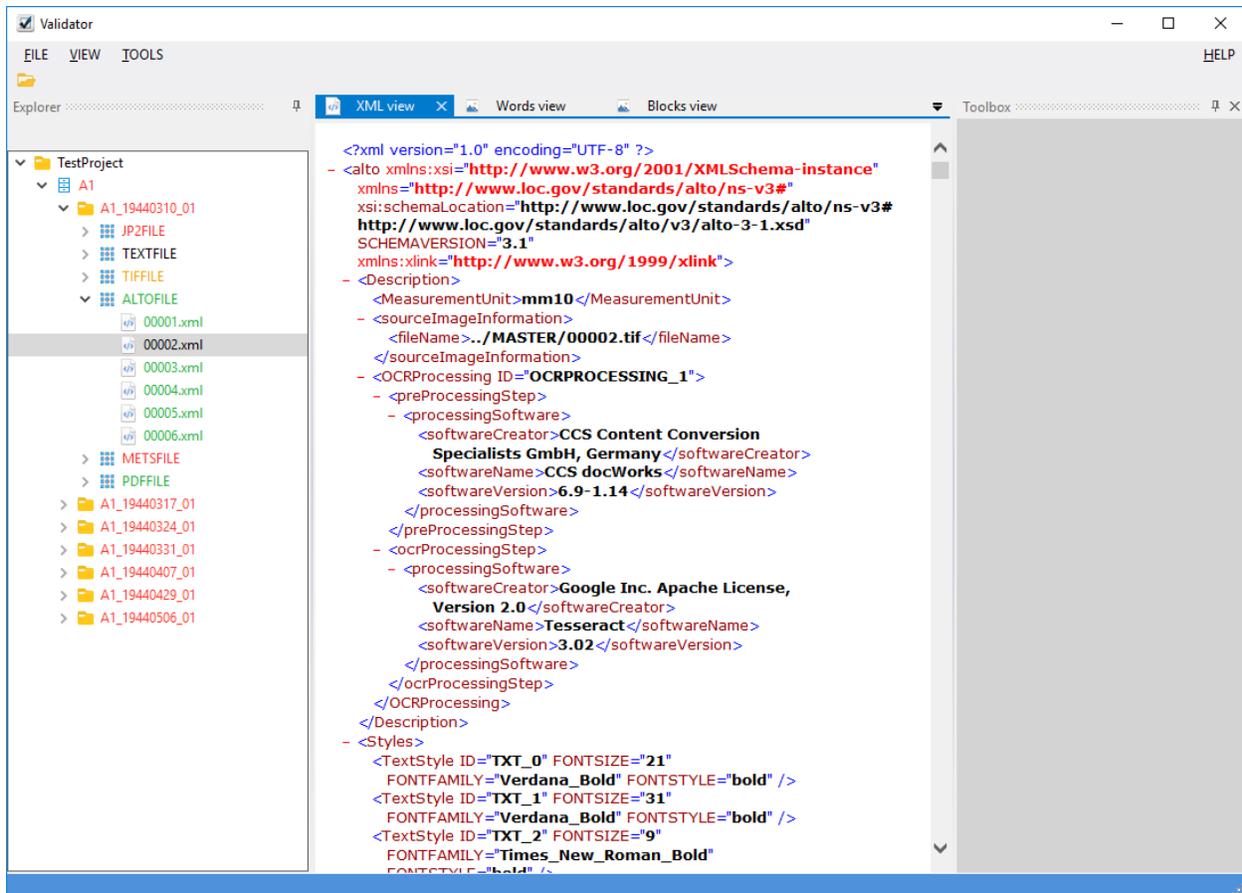
In this view, all content of the docblock (the images) are displayed, using either their thumbnail (if the images have this embedded), or the low-resolution copy of the images.

## ViewManagerAlto

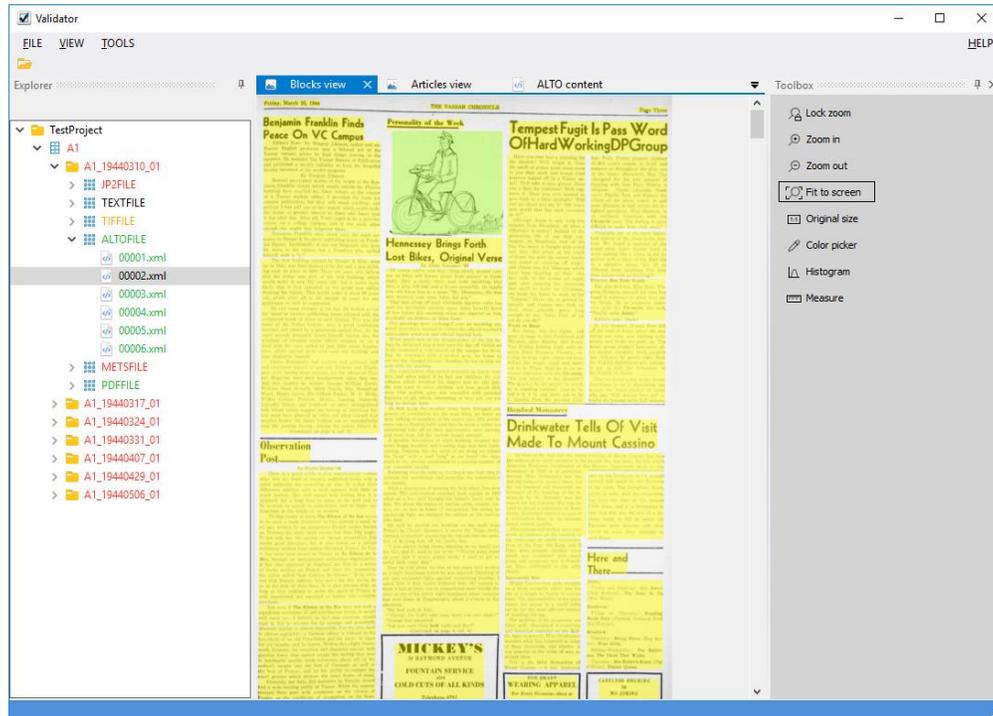
This was designed specifically for ALTO files. Because ALTO files contain the coordinates of the zones and words, this View manager is used to display them also visually, using the image linked in the ALTO file.

There are six views displayed for an ALTO file by default:

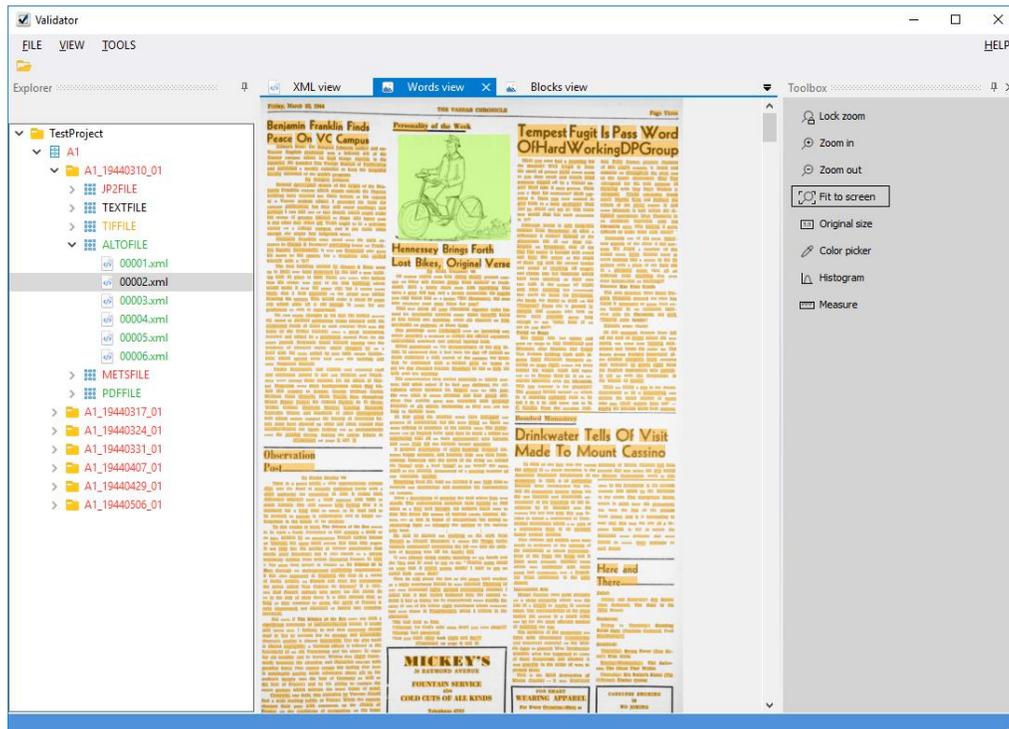
*XML View* – displays the content of the file as an xml:



