

# Brainware Intelligent Capture

Verifier

Version: Foundation EP2

Written by: Documentation Team, R&D

Date: Wednesday, February 4, 2026

# Documentation Notice

Information in this document is subject to change without notice. The software described in this document is furnished only under a separate license agreement and may only be used or copied according to the terms of such agreement. It is against the law to copy the software except as specifically allowed in the license agreement. This document or accompanying materials may contain certain information which is confidential information of Hyland Software, Inc. and its affiliates, and which may be subject to the confidentiality provisions agreed to by you.

Complying with all applicable copyright laws is the responsibility of the user. Without limiting the rights under copyright law, no part of this document may be reproduced, stored in or introduced into a retrieval system, or transmitted in any form or by any means (electronic, mechanical, photocopying, recording, or otherwise), or for any purpose, without the express written permission of Hyland Software, Inc. or one of its affiliates.

Hyland, HXP, OnBase, Alfresco, Nuxeo, and product names are registered and/or unregistered trademarks of Hyland Software, Inc. and its affiliates in the United States and other countries. All other trademarks, service marks, trade names and products of other companies are the property of their respective owners.

© 2026 Hyland Software, Inc. and its affiliates.

The information in this document may contain technology as defined by the Export Administration Regulations (EAR) and could be subject to the Export Control Laws of the U.S. Government including for the EAR and trade and economic sanctions maintained by the Office of Foreign Assets Control as well as the export controls laws of your entity's local jurisdiction. Transfer of such technology by any means to a foreign person, whether in the United States or abroad, could require export licensing or other approval from the U.S. Government and the export authority of your entity's jurisdiction. You are responsible for ensuring that you have any required approvals prior to export.

## Table of Contents

<b>Documentation Notice</b> .....	<b>2</b>
<b>Verifier Help</b> .....	<b>9</b>
What is Verifier? .....	9
<i>Explanation of Terms</i> .....	11
<i>About Brainware Intelligent Capture Workflow</i> .....	12
Start Verifier .....	12
<i>Log On</i> .....	12
<i>Log On Using Command Line Arguments</i> .....	13
About Roles .....	13
Change your Password .....	14
Verifier Configuration .....	14
<i>About Configuring Verifier</i> .....	14
<i>Configure Verifier</i> .....	15
<i>General Settings</i> .....	15
Define the Project File .....	15
Define Directories .....	15
About Batch Root and Image Root .....	16
About Client Settings .....	16
Define Batch Options .....	16
Define Fields Edit Mode .....	17
Define Tabbing Behavior .....	17
About 508 Compliance .....	17
Enable 508 Compliance .....	18
<i>Workflow Settings</i> .....	18
About Workflow .....	18
Activate and Deactivate Workflow Steps .....	18
Verification Rules .....	20
<i>Exception Handling</i> .....	24
About Exception Handling .....	24
Define Exception States .....	24
<i>Supervised Learning</i> .....	25

Configure Supervised Learning .....	25
<i>Advanced Settings</i> .....	27
Configure the Advanced Settings .....	27
Working with Verifier .....	27
<i>About the Batch List</i> .....	27
Display the Batch List .....	27
Sort the Batch List .....	27
Batch List Columns .....	27
Batch List Icons .....	29
Navigate in the Batch List .....	29
About Batch Filtering .....	29
Configure Batch Filter Conditions .....	30
Remove a Filter .....	30
Access Predefined Filters .....	30
Batch List Toolbar Buttons .....	30
Batch List Keyboard Shortcuts .....	32
<i>About the Verification View</i> .....	32
Work with the Verification View .....	32
Customize the Verification Viewer Pane .....	33
Navigate Through the Document .....	33
Navigate in the Batch .....	33
Move a Document to an Exception State .....	34
About the Class Selection List .....	34
Correct Classification Results .....	34
Correct a Classification Result Using Advanced Classification .....	35
About Processing Documents with an Obsolete Class .....	35
Classification Window Keyboard Shortcuts .....	35
About the Indexing Window .....	37
About Fields .....	38
Navigate Through the Fields .....	38
About the Document Pane .....	38

About Tables in the Document Pane .....	39
Increase or Decrease the Image Area .....	39
Highlight Fields and Candidates .....	39
Apply Local Extraction .....	40
Add a Document to the Local Learnset .....	40
Learn a Document .....	40
Support of the Mouse Wheel .....	40
About the Current Input Pane .....	40
About the User Info Pane .....	41
Correct Extraction Results .....	41
Form Elements and Field Types .....	41
About Editing Text Fields .....	43
About Auto-Completion .....	44
About Inserting Words in Fields .....	44
Use a Word that is a Candidate for a Field .....	44
Use a Word That is not a Candidate for a Field .....	45
Insert Blocks of Text .....	45
About Smart Indexing .....	45
Use Smart Indexing .....	46
Indexing Window Keyboard Shortcuts .....	46
Check Entire Batches .....	47
About manual correction of classification and extraction results .....	48
About Working with Tables .....	48
About Auto-Completion with Tables .....	48
Insert Candidate Words in Table Cells .....	48
Insert Non-Candidate Words in Table Cells .....	49
Correct the Table Structure .....	49
About the Rubber-Banding Feature .....	50
Auto-Scroll with the Rubber-Banding Feature .....	50

About Adding Column Data to a Table .....	50
Insert Column Data .....	50
Replace Column Data .....	51
Insert or Replace Column Data .....	51
Insert Data from Split Columns .....	52
Insert Data in Partially Extracted Columns .....	53
Insert Missing Values .....	53
Correct Misaligned Columns .....	54
About Correcting Single Cells .....	54
Delete a Single Cell .....	55
Insert a Single Cell .....	55
About Table Extraction and Correction .....	55
About Lines .....	55
About Learning Column Mapping .....	56
About Correcting Fields in Tables Created with Brainware Table Extraction .....	56
Use the Standard Method for Table Extraction .....	57
<b>Show the First Row Sample .....</b>	<b>57</b>
<b>Learn Mapping .....</b>	<b>57</b>
<b>Learn Missing Lines .....</b>	<b>58</b>
<b>Adjust Mapping .....</b>	<b>58</b>
<b>Apply Corrections .....</b>	<b>58</b>
<b>Learn the Document .....</b>	<b>59</b>
Advanced Learning with Brainware Table Extraction .....	59
<b>Learn a Block of Secondary Lines .....</b>	<b>59</b>
<b>Unlearn a Line .....</b>	<b>60</b>
<b>Learn a Line as a Wrong Line .....</b>	<b>60</b>
About the Unmap Column Method .....	60
<b>Undo Column Mapping .....</b>	<b>60</b>
Verification View Toolbar Buttons .....	61
<i>About the Document List</i> .....	64

Display the Document List .....	64
Access Predefined Filters .....	64
Customize the Document Viewer Pane .....	64
About the Batch Structure Pane .....	65
Navigate in the Document List .....	65
Display a Document .....	66
About Splitting and Appending Documents .....	66
Split a Multi-Page Document .....	66
Append Two Documents .....	66
Classify or Reclassify a Document .....	67
Viewer Toolbar Buttons .....	67
Document List Toolbar Buttons .....	67
Document List Keyboard Shortcuts .....	69
<i>Page Separation Workflow in Verifer</i> .....	70
About Manually Correcting the Automatic Document Separation .....	70
Working with Learnset Manager .....	71
<i>About Supervised Learning</i> .....	71
<i>Start Learnset Manager</i> .....	71
<i>About the Learnset Manager User Interface</i> .....	71
Accumulated Documents Browsing .....	72
Global Learnset Browsing .....	72
Learnset Manager Keyboard Shortcuts .....	72
Learnset Manager Toolbar Buttons .....	73
Learnset Manager Viewer Toolbar Buttons .....	73
<i>Using Learnset Manager</i> .....	74
About the Learnset Manager Process .....	74
Configure Learnset Manager .....	74
Work with Common Learnsets .....	75
Correct Tables .....	75
Reclassify a Document .....	76
About Accepting and Rejecting Documents .....	76
Sort Batches .....	76

Work with Global Learnsets .....	76
Train Base Classes .....	77
Update Local Projects .....	77
<i>About Using Learnset Manager on Several Workstations</i> .....	78
About Batch-Level Locking .....	78
About Tracking Changes Made by Supervised Learning Managers .....	78
About Project File and Learnset Locking During Training .....	78
Print a Document .....	79
<i>Configure Print Settings</i> .....	79
Troubleshooting .....	79
Helpful Terms .....	80
<i>Items</i> .....	80
<i>Processes</i> .....	82
Toolbar Buttons .....	83

# Verifier Help

## What is Verifier?

Brainware Intelligent Capture is a product suite designed for automatically processing incoming documents. BIC can process documents from arbitrary physical sources and paper-based documents as well as from electronic files, email, or faxes.

Verifier allows users to validate and correct extracted data.

## What happens when Verifier processes documents?

Structured or unstructured document input is obtained by scanning paper-based documents from fax servers, email servers or as files. All documents are stored on a computer's hard drive. BIC monitors specified directories on this hard drive for new documents. If BIC detects new documents, the system imports them.

BIC first analyzes the imported documents to determine the document layout and to recognize structures such as words, lines, logos, or tables.

BIC then classifies the documents according to predefined categories. Examples of typical categories used in classification are invoices, orders, offers, or resumes. You can define categories individually, depending on the needs of your organization. Using a set of sample documents, the system actually learns to decide to which category a previously unknown document belongs to.

For each category, the data relevant for further processing is different. For example, if you are processing invoices, you probably want to know the total sum to be paid. This information is irrelevant if you are processing resumes, where the applicant's name, the desired position, and the contact options are more important. BIC identifies and extracts data that is relevant for the respective document category. You can individually define the data that BIC extracts to suit the needs of your organization.

