User Manual

SVOWebApp 10.10

for SVObserver Version 10.10

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1 Revision History

|  |  |  |  |
| --- | --- | --- | --- |
| Version | Name | Date | Description |
| 00 | M. Weber | 12.05.2021 | First version |

2 General Information

SVOWebApp is provided by a web server on the SVIM. It retrieves data, images and results from the imaging software SVObserver to present them in an Internet browser.

SVOWebApp uses the HTML5 standard to support a multilingual, modern and user-friendly interface. It can be embedded in the machine HMI. You can access the web app also on multiple devices, e.g. a laptop or other mobile devices, via the internet browser, regardless of the operating system used.

The implementation of the current SVOWebApp is still in progress. All settings are still supported in the current SVObserver GUI. The final goal is to provide you with the required functionality known from the current SVObserver GUI.

2.1 Scope

This document exclusively includes information about and descriptions of SVOWebApp.

2.2 Screenshots

Please note that the screenshots used in this document can differ from the original software due to individual requirements or user permissions.

2.3 Installation of Third-Party Software

Please note that it is forbidden to install any software (even virus scanner programs) on our systems. Seidenader is not responsible for problems being caused by unauthorized software.

2.4 User Training

We offer special user training, please contact the Customer Support Group via support.inspection@koerber-pharma.com for details.

|  |  |
| --- | --- |
| 2.5 Contact   |  | | --- | | Seidenader Maschinenbau GmbH  Lilienthalstr. 8  D-85570 Markt Schwaben  Germany  Phone: +49 8121 802-0  Fax: +49 8121 802 100  E-mail: support.inspection@koerber-pharma.com | |

3 Getting started

You need to consider several requirements and steps before using SVOWebApp.

3.1 Requirements

3.1.1 Software-related requirements

Make sure to load a configuration in SVObserver before logging in to the Web App. You cannot load a configuration in the Web App. The Web App uses the configuration loaded in SVObserver.

The Web App displays "No configuration loaded in SVObserver" and offers only limited interaction possibilities, if there is no configuration loaded in SVObserver.

3.1.2 System requirements

Minimum system requirements for SVObserver Web App:

|  |  |
| --- | --- |
| Browser | Google Chrome |
| Operating system | Windows 7 or higher |
| RAM | Minimum 8 GB |
| Monitor resolution | 1280 x 1024 pixels |
| Network | Minimum Gigabit Ethernet Connection to SVObserver.  Not connected to other networks |

|  |
| --- |
| NoteOther settings may work, but they are not supported. |

3.2 Connection

|  |  |  |
| --- | --- | --- |
| SVOWebApp can connect to the inspection system via IP address or the computer name and port 80.  The connection to the inspection system must run via the protocol SVOGateway. It allows for the communication between SVObserver and clients, such as machine HMI and Internet browser.  When the configuration that you want to use was created with a previous version of SVObserver that is not matching the versions of SVObserver and SVOWebApp, the following error message shows: "Error while configuration: Error: Selected config is not compatible with the current WebApp version."  How to solve this configuration issue   |  | | --- | | NoteThe currently only solution involves that the SVOWebApp configuration is deleted. This means that you will lose any configured view sets and views. |   → Go to SVObserver.  → Open the folder "C:\RUN" in Explorer.  → Delete or rename the file "WebApp.json". It contains the SVOWebApp configuration.  → Refresh the SVOWebApp interface.  → Configure SVOWebApp by adding views.  → Save the view set in the View Manager.  → The file "WebApp.json" is created again.   |  | | --- | | NoteSVObserver is a high-performance inspection system. Connections to other networks than to the internal machine network are permitted. It is not allowed to install additional applications or services onto the inspection system. Virus scanners or firewalls are not allowed to run on the inspection system. SVRC clients need to be compatible to the running version of SVObserver. | |

3.3 Login

Once connected to SVOWebApp, the login screen appears in the Internet browser.

Enter the username and password used in HMI to log in to SVOWebApp.

→ Click in the field Username.

→ Enter username.

→ Click in the field Password.

→ Enter password.

→ Click the button LOGIN.

You can log off from SVOWebApp via the [top bar](#_Ref-199472137).

3.4 Start screen

3.4.1 First-time use

After a successful login, you see the start screen. By default, you see the top and bottom bar and an empty view set named "Initial".

3.4.2 Recurring use

If you close the WebApp and reopen it, the WebApp loads the configuration from the cache when the configuration was not changed in SVObserver in the meantime. This leads to a shorter loading time.

In this case, the start screen contains the configuration's view sets.

Learn more about the [general structure](#_Ref-1180522543) of the WebApp.

Learn more about [View Sets](#_Ref1567328757).

4 General structure

The SVOWebApp user interface is organized into four main sections:

1. [Top Bar](#_Ref-199472137)
2. [View Set](#_Ref1567328757)
3. Bottom bar: [View Set Navigation](#_Ref1743638418) and [View Set Manager](#_Ref124836191)

**Show and Hide the Top or Bottom Bar**

You can choose whether you want to see the top or bottom bar in the browser.

|  |
| --- |
| Hide the Top or Bottom Bar  You can hide the top bar and/or the bottom bar to allow for more screen space. The above picture shows the hide button within the top bar. You find the same button in the center of the bottom bar.  → Mouse over the semi-circular white shape on the bar.  → The button Hide appears.  → Click on the button Hide.  → The bar disappears and is not anymore shown in the user interface until you choose to view it when required. |

|  |
| --- |
| Display the Hidden Top or Bottom Bar  → Mouse over the semi-circular white shape at the center top of the screen to show the top bar respectively at the center bottom to show the bottom bar.  → The button Show appears.  → Click on the button Show.  → The bar shows on the screen. |

4.1 Top Bar

|  |
| --- |
| The top bar contains general information and functionality included in the following components:   1. [System Configuration](#_Ref-957806569) 2. [Operating Mode](#_Ref1209687906) 3. [Notifications](#_Ref833085096) 4. Toggle button to [pause/resume inspections](#_Ref-1810818461) 5. [Current user and other menus](#_Ref-588431973) 6. [Language Settings](#_Ref38946738) 7. [Date and Time](#_Ref625788868) |

4.1.1 System Configuration

This area displays the currently loaded SVObserver configuration. The name of the configuration is written in italics and followed by an asterisk, if there are unsaved changes.

4.1.2 Operating Mode

The area in the top bar displays the operating mode that is currently set.