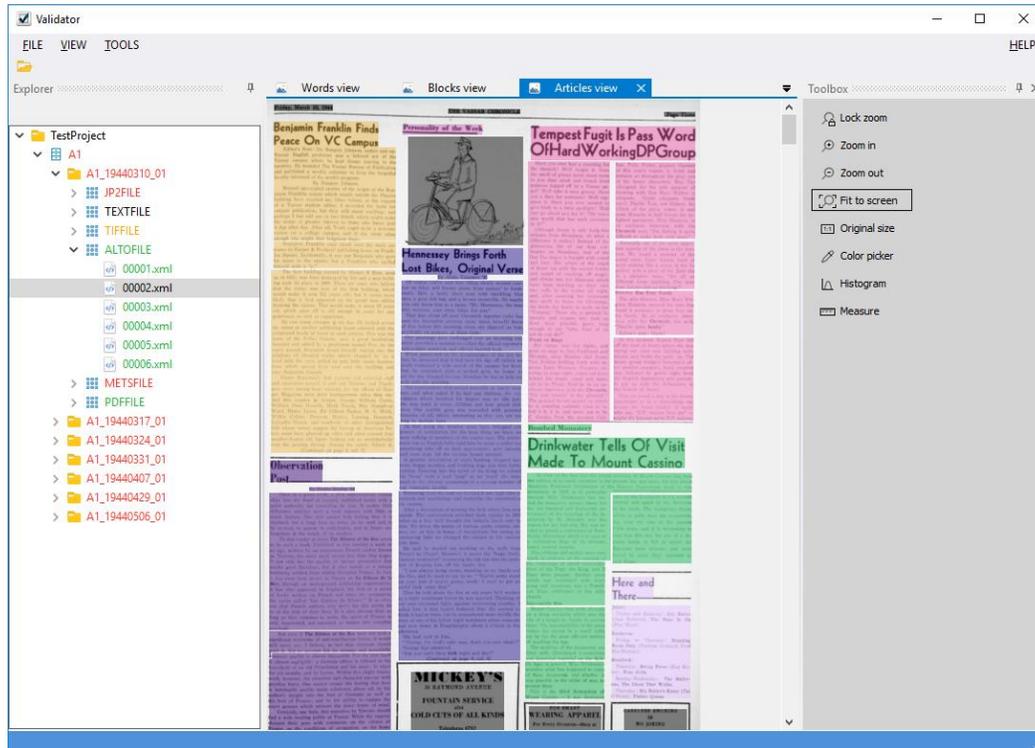
*Blocks view* – using the coordinates and types of the zones from the ALTO, the zones are displayed over the linked image (*for more details, see [Special cases Help](#)*):



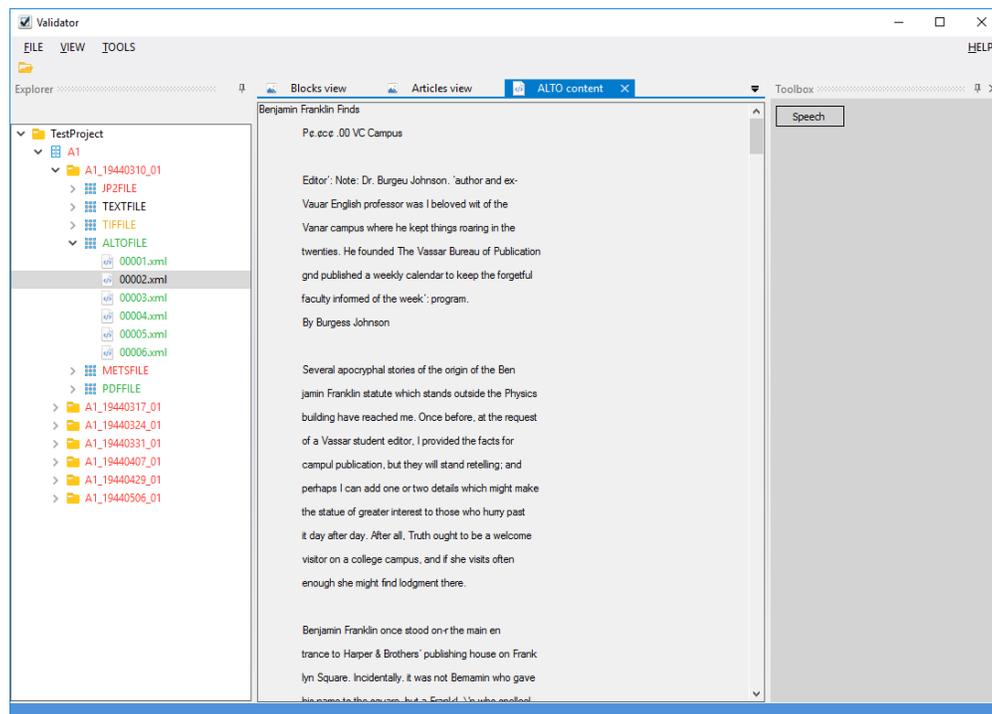
*Words view* – using the coordinates of each word from the ALTO file, each word is displayed over the linked image (*for more details, see [Special cases Help](#)*):



*Articles view* – it uses the ALTO file content and also the METS file to display the articles on the linked image (for more details, see [Special cases Help](#)):



*ALTO content* – displays only the text of the file, using the nodes content of the xml to split the text in lines and paragraphs.



*Text and image view* – that splits the ALTO content by lines and adds each line of text as one row of a table. For each line, its corresponding image area is displayed, and also the zone ID from ALTO.

The entire image is displayed on the top part of the list (*for more details, see [Special cases Help](#)*).

Text line	Image	Zone id
Last Class Party Is Gay Entertainment	Last Class Party Is Gay Entertainment	P1_TB00014
Instead of the traditional Daisy	Instead of the traditional Daisy	P1_TB00015
Chain and skits, the late senior	Chain and skits, the late senior	P1_TB00015
class (R.I.P.) gave a last class	class (R.I.P.) gave a last class	P1_TB00015
party, Remember Our Daisy, on	party, Remember Our Daisy, on	P1_TB00015
Class Day. For four years this	Class Day. For four years this	P1_TB00015
class has been noted for its excel	class has been noted for its excel	P1_TB00015
lent class parties and this was no	lent class parties and this was no	P1_TB00015
exception. Despite the little time	exception. Despite the little time	P1_TB00015
for rehearsals during exams and	for rehearsals during exams and	P1_TB00015
the fact that there were never less	the fact that there were never less	P1_TB00015
than thirty people on the stage at	than thirty people on the stage at	P1_TB00015
once, the result was a finished	once, the result was a finished	P1_TB00015
production.	production.	P1_TB00015
Daisy is "Integrated"	Daisy is "Integrated"	P1_TB00015
The evening began with the	The evening began with the	P1_TB00015

## Special cases

### Articles view

The Articles view needs a custom procedure that returns the relative path of the METS file. By default, we do not provide a solution, so the articles will not be displayed over the image. The procedure needs to be added in **\*\*\*PROJECT\_CFG\*\*\*\ProjectName\CSScripts\interfaceScript.cs** file (uses C# language). Uncomment the **GetMETSRelativePathForALTOArticlesView** procedure, and add your code there.