Finally, the documents, their category assignments, and the extracted information are released from the system and written to designated export directories. The documents are then forwarded to connected systems. For example, invoices can automatically be forwarded to the software system used in your company's accounting department, while resumes are sent to Human Resources.

All this is done without human intervention once the application has been set up. But what happens if BIC cannot properly process a document? There are several reasons this could happen.

- Paper-based documents might be illegible.
- There might be stamps or notes on the documents that make important sections illegible.
- BIC may encounter a document from an unknown category. Since the software was not previously trained to recognize documents from this category, it is not able to process the document.
- BIC tries to extract information that is missing, such as from an incompletely filled in form.

That is where Verifier comes in: is the quality assurance utility of the product suite. The program detects all documents with processing problems and presents them to the user for verification.

Since the verification step precedes the export step, only qualified output can leave the process. Therefore, subsequent systems only receive appropriate input.

## Verifier key features

- Allows central database storage of projects and of user authentication information for more flexible access.
- Allows convenient correction of automatic classification results.
- Allows convenient correction of automatic extraction results.
- Allows manual indexing of documents.
- Allows semi-automatic indexing of documents by means of database lookups.
- Allows a final check of corrected documents before releasing.

## Verifier functionality highlights

- The structured user interface makes the program easy to learn.
- Sophisticated status management and filter techniques display only the documents you have to check.
- During the application design, the user interface is configurable, providing optimum display options for each document category.
- Keyboard shortcuts are available for most operations, enabling you to get your job done quickly.
- Through automatic locking, teams of users can safely process document batches.

## Explanation of Terms

To properly ensure the quality of automatically processed documents, it is important to understand the following information.

### **Batches are the basic entity.**

Brainware Intelligent Capture (BIC) works on batches and will completely process one batch before processing the next. Verifying and approving entire batches before routing to subsequent systems is an important step since batches are the basic entity.

### **A batch is only valid if all of its parts are valid.**

Since BIC deals with information and data, the application uses the terms “valid” or “invalid” instead of “working” or “damaged.” The restrictions on the number of parts and the well-defined relationships makes it easy to understand why a batch is invalid.

### **A batch is invalid if:**

One or more folders inside the batch are invalid.

### **A folder is invalid if:**

One or more documents inside the folder are invalid.

### **A document is invalid if:**

The automatic classification result is incorrect or if the automatic extraction result has invalid fields.

**A classification result is invalid if:**

The class still needs validating or the matching class was not found.

**A field is invalid if:**

The field content still needs validating, the field content does not comply with the validation rules, or filling-in the field is simply unfeasible.

There are a few reasons for violating field validation rules.

- Restrictions on the number of characters.
- Allows only uppercase characters.
- Checking the questionable results from the OCR process, which are red and underlined.

## About Brainware Intelligent Capture Workflow

In Brainware Intelligent Capture, the flow of incoming documents follows a sequence of standard processing steps. One of the objectives of Brainware Intelligent Capture is to get documents to their recipients as quickly as possible.

Runtime Server executes automatic steps that include document import with batch creation, OCR and layout analysis, classification, extraction, export, and clean-up. After the automatic steps there are two manual verification steps for quality control.

If Runtime Server detects that the batch contains invalid results, the user manually analyzes and resolves the problem. Invalid batches appear in a task list called Batch View. When Brainware Intelligent Capture finishes processing a batch, the documents are sent to their recipients.

## Start Verifier

### Log On

To log on to Verifier, complete the following steps.

**Note:** The **Remember password** option is deprecated and no longer taken into account.

1. Launch **Verifier**.
2. In the **Brainware Intelligent Capture Project Logon** dialog box, enter you user name and password.

**Note:** The project administrator specified your user name and password in Designer. The password is not the same as the one you use to log on to your workstation. Instead, it is specific to Verifier, and possibly to the project. However, you probably have the same user name and password for all Verifier projects you work on.

3. Click **OK**.

**Note:** When launching Verifier for the first time, the **Batch List View** is empty and an error message

displays if Verifier is not yet configured.

Verifier displays the **Batch List View**.

## Log On Using Command Line Arguments

To suppress the login dialog when starting Verifier, you can use command line arguments. Complete one of the following actions.

- To launch **Verifier** from the `[Installation path]\Brainware Intelligent Capture\bin` directory, complete the following substeps.
  - In the `[Installation path]\Brainware Intelligent Capture\bin` directory, create a new batch file and give it a meaningful name, such as `LaunchVerifier.bat`.
  - Copy the following line to the batch file, replacing `User name` with the user name and `password` with the password.

**Example** `start /B DstVer.exe /USR "User name" /PWD password`

- Save and close the file.
- In Windows Explorer, double-click the batch file.
- To launch **Verifier** from a location other than the `[Installation path]\Brainware Intelligent Capture\bin` directory, complete the following substeps.
  - Create a new batch file and give it a meaningful name, such as `LaunchVerifier.bat`.
  - Copy the following line to the batch file, replacing `User name` with the user name and `password` with the password.

**Example** `"[Installation path]\Brainware Intelligent Capture\bin\DstVer.exe" /USR "User name" /PWD password`

- Save and close the file.
- In Windows Explorer, double-click the batch file.
- To launch **Verifier** from the Windows Run application, complete the following substeps.
  - From the Windows Start menu, select Run.
  - In the Run dialog box, in the Open field, enter the following command, replacing `User name` with the user name and `password` with the password.

**Example** `"[Installation path]\Brainware Intelligent Capture\bin\DstVer.exe" /USR "User name" /PWD password`

## About Roles

Depending on their assigned role, users are able to complete the following tasks.

- Define, modify, and maintain the learnset.
- Collect and manage local training data.
- Propose learnset candidates to improve the performance.
- Verify the documents that Runtime Server could not automatically process.
- Access and change the batch filtering properties.
- Access and change the settings.

For more information, see "Users, groups, and roles" in the *Brainware Intelligent Capture Designer Help*.

## Change your Password

To change your password, complete the following steps.

1. From the **Options** menu, select **Change Password**.
2. Optional. To display the passwords, select **Decode password**.
3. In the **Old password** field, enter the current password.
4. In the **New password** field, enter the new password.

**Note:** The minimum character length for a password is 7, the maximum character length is 20. The password must include both alphanumeric and numeric characters.

5. In the **Confirm new password** field, reenter the new password.
6. Optional. Select **Update password in Database**.  
This option is available if **Allow Database Authentication** is enabled for the user in **Designer**.

For more information, see "Create a User" in the *Brainware Intelligent Capture Designer Help*.

7. Click **Apply** and then click **OK**.

## Verifier Configuration

### About Configuring Verifier

You can only change the Verifier settings if you have been assigned the **Verifier Settings (SET)** role.

Configuring Verifier entails specifying which batches of documents are processed at a given station. This includes the following.


- Sourcing of the batches either from the file system or from the Brainware Intelligent Capture database.
- The location of the batches in the file system.
- The Designer project file that contains the settings used to process the documents.
- The processing steps that you want to verify: classification, extraction, or both.
- The status of batches before and after processing.

It also entails configuring 508 Compliance, but this is done at the workstation level, not the project level.

After you configure a project's settings, you can load and save them using commands on the File menu. When loading or saving a project you can load or save a file with or without network data. When loading, click on the file type drop down box and select either <project name> (\*.sdp), or <project name> skip learn data (\*.sdp).

## Configure Verifier

To configure Verifier, complete the following steps.

1. On the toolbar, click the **Settings**  button.
2. Configure the settings as described in the following topics.

## General Settings

### Define the Project File

The project file contains the forms used to verify the extraction. To define the project that processes the documents, complete the following steps.

1. In the **Brainware Intelligent Capture Verifier Properties** dialog box, select the **General** tab.
2. Complete one of the following substeps.
  - To specify the project file that processes the documents, click **Use project file** and enter or browse to the path and file name of the BIC project. The project loads after returning to the **Batch View**.
  - To specify a project referenced in the batch control file, click **Use batch specific project file**. The project loads each time you open a batch.

#### Note:

If you use this option, ensure that the **Allow Database Authentication** option is selected for all users in Designer. For more information, see "Allow database authentication" in the *Brainware Intelligent Capture Designer Help*

The title bar indicates the currently loaded project.

## Define Directories

Under **Directories**, complete one the following substeps.

- To store BIC core information in the database, complete the following substeps.
  - Select the Use database as document and statistics source check box.
  - From the Select Job list, select a job.
  - To specify the number of batches displayed per page, select the Display check box and modify the value in the [xx]batches per page field, if required. The valid range is from 1 to 200.

- To store BIC core information in the file system, complete the following substeps.
  - Clear the Use database as document and statistics source check box.
  - In the **Batch Root** field, enter or browse to the directory where the batch control files are located.
  - In the **Image Root** field, enter or browse to the directory where the scanned images can be found.

For more information, see [About Batch Root and Image Root](#).

## About Batch Root and Image Root

### Batch Root

The **Batch Root** directory is where the batch control files are located. This directory also includes a license directory where you can find the network license file. When multiple instances of Runtime Server and Verifier are running, they will check this directory for the network license file. If you use different Batch Root directories simultaneously, you can set up a specific path for the network license. However, you can only configure this path manually for Runtime Server and Verifier. This option is not available when using the Brainware Intelligent Capture database.

### Image Root

The **Image Root** directory is where subdirectories with the scanned images can be found. As a rule, Batch Root and Image Root should be the same. In special cases, for security reasons for example, the Image Root can be different from the Batch Root.

## About Client Settings

The Client option refers to the intent to use client-specific variables.