You can operate SVOWebApp and SVObserver in various modes. The choice of mode depends on the required tasks and processes.

This button in the top bar indicates the mode in which SVObserver is operating. You can switch the operating mode if you have sufficient rights.

The following modes are available:

|  |  |
| --- | --- |
| Mode | Description |
|  | SVObserver acquires and processes images, reads inputs and sets outputs in this mode. |
|  | SVObserver does not accept any triggers while in this mode. You cannot edit or configure tools in this mode. |
|  | SVObserver processes previously archived images. |
|  | You can access some tool adjustments while taking images for testing purposes when you have sufficient rights. |
|  | You can add, adjust and delete configurations and tools when you have sufficient rights. |

|  |
| --- |
| Switch Operating Mode  To conduct certain user interactions, you have to switch SVObserver into the required operating mode.  When you change the mode, SVObserver is executed in the selected mode.  → Click on the button indicating the respective operating mode currently set.  → Select the designated mode from the available submenu items.  → The operating mode is set accordingly.  → When you switch from Run mode to Stop, Test or Edit more, the latest image and its corresponding inspection results are shown in the view set. |

4.1.3 Notifications

This button displays the most recent SVObserver notification.

→ Click on the notification displayed in the top bar to view a comprehensive list of notifications:

4.1.4 Toggle button to pause or resume inspections

With this toggle button you can pause or resume all or individual inspections in the view set. The button Inspection state shows how many inspections of the configuration are running. By clicking on the button, a drop-down list appears.

You can pause or resume all or individual inspections in this drop-down list. The drop-down list shows only the inspections that are part of the SVObserver configuration. A paused inspection continues to run in SVObserver.

When you are in Edit or in Stop mode, no inspection is active. When you press on the button to resume inspections when in Edit or in Stop mode, this has no effect.

Pause all inspections

→ Press the button Inspection state to open a drop-down list.

→ Press the button Pause all inspections.

→ All views pause at the currently displayed image and the corresponding inspection results.

→ The inspections continue to run in the background when you are in Run mode. You can verify in SVObserver that the inspections were not paused.

→ The notification "Reject stream was paused" shows in the top bar.

→ Images resulting from the ongoing inspections are not buffered and are not shown in the Image Strip View when you press Play.

Pause an individual inspection

→ Press the button Inspection state to open a drop-down list.

→ Select the inspection you want to pause.

→ Press the button Pause in front of the inspection's name.

→ The views for this inspection pause at the currently displayed image and the corresponding inspection results.

→ The inspection continues to run in the background when you are in Run mode. You can verify in SVObserver that the inspection was not paused.

→ The notification "Reject stream was paused" shows in the top bar.

→ Images resulting from the ongoing inspection are not buffered and are not shown in the Image Strip View when you press Play.

Resume all inspections

→ Press the button Inspection state to open a drop-down list.

→ Press the button Resume all inspections.

→ All inspections resume with the current image and inspection results. Please note that the inspections continued to run in SVObserver after you had pressed Pause all inspections in the top bar as long as the system was in Run mode.

→ Images that were taken during a pause are not shown in the image strip view. Thus, results to these images cannot be displayed in the List View.

Resume an individual inspection

→ Press the button Inspection state to open a drop-down list.

→ Select the inspection you want to resume.

→ Press the button Resume in front of the inspection's name.

→ The views for this inspection resume with the current image and inspection results. Please note that the inspection continued to run in SVObserver after you had pressed Pause all inspections in the top bar as long as the system was in Run mode.

→ Images that were taken during a pause are not shown in the image strip view. Thus, results to these images cannot be displayed in the List View.

**Interaction between image strip and inspection state**

It is also possible to pause and resume an individual inspection by clicking on an image shown in [image strip view](#_Ref-987980405). Alternatively, you can click on the Play/Pause button at the bottom of the image strip view. In both cases, you can see in the top bar the number representing the running inspections change accordingly.

4.1.5 Current user and other menus

This area displays the username of the logged in user and offers links to permissions, the help and other menus.

Click on the triangle below the username to display more menus:

The following menu items are available:

|  |  |
| --- | --- |
|  | Allows users with administrator rights to set permissions for user groups |
|  | Access SVOWebApp help |
|  | Access a full list of keyboard shortcuts |
|  | Shows information about the versions of SVOWebApp, SVObserver and SVOGateway. |
|  | Log off from SVOWebApp |

4.1.5.1 Permissions

This menu is only available when you are logged in with a user with administrator rights.

A user with administrator rights can set permissions for each user group or define whether the related menu or action is available when no user is logged in.

Menus, options and other elements related to a permission may not be displayed or may be grayed out if a user has not the sufficient permissions. You can use the user group "common" as a collective group when you want to assign rights to every user group. For an easier understanding, each permission is described on the right.

Please be careful when assigning permissions to user groups. Some permissions are required by other permissions to work properly.

The permissions to see views of any type is e.g. required when the permission to edit a view of any type is granted.

The permissions svobserver.file.read and svobserver.file.write are necessary for saving the configuration to SVObserver.

Example picture with grayed out names and descriptions for permissions and example user groups:

**Setting permission for a user group**

1. Scroll to the permission for which you want to configure the user group. You can find a description of each permission on the right.
2. Tick or untick the checkbox under the user group.
3. Click on "Save" in the top bar to save your changes in the WebApp configuration.
4. If you are finished, click on the button "Back to WebApp" to go back to the WebApp.
5. If you log in with a user for who you changed the permissions, menus, options and other elements may not be displayed or may be grayed out.

4.1.5.2 Shortcuts

You can use the following keyboard shortcuts to perform different tasks in SVOWebApp.

Task to Shortcut

| Task | Shortcut | Description |
| --- | --- | --- |
| Contextual Help | F1 | Access a suitable help topic related to the screen subject |
| Full screen | Ctrl + F | Click in the content of a view and press Ctrl + F. The active view is displayed in full screen respectively a view which is already in full screen is set back to normal view. |
| Reload | F5 | SVOWebApp will be restarted and its content updated |

Shortcut to Task

| Shortcut | Task | Description |
| --- | --- | --- |
| Ctrl + F | Full screen | Click in the content of a view and press Ctrl + F. The active view is displayed in full screen respectively a view which is already in full screen is set back to normal view |
| F1 | Contextual Help | Access web app help for a certain instance of the web app |
| F5 | Reload | SVOWebApp will be restarted and its content updated |

4.1.6  Language Settings

This area displays the currently selected interface language.