Example:

```
public override string GetMETSRelativePathForALTOArticlesView(string ALTOFileFullPath)
{
    string ALTOFolder = ALTOFileFullPath.Substring(0, ALTOFileFullPath.LastIndexOf('\\'));
    string documentFolder = ALTOFolder.Substring(0, ALTOFolder.LastIndexOf('\\'));
    string documentName = documentFolder.Substring(documentFolder.LastIndexOf('\\')+1);
    return "../" + documentName + "-METS.xml";
}
```

The example above returns the relative path of a METS file, located in the main document folder, and has the same name as the document, plus “-METS.xml”.

It is possible to have **NO IMAGE FOUND** displayed in all the views that require an image. This means that the relative path of the linked image is not correct, not pointing to the correct image or even missing completely.

Our standard solution resolves the linking of images with relative path defined like this:

```
<fileName>../MASTER/00001.tif</fileName>
```

For other cases, a custom procedure is needed to define the path of the image. The custom procedure is in **\*\*\*PROJECT\_CFG\*\*\*\ProjectName\CSScripts\interfaceScript.cs** file. Uncomment the **GetImageRelativePathForALTOView** procedure and add your code there.

Example:

```
public override string GetImageRelativePathForALTOView(string ALTOFileFullPath, string
sourceImageFileName)
{
    return "../MASTER/" + sourceImageFileName;
}
```

The example above returns our standard relative path: *../MASTER/imageName*.

Other procedures are also available in the same file, that you can overwrite with your own code. You can overwrite **GetArticlesFromMetsForALTOView** procedure if you have a custom METS file.

### Text and image view

By default, we display all the zones of the ALTO file in this view. You can overwrite the **GetALTOBlocksIDsToDisplay** found in **\*\*\*PROJECT\_CFG\*\*\*\ProjectName\CSScripts\interfaceScript.cs** file to return only the desired zone IDs.

## ViewManagerMets

This is used specifically for METS files. Because the structure of a METS file is very complex, there is a configuration file where you can set what and how to be displayed. The configuration file is located at **\*\*\*PROJECT\_CFG\*\*\*\ProjectName\CSScripts\MetsConfig.xml** and the default version is:

```
<METSVIEWERCFG>
  <STRUCTFILTER>
    <div label="#TYPE - #ORDER - #LABEL">section</div>
    <div label="#TYPE - #ORDER - #LABEL">article</div>
    <div label="#TYPE - #LABEL">issue</div>
  <div label="#TYPE - #ORDER - #LABEL">chapter</div>
    <div label="#TYPE - #ORDER">page</div>
  </STRUCTFILTER>
<FINALDIV>
  <div color="#ffff00">text</div>
  <div color="#80ffff">title</div>
  <div color="#008000">image</div>
  <div color="#80ff80">caption</div>
  <div color="#ffaaff">table</div>
</FINALDIV>
</METSVIEWERCFG>
```

Inside `<structFilter>` node you can define the div nodes types that will appear in the Mets viewer tree. Their attribute "label" represents how the node will be displayed, based on the attributes of the selected div node.

By default, the structures filtered via in `METSConfig.xml` are not displayed recursively, unless these are the last level in tree. This avoids following situations:

1. Press on logical structure node and load all pages for the entire document and highlight the entire document.
2. Press on a Section and highlight the entire content that could spread on multiple pages, etc.

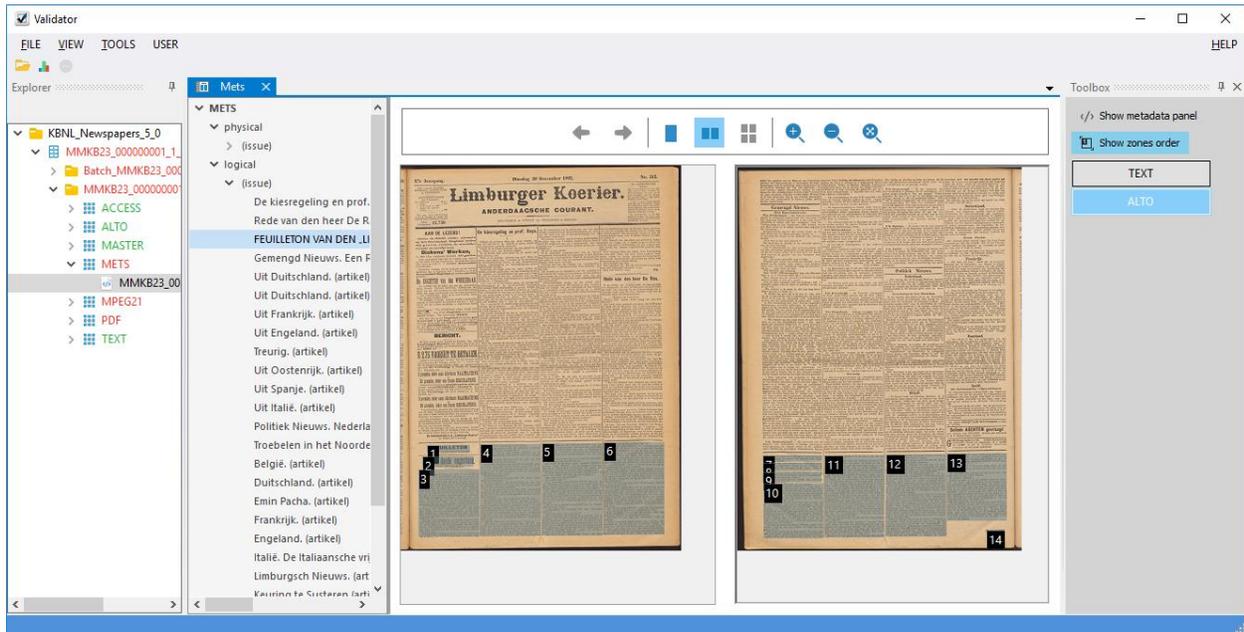
Nevertheless there are cases when recursive display may be useful for example when selecting an Article that have also an Illustration bellow in METS tree - the user would like to see complete article highlighted as well, even is not final level in tree.

In this case into `METSConfig.xml`, article node should be configured as follows:

```
<structFilter>
  <div label="#TYPE - #ORDER - #LABEL">section</div>
  <div label="#TYPE - #ORDER - #LABEL" showRecursive="1">article</div>
  <div label="#TYPE - #ORDER - #LABEL">illustration</div>
</structFilter>
```