Currently, only the default setting is available. In Designer, project administrators can define global variables for different clients.

With the default entry, global variables do not vary by client.

## Define Batch Options

Under **Batch options**, complete the following steps.

1. To automatically display newly generated batches with matching states in the **Batch List View**, select the **Automatic batch refresh** check box.

**Note:**

To manually refresh the **Batch List View**, click **View > Refresh**.

2. To enable Verifier users to create new TIFF files when a workdoc is split into multiples, select the **Create new image file when cutting document** check box. The TIFF files correspond to the new workdocs.

**Note:**

This feature is disabled when the **Use database as documents and statistics source** option is enabled. Any project that wants to use this feature needs to use the file system instead of the database.

3. To enable Verifier users to cut a long document, such as a multi-page fax, into several shorter documents while still retaining the cover page of the original workdoc as the cover page for each of the newly created shorter documents, select the **Enable cut keeping cover page** option.

**Note:** You must repeat the OCR processing for the new documents.

This provides additional menu items in the shortcut menu in **Document Separation Mode**.

## Define Fields Edit Mode

The fields edit mode determines how to initially select the content of a field. When the Verifier form appears, the cursor automatically places in the first invalid field at the beginning of the current content. Under Fields edit mode, complete one of the following substeps.

- To place the cursor before the current content without any text pre-selected, select Insert.
- To pre-select the current content such that entered text replaces the current content of the field, select Overwrite.

## Define Tabbing Behavior

To enable the user to skip all valid fields and tab through invalid fields only, complete the following step.

**Note:**

When the user presses **Tab** inside a table control, the system tabs through invalid table cells only. This option also applies for tabbing backwards by pressing **Shift + Tab**.

- Under Advanced, select the Tab through invalid fields only check box.

## About 508 Compliance

The Enable 508 Compliance option is helpful for people with visual impairments.

This option provides the following features.

- A blue arrow points to the field that has focus.
- If input focus is lost, the user can manually restore the focus by pressing Ctrl + N or by clicking **View > Restore Focus**
- The user can activate pop-up menus for workflow state lists and exception handling by pressing the right-click key. This key is located on the right side of the standard keyboard, between the Windows key and the Ctrl key.
- In Show Selected Batch, the right-click key activates the shortcut menu for Append this document to previous one and Cut pages into a new document.

- During document verification, the user can activate the shortcut menu for the current item by pressing Ctrl + M or by clicking **Image > Show Selection Context Menu** .
- Blue rectangles without icons in the highlight columns for the interactive learning mode indicate unmapped column items.
- Rectangles with a valid/invalid icon on its left side indicate a valid/invalid column item.
- Additional visual indicators besides color highlighting help distinguish between invalid fields, valid fields, and questionable fields. These indicators are present in table fields and form fields. Green check marks show valid fields, red X's show invalid fields, and orange question marks show questionable fields. Field candidates highlight in yellow, but do not have additional validity icons.

### Enable 508 Compliance

To enable the 508 Compliance settings for your workstation and projects, complete the following step.

- On the General tab, under Advanced, select **Enable 508 Compliance**.

## Workflow Settings

### About Workflow

In Verifier, you verify and correct batches failed in Runtime Server during Document Separation, Classification, or Extraction.

- The workflow settings allow to define the processing of documents in Verifier.
- Each workflow step has an input and an output state.
- The input state must match the failure output state defined for the corresponding workflow step in Runtime Server.
- After batch was successfully processed by the workflow step, Verifier assigns the specified output state to the batch.
- This output state must match the input state of the subsequent workflow step in Runtime Server.

### Activate and Deactivate Workflow Steps

To specify the workflow steps you want to perform at the current Verifier station, complete the following step.

1. On the **Workflow** tab, select one of the following options.
  - To activate a step, click the corresponding button.
  - To deactivate a step, click the button again.
2. Optional. To add an input state, complete the following substeps.
  1. In the **Input State** field, right-click and then click **Add State**.
  2. In the **Add State** dialog box, enter a new input state and then click **OK**.
3. Optional. To remove an input state, complete the following substep.
  - In the **Input State** field, right-click and then click **Remove State**.

4. Optional. To change an input state, complete the following substeps.
  1. In the **Input State** field, right-click and then click **Change State**.
  2. In the **Change State** dialog box, enter a new value and then click **OK**.
5. In the **Input State** field, select a value.
6. From the **Output State** list, select a value.
7. Under **Verification rules**, select the required options.  
For more information, see [Verification rules](#)

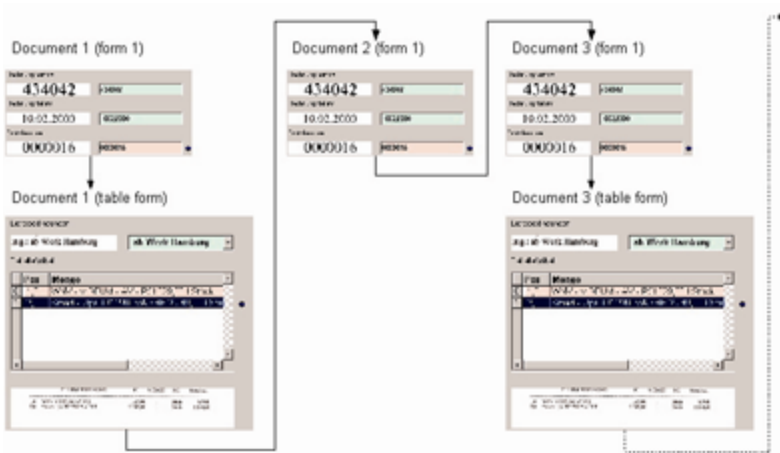
## Verification Rules

You can select the following verification rules on the **Workflow** tab in the **Settings** dialog.

### Verify document for the lowest input verification state only

Select this option to verify a document using the lowest input verification state. When this option is selected, the correction of the documents is grouped. After the verification of each input state, the user is asked to release the batch even if there are still documents with a higher input state left to be corrected. This option is valuable when you use several forms to verify extraction fields. If you have several forms defined for default processing (meaning that this option is not selected) all forms will be shown for the document that is corrected.

In the example shown below, first form 1 and afterwards form 2 for Document 1 is shown, afterwards form 1 for Document 2 that has only Form 1. Then all forms for Document 3 will be shown.



If this option is selected, the processing can be changed so that Form 1 for Document 1 is shown first, followed by Form 1 for Document 2 and Form 1 for Document 3 until all documents of the lowest input level are processed. Then the documents for the next input state and other forms are displayed for correction, as in the below example.



Use the DesignerVerifier Design Mode to design verification forms and to define which form is shown for which input state, as in the below example.

In the settings of the first Verifier form of this document class, Partial Validation is selected, and the value is set (in this example the value is 210) which will be the output status for the document when verification with this form is completed. When a document has the input state 210, the second verification form is used to validate the fields. Therefore, the Process Step Filter was set to 210.

### By default open the first available invalid batch and not the selected one

By default, the first available invalid batch is opened and not the selected one. The first invalid batch is selected based on Priority (higher first), user's custom filter, sort settings and the Batch ID. This is for projects with large amount of batches and simultaneous Verifier users. It decreases time delay of project verification. This option is selected by default. And under Verification Mode, option "Verify first invalid batch" is also selected by default. If the user changed the option from the Verification Mode, this option will only remain valid for the current application session. As soon as the user quits the application, the default behavior is re-initialized through the "By default open the first available invalid batch and not the selected one" option.

### Perform automatic extraction after classifying documents manually

Forces Brainware Intelligent Capture to attempt to automatically extract data after the Verifier operator manually classifies the document.

**Note:** This option is only available if the **Output State** of the **Classification Verification** workflow step matches the **Input State** of the **Extraction Verification** step.

### Keep showing current document after saving

Displays the current document after performing a Save, instead of automatically displaying the next document.

### Allow immediate copying of selected area to a field or table cell

Allows copying of a selected area to a field or table cell when verifying. Speeds up the process by copying single words and candidates to verification elements.

## Exception Handling

### About Exception Handling

Use exception handling to deal with documents that fail in Verifier, such as documents with poor document quality or missing information.

You can move such documents into an exception state to flag the batch for issues.

Having a mechanism for handling unexpected errors allows users to remove the batch from their task list. Then, users can manually assign special states to documents.

### Define Exception States

When defining an exception state, a menu command becomes available in the verification view. The menu command allows for case-specific handling of various types of unforeseeable errors.

To select an exception state and set its description label, complete the following steps.

1. On the **Exception Handling** tab, in the **Select states** column, select the required check boxes.

**Note:** The available exception states cover the range from 601 to 699. A batch state corresponds to the lowest document state within the batch. Routing batches using their exception state is only possible if the state for successful verification is greater than the one used for exceptions.

2. To rename a description, right-click on the description and then click **New description**.  
This description represents the menu item in the **Move Document to Exception State** menu in verification view.
3. In the **New description** dialog box, enter the new description and then click **OK**.

**Note:** The maximum character length for the description is 128.

4. Select any of the following options.

Option	Description
Before moving a document to an exception state, save it automatically	Select this option to save a document automatically before moving it to an exception state.  <b>Note:</b> This applies to the current document only.