The display language is set to English by default and can be changed.

The following languages are available:

en: English

de: German

→ Click on the button labeled with the language code.

→ Choose the designated language.

→ The user interface changes instantly to the selected language.

4.1.7  Date and Time

This area displays the date and time of the local device: dd.mm.yyyy hh:mm:ss

4.2 View Set

A view set is the core part of SVOWebApp and is located in the center of the screen. It contains one or more views. You can group views to create a custom joint display of data, parameters and images. You can arrange and resize each view as needed. The organization of the views and the layout are saved. The above image shows an active view set with four included views.

View Sets are saved in the configuration. If you do not see any View Set, switch to SVObserver and load a configuration.

If you have not yet created a view set, you see an empty view where you can add a view.

Learn how to [add content to a view](#-33926034).

The SVOWebApp configuration can include multiple view sets. You can choose which of the available view sets you want to display in the center of the screen by using the view set navigation in the bottom bar.

You can find more details on how to create, edit and work with views under: [View](#_Ref-1902321261)

You can find more details on how to create, manage and save view sets under: [View Manager](#_Ref124836191)

You can find more details on how to display any of the available view sets under: [View Set Navigation](#_Ref1743638418)

4.2.1 View

A view provides a means of viewing and interacting with data or images via SVOWebApp. It is the basic element of a view set.

You can find more information about view sets under: [View Set](#_Ref1567328757)

If you have added content to a view, it has the following components:

1. [View title](#-13211606)
2. [View controls](#-217028566)
3. [View content](#1739286570)
4. [View type controls](#165308458)

If you have not yet edited a view, it only contains a single, empty view, where you can add a view and which includes only the view controls in the top right corner. The view title as well as the view type controls are shown if you have added content.

**View Title**

The view title provides more information about the source and the content type.

The view title indicates the inspection and, depending on the view type, the specific inspection tool or the view type of the added view content. If the view is empty, no title is shown.

**View Controls**

You can add view content via the general view controls located in the upper right corner of the view.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Views include the following general controls:   |  |  | | --- | --- | | Element | Description | |  | Split window | |  | Choose view type | |  | Delete view | |

Add view to view set

You can add as many views to a view set as you desire. The views are initially empty.

→ In the upper right corner of the view, click on Split window .

→ The view is split either on a horizontal or vertical dividing line, depending on the original shape of the view to be split.

**View Content**

The actual content of the view may include data, parameters, values or images which are visualized within the view. The displayed view content depends on the inspection and the view type (e.g. image, parameter, image strip, etc.) that you selected.

You can find more information about view types under: [View types](#_Ref-1348110416)

Add view content

You can add view content, such as data, parameters or images to a view by selecting a specific inspection and choosing from a list of predefined view types.

→ Click on Choose view type to display the following screen where you can select a view type. This step is not necessary when you add a view to a view set or when you set up a view set from scratch.

You can find more information on view types under: [View types](#_Ref-1348110416)

→ Select a view type from the list.

→ A list of available inspections is displayed (see example below).

→ Select an inspection.

→ Navigate through the selection tree by clicking on the plus buttons when needed. (This step is not necessary for toolset and parameter views.)

→ Click in the check box next to the image or result you want to display.

In order to find inspections faster, you can use the filter. Click in the filter field at the top, and enter your search term.

You can find more details on how to use the filter and about the displayed results in [Using the Filter](#_Ref1517779352).

**View Type Controls**

After you added content to the view, you see in the lower bar control elements. These controls vary depending on the view type. The view type controls are explained together with the respective view type.

You can find general information about view types under: [View types](#_Ref-1348110416)

You can find more information about the image view under: [Image View](#_Ref-590229867)

You can find more information about the parameter view under: [Parameter View](#_Ref1988657032)

You can find more information about the image strip view under: [Image Strip View](#_Ref-987980405)

You can find more information about the list view under: [List View](#_Ref1421479748)

You can find more information about the toolset view under: [Toolset View](#_Ref-393538324)

|  |
| --- |
| 4.2.2  View Types  The view type determines the means of how the desired view content, such as data, parameters and images, is visualized. |

You can choose from the following available view types:

* [Image View](#_Ref-590229867)
* [Parameter View](#_Ref1988657032)
* [Image Strip View](#_Ref1988657032)
* [List View](#_Ref1421479748)
* [Toolset View](#_Ref-393538324)

When you add content to a view, you must select the view type.

You can find more information on how to select a view type to an empty view under: [View](#_Ref-1902321261)

4.3  View Set Navigation

The view set navigation includes one or more buttons. Each button relates to an existing view set and is labeled with the view set name. The default name for the view set which has not been edited is "Initial".

A gray-shaded button indicates that the referring view set is being displayed at the center of the screen. This view set is referred to as the active view set.

→ Click on the referring view set button to display any other view set in the center of the screen.

4.4 View Set Manager

You find the view set manager on the right side of the bottom bar.

→ Click on the button View Set Manager to access the menu items.

→ A pop-up window appears in which you can manage your view sets.

You can create, rename, save, delete, export and import view sets in the view set manager.

View Set Manager Controls

The view set manager includes the following specific components and controls:

|  |  |
| --- | --- |
| Element | Description |
|  | Apply changes |
|  | Add new view set |
|  | Delete view set |
|  | Save all view sets and settings (organization of views, zoom factor and position of image, overlays and much more) |
|  | Export current view set |
|  | Import view set |

Note

Settings saved via the SVOWebApp interface are only saved in the SVOWebApp configuration and have no effect on SVObserver. If you want to save your settings in the SVObserver configuration, you can do so by using the SVObserver interface.

Add new view set

→ Click on the button View Set Manager (bottom right corner of the screen).

→ Enter in the input field Name the desired name for the view set you want to create. The maximum length for the name is 20 characters.

→ Click on the button Add View Set.