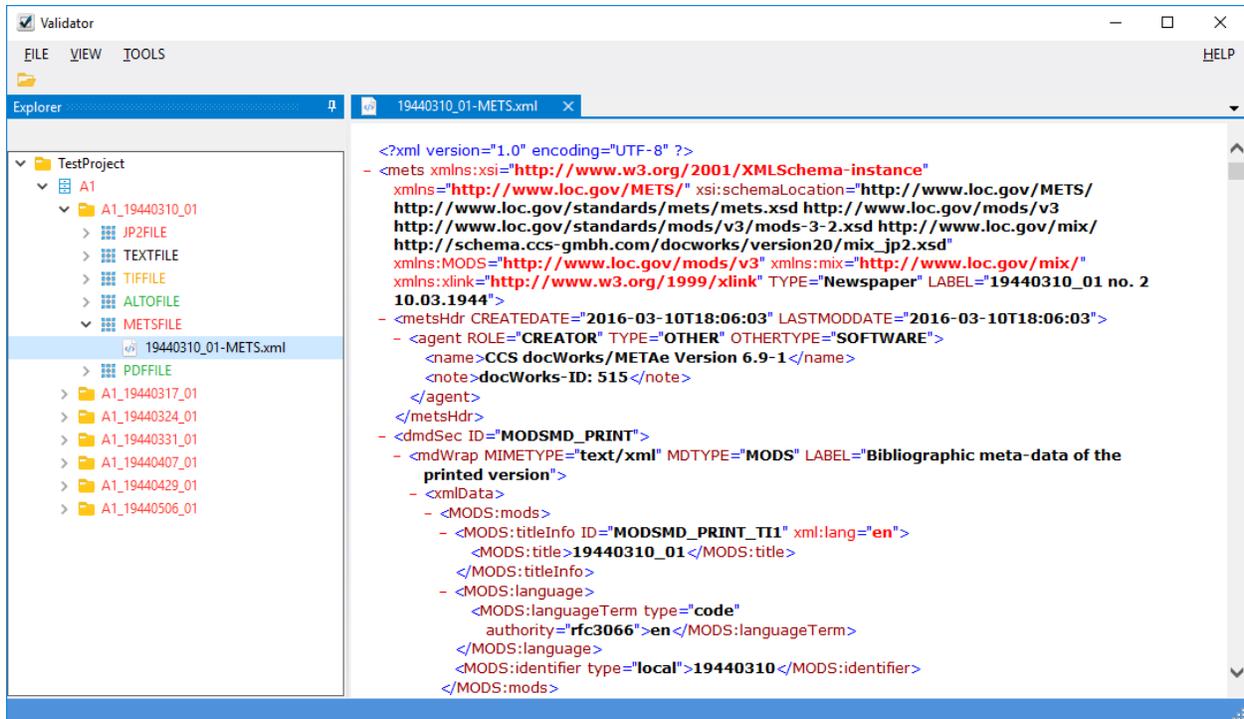
Based on this configuration, articles will be always highlighted complete, no matter there are Illustration nodes inside or not.

The nodes inside `<finalDiv>` are used to define the colors of the areas displayed on Mets viewer.



## ViewManagerXML

This is used to display any type of .xml file and is also used in ViewManagerAlto, to display the ALTO file as XML.



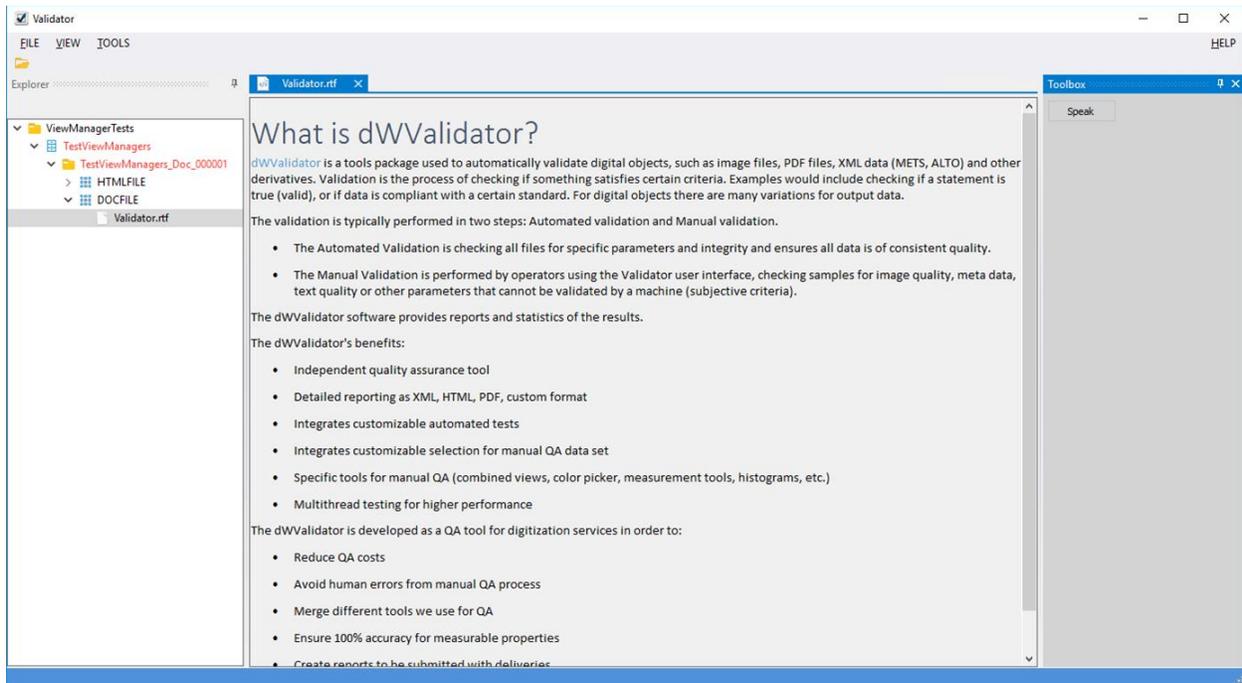
## ViewManagerPDF

It uses Adobe® Acrobat® Reader® and Internet Explorer® to display the PDF inside the application. If you don't have Acrobat Reader® installed, the PDF will need to be downloaded locally and opened in an external application. Having Acrobat Reader® installed will also give you access to its tools, so you can zoom, search text or print the PDF from inside the application.



## ViewManagerRtf

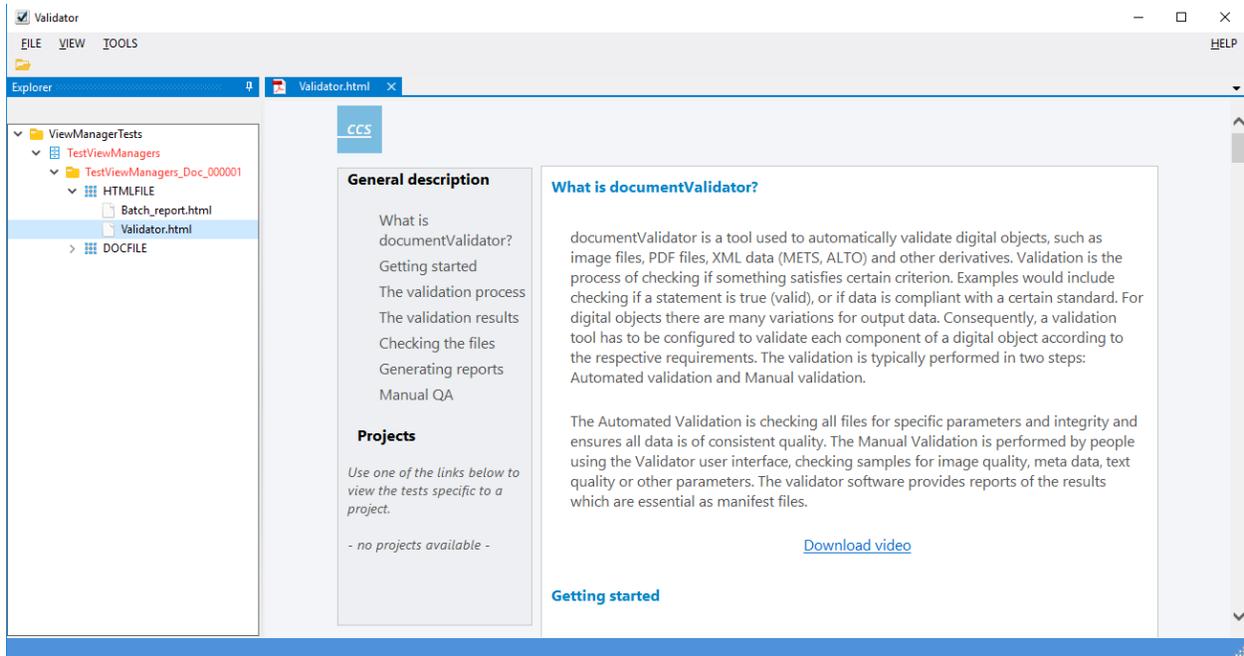
This is used to display \*.rtf, \*.doc and \*.txt files. The contents of the files will be displayed in a Rich Text Box view – it behaves the same as WordPad application. This view manager is also used in ViewManagerAlto to display the ALTO as text.