Option	Description
Create new batches with documents marked for exception handling	<p>Select this option to move documents for exception handling to an exception batch.</p> <ul style="list-style-type: none"> <li>Creates a batch for each exception code</li> <li>Each batch receives a new batch ID</li> <li>Documents from verified batches move to the same exception batch in Batch View</li> <li>Batches release manually or automatically</li> </ul> <p>When this option is not selected, documents for exception handling stay in their batches. These batches keep their batch ID but receive a new name according to the state description.</p>
Automatically release all available pending exception batches that contain [XX] or more documents or older than [XX] minutes	<p>Select this option to release an exception batch once it contains more than [XX] documents or is older than [XX] minutes. This allows critical exception documents to process without waiting for manual intervention. Exception batches will also release when the user logs out.</p>
By default, set exception mode to Batch	<p>Select this option to change the scope of the command <b>Move to Exception State</b> on the <b>Options</b> menu to <b>Batch automatically</b>.</p>
Allow user selection of exception mode (Batch vs. Document)	<p>Select this option to enable the dynamic changing of the exception mode on the <b>Options</b> menu, document verification view. By default, this option switches on. Use this option together with the option above to preserve a specific exception mode for the different user groups.</p>

## Supervised Learning

### Configure Supervised Learning

To configure Supervised Learning, complete the following steps.

1. To enable Supervised Learning, on the **Supervised Learning** tab, select **Activate Supervised Learning workflow**.
2. Optional. In the **Local project name** field, enter or browse to the local project.

**Note:** Configure the local project with its own base directory (local learnset) and batch root.

3. Optional. To push the local learnset to the common learnset, select **Distribute Local Learnset to Knowledge base** and then select any of the following options.

**Note:**

When selected, this option automatically adds any documents added to the local learnset into a queue for the Learnset Manager to review if the documents are appropriate to be added to the global learnset. The knowledge base is often referred to as a queue of accumulated documents or common learnset pending review by the Learnset Manager for improvements into the project file.

- In the **Knowledge base directory**, enter or browse to the common learnset directory.

**Note:**

The common learnset updates whenever the local learnset is migrated to it.

- Optional. To prevent the learnset from being trained locally, select **Nominate for the learnset but never train locally**.
- Optional. Select **Use Database as knowledge source**. This option enables the **Select Job** list.

**Note:**

To use this option, you need to have a job for a common learnset in the database. If this common learnset job is not available, create a database job in Runtime Server with the common learnset directory as the batch root.

4. **Always show state of all field locations after opening a document** is reserved for future enhancements and not available yet.
5. To create a learnset, select **Apply local classification and extraction automatically**.

**Note:**

When no local project or learnset is used, the global project and global learnset is used instead.

Now the SLW user can perform classification and automatic extraction in Verifier. Also, the SLM user can now launch Learnset Manager to verify the learnsets from the common learnset in the Accumulated Documents Browsing mode.

6. To receive a notification in case of a discrepancy between script and your commands regarding the population of the learnset, select **Prompt if script forces or rejects insertion to Learnset**.
7. Under **Put document to Local Learnset**, select one of the following options.
  - **Only if adding activated by a user**: If selected, a document is added to a learnset when a user requests it. The system displays a dialog box to confirm that the document should be added.
  - **Automatically if more than [X] % invalid fields**: If selected, documents are automatically added to the learnset if the number of invalid fields exceeds the specified number. The system displays a dialog box to confirm that the document should be added.

Optionally select **Always prompt before adding** to display a confirmation dialog before the document is added.

8. Under **Learn new documents**, select one of the following options.
  - **Only by user request**: Select this option to initiate learning only when a user requests it.

- **Before batch closing:** Select this option to initiate learning for every batch in the project each time any batch is closed.
- **Immediately:** Select this option to initiate learning anytime a document is added to the learnset.

## Advanced Settings

### Configure the Advanced Settings

To configure the advanced settings, complete the following steps.

1. To activate the project file updating feature, select **Activate project file updating**.
2. In the **Source project file location** field, enter or browse to the project.


## Working with Verifier

### About the Batch List

The batch list displays a list of batches, which is your work list, and appears after starting the Web Verifier.

### Display the Batch List

To display the batch list, complete the following step.

- On the toolbar, click the Show batch list  icon.

### Sort the Batch List

To sort the batch list by a column, complete the following step.

- Click on the column header by which you want to sort the list.

**Note:** If the batches in the list have different **Priority** values, they are always sorted first by **Priority** in descending order and then by the column you clicked on.

### Batch List Columns

Batch view columns display the following information about a batch.

#### Batch ID

A number for uniquely identifying a batch.

#### State

An integer between 0 and 999 that indicates the progress of batch processing. The state also indicates whether the batch is ready for verification.

**Priority**

An integer between 1 and 9 that indicates the urgency for processing a batch. 1 is the highest priority and 9 is the lowest.

**Name**

An arbitrary name that is easier to read than the batch ID.

**Folders**

Folders organize documents in a batch. The value in this column indicates the number of folders inside the batch.

**Documents**

The value in this column indicates the number of documents inside the batch.

**Client**

The owner of the BIC license. Contains N/A; not in use yet.

**Last user/Module**

This displays the most recent person or computer, and application that processed the batch.

**Last Access**

Displays the latest processing date.

**The following columns do not display by default:**

See " Additional Columns in Verifier or Web Verifier" in the *Brainware Intelligent Capture Installation Guide* for more information.

**External Group ID**

The group ID relates to the security of the batch. It is a unique ID that assigns batches to a user group.

**External Batch ID**

The external batch ID is the name of the Batch Group. You can use this ID to represent any piece of information you would like to associate with a batch, such as an external system ID or a storage box ID.

**Transaction ID**






Batches have transaction IDs to identify originators of batches of documents. This allows the developer to synchronize a new batch of documents with another external system.

**Transaction Type**

Transaction Types helps to identify the type of documents in batches. This allows the developer to synchronize a new batch of documents with another external system.






## Batch List Icons

An icon displays in front of each batch to indicate the status. When no icon is shown, the batch state is out of workflow.

Symbol	Status
	Batch is complete and ready for export.
	Batch requires a correction of the classification results.
	Batch requires a correction of the extraction results.
	Batch is locked by another user or application and is unavailable
	Batch contains documents with exception statuses. To work on the batch, release it when it is unavailable.

## Navigate in the Batch List

To navigate in the batch list, perform any of the following actions.

- To go to the first batch page, click the First batch page  button.
- To go the previous batch page, click the Previous batch page  button.
- To navigate to a specific page, enter a number in the Page  of 3 field.
- To go to the next batch page, click the Next batch page  button.
- To go to the last batch page, click the Last batch page  button.
- To refresh the list, click the Refresh  button.

## About Batch Filtering

The batch filtering conditions affect the display of the batches.


This is useful for finding a subset of batches in a large job or for limiting the user's activities.

The filtering dialog box is accessible outside the settings dialog box so that users without a SET role but with the FLT role can filter batches. Only users with the FLT role can configure filter conditions.

Saving the settings applies to the current batch view and saves for the next sessions.

## Configure Batch Filter Conditions

To configure batch filter conditions, complete the following steps.

1. On the toolbar, click the **Batch filter**  button.
2. In the **Batch Filtering Condition Properties** dialog box, in the left pane, double-click to copy a field name to the **Select Filter Condition** field.
3. In the right pane, double-click to copy an operator to the **Select Filter Condition** field.
4. In the **Select Filter Condition** field, modify the condition according to your needs.


**Example** To see only batches at a state of 550, add the following condition.

```
[State]=550
```

5. Optional. To clear the filter condition settings, click the **Clear Condition** button.
6. Optional. Within the **Group Settings** section, administrators can easily define filter conditions for several user groups.
  1. Select a group from the drop-down list.
  2. Click **Configure Filtering**.
  3. Establish the filtering conditions and confirm by clicking **Apply**.
  4. Click **Save** to save your settings.


## Remove a Filter

To remove a filter, complete the following steps.

1. On the toolbar, click the **Batch filter**  button.
2. Click the **Clear Condition** button and then click **OK**.



## Access Predefined Filters










To access a predefined filter, complete the following step.

- On the toolbar, click the arrow next to the Show batch list  button and then select the required filter.

## Batch List Toolbar Buttons

The toolbar provides quick access to frequently used commands.

Label	Description	Button
<b>Settings</b>	Opens the Verifier properties dialog box.	
<b>Batch filter</b>	Opens the Batch Filtering Condition Properties dialog box.	

Label	Description	Button
Show batch list	Displays the batch list.	
Verify batch	<p>Start the verification of the currently selected batch.</p> <p>Depending on the batch state, the batch is either displayed in the classification window or in the indexing window.</p> <p><b>The drop-down list offers the following options:</b></p> <ul style="list-style-type: none"> <li>• <b>Verify first invalid batch:</b> Select this option to verify the batch with the highest priority, regardless of which batch is selected in the list.</li> <li>• <b>Verify selected / next batch:</b> Select this option to verify the selected, respectively the next batch in the list.</li> </ul>	
Show document list	<p>Displays the structure of the current batch.</p> <p>Selecting a document shows the document view, which provides an overview of the documents inside the batch.</p>	
Start Learnset Manager	Starts Learnset Manager.	
First batch page	Navigate to the first page.	
Previous batch page	Navigate to the previous page.	
Next batch page	Navigate to the next page.	
Last batch page	Navigate to the last page.	
Refresh	Refresh the batch list.	

## Batch List Keyboard Shortcuts

The following shortcuts are available in the batch list.

Keyboard Shortcut	Command
Ctrl + 1	Switch to Batch List View
Ctrl + 2	Switch to Verification Mode
Ctrl + 3	Switch to Document Separation Mode
Ctrl + N	Restore Focus
F5	Refresh
Ctrl + E	Release Exception Batches

## About the Verification View


In the verification view, you can correct the classification and extraction results.

When opening verification view, the classification window displays automatically if the next document requires a correction of the classification result.

The class selection list in the lower pane shows the classification result of the current document.

## Work with the Verification View

In the verification view, you correct the classification and extraction results. To display the Verification View, complete the following steps.