→ The new view set appears in the bottom bar.

|  |  |
| --- | --- |
| Rename existing view set  → In the view set navigation (bottom bar), click on the button indicating the view set name you want to rename  → The selected view set is displayed in the center of the screen. The view set button is highlighted in gray.  → Click on the button View Set Manager (bottom right corner of the screen).  → The view set manager opens in a pop-up window.  → In the input field Name, replace the old title with the desired new title.  → Click on the button Apply changes .  → The selected view set is renamed. You can see the new name in the bottom bar.  Save all view sets  → Click on the button View Set Manager (bottom right corner of the screen).  → The view set manager opens in a pop-up window.  In the input field "Name", the selected view set is indicated.  → Click on the button Save All View Sets .  → All changes to the view sets are saved in the web app configuration.  → When you restart the web app, the saved configuration is loaded automatically.   |  | | --- | | NoteSettings saved via the SVOWebApp interface are only saved in the SVOWebApp configuration and have no effect on SVObserver. If you want to save your settings in the SVObserver configuration, you can do so by using the SVObserver interface.  If you edit a view set and want to close the SVOWebApp, the software reminds you that your changes have not yet been saved. The name of the configuration is written in italics and followed by an asterisk, if there are unsaved changes. | |

Export view set

→ Click on the view set button in the bottom bar indicating the name of the view set you want to export.

→ The selected view set is displayed in the center of the screen.

→ The view set button is highlighted in gray.

→ Click on the button View Set Manager (bottom right corner of the screen).

→ The view set manager opens in a pop-up window.

In the input field Name, the selected view set is indicated.

→ Click on the button Export current view layout .

→ If the export is successful, the view set file is saved in the Downloads folder of your browser.

Import view set

→ When you import a view set, the currently selected view set is overwritten. If you do not want to overwrite a view set, you must create a new one by adding a view set.

→ Click on the view set button in the bottom bar indicating the name of the view set you want to overwrite.

→ The selected view set is displayed in the center of the screen.

→ The view set button is highlighted in gray.

→ Click on the button View Set Manager (bottom right corner of the screen).

→ The view set manager opens in a pop-up window.

In the input field Name, the selected view set is indicated.

→ Click on the button Import a view layout from file .

→ Select a file in the Explorer window and click on Open.

→ A warning appears if you try to overwrite an existing view set. Click on OK if you want to overwrite the content of the view set. Click on Cancel if you do not want to overwrite the content of the view set.

→ After a successful import, a pop-up window appears confirming the import.

Delete view set

→ Click on the view set button in the bottom bar indicating the name of the view set you want to delete

→ The selected view set is displayed in the center of the screen.

→ The view set button is highlighted in gray.

→ Click on the button View Set Manager (bottom right corner of the screen).

→ The view set manager opens in a pop-up window.

In the input field Name, the selected view set is indicated.

→ Click on the button Delete View Set .

→ The selected view set is removed from your screen.

4.5 Selection Tree

In the selection tree, you can select the tool results from the inspection tool set or an inspection tool. These results refer to the inspection of the SVObserver configuration. The selection tree has a different look depending on the view type.

Example of a selection tree of a parameter view:

The selection tree consists of a filter and the tree. You can [use the filter](#_Ref1517779352) or navigate through the tree to find tool results.

Navigate through the tree

There are two ways how you can navigate through the tree. You can choose to select more or less information:

* Click on the plus button before a node to expand the subordinate values or sub-nodes.
* Click on the minus button before a node to collapse the subordinate values or sub-nodes.

**Select tool result for use in SVOWebApp**

The selection tree has a different look depending on the view type. You can select tool results or an image source.

Select an image for use in an Image View or an Image Strip View

The selection tree is displayed when you add an image source to an [image view](#-498145984) or an [image strip view](#-494908777).

→ Click on the plus button of the desired inspection tool.

→ A subordinate node shows.

→ Click on the plus button before the subordinate node.

→ Click in the field next to the image you want to select.

→ The selection tree disappears. The image view shows <UNAVAILABLE>.

→ Switch to run mode to display the selected image.

Select a tool result for use in Parameter View

The selection tree is displayed when you edit a variable value of a parameter in a [parameter view](#1252759959).

→ Click on the plus button of the desired inspection tool.

→ If a subordinate node shows, click on the plus button before the subordinate node.

→ Click in the field next to the variable you want to select.

→ The parameter view appears. The field contains the variable you selected.

Select one or several tool results for display in List View

The selection tree is displayed when you add a [list view](#_Ref1421479748). You can select one, several or a group of tool results.

→ Click on the plus button of the desired inspection tool.

→ If a subordinate node shows, click on the plus button before the subordinate node.

→ Click in the field next to one or several tool results you want to select.

→ A checkmark shows in the field next to the selected tool result .

→ If you want to display all tool results from a node, click on the field next the node you want to select.

→ A checkmark shows in the field next to the selected node .

If you select several but not all values from a specific node or subordinate node, the field next to this node shows a checkmark with a gray background:

4.5.1 Using the Filter

The filter provides a fast way to find a specific image or tool result from an inspection tool. The filter is displayed

* when you add an image source to an [Image View](#_Ref-590229867) or an [Image Strip View](#_Ref-987980405),
* when you select values in [List View](#_Ref1421479748) or
* when you apply values in [Parameter View](#_Ref1988657032).

Example of a filter:

**How to use the filter**

→ Click in the field Filter.

→ Enter your search term.

The search results are displayed.

Matching letters and words are underlined and highlighted. The search is not case-sensitive.

The search finds matches in nodes and in subordinate values. Only a limited number of matches is displayed.

Example of results for the search "count":

To return to the full selection tree showing all nodes, delete the search term you entered in the field Filter.

Which results are displayed

The search finds words and letters that match your search term. Single letters are considered as well.

When you enter your search term, you have to enter the search terms in the same order as they appear in the selection tree (see example below).

When you perform a search over several sub-nodes, use a dot to separate your search terms and jump to the next sub-node.

Example of different results when searching for "passed count" and when searching for "count passed"

Example of a search performed over several sub-nodes

Hint: Narrow down search

If you want to display all subordinate values containing "count", enter "count" in the field Filter.

This may result in a long list of matches comparable to this screenshot:

You can narrow down the matches by entering before "count" the name of the inspection tool. This is useful when you know the inspection tool which returns the value you search.

Example of a search (narrowed down to "data valid count"):

5 Image View

This view type features images acquired by SVObserver. It contains overlays from the selected inspection or tool.

The image view includes the following specific components:

1. Featured image (center), depicted with [overlays](#1506227741)
2. [Image controls](#1305956216) (bottom left)

|  |
| --- |
| NoteYou can save all view sets and incorporated views via the [view manager](file:///C:/Users/1342/Desktop/SVOWebApp/10.10/SVOWebApp/Content/Obsolete/View_manager.htm). All changes will only be saved in the SVOWebApp configuration. |

**Select Image**

You can select whether you want to display images from an inspection or from a specific inspection tool.

The image from an inspection includes all inspection overlays.