There is also a Text-To-Speech functionality, with only English as supported language. On the toolbox is the **Speak** button you can use to start the reading of the file content. A **Stop** button is displayed once the reading is started, so you can stop this process.

## ViewManagerWeb

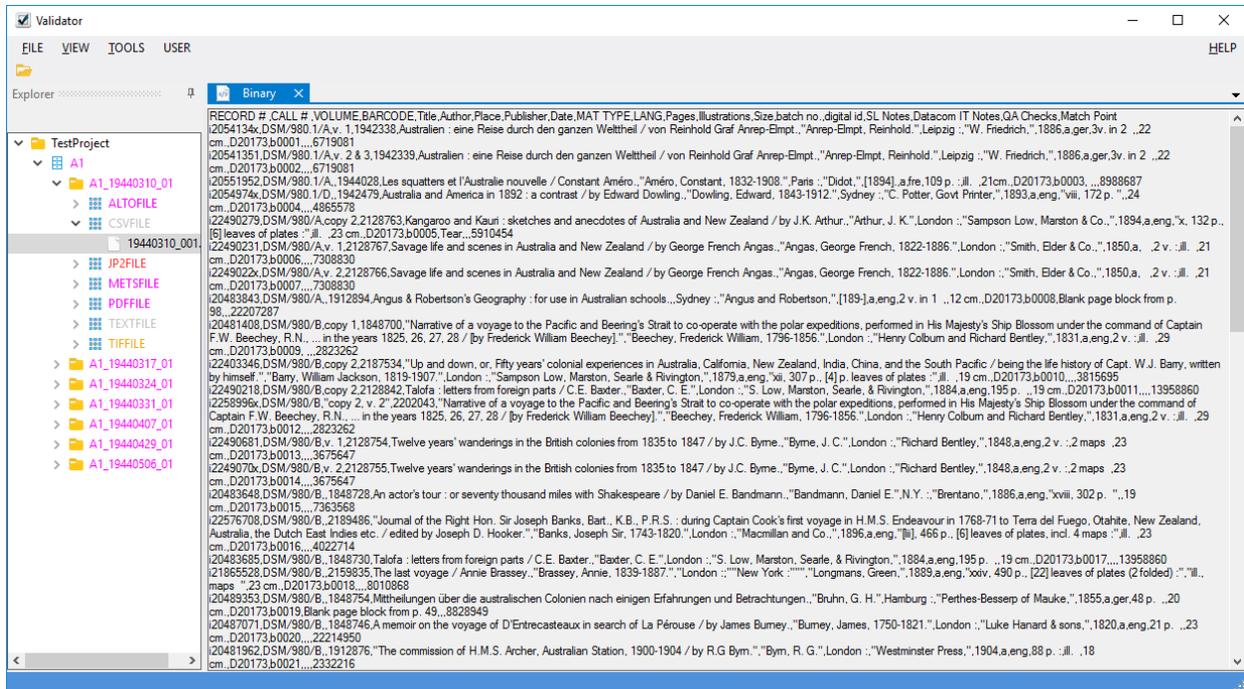
This View manager uses Internet Explorer® to display \*.htm and \*.html files. The styling of the HTML is kept and displayed if it was done either with embedded css and images, or the linked files are found at the location where the link is pointing.



The Web View manager is also used in ViewManagerPDF to display the PDF file.

## ViewManagerGeneric

This view manager can be used to display any type of file as binary.



## ViewManagerCSVandExcel

You can use this view manager to display \*.csv, \*.xls and \*.xlsx files. For .csv files there is an option to change the delimiter – by default, it is set to semicolon “;”.

The Table view behaves like a read-only Excel sheet – you can select individual cells, multiple cells or rows, you can resize column width or row height and can sort by clicking on column headers. Using CTRL+C will copy the content of the selected cell(s) which then you can paste in an Excel sheet.

The screenshot displays the dWValidator application window. The main area shows a table with the following data:

A	B	C	D	E
ID	volgnr	master	access	met
MMKB15_000055001	00001	MMKB15_000055001_00001_master.jp2	MMKB15_000055001_00001_access.jp2	MMKB15_01
MMKB15_000055001	00002	MMKB15_000055001_00002_master.jp2	MMKB15_000055001_00002_access.jp2	MMKB15_01
MMKB15_000055001	00003	MMKB15_000055001_00003_master.jp2	MMKB15_000055001_00003_access.jp2	MMKB15_01
MMKB15_000055001	00004	MMKB15_000055001_00003_master.jp2	MMKB15_000055001_00003_access.jp2	MMKB15_01
MMKB15_000055001	00005	MMKB15_000055001_00003_master.jp2	MMKB15_000055001_00003_access.jp2	MMKB15_01
MMKB15_000055001	00006	MMKB15_000055001_00003_master.jp2	MMKB15_000055001_00003_access.jp2	MMKB15_01
MMKB15_000055001	00007	MMKB15_000055001_00004_master.jp2	MMKB15_000055001_00004_access.jp2	MMKB15_01
MMKB15_000055001	00008	MMKB15_000055001_00004_master.jp2	MMKB15_000055001_00004_access.jp2	MMKB15_01
MMKB15_000055001	00009	MMKB15_000055001_00004_master.jp2	MMKB15_000055001_00004_access.jp2	MMKB15_01
MMKB15_000055001	00010	MMKB15_000055001_00004_master.jp2	MMKB15_000055001_00004_access.jp2	MMKB15_01
MMKB15_000055001	00011	MMKB15_000055001_00004_master.jp2	MMKB15_000055001_00004_access.jp2	MMKB15_01
MMKB15_000055001	00012	MMKB15_000055001_00004_master.jp2	MMKB15_000055001_00004_access.jp2	MMKB15_01
MMKB15_000055001	00013	MMKB15_000055001_00004_master.jp2	MMKB15_000055001_00004_access.jp2	MMKB15_01
MMKB15_000055001	00014	MMKB15_000055001_00005_master.jp2	MMKB15_000055001_00005_access.jp2	MMKB15_01
MMKB15_000055001	00015	MMKB15_000055001_00005_master.jp2	MMKB15_000055001_00005_access.jp2	MMKB15_01
MMKB15_000055001	00016	MMKB15_000055001_00006_master.jp2	MMKB15_000055001_00006_access.jp2	MMKB15_01
MMKB15_000055001	00017	MMKB15_000055001_00006_master.jp2	MMKB15_000055001_00006_access.jp2	MMKB15_01
MMKB15_000055001	00018	MMKB15_000055001_00006_master.jp2	MMKB15_000055001_00006_access.jp2	MMKB15_01
MMKB15_000055001	00019	MMKB15_000055001_00006_master.jp2	MMKB15_000055001_00006_access.jp2	MMKB15_01
MMKB15_000055001	00020	MMKB15_000055001_00006_master.jp2	MMKB15_000055001_00006_access.jp2	MMKB15_01
MMKB15_000055001	00021	MMKB15_000055001_00007_master.jp2	MMKB15_000055001_00007_access.jp2	MMKB15_01
MMKB15_000055001	00022	MMKB15_000055001_00007_master.jp2	MMKB15_000055001_00007_access.jp2	MMKB15_01
MMKB15_000055001	00023	MMKB15_000055001_00007_master.jp2	MMKB15_000055001_00007_access.jp2	MMKB15_01
MMKB15_000055001	00024	MMKB15_000055001_00007_master.jp2	MMKB15_000055001_00007_access.jp2	MMKB15_01
MMKB15_000055001	00025	MMKB15_000055001_00007_master.jp2	MMKB15_000055001_00007_access.jp2	MMKB15_01
MMKB15_000055001	00026	MMKB15_000055001_00007_master.jp2	MMKB15_000055001_00007_access.jp2	MMKB15_01
MMKB15_000055001	00027	MMKB15_000055001_00007_master.jp2	MMKB15_000055001_00007_access.jp2	MMKB15_01
MMKB15_000055001	00028	MMKB15_000055001_00008_master.jp2	MMKB15_000055001_00008_access.jp2	MMKB15_01