1. Select a batch from the list that requires verification.
2. Click the **Verify Selected Batch**  button.  
Depending on the state of the document, the classification or indexing window opens.
3. Optional. To increase or decrease the image area, drag the vertical bar between the field pane and the image pane either to the right or left.
4. If the classification window is displayed, from the class selection list in the lower pane, select the correct class.

**Note:** You can also enter the first characters of the required class name to limit the number of classes displayed.

5. If the indexing window is displayed, the document requires a correction of the extraction result. Correct the invalid fields.




## Customize the Verification Viewer Pane

To adjust the magnification used to display documents, complete any of the following steps.

- To adjust the document to window height, click the Fit to height  button.
- To adjust the document to window width, click the Fit to width  button.
- To adjust the document to best fit, click the Best fit  button.
- To zoom in, click the Zoom in  button.
- To zoom out, click the Zoom out  button.
- To display the next document with the currently selected magnification, click the Keep Zoom  button.
- To keep the focus on the document area associated with the currently selected field, click the Keep Focus on Field  button.




## Navigate Through the Document

To navigate through the document, perform any of the following actions.

- To go to the first document page, click the First Page in Document  button.
- To go to the previous batch page, click the Previous Page in Document  button.
- To navigate to a specific page, enter a number in the Page  field.




### Note:


All invalid entries, for example alphabetical characters and page numbers out of range, are ignored, and the page number is reset to the currently displayed page.

- To go to the next batch page, click the Next Page in Document  button.
- To go to the last batch page, click the Last Page in Document  button.
- To rotate the image, click the Rotate Image  button.

## Navigate in the Batch

To navigate in the batch, perform any of the following actions.

- To go to the first document in the batch and switch to Browsing Mode, click the First Document  button.
- To go to the previous document in the batch and switch to Browsing Mode, click the Previous Document  button.
- To go to the next document in the batch and switch to Browsing Mode., click the Next Document  button.

- To go to the last document in the batch and switch to Browsing Mode, click the Last Document  button.

## Move a Document to an Exception State

If a batch contains a document that you cannot correct, for example because it belongs to none of the defined classes, you can move this document to an exception state.

For more information, see [Define exception states](#).

1. On the toolbar, from the **Move Document to Exception State**  list, select the required exception.
2. Click the **Move Document to Exception State**  button.

## About the Class Selection List

The class selection list in the lower pane shows the classification result of the current document.

Opening the drop-down list displays all available classes.



### Correct Classification Results

To correct invalid classification results, complete the following steps.

#### Prerequisite

Ensure that the **Classification Verification** workflow step is active.

For more information, see [Activate and deactivate workflow steps](#)

1. Optional. To display only batches that require correction, click the arrow next to the **Show batch list**  button and then select **Batches to Verify, Classification Only**.
2. In the batch list, select a batch and then click the **Verify Selected Batch**  button.  
The verification view displays the first invalid document.
3. In the lower pane, complete one of the following substeps and then press **Enter**.
  - From the drop-down list, select the correct class.
  - Type the first characters of the class name and wait until the system automatically displays the full name.

The application validates the document and updates the state. The next document requiring verification displays automatically.

4. Repeat the previous step for all documents displayed.
5. After verifying all the documents in the batch, in the **Brainware Intelligent Capture Verifier** dialog box, complete one of the following substeps.
  - Click **Yes**.
  - Click the **Details** button, select one of the following options and then click **Yes**.

- To release the current batch and open the next batch that needs verification, select **Verify the next invalid batch on the list**.
- To release the current batch and display the Batch View where you can select the next batch, select **Close batch and return to the batch list**.
- To change verification forms, select **Verify this batch with the next verification form**.

### Correct a Classification Result Using Advanced Classification

To select a class result using advanced classification, complete the following steps.

#### Prerequisite

In Designer, select the **Enable advanced classification in Verifier** check box.

For more information, see "Enable advanced classification" in the *Brainware Intelligent Capture Designer Help*.

1. Click the **Classification Matrix** button.  
If the result was not 100 percent certain, a list opens up containing one or more classes. The class with the highest probability is at the top of the list.
2. Select a class and then click **OK**.

### About Processing Documents with an Obsolete Class

Deleting a class will make the class obsolete. Often with Supervised Learning workflow, classes become obsolete because the global project's configuration deletes or just does not insert the class.

The only way to process obsolete document classes is if the class still exists in the project that the document is processing with. Information saves internally about the former parent class assignment, which makes it possible to process obsolete document classes.

### Classification Window Keyboard Shortcuts

The following keyboard shortcuts are available in the classification window.

Keyboard Shortcut	Command
Ctrl + Alt + Home	First Document
Ctrl + Alt + Page Up	Previous Document
Ctrl + Alt + Page Down	Next Document
Ctrl + Alt + End	Last Document
Ctrl + 1	Show Batches

Keyboard Shortcut	Command
Ctrl + 2	Verify selected batch.
Ctrl + 3	Show selected batch.
Ctrl + N	Restore focus
Ctrl + Add	Zoom In
Ctrl + Subtract	Zoom Out
Ctrl + Left	Move Image to Left
Ctrl + Right	Move Image to Right
Ctrl + Up	Move Image Upwards
Ctrl + Down	Move Image Downwards
Ctrl + R	Rotate
Ctrl + Home	First Page in Document
Ctrl + Page Down	Previous Page in Document
Ctrl + Page Up	Next Page in Document
Ctrl + End	Last Page in Document
Ctrl + M	Show Selection context menu.
F3	Option available in Advanced Verifier. Show last verified document.
F8	Option available in Advanced Verifier. Get last value for selected field.
Ctrl + L	Option available in Advanced Verifier. Apply local extraction.
Ctrl + J	Increase image area.
Ctrl + K	Decrease image area.

Keyboard Shortcut	Command
Ctrl + A	Option available in Advanced Verifier. Add document to learnset.
F7	Reclassify document manually.
F9	Move to exception state.
Ctrl + E	Release exception batches.
Ctrl + T	Available in both Verifier and Advanced Verifier, but enhanced functionality only available in Advanced Verifier. Correct Table.
Ctrl + Q	Option available in Advanced Verifier. Switch table highlighting.
Ctrl + Z	Undo

## About the Indexing Window

The indexing window displays fields and documents specific to your organization.

Depending on the state of a document, the indexing window displays automatically in the left pane if the next document for processing requires a correction of the extraction result.

The indexing window uses the form defined in Designer.



### A form contains the following main elements.

- **Labels:** Captions that help users identify form fields, viewers and tables.
- **Viewers:** Contains pieces of document.
- **Fields:** Displays the extracted data and allows to enter or edit the content. Fields might be either a text field, table field, check box, list box, or a Yes/No selection.

## About Fields

A field displays data and allows the user to enter or edit data. To understand fields and the different types, refer to the following lists.

The following list explains the meanings of the colors and icons for both **Web Verifier** and **Verifier**.

- A red frame for **Web Verifier** and a blue arrow  icon for **Verifier** indicates the current field.
- A blue frame for **Web Verifier** and a green check mark  icon for **Verifier** indicates a valid field extraction.
- A red triangle in the right upper corner for **Web Verifier** and a red  icon for **Verifier** indicates a field that is needing validation because of its low confidence extraction.

The following list explains the field types.

- A user cannot edit or select a Read Only field.
- A Auto-completion field enables the user to edit text by typing the first few letters of a word until best matching candidate appears.
- A Multi-line field enables line wrap and displays a vertical scroll bar. This field type is a requirement for address analysis.
- A List box contains a selection list to verify an item in a document.
- Check boxes are toggle selections for data input that derive from form fields.

### Navigate Through the Fields

To navigate through the fields, complete any of the following actions.

- Use the mouse. This method does not affect the validation state of a field.
- Press Tab. This method gets you to the next field, but not to the next document. This method does not affect the validation state of a field.

**Note:** The order that the Tab key moves through the form is defined in field properties. For more information, see "Add a form field" in the *Brainware Intelligent Capture Designer Help*.

- Press Shift + Tab to go to a previous field.
- Press Enter. This method validates the entire field or the next invalid character within a field. Once the field is correct, it validates and the focus moves to the next field that requires correction. This field may also be within another document.

## About the Document Pane

The document pane shows the currently selected document or page along with highlights.

- Red areas indicate an invalid result.
- Green areas indicate a valid result.
- Yellow areas were considered as candidates, but another candidate seemed more likely. If the extraction result is invalid or wrong, these areas may point to the correct indexing data.

**Note:** In practice, red, green, and yellow areas never appear in the same document.

### About Tables in the Document Pane

Only one table will display per verification form, even if you are able to define multiple tables. However, you can display different tables on different forms.

If you only need to verify certain columns in a table, you can make the other columns invisible. All invisible columns must be valid for the entire table can be valid.

For a large document with many line items, you can detect and view the location of all the extracted line items that are currently shown within a table field.

### Increase or Decrease the Image Area




To increase or decrease the image area, complete the following step.

- Drag the vertical bar between the image area and field area either to the right or left.

### Highlight Fields and Candidates

To highlight the areas on the current document that have been used to fill the fields, complete any of the following steps.

**Note:** Valid areas highlight in green and invalid areas highlight in red. These areas may also contain validity icons, which are green check marks for valid fields or red Xs for invalid fields.