Images from an inspection represent the image that results from the SVObserver configuration of this inspection tool. An image from a specific tool represents the applied SVObserver configuration of this tool (filter, threshold etc. included).

This may lead to the effect that an image from a specific tool might look different than the image from the whole inspection or from another tool of the same inspection.

You can find more details on how to configure inspection tools and overlays in the SVObserver manual.

Add image source to image view

→ In an empty view, click on Image , and select the desired inspection.

→ Scroll in the [selection tree](#_Ref1552754166) to the inspection tool for which you want to display the images.

→ Navigate through the selection tree by clicking on the plus buttons when needed.

→ Click in the check box next to the image you want to display.

→ Switch the operating mode to Run Mode.

In order to find inspections faster, you can use the filter. Click in the filter field at the top, and enter your search term.

You can find more details on how to use the filter and about the displayed results in [Using the Filter](#_Ref1517779352).

**Overlays**

An overlay is a shape superimposed on an image displayed in image view. There are two different types of overlays. Inspection overlays and custom overlays.

Inspection overlays are transferred from the SVObserver inspection tools.

You can create custom overlays to highlight areas in the [Parameter View](#_Ref1988657032). You can hide or show custom overlays.

You can find more details about overlays and the difference between custom overlays and inspection overlays in [Overlays](#_Ref2007052144).

**Dragging and Panning Images**

You can navigate the image within the view by using the mouse or your fingers.

|  |
| --- |
| Zoom image in image view  → Place the cursor on the image.  → Use the mouse wheel to zoom the image.  Alternatively, you can spread your fingers apart if your device support multi-touch. |

|  |
| --- |
| Drag image in image view  → Place the cursor on the image.  → Hold down the mouse button and drag the image.  Alternatively, you can pinch your fingers together if your device support multi-touch. |

**Image Controls**

The image view offers the following elements to control the image (from left to right):

|  |  |
| --- | --- |
| Element | Description |
|  | 1:1 original image size |
|  | Fit image to width |
|  | Fit image to height |
|  | Download image |
|  | Download image with overlays |
|  | Display [overlay list](#1854207207) to show or hide custom overlays all together or individually |
|  | Display [image information](#-1113026267)  Show image width/height, cursor position (X, Y) relative to image, color and RGB color value of the pixel |

|  |
| --- |
| Download image without overlays  You can download the image without any overlays to any location  → In the view menu, press Download image .  → The image is saved to the location specified in the browser settings. The saved image does not contain any inspection or custom overlays. |

|  |
| --- |
| Download image with overlays  You can download the image with inspection and custom overlays to any location  → In the view menu, press Download image with overlays .  → The image is saved to the location specified in the browser settings. |

**Overlay List**

The overlay list offers options to show and hide custom overlays in the image.

You can show or hide custom overlays either all together or individually.

→ To open the overlay list, click on the button Overlay list in the view controls bar.

The overlay list opens in a separate window within the active view next to the featured image.

|  |
| --- |
| Hide custom overlays in image view  You have two options to hide custom overlays in the featured image:  Hide all custom overlays  → In the view menu, click on the button Overlay list .  → The overlay list opens within the active view.  → Uncheck the checkbox next to the heading Overlays.  → Custom overlays are no longer displayed with the featured image.  Hide individual custom overlays  → In the view menu, click on the button Overlay list .  → The overlay list opens in the active view.  → Uncheck the checkbox next to the custom overlay you want to hide .  → The respective custom overlay is no longer displayed with the image. |

|  |
| --- |
| Show custom overlays in image view  You have two options to display custom overlays in the featured image:  Show all custom overlays  → In the view menu, click on the button Overlay list .  → The overlay list opens in the active view.  → Activate the checkbox next to the heading Overlays.  → Custom overlays are displayed in the image.  Show individual custom overlays  → In the view menu, click on the button Overlay list .  → The overlay list opens in the active view.  → Check the checkbox next to the custom overlay you want to show .  → The respective custom overlay is displayed in the image. |

**Image Information**

You can display additional information about the image and the cursor position.

→ To display image information, click on the button Image information in the image controls bar.

The information shows in a separate window within the active image view.

You can view the size of the image (width/height), cursor position (X/Y) relative to image, and color and RGB color value (0, 0, 0) of the pixel.

**Image View during Run Mode**

The image shown in an Image View is constantly updated when in Run Mode. The image view shows in Run Mode always the current image of the SVObserver configuration.

You can pause the image shown in the Image View:

→ Click on the top bar on Inspection state and select the inspection you want to pause.

→ Alternatively, press Pause in an Image Strip View that refers to the same inspection.

→ The notification "Reject stream was paused" shows in the top bar.

→ The inspection continues to run. You can verify in SVObserver that the inspection was not paused.

For more information about how to resume the automatic update of images, refer to [Play image strip](#1736980124).

Select image to display in Image View from Image Strip View

If you have an image view and an image strip view, both referring to the same inspection, you can select an image from the image strip to be displayed in the image view.

→ You need an Image Strip View and an Image View for the same inspection.

→ Click on an image in the image strip.

→ An image of the corresponding object is displayed in the image view.

→ The image strip is paused and the notification "Reject stream was paused" shows in the top bar.

5.1 Overlays

An overlay is a shape superimposed on an image displayed in image view.

There are two different types of overlays.

**Inspection Overlays**

Inspection overlays are transferred from the SVObserver inspection tools and are included in images displayed in the Image and Image Strip View. Images contain several inspection overlays as these reflect the inspection tools configured in SVObserver.

Inspection overlays may contain arrows, lines and other graphs. The SVOWebApp displays overlays from analyzers as inspection overlays, but these are not shown when you switch to Run Mode.

It is not possible to change the dimensions of inspection overlays or hide them in SVOWebApp.

The properties and the name of inspection tools are identical to those in SVObserver. If you want to change them, you must change them in the SVObserver configuration.

The color of the inspection overlays is identical to the color in SVObserver. In run mode, the color may change according to the tool configuration made in SVObserver.

Example of three inspection overlays:

You can find more details on how to configure inspection tools and overlays in the SVObserver manual.

**Custom Overlays**

A custom overlay is a customizable overlay that you can apply and superimpose on an image in image view. It is possible to apply multiple custom overlays to one instance of the image view.

You can use an overlay for various purposes, e.g. to identify or indicate errors. You can feature certain aspects within the defined section of the image.

The custom overlay is only available in SVOWebApp.

The custom overlays' properties (e.g. dimensions, color, name) are managed in a separate instance of a [Parameter View](#_Ref1988657032).