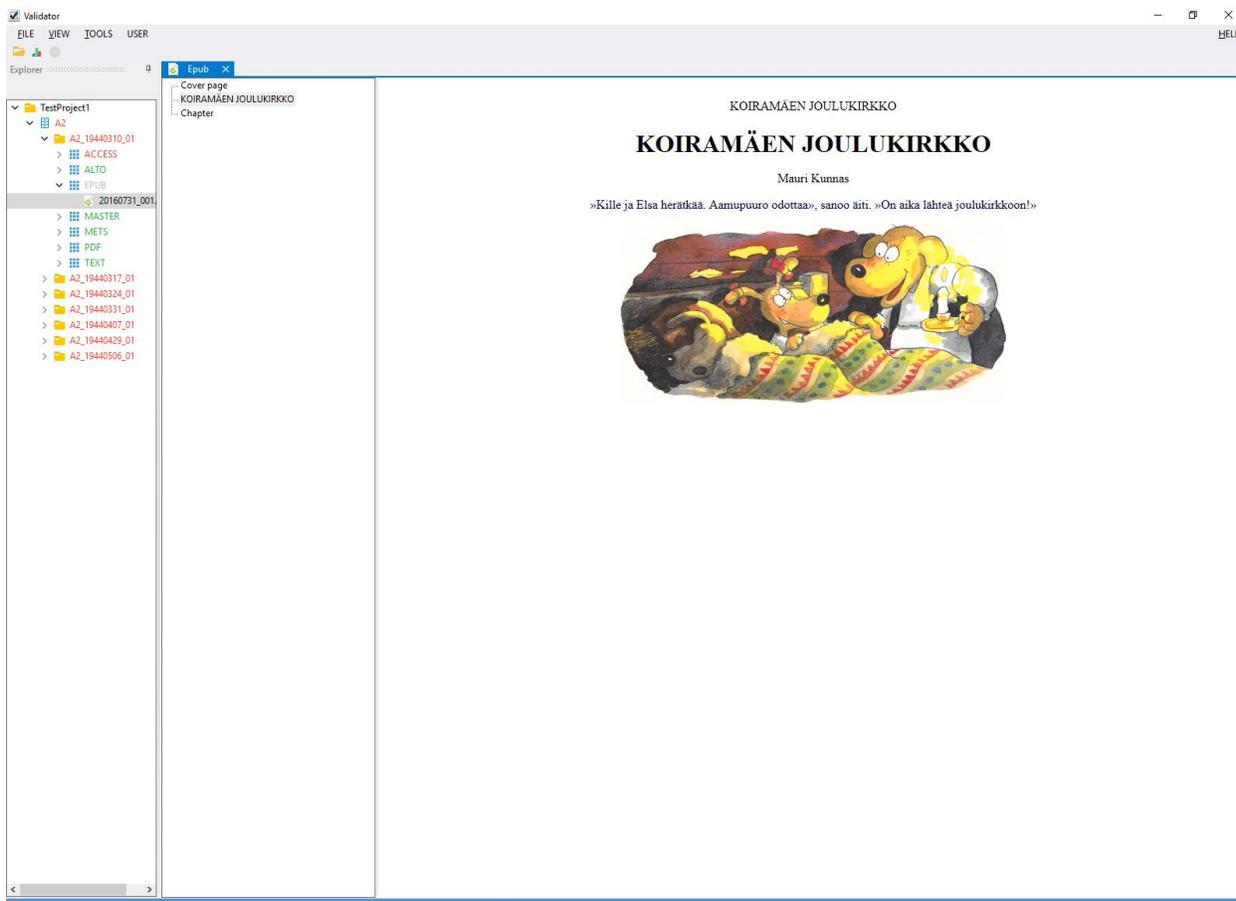
The Explorer pane on the left shows the file structure:

- KBNL\_Newspapers\_3\_0
  - TestBatch
    - Batch\_TestBatch
      - checksums
      - concordantietabel
      - MMKB15\_000000002\_3\_01.csv
      - pakbon
      - target.jp2.access
      - target.jp2.master
      - TestBatch\_MMKB15\_000055002
      - TestBatch\_MMKB15\_000055003

The Toolbox on the right allows setting the delimiter for CSV files, with options for comma and semicolon (selected).

## ViewManagerEpub

You can use this view manager to display \*.epub files. The Epub view contains a tree with the table of contents on the left side and the content on the book on the right side.



The screenshot displays the dWValidator software interface. On the left, a file explorer shows a project named 'TestProject1' with a tree structure including folders like 'A2', 'ACCESS', 'ALTO', 'EPUB', and '20160731\_001'. The right pane shows the 'Epub' view of a book cover. The cover text reads: 'KOIRAMÄEN JOULUKIRKKO' by Mauri Kunnas, with a quote: '»Kille ja Elsa herättää. Aamupuuro odottaa», sanoo äiti. »On aika lähteä joulukirkkoon!»'. Below the text is a colorful illustration of a dog and a cat sitting on a patterned blanket.

## ViewManagerCalendar



This view manager can be used to display calendar view having all days from all the issues from the batch highlighted.

You can configure dWValidator to display a Calendar view for a selected batch. To do this, you need custom scripting, which is done in **\*\*\*PROJECT\_CFG\*\*\*\ProjectName\CSScripts\interfaceScript.cs** file (uses C# as language).

First, you need to define a class derived from **Scripting.CalendarInterface**. The methods of this interface are called for every document of the selected batch, and all of them receive as input the document path.

For optimization purposes, the `bool LoadDocument(string documentPath)` method can be used to load the document files only once, save them in your custom implemented class, and use them in the other methods, ignoring the `documentPath` argument.

There are a few procedures that you need to add to your custom class:

```
public override bool LoadDocument(string documentPath)
```

**Tip:** Load the files (XML and others) and save them as members in your class, to avoid loading them in the other methods.

This procedure loads the necessary files needed for extracting information such as issue date, title, etc.

```
public override bool IsMissingIssue(string documentPath)
```

This procedure returns true if the document is marked as having a missing issue.

```
public override DateTime? GetIssueDate(string documentPath)
```

This procedure returns the issue date, or null if there is no issue date.

```
public override string GetIssueTitle(string documentPath)
```

This procedure returns the issue title.

```
public override string GetIssueAcronym(string documentPath)
```

This procedure returns the issue acronym.

```
public override string GetIssueNumber(string documentPath)
```

This procedure returns the issue number.

```
public override string GetEditionNumber(string documentPath)
```

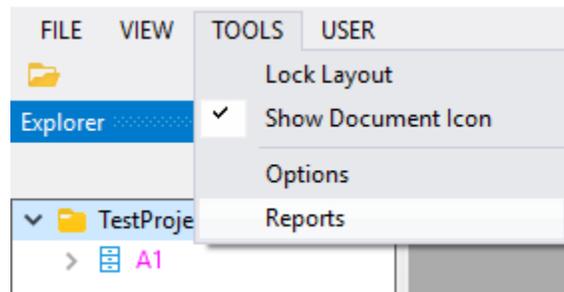
This procedure returns the edition number.

```
public override string GetVolumeNumber(string documentPath)
```

This procedure returns the volume number.