- To highlight all areas that have been used to fill the fields, on the toolbar, click the Highlight All Fields  button.  
If the result is valid, the area highlights in green. If the result is invalid, the area highlights in red.
- To highlight only the area that has been used to fill the currently selected field, on the toolbar, click the Highlight Selected Field  button.  
If the result is valid, the area highlights in green. If the result is invalid, the area highlights in red.
- To highlight the candidates for the currently selected field, on the toolbar, click the Highlight Candidates  button.  
This area either appears in green or in red. In addition, all other areas that were taken into account to fill this field highlight in yellow.
- To highlight an entire table on the document, in the left pane, click the square in the upper-left corner of the table field.
- To highlight a table column on the document, in the left pane, click the column label of a table field.
- To highlight a table row on the document, in the left pane, click the row label of a table field.
- To highlight a table cell on the document, in the left pane, click the cell of a table field.

### Apply Local Extraction

To apply local extraction to the current document, complete the following step.

- Click the Apply local extraction  button.

### Add a Document to the Local Learnset

To add a document to the local learnset, complete the following step.

- Click the Add document to learnset  button.

### Learn a Document

To learn a document, complete the following step.

- Click the Learn Document  button.

### Support of the Mouse Wheel

Verifier supports the mouse wheel when validating documents in document verification mode. Mouse wheel rolling has the following effect depending on where the mouse cursor is or where the keyboard focus is.

Case	Wheel rolling effect
Input focus is in a multi-line header field.	Scrolls between lines of the header field.
Input focus is in a single line header field or at the first line / row of any field (scrolling up only) or at the last line / row (scrolling down only).	Scrolls the entire verification form.
Input focus is in a table field.	Scrolls between table rows or between multiple lines of the currently selected table cell (when multi-line).
Mouse pointer is in the Document Viewer area.	Scrolls the currently viewed page image up and down.

### About the Current Input Pane

The input pane below the document displays document area that relates to the field and provides a field where the user can modify the field content.

**Web Verifier** and **Verifier** have a direct view control for viewing a large image area of the current field.

## About the User Info Pane

The user info in the lowest pane displays three sections with the following information.



- The name of the currently selected field.
- If the current field is invalid, the reason is displayed. If the current field is valid, the section is normally empty.
- The classification result of the current document.

## Correct Extraction Results

### Prerequisite

Ensure that the **Extraction Verification** workflow step is active.

For more information, see [Activate and deactivate workflow steps](#)

1. Optional. To display only batches that require correction, click the arrow next to the **Show batch list**  button and then select **Batches to Verify, Indexing Only**.
2. In the batch list, select a batch and then click the **Verify Selected Batch**  button.  
The verification view displays the first invalid document. The application places the cursor in the first invalid field.
3. Verify and if required, correct the field content.  
For more information, see [Use a word that is a candidate for a field](#), [Use a word that is not a candidate for a field](#), and [Insert blocks of text](#).
4. Repeat the previous step for all documents displayed.
5. After verifying all the documents in the batch, in the **Brainware Intelligent Capture Verifier** dialog box, complete one of the following substeps.
  - Click **Yes**.
  - Click the **Details** button, select one of the following options and then click **Yes**.
    - To release the current batch and open the next batch that needs verification, select **Verify the next invalid batch on the list**.
    - To release the current batch and display the Batch View where you can select the next batch, select **Close batch and return to the batch list**.
    - To change verification forms, select **Verify this batch with the next verification form**.

### Form Elements and Field Types

A form has three main elements: a label, a viewer, and a form field. From a form field, you can select a text field or table field. Using a text field or table field, you can create check boxes or combo boxes. The field types for validation include Read Only, Auto-completion, Multi-line, Combo Box, and Checkbox. You can also add a button to a form to fire actions.

A form can include the following elements.

### **Form fields**

Display extracted data. You can also enter and edit data during manual indexing. You can use form fields to create checkboxes and combo boxes.

### **Labels**

Identify form fields, viewers, and tables.

### **Viewers**

Are sections of document areas, normally those that were extracted to fill fields or tables.

### **Buttons**

Fire actions for a new script event.

### **Tables**

Extracted from documents.

The following is a list of field types and their description.

### **Read Only**

When selected, information on a field is dimmed and cannot be selected or edited.

### **Auto-completion**

Enables you to edit text in a field by typing the first two letters of a word. Auto-completion finishes the word with the best matching candidates.

### **Multi-line fields**

Multi-line fields are necessary for address analysis but can also be useful in other cases. A multi-line field enables line wrap and displays a vertical scroll bar, if required. To add a new line to a multi-line field press Ctrl + Enter.

### **List box**

A drop-down box that lists predefined strings related to the verification document. It can either show the nearest values automatically or show only selected values.

### **Combo box**

A combo box lists predefined strings related to the verification document. To aid in verification, you can select from the list of strings.

## Check box

A check box provides an either/or option that toggles table data entry choices on and off. For example, with a Yes or No check box, checking Yes would bring up data entry related to the verification and unchecked for No would hide them.

The screenshot displays the Brainware Intelligent Capture Verifier interface. On the left, there is a form for entering invoice details. The 'Vendor Name' field contains 'Unicom Corporation' with address 'P.O. BOX 43767, Georgia, GA 30215-2137' and phone '404-966-3433'. The 'Invoice Date' is '07/07/04', 'Invoice Number' is '1956499', 'P.O. Number' is 'PO #3201182129', and 'Invoice Total' is '28,643.58'. Below the form is a table with columns 'Description', 'Single Price', and 'Quantity'. The table contains one row: 'Adaptec 989000, AHA2940AU' with a quantity of 1. On the right, a scanned invoice for 'UNICOM' is displayed, showing a detailed table of items with columns for description, quantity, and price. At the bottom of the interface, there is a search bar containing 'Adaptec 989000, AHA2940AU' and a 'BULK' button. The status bar at the bottom indicates 'Table: No table found' and 'Invoices: 1'.

**Note:** You'll notice a Vendor Search button in many of the illustrations. This button is created and programmed in the BIC scripting language either for the Associative Vendor search or for the Multi-column Associative search engine. In these illustrations, the button is used to quickly classify or reclassify. To learn more about the scripting language, refer to the Scripting Documentation.

## About Editing Text Fields

Verifier and Web Verifier include automated features for editing text fields that can speed up text entry and correction.

You can use automatic character entry, when the auto-completion is selected in the form field Properties dialog box, to edit text fields and cells. Other options for character changes include multi-line fields, combo boxes, and check boxes. You can also insert and replace text in cells and fields, either in single words or blocks of text, using drag-and-drop or by double-clicking on the selected text.

Multi-line fields are necessary for address analysis but can also be useful in other cases. A multi-line field enables line wrap and displays a vertical scroll bar, if required. To add a new line to a multi-line field press Ctrl + Enter.

A Combo box lists predefined strings related to the verification document. To aid in verification, you can select from the list of strings.

The Check box provides an either/or option that toggles table data entry choices on and off. For example, with a Yes or No check box, checking Yes would bring up data entry related to the verification and unchecked for No would hide them.

**About Auto-Completion**

Auto-completion helps to speed up typing. When you start to type, auto-text completes the word, suggesting the best match among all of the words or candidates available after the OCR process and Format Analysis. For example, you can type the first two characters of a 20-character invoice. The auto-text feature finds the best-matched candidate suggested by the Format Analysis engine and places it in that field.

The auto-selected text also appears highlighted in the original document. Select whether a single-line or a multi-line text field should display. To override auto-completion, continue typing the desired text.

The auto-completion feature for a header field should automatically select the best candidate, which works within Highlight Candidates mode. The viewer is only updated if the candidate appears once in the document; otherwise, when the word for the field is inserted by auto-completion, the viewer will be blank.

**Note:** Auto-completion does not work on formatted text and characters incorrectly read by OCR.

**About Inserting Words in Fields**

To speed up verification, you can insert words to replace or append text.

The method for inserting words depends on the availability of candidates.

A candidate is one that matches the learned words for that field. It displays in green, with a border of green check marks if that visual indicator is enabled in Batch Options, when you select it after selecting the field.

Non-candidates display in orange when selected.

You can insert words in fields or table cells. You can append or insert words and use the mouse to append or replace the field.

To use the Append feature, the selected word must appear on the same line as the existing cell text. If not, the selected word will replace the existing cell text.

- **Words that are candidates for cells:** If the word belongs in a cell area, you can append or replace a word in a cell. The Append feature takes the current word behind the candidate and appends the cell text. It places the text in the best location, either to the right or left of the word, and in the cell location based on the text or location of the word. The word belonging to a cell area displays in green when selected. Or, you can replace the text. In the search region, word candidates are all words that are not covered (by location) by other table cells and that have the same beginnings as the whole text of the cell.
- **Words that are not candidates for a cell:** If the word does not belong to cell areas, it displays in orange when selected. Even if it is not a candidate, you can append or replace the word. Appending places the text in the best location, either to the right or left of the word, by text or location of the word. For example, a cell named "C2658" might be appended by "number." Or you can replace the cell text and location by the text and location of a word.

**Use a Word that is a Candidate for a Field**

If the word is a candidate for a field, you can copy it into the field box. A candidate is a word that matches the learned selections for the field. To copy text to the field box, complete the following steps.

**Prerequisite** Ensure the word fits the format analysis rules for the specific field.

1. On the document, click on the text you want to copy. A box appears around the word.

2. Double-click on the text or right-click in the text, and then select **Copy to Current Field**.

**Note:** You can insert only one candidate per field per document verification session.

#### Use a Word That is not a Candidate for a Field

Even if the word does not belong to any candidates for the field, you can append or replace a word with a new one. Appending places the text in the best location, either right or left of the word, by text or location of the word. Or you can replace the field text and location by the text and location of a word. A word that does not belong to any candidates for that field will display in orange when selected. For example, a field named “sales total” might be replaced by “invoice total.” To use a word that is not a candidate for field, complete one of the following options.