Example of a custom overlay (in yellow)

You can find more details on how to use the parameter view under: [Parameter View](#_Ref1988657032)

6 Parameter View

This view type indicates parameters and their values in reference to a selected image view. The parameter view is context sensitive, as this view always displays the parameters that are applied to a custom overlay in an Image View when in run mode.

For example, a parameter view that is targeted to an instance of image view includes all relevant parameters to manage one or more custom overlays.

**Custom Overlay Parameters**

You can create and configure custom overlays in a parameter view. The [target image](#230508829) and the overlay are featured in an image view. You can apply multiple custom overlays to one instance of an image view.

You can find more details on custom overlays and their difference to inspection overlays in [Overlays](#_Ref2007052144).

The parameter view for custom overlays includes the following specific components:

1. [Overlay list](#141219391)
2. [Overlay parameters](#-1552880271)
3. [Parameter controls](#1673240799)

**Overlay List**

This list indicates all custom overlays for the target image. Inspection overlays are not listed in the overlay list. You have to add custom overlays by using the [Parameter Controls](#1673240799) at the bottom of the view.

|  |
| --- |
| NoteThere might be no entry in the overlay list until you have created a custom overlay. |

Hide custom overlays in image view

You have two options to hide custom overlays in the image:

Hide all custom overlays

→ Uncheck the checkbox next to the heading Overlays.

→ Custom overlays are no longer displayed with the image.

Hide individual custom overlays

→ Uncheck the checkbox next to the custom overlay you want to hide .

→ The respective custom overlay is no longer displayed with the image.

Show custom overlays in image view

You have two options to display custom overlays in the featured image:

Show all custom overlays

→ Activate the checkbox next to the heading Overlays.

→ Custom overlays are displayed in the image.

Show individual custom overlays

→ Check the checkbox next to the custom overlay you want to show .

→ The respective custom overlay is displayed in the image.

|  |
| --- |
| NoteThe overlay list indicates only the custom overlays that refer to the currently selected image view of the same inspection. This means that the custom overlays shown in the list change when you switch between the image views. |

**Overlay parameters**

There are various input fields to add parameters of the custom overlay. You can change the parameters for the selected custom overlay.

Certain fields allow to enter constant values. These values stay the same when in run mode.

You can select variable values in certain fields that have a small "x" at the end. The values of these variables are updated when in run mode depending on the SVObserver configuration.

For more information about how to edit parameters, see [Edit parameters for a custom overlay](#1252759959).

The following overlay parameters are available:

|  |  |
| --- | --- |
| Parameter field | Description |
| Label | Name of custom overlay |
| X | X coordinate value [px] of the shape (only numbers are allowed) |
| X Variable | X variable as selected from the [parameters tree](#-1403641373) |
| Offset Left | Left position of X [px] relative to the left edge of the featured image (only numbers are allowed) |
| Offset Left Variable | Offset left variable as selected from the [[parameters tree](#-1403641373)](file:///C:/Users/1342/Desktop/SVOWebApp/10.10/SVOWebApp/Content/Parameter_view.htm#Parameter_List) |
| Y | Y coordinate value [px] of the shape (only numbers are allowed) |
| Y Variable | Y variable as selected from the [parameters tree](#-1403641373) |
| Offset Top | Top position of Y [px] relative to the top edge of the featured image (only numbers are allowed) |
| Offset Top Variable | Offset top variable as selected from the [[parameters tree](#-1403641373)](file:///C:/Users/1342/Desktop/SVOWebApp/10.10/SVOWebApp/Content/Parameter_view.htm#Parameter_List) |
| Width | Width of the shape [px] (only numbers are allowed) |
| Width Variable | Width variable as selected from the [[parameters tree](#-1403641373)](file:///C:/Users/1342/Desktop/SVOWebApp/10.10/SVOWebApp/Content/Parameter_view.htm#Parameter_List) |
| Height | Height of the shape [px] (only numbers are allowed) |
| Height Variable | Height variable as selected from the [[parameters tree](#-1403641373)](file:///C:/Users/1342/Desktop/SVOWebApp/10.10/SVOWebApp/Content/Parameter_view.htm#Parameter_List) |
| Color | Hexadecimal color of the shape, e.g. #ebfc02 |
| Color Variable | Color variable as selected from the [[parameters tree](#-1403641373)](file:///C:/Users/1342/Desktop/SVOWebApp/10.10/SVOWebApp/Content/Parameter_view.htm#Parameter_List) |
| Line Style | Line style of the rectangle. The following line styles can be applied:   * solid * dotted * dashed |

**Exceeding maximum allowed values**

The maximum value for dimensions-related parameters (X, Y, Offset Left, Offset Top, Width and Height) is fixed to two times the image size.

If you enter a fixed value for one of these parameters, the value changes automatically to the maximum allowed value.

If the value for a variable exceeds the allowed maximum, you see in the notifications area a notification specifying the allowed range. If you expand the list of notifications, you see a counter that shows how often the value has already exceeded the maximum. The maximum allowed value is used to visualize the overlay.

*Example:*

The image has a size of 100 px. The maximum value is 200 px. When the variable entered for X has a value of 250 px, the overlay is positioned at 200 px as it is the maximum value. You see a notification specifying that the value should be within a range of minus 200 to 200 px.

**Parameter Controls**

The parameter view offers the following elements to control the parameters (from left to right):

|  |  |
| --- | --- |
| Element | Description |
|  | Add custom overlay |
|  | Delete custom overlay  Note: Clicking this button deletes the custom overlay that is currently selected. The custom overlay is no longer available for future use and the parameter set is permanently erased. |

|  |
| --- |
| Add custom overlay  You can create several overlays for a target image by adding them to the overlay list in the respective parameter view.  → In the view menu, click on the button Add overlay.  → A new custom overlay is added to the overlay list. |

Edit parameters for a custom overlay

After you added a custom overlay, you can edit all parameters for this custom overlay. You can choose to enter constant or variable values.

→ Click in the parameter field to enter or change a value.

→ If the cursor is placed inside the field, you can enter a value manually. (Refer to [Overlay Parameters](#-1552880271) for more information and character restrictions.)

→ If a selection tree opens in a pop-up window, navigate through the parameters tree to the parameter you want to select. Click in the box next to the desired parameter. (For more information about how to navigate through the selection tree, see [Selection Tree](#_Ref1552754166))

→ If a drop-down list opens, select the desired parameter by clicking on it.