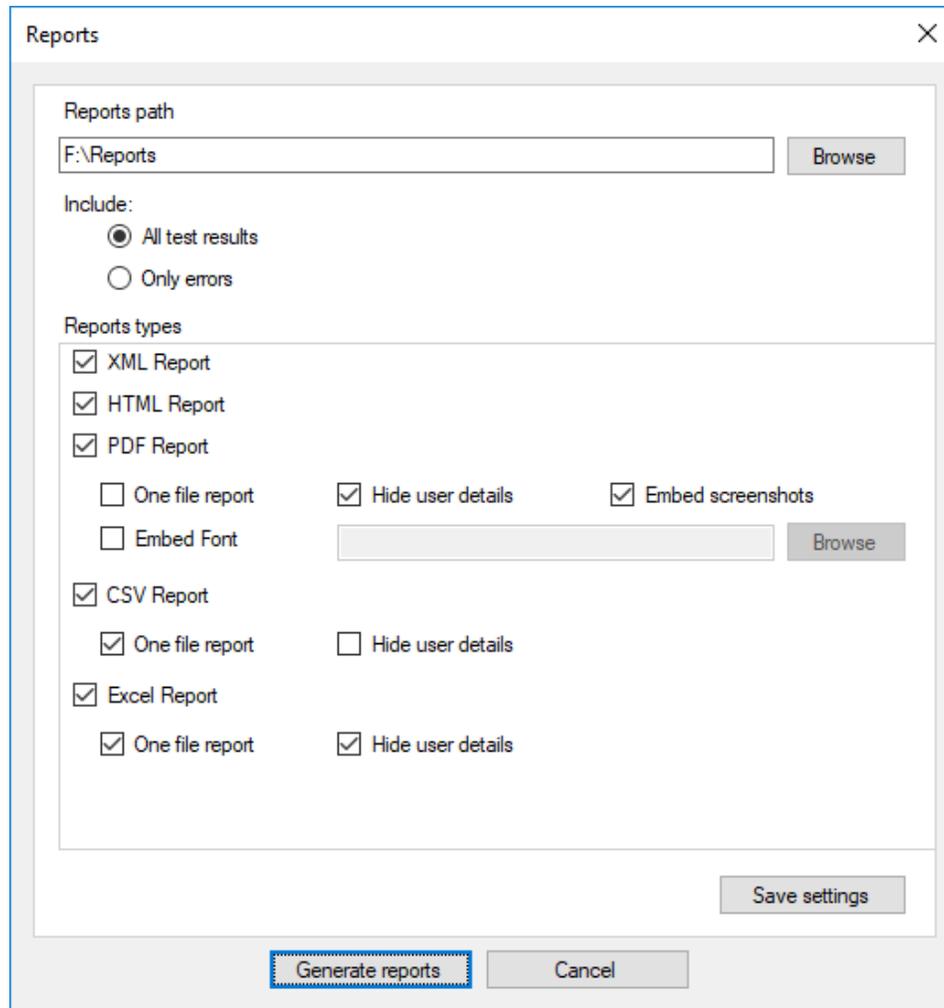
## Generate batch reports

If you want to have the reports of the validation and manual QA processes outside dWValidator, you can generate them using **Reports** option from **TOOLS** menu.



You need to be logged in and have a batch opened in order to generate reports, otherwise the **Reports** option will be disabled.

A dialog will be displayed where you can configure the path where you want to save the reports and the reports type that will be generated.



The **Save settings** button will save your options, so you don't have to change them each time you want to generate a report.

You have the possibility to add in the reports all the results of the validation, checking **All test results**, or only the validation results for failed tests (automatic and manual), checking **Only errors**.

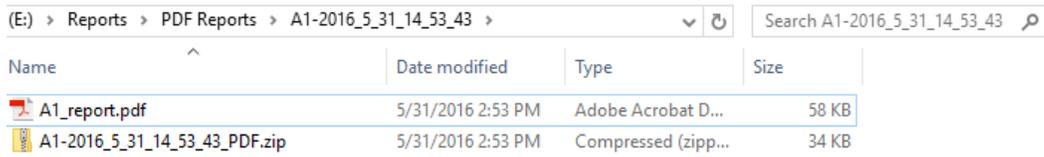
Also, for PDF, CSV and Excel reports you can choose to create only one file for the entire batch, using **One file report** check.

You can also remove user details (columns "Checked by" and "Checked on machine") from Manual QA reports by checking **Hide user details**.

For PDF reports, the screenshots attached to Manual QA tests can be embed as images and will appear inside the report file. This can help you see directly the problems found during the MQA process but will also increase the size of the PDF file on disk.

Because we use a standard font when creating a PDF file, some characters might not be displayed (for example: Chinese characters). You have the option to embed your own font using **Embed font** check and providing the path of the font.

Use **Generate reports** button to export the report. This will create a folder for each report type you select. Each folder will contain another folder named after the project name and time stamp.



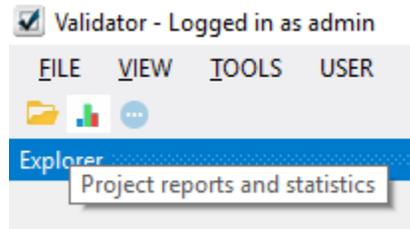
The screenshot shows a Windows File Explorer window with the address bar displaying the path: (E:) > Reports > PDF Reports > A1-2016\_5\_31\_14\_53\_43. A search box on the right contains the text 'Search A1-2016\_5\_31\_14\_53\_43'. The main area displays a table of files:

Name	Date modified	Type	Size
 A1_report.pdf	5/31/2016 2:53 PM	Adobe Acrobat D...	58 KB
 A1-2016_5_31_14_53_43_PDF.zip	5/31/2016 2:53 PM	Compressed (zipp...	34 KB

A zip file will also be created, containing all the files of the folder compressed.

## Project reports and statistics

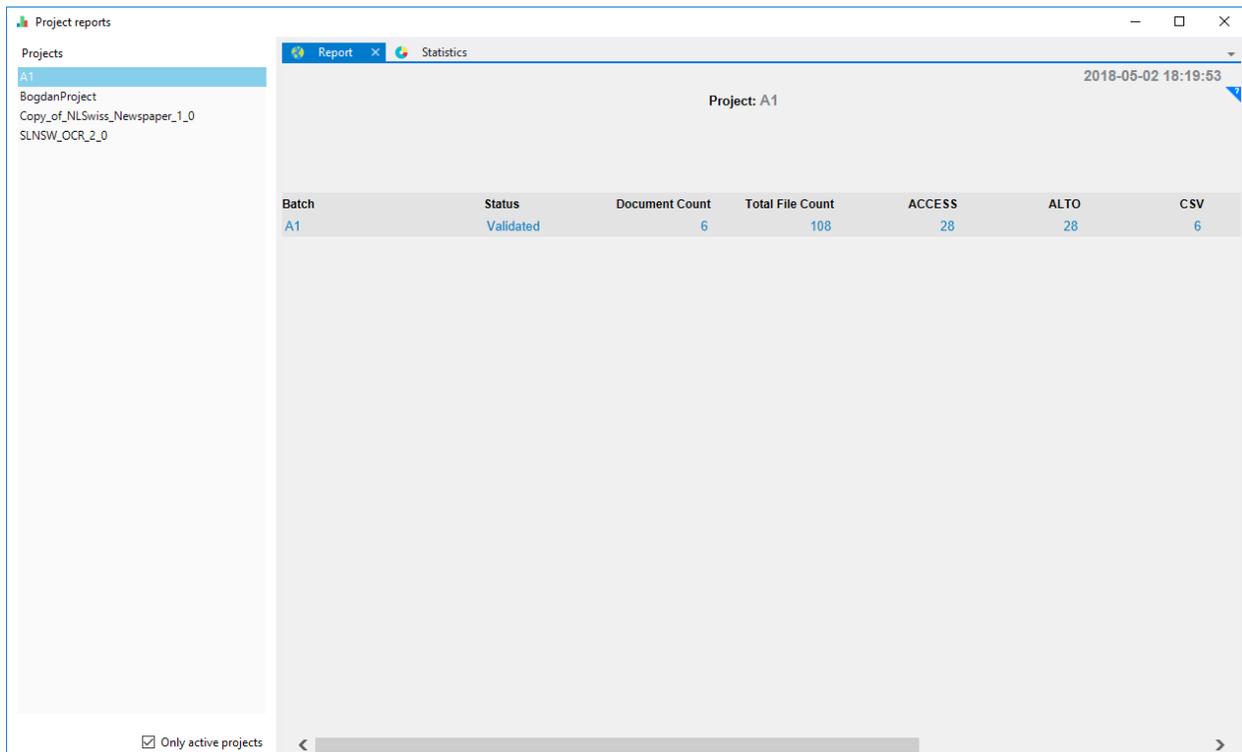
You can view a summary report of any project by using **Project reports and statistics** button from the main toolbar.