- To append text with the new text, drag a box around the desired word. Double-click on the word in the box, or right-click in the document and select **Append Field Text by Word**.
- To replace text, select the word with the mouse. A box appears around the word. Double-click it, or select **Replace Field Text by Candidate** in the shortcut menu.

**Note:** You can insert only one candidate per field per document verification session. Make sure that this word fits the format analysis rules defined for that field. If not, the word is highlighted in orange (and with a border of orange exclamation marks if validity icons are enabled) to help distinguish it. If so, it would not be a good candidate for the field.

#### Insert Blocks of Text

Inserting blocks of text is helpful when working with multiple data verification elements. To insert blocks of text, complete the following steps.

1. On the document, drag over the text.
2. Optional. Use the handles to adjust the selection.
3. To replace the selected text in the field or table cell, complete one of the following substeps.
  - Drag the selection to the field or table cell.
  - Double-click on the selection.

#### About Smart Indexing

Organizations, in particular commercial ones, usually collect legions of information about themselves and everybody they do business with. Much of this information is stored in databases. There will rarely be a company without a customer database that contains addresses, contacts, and so on. Financial transactions are also recorded in databases. Databases can be an excellent support for indexing because they store related information that can easily be retrieved. During indexing, if you have one piece of information from a document, you can obtain related pieces from the database and fill the associated fields automatically. This method is called smart indexing.

Normally, smart indexing is combined with manual indexing. Some fields of a form have to be filled in manually; some fields can be filled automatically.



For example, let's assume that your organization saves information related to orders in the database of its ERP system. Every order is characterized with a unique identifier and some attributes about the supplier and the items that have been ordered. Soon after an order is placed, the ordered items are delivered, and a delivery note is attached. The corresponding invoice follows soon. Delivery note and invoice refer to the original order. They have the order's unique identifier printed on them. With this identifier, you can look up supplier information from the database when you verify the delivery note and invoice. However, new information such as the invoice date has not yet been entered into the database. This information can be supplied manually.

#### Use Smart Indexing

To use smart indexing, complete the following steps.

1. In Verification View, in the left pane, select a smart index field.

#### Note:

The key  icon indicates a smart index field and the yellow cylinder  icon marks the fields that can file through the database lookup.

2. If the field is still empty, enter the field value. Alternatively, enter a wildcard expression, using a \* to represent a sequence character or a ? to represent a single character.
3. Perform one of the following actions to start the lookup.
  - If your application is configured accordingly and the field content is correct, press **Enter** to validate the smart index field.
  - Press Alt + F12.
4. The system responds with one of the following options.
  - If the lookup yields no results, a corresponding message displays. Fill the lookup fields manually. If you cannot complete the fields, send the document to exception handling.
  - If the lookup yields one result, the lookup fields are filled.
  - If the lookup yields multiple results, and this is allowed in your application, the lookup fields are filled.
  - If the lookup yields multiple results, and this is not allowed in your application, a dialog box appears and you can select the correct record. The lookup fields will fill accordingly.

#### Indexing Window Keyboard Shortcuts



The following keyboard shortcuts are available in the indexing window.

Keyboard Shortcut	Command
Ctrl + P	Print
Ctrl + Alt + Home	First Document


Keyboard Shortcut	Command
Ctrl + Alt + Page Up	Previous Document
Ctrl + Alt + Page Down	Next Document
Ctrl + Alt + End	Last Document
Ctrl + 2	Verification Mode
Ctrl + 1	Batch List View
Ctrl + 3	Document Separation Mode
Ctrl + N	Restore focus
Ctrl + L	Apply local extraction
Ctrl + A	Add document to learnset
Ctrl + J	Increase image area
Ctrl + K	Decrease image area
F9	Move to exception state
Ctrl + E	Release exception batches

## Check Entire Batches

To check all the documents in a batch, complete the following steps.

1. In Batch View, select a batch from the list that requires verification.
2. Click the **Verify Selected Batch**  button.  
Verification View displays the first document requiring correction.
3. To display the first document in the batch, click the **First Document**  button.
4. Optional. You may encounter a document with incorrect classification.
  - For **Verifier**, press **F7** to open the classification window. Next, select the corresponding entry from the drop-down list in the lower pane, and then press **Enter** to confirm.
  - For **Web Verifier**, select **Reclassify Document Manually** from the **Options** menu. Next, select the corresponding entry from the list at the bottom, and then press **Enter** to confirm.

This displays the indexing window.
5. Correct the extraction results by typing into the corresponding fields, and then press **Enter** to validate.

- For **Verifier**, press F3 to return to the document.
6. Go to the next document and repeat the previous steps.
- For **Verifier**, press Ctrl + Alt + Page Down.
  - For **Web Verifier**, click the **Next Document**  button.

## About manual correction of classification and extraction results

Simultaneous correction of classification and extraction results are available if your workstation is configured with the following settings.

- Classification verification is enabled.
- Extraction verification is enabled.
- Automatic extraction after classification is disabled.
- To determine your settings, check the Workflow tab of the **Settings** dialog box.

**Note:** If this option is enabled, extraction will be carried out automatically. In this case, classification verification and extraction verification are two separate steps.

**Note:** If you do this task regularly, you may want to apply the appropriate filter in the Batch View using the menu command View > Batch Filter > Batches to verify.

## About Working with Tables


You can verify tables in the same way you would correct an invalid header field.

Additional methods to simplify manual table extraction, such as Correct Table, are available.

If automatic table extraction fails to recognize the line items properly, Verifier provides several ways for convenient manual table correction.

### About Auto-Completion with Tables

Auto-completion works in table cells and with text fields. When you type two or more characters, auto-complete suggests a word or phrase for that cell.

The candidate appears in green if the field is valid and red if the field is invalid. If the visual validity icons are enabled in Batch Options, valid fields also have a border of green check marks and invalid fields have a border of red question marks. This function only works with Highlight Candidates  mode.

### Insert Candidate Words in Table Cells

You can insert single words or append existing text in table cells. To insert words in table cells, complete the following steps.

1. To select the text you want to insert in a table cell, complete one of the following actions.
  - Double-click on the word.
  - Right-click on the word in the document pane and select the respective option.

- If you have candidates, double-click the desired candidate to replace it.
- 2. To append the selected text to the cell text, select **Append Cell Text by Word**.
- 3. To replace the cell text with the selected text, select **Replace Cell Text by Word**

### Insert Non-Candidate Words in Table Cells

Even if the word does not belong to any candidates for the cell, you can insert single words, append or replace existing text in table cells. To insert words in table cells, complete the following steps.

1. To append the selected text to the cell text, double-click the word or right-click in the document pane.
2. Select **Align & Copy to Current Field**.
3. To replace the cell text with the selected text, select the word, right-click and then click **Copy to Current Field**.

### Correct the Table Structure

To correct the structure of a table, complete any of the following steps.

- To unmap a column, right-click the column header and then click Unmap Column.  
This clears all data for the selected verification column and turns the state of the corresponding column of the recognized table back to *unmapped*.  
To view an unmapped column, double-click on the table header in the verification form. All unmapped columns highlight in red.
- To add the column selected from the shortcut menu, right-click the column and then click Map Column.  
You can also right-click on an unmapped column to map it to a column in the verification form.
- To exchange the position of the current column, right-click the column header, click Swap Column, and then select the column you want to exchange the current column with.
- To insert an empty row above the current one, right-click the row number and then click Insert Row.
- To delete a row, right-click the row number and then click Delete Row.
- To append an empty row at the bottom of the table, right-click any row number and then click Append Row.
- To merge rows, select the required rows, right-click any row number and then click Merge Rows.
- To insert an empty cell above the selected cell while shifting the cells below down, right-click the cell and then click Insert Cell.
- To delete a cell and shift up the cells below, right click the cell and then click Delete Cell.

## About the Rubber-Banding Feature

The rubber-banding feature allows you to select a block of data by clicking and dragging on a document and to place this block of values at a particular point within the table.

### Note:

The Table Correction mode must be switched off for the menus described in the following topics, though a mixed usage of manual and engine driven table correction is possible.

### Auto-Scroll with the Rubber-Banding Feature

To auto-scroll when using the rubber-banding feature, perform one of the following actions.

- If the target document area displays partially, move the mouse outside of the document area while rubber-banding to scroll the document and to select the data.
- To re-size a rubber-banded area, drag the corner of the rubber-band rectangle. The window will auto-scroll to select values outside of the visible area.

### About Adding Column Data to a Table

There are two ways to add column data to a table.

#### Insert Column Table Data

If whole rows are missing after extraction, use this option for better accuracy. Note that the application observes the relationship between the columns and maps the values appropriately. Already extracted cell values would be shifted up or down by the insertion creating new rows. See the insertion behavior described below.

#### Replace Column Table Data

This is very comfortable when at least one column has been extracted by 100%, and other table columns contain random values. With this option, the column data can be added blockwise, overwriting the previously extracted entries.

#### Insert Column Data

To insert column data, perform one of the following actions.

- To insert column data above a correctly extracted and filled cell, click into the filled cell and select Insert Column Table Data from the menu. This creates additional rows and shifts already existing rows up. At the same time, the values will be automatically assigned to already extracted values of other columns if available (green frame in the screenshot below).

1	234553			
2	345434	F453653		
3	456323			
4	934543			
5	940002			
6	356989			
7	659894			

- To insert column data below a correctly extracted and filled cell, click into the next empty cell below and select one of the two options depending on whether or not you want to keep already extracted cell entries.

1		A750405		
2		C550403		
3		D359403		
4	234553	E940589		
5	345434	F453653		
6	456323			
7	934543			
8	940002			
9	356989			
10	659894			

#### Replace Column Data

To replace column data, complete the following step.