All changes are applied immediately on the custom overlay in the associated image view.

The actual parameter value is not indicated in the parameter list. In some cases, it might be useful to view the value referring to the applied parameter. You have to create a view of the type list for the same inspection. You can find more information about how to display the parameter values under [Show values of selected parameters](#1334669731) in [List View](#_Ref1421479748).

|  |
| --- |
| Delete custom overlay  Besides the option of hiding a custom overlay in the image view, you can also delete a custom overlay.  → In the overlay list, click on the custom overlay you want to delete.  → In the parameters control, click on the button Delete.  Note  Clicking this button deletes the custom overlay that is currently selected. The custom overlay is no longer available for future use and the parameter set is permanently erased. |

**Target Image**

The dependency between the custom overlay parameters and the target image featured in an image view is visualized by a green frame around the target image view.

**Display custom overlay in image view**

To view one or more custom overlays on an image as well as the overlay parameters, following views are required:

1. One instance of image view that features the target image as well as the custom overlays
2. One instance of parameter view for the same inspection to edit the parameters for the custom overlay

Both instances of image view and parameter view have to refer to the same inspection as indicated in the view title.

If you add a parameter view for a specific inspection and there is no image view for this inspection in the current view set, the following message appears: "Please select a source for this parameter view."

|  |
| --- |
| Associate parameter view and image views  You can establish the dependency between one instance of parameter view and several instances of image view referring to the same inspection by following these steps:  → Add the instances of image view that you want to display for one inspection.  → Add one parameter view for the same inspection.  → Click on the instance of the image view in which you want to add a custom overlay. A green frame is displayed to show that this image view is selected.  → You can now add a custom overlay and edit its parameters. |

7 Image Strip View

This view type features images from an inspection or from a specific inspection tool in sequence. An image is added at the most left place, previous images move to the right when a new image is added to the strip. Image strip view only adds an image of the current object to the image strip when the reject condition specified in the SVObserver's monitor list is fulfilled (i.e. when the result is TRUE). If there is no reject condition specified, no images are displayed.

The most recent image is featured as the first image on the left.

You can select whether you want to display the image containing the overlays of the toolset or the image resulting from one tool.

The image strip view includes the following specific components:

1. [Image strip](#-494908777)
2. [Image strip controls](#-2138883366)

You can navigate through the image strip by dragging the scroll bar or by pressing the arrow keys on your keyboard.

**Select Image**

You can select whether you want to display images from an inspection or from a specific inspection tool.

The image from an inspection includes all inspection overlays.

Images from an inspection represent the image that results from the SVObserver configuration of this inspection tool. An image from a specific tool represents the applied SVObserver configuration of this tool (filter, threshold etc. included).

This may lead to the effect that an image from a specific tool might look different than the image from the whole inspection or from another tool of the same inspection.

You can find more details on how to configure inspection tools and overlays in the SVObserver manual.

Add image source to image strip

→ In an empty view, click on the button Image Strip and select the desired inspection.

→ Scroll in the [selection tree](#_Ref1552754166) to the inspection tool for which you want to display the images.

→ Click on the plus button to expand the line below. Click on the plus button in the line below.

→ Click in the check box next to the image you want to display.

→ Switch the operating mode to Run Mode.

In order to find inspections faster, you can use the filter. Click in the filter field at the top, and enter your search term.

You can find more details on how to use the filter and the displayed results in [Using the Filter](#_Ref1517779352).

**Image Strip Controls**

The image strip view offers the following controls:

|  |  |
| --- | --- |
| Element | Description |
|  | Play/Resume inspection |
|  | Pause inspection |

|  |
| --- |
| Interaction between image strip view and image view  If you click on an image in the image strip view, the linked image view automatically shows the corresponding image. If you pause or resume an inspection, images in image strip view and image view are paused or resumed as well. For an instruction on how to pause or resume an inspection, see below.    Pause inspection  → In the view menu, press the button Pause or click on one of the currently displayed images  → The image strips pauses at the currently displayed image. The image in an image view (if applicable) and its corresponding inspection results are paused as well.  → The number of running inspections displayed in the top bar next to Inspection state changes accordingly.  → The inspection continues to run. You can verify in SVObserver that the inspection was not paused.  → The notification "Reject stream was paused" shows in the top bar.  → Images resulting from the ongoing inspection are not buffered and are not shown when you resume the inspection by pressing Play or one of the displayed images in the image strip view. |

|  |
| --- |
| Resume inspection  → In the view menu, press the button Play .  → The image strip resumes at the image that was taken last in the inspection. Please note that the inspection continued to run in SVObserver after you had pressed Pause in the image strip.  → The number of running inspections displayed in the top bar next to Inspection state changes accordingly.  → The image in an image view (if applicable) and its corresponding inspection results resume to update as well.  → The notification "Reject stream was resumed" shows in the top bar.  → Images that were taken during a pause are not shown in the image strip view. |

Show image in bigger size

→ Right-click on the image and select Open image in new tab.

→ A new tab opens where you can see the same image in bigger size.

Save image

→ Right-click on the image and select Save image as....

→ Define a file name, file extension and a location.

→ Press Save.

8 List View

This view type features parameters and values from SVObserver in list format. You can view the parameters available for the whole tool set and you can rename them by specifying aliases.

The list view includes the following specific components:

1. Parameter list
2. List controls (bottom left)

If you click on one of the headers "Name" or "Value", the list elements are ordered alphabetically. If you click again, the order is reversed.

**Parameter list**

The parameter list shows the parameters you selected.

Each list item indicates the fully qualified name for one parameter. You can specify for each parameter an alias name and rename the parameter.

You can select up to 100 parameters by checking the checkboxes next to them. If you click on the toggle button, you see the values for the selected parameters. For more information, see [Show values of selected parameters](#1334669731). You can also change the order of the list entries.

**List View Control**

The list view offers the following controls:

|  |  |
| --- | --- |
| Element | Description |
|  | Toggle between visualization of all available parameters and visualization of values for selected parameters |
|  | Toggle between alias and fully qualified SVObserver name |

|  |
| --- |
| Show values of selected parameters  → Scroll in the [selection tree](#_Ref1552754166) to the inspection tool for which you want to display the images.  → Click on the plus button to expand the lines below.  → Click in the check box next to the parameter you want to display.  → Click on the button Save . |

|  |
| --- |
| Hide values of selected parameters  → Click on the button Save .  → The parameter list containing all parameters available for the inspection is shown. |

Show/hide aliases

→ If you want to show the aliases you specified, click on the button Show aliases. Parameters without any alias still show their fully qualified name.