*Project reports and statistics* button can be disabled for two reasons: either you are not logged in, or your user account doesn't have the necessary right to modify configuration. For more details, see [Users rights Help](#).

The button will open a dialog where you can select the desired project and view a summary report of the batches and statistics.

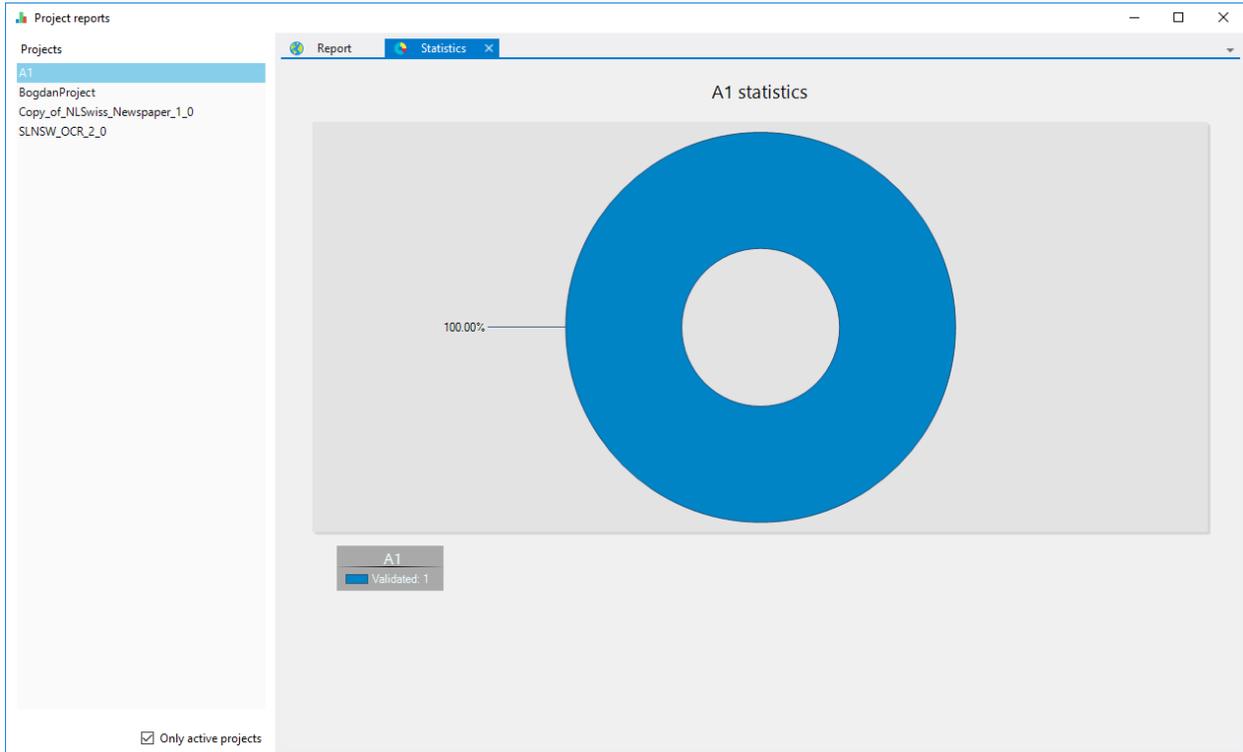
The report view shows all the batches of the selected project, with details about their status, number of documents, number of files.

A screenshot of the 'Project reports' dialog box. The left sidebar shows a list of projects: 'A1', 'BogdanProject', 'Copy\_of\_NLSwiss\_Newspaper\_1\_0', and 'SLNSW\_OCR\_2\_0'. The main area displays a report for 'Project: A1' as of '2018-05-02 18:19:53'. The report contains a table with the following data:

Batch	Status	Document Count	Total File Count	ACCESS	ALTO	CSV
A1	Validated	6	108	28	28	6

At the bottom left, there is a checkbox labeled 'Only active projects' which is checked. Navigation arrows are visible at the bottom of the main area.

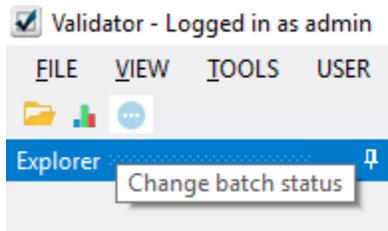
In statistics tab is displayed a pie chart representing the status of the bathes.



## Batch status

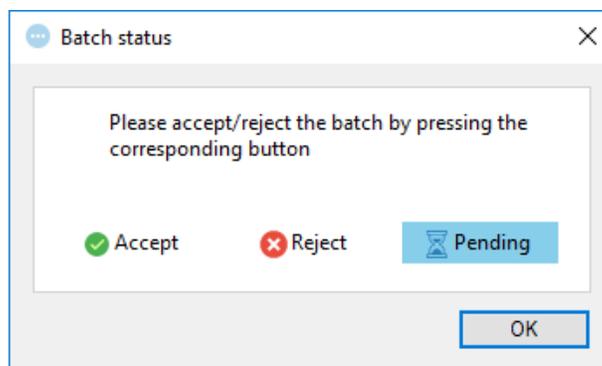
A batch can have different statuses (like Explored, Validated ...), but the application doesn't set as status **Accepted** or **Rejected**. Setting the acceptance of a batch has to be a human decision.

To manually change the status of a batch, use **Change batch status** button from the main toolbar.



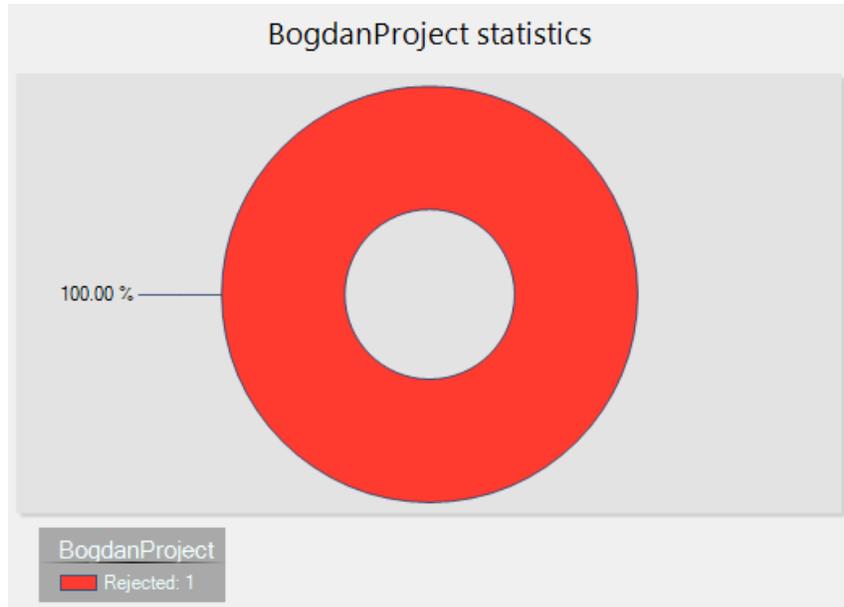
*Change batch status* button can be disabled for two reasons: either you are not logged in, or your user account doesn't have the necessary right to modify configuration. For more details, see [Users rights Help](#).

This will open a dialog where you can select a status:



The default status will be **Pending**, but you can select **Accept** if you consider the batch to be correct, or **Reject** if you want to reject the batch.

The batch status will then be updated in database, and will appear in project reports.



You always have the possibility to set the batch to its previous status by opening again the dialog and selecting  Pending.

In order to be able to change a batch status, its current status has to be **Validated**. Otherwise, the buttons for a different status will be disabled.