→ If you want to hide the aliases and show the fully qualified name of the parameters, click on the button Hide aliases .

Reorder the entries in the list

→ Click on the small dotted grid and hold the button pressed.

→ Drag the list entry to the desired place and release the button.

**Dialog "Set Alias"**

In the dialog Set alias for dotted name you can rename a parameter. You can specify an alias for each available language that is displayed when you select the respective language in the top bar. You can enter any letter or number and spaces. Aliases are only available in list views, they are not available in other view types nor in SVObserver.

Rename parameters

→ If you selected parameters and see the list of parameters and values, click on the button Set alias for dotted name.

→ In the new window, you can specify an alias for German and English.

→ Click on the button Save .

→ The alias is displayed immediately. You may need to press the toggle button Show aliases to see the aliases.

If you set an alias only for one language, the parameter shows the fully qualified name when the other language is selected.

Dotted name shows the fully qualified name from SVObserver. Value shows the current value resulting from the inspection.

If you set an alias in a list view for one inspection, this alias is not available in views of another type for the same inspection. You must search for the fully qualified name in other view types.

But this alias is shown in other list views for the same inspection. This means it is not possible to create several list views and to give different aliases for the same parameter.

9 Toolset View

The toolset view displays a list of the tools used in the corresponding SVObserver inspection. Currently, it offers a restricted view on the tools and their settings as sub-nodes, which represent the titles of tabs known from SVObserver. For now, the Toolset View offers no further interaction with these settings. You can click on each tool to expand a list of its settings.

If the inspection uses grouped tools, the tool groups are not displayed.

Add toolset to toolset view

→ In an empty view, click on Toolset, and select the desired inspection.

→ The toolset is displayed as a list.

10 Seidenader Software License Terms

The Seidenader software license terms specify the legal conditions for using the software.

**Scope of the Software**

Seidenader products do not include an operating system (OS) and third-party tools installed on the OS.

The licensed products contains:

* SVObserver Inspection System
* SVOGateway Communications Module
* SVRC Interface Client

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Last updated 21 September 2017

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Igor Pavlov

10.1.6 Microsoft Sysinternals PSTools

‎09‎/‎28‎/‎2009

5 minutes to read

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Kent Sharkey

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10.1.7 Microsoft .NET Framework

‎09‎/‎13‎/‎2006

9 minutes to read

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10.1.25 Python

Python 3.4.0 license

This is the official license for the Python 3.4.0 release:

A. HISTORY OF THE SOFTWARE

==========================

Python was created in the early 1990s by Guido van Rossum at Stichting Mathematisch Centrum (CWI, see http://www.cwi.nl) in the Netherlands as a successor of a language called ABC. Guido remains Python's principal author, although it includes many contributions from others. In 1995, Guido continued his work on Python at the Corporation for National Research Initiatives (CNRI, see http://www.cnri.reston.va.us) in Reston, Virginia where he released several versions of the software. In May 2000, Guido and the Python core development team moved to BeOpen.com to form the BeOpen PythonLabs team. In October of the same year, the PythonLabs team moved to Digital Creations (now Zope Corporation, see http://www.zope.com). In 2001, the Python Software Foundation (PSF, see http://www.python.org/psf/) was formed, a non-profit organization created specifically to own Python-related Intellectual Property. Zope Corporation is a sponsoring member of the PSF.

All Python releases are Open Source (see http://www.opensource.org for the Open Source Definition). Historically, most, but not all, Python releases have also been GPL-compatible; the table below summarizes the various releases.

Release Derived Year Owner GPL-

from compatible? (1)

0.9.0 thru 1.2 1991-1995 CWI yes

1.3 thru 1.5.2 1.2 1995-1999 CNRI yes

1.6 1.5.2 2000 CNRI no

2.0 1.6 2000 BeOpen.com no

1.6.1 1.6 2001 CNRI yes (2)

2.1 2.0+1.6.1 2001 PSF no

2.0.1 2.0+1.6.1 2001 PSF yes

2.1.1 2.1+2.0.1 2001 PSF yes

2.2 2.1.1 2001 PSF yes

2.1.2 2.1.1 2002 PSF yes

2.1.3 2.1.2 2002 PSF yes

2.2.1 2.2 2002 PSF yes

2.2.2 2.2.1 2002 PSF yes

2.2.3 2.2.2 2003 PSF yes

2.3 2.2.2 2002-2003 PSF yes

2.3.1 2.3 2002-2003 PSF yes

2.3.2 2.3.1 2002-2003 PSF yes

2.3.3 2.3.2 2002-2003 PSF yes

2.3.4 2.3.3 2004 PSF yes

2.3.5 2.3.4 2005 PSF yes

2.4 2.3 2004 PSF yes

2.4.1 2.4 2005 PSF yes

2.4.2 2.4.1 2005 PSF yes

2.4.3 2.4.2 2006 PSF yes

2.4.4 2.4.3 2006 PSF yes

2.5 2.4 2006 PSF yes

2.5.1 2.5 2007 PSF yes

2.5.2 2.5.1 2008 PSF yes

2.5.3 2.5.2 2008 PSF yes

2.6 2.5 2008 PSF yes

2.6.1 2.6 2008 PSF yes

2.6.2 2.6.1 2009 PSF yes

2.6.3 2.6.2 2009 PSF yes

2.6.4 2.6.3 2009 PSF yes

2.6.5 2.6.4 2010 PSF yes

3.0 2.6 2008 PSF yes

3.0.1 3.0 2009 PSF yes

3.1 3.0.1 2009 PSF yes

3.1.1 3.1 2009 PSF yes

3.1.2 3.1.1 2010 PSF yes

3.1.3 3.1.2 2010 PSF yes

3.1.4 3.1.3 2011 PSF yes

3.1.5 3.1.4 2012 PSF yes

3.2 3.1 2011 PSF yes

3.2.1 3.2 2011 PSF yes

3.2.2 3.2.1 2011 PSF yes

3.2.3 3.2.2 2012 PSF yes

3.3.0 3.2 2012 PSF yes

3.3.1 3.3.0 2013 PSF yes

3.3.2 3.3.1 2013 PSF yes

3.4.0 3.3 2013 PSF yes

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Graphical user interface

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HMI

Human machine interface

S

SVIM

Seidenader Vision Inspection Machine

SVRC

Seidenader Vision Remote Control