- Click a cell as the starting point and select the Replace Column Table Data option. This will overwrite existing cell values.

Since the rubber-banding area spans more lines than the table contains, the additional subsequent lines will add as additional rows.

#### Insert or Replace Column Data

To insert or replace column data, complete the following steps.

- In the left pane, place the cursor into the destination cell within the table.

	Description	Single Price	Quantity	Total Price
1	234553			
2	345434	138.56		
3	456323			
4	934543			
5	940002			
6	356989			
7	659894			

- On the document, click and drag around the column data you want to add to the table.

2	178.82	357.64
2	124.18	248.36
4	220.70	882.80
1	217.29	217.29
1	401.27	401.27
2	24.19	48.38
2	431.22	862.44
2	353.17	706.34
2	193.25	386.50
2	192.96	385.92
2	192.88	385.76
2	207.04	414.08

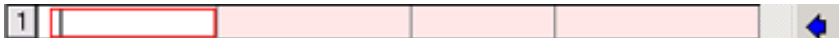
- Complete one of the following substeps.
  - To insert the selected data, right-click the selection and then click **Insert Column Table Data**.
  - To replace the data in the cell, right-click the selection and then click **Replace Column Table Data**.

#### Insert Data from Split Columns

To insert data from columns of one data type that are split up and placed side-by-side or stacked, complete the following steps.

- In the left pane, place the cursor into the first line of the column.

#### Example



- On the document, drag around the first block of column data.

#### Example

Text Company				113 Testing Blvd. Boston MA 02105			
Invoice No.	Reference	Invoice Amt.	Total	Invoice No.	Reference	Invoice Amt.	Total
934567	A750405	13.55	13.55	456323	G455940	54.90	748.14
356454	C550403	355.78	369.33	934543	H845344	165.90	914.04
842039	D359403	33.56	402.89	940002	I345453	74.45	988.49
234553	E940589	23.45	426.34	356989	J892345	46.78	1035.27
345434	F453653	266.90	693.24	659894	K345655	245.90	1281.17

- Right-click the selection and then click **Insert Column Table Data**.

The mapping result looks like in the following example.

1	934567			
2	356454			
3	842039			
4	234553			
5	345434			

- To append further column data, right-click the row's node of the last table row and select **Append Row**.
- Place the cursor into the next empty cell of the desired table column.
- On the document, drag around the next block of column data.

**Example**

Test Company 113 Testing Blvd. Boston MA 02105				Test Company 113 Testing Blvd. Boston MA 02105			
Invoice No.	Reference	Invoice Amt.	Total	Invoice No.	Reference	Invoice Amt.	Total
934567	A750405	13.55	13.55	456323	G455940	54.90	749.14
356454	C550403	355.78	369.33	934543	H845344	165.90	914.04
842039	D359403	33.56	402.89	940002	I345453	74.45	989.49
234553	E940589	23.45	426.34	356989	J892345	46.78	1035.27
345434	F453653	266.90	693.24	659894	K345655	245.90	1281.17

- Right-click the selection and then click **Insert Column Table Data**.
- If required, repeat the previous steps with other columns to fill the table.

**Insert Data in Partially Extracted Columns**

To correct data for column items that are partially extracted, complete the following steps.

- In the left pane, place the cursor into the already extracted cell to mark the starting point for the insertion.
- On the document, click and drag around the column data.
- Right-click the selection and then click **Insert Column Table Data**.
- Repeat the previous to map other column data.

**Example** To add the column data under the cell **F453653**, select the next empty cell below as the starting point and repeat the steps from above.

Test Company 113 Testing Blvd. Boston MA 02105				Test Company 113 Testing Blvd. Boston MA 02105			
Invoice No.	Reference	Invoice Amt.	Total	Invoice No.	Reference	Invoice Amt.	Total
934567	A750405	13.55	13.55	234553			
356454	C550403	355.78	369.33	345434	F453653		
842039	D359403	33.56	402.89	456323			
234553	E940589	23.45	426.34	934543			
345434	F453653	266.90	693.24	940002			
456323	G455940	54.90	749.14	356989			
659894	H845344	165.90	914.04	659894			

**Insert Missing Values**

If column items are missing from a neighboring column, complete the following steps to insert missing values.

From the 'Reference' column, only the value from line 9 is extracted, and the 'Invoice No.' values from lines 4 – 8 are missing. To insert the 'Reference' values from lines 2 – 8 as a block, complete the following steps.

- Place your cursor into the "reference" cell in line 2.

Test Company 113 Testing Blvd. Boston MA 02105			
Invoice No.	Reference	Invoice Amt.	Total
1 934567	A750405	13.55	13.55
2 356454	C550403	355.78	369.33
3 842039	D359403	33.56	402.89
4 234553	E940589	23.45	426.34
5 345434	F453653	266.90	693.24

1 934567			
2 356454			
3 842039			
4 356989	J892345		
5 659894			

- On the document, click and drag around the column data.
- Right-click the selection and then click **Insert Column Table Data**.  
Rows appear for the missing "Invoice No." values while shifting "reference" cell J892345 down.

1	934567			
2	356454	C550403		
3	842039	D359403		
4		E940589		
5		F453653		
6		G455940		
7		H845344		
8		I345453		
9	356989	J892345		
10	659894			

**Correct Misaligned Columns**

To correct data columns that appear misaligned, complete the following step.

- Map the column data as described in previous topics.

Invoice No.

934567

356454

842039

Reference

A750405

C550403

D359403

**About Correcting Single Cells**

You may also need to correct the table structure if for instance an unnecessary cell has been mapped to the table or if a missing cell has to be added.

As in the example below, you may have documents where one of the line items is missing. During extraction, the values from below might be shifted up to fill the empty space.

Test Company 113 Testing Blvd. Boston MA 02105							
Invoice No.	Reference	Invoice Amt.	Total	Invoice No.	Reference	Invoice Amt.	Total
934567	A750405	13.55	13.55	456323	G455940	34.90	748.14
356454	C550403	355.78	369.33	934543	H845344	165.90	914.04
842039		33.56	402.89	940002	I345453	74.45	988.49
234553	E940589	23.45	426.34	356989		46.78	1035.27
345434	F453653	266.90	693.24	659894	K345655	245.90	1281.17

To correct this, you have the possibility to insert or delete single cells.

#### **Delete a Single Cell**

To delete an unnecessary cell, complete the following steps.

1. In the left pane, in the table, click into a cell.
2. Right-click and then click **Delete Cell (Shift Cells Up)**.

#### **Insert a Single Cell**

To insert a cell, complete the following steps.

1. In the left pane, in the table, click into a cell.
2. Right-click and then click **Insert Cell (Shift Cells Down)**.  
This creates an empty cell above the selected cell.

### **About Table Extraction and Correction**

The learning process for the Brainware Table Extraction engine consists of two phases.

- Learning lines
- Learning mappings of columns

These are discussed in detail in the following topics.

#### **Note:**

This functionality is available for Supervised Learning Verifiers. With the Generic Table Extraction, no extra learning is needed.

#### **About Lines**

The Brainware Table Extraction engine considers the following main types of the lines.

#### **Primary line**

A line that defines table structure. The engine applies advanced and precise similarity analysis for all primary lines. It is important that all primary lines are well-structured and that they look similar in many of the rows to extract. The engine easily supports an unlimited number of types of primary lines for one table definition. The primary line must contain at least four words. Otherwise, the engine will not learn it. In addition, the primary line must be the first line in the table row.

#### **Secondary line**

A line between primary lines. The engine applies smooth similarity analysis for these types of lines, which is possible because Brainware Table Extraction only searches the area between two neighboring primary lines. This allows the engine to extract data that varies widely, which often happens with multi-line descriptions. There is also no limit to the number of words in secondary lines, and no limit to the number of secondary lines. However, a document's page must have at least one primary line; otherwise, secondary lines on this page are not extracted.

## Wrong line

A primary line that is learned as a negative line sample. In other words, all lines classified by the engine as members of one particular “wrong” line class are not extracted. In principle, it is possible to learn an unlimited number of wrong lines, though the current restriction is that this will only take effect during in-document learning. Cross-document learning (that is, learning the whole document after all the fields are completely valid) may not automatically train the wrong lines.

After it learns any type of line, the Brainware Table Extraction engine automatically creates and manages a new line class (cluster). Afterward, all lines in the document considered by the engine to be members of the line class (similar to the learned line sample) will be extracted, or not extracted in the case of “wrong” lines.

It is possible to learn an unlimited number of different line classes. However, the overall quality may suffer if too many lines are learned.

Learning lines can be applied in lines learning (or lines highlighting) mode. Mapping of the column data in the lines can be done in column mapping learning (or columns highlighting) mode. The user can switch between learning (highlighting) modes with the Switch Table Highlighting menu option in Verifier Options menu or with the context menu options Show Lines and Show Columns.

### About Learning Column Mapping

When learning the mapping for columns, the user trains the engine on how the data from the extracted lines must be mapped to the user’s table data.

For primary lines, this mapping can be defined differently for different line classes. For example, if a user learned two different line samples that went to two different lines classes internally in one document, the user can then map “Unit Price” in the document to the “Unit Price” data column and the “Total Price” to the “Total Price” for the first line sample. For all lines of the second line type, the user can map “Unit Price” to “Total Price” and “Total Price” to “Unit Price.” For the next document, the Brainware Table Extraction engine will always use mapping rule #1 for the lines classified to the first line type and mapping rule #2 for the lines classified as the second line type.

If you have several Brainware Table Extraction tables in one class, the learnset is shared between these tables. In other words, if you used interactive learning for one Brainware Table Extraction table, cross-document learning, which happens if the system added the document to the learnset after document validation, is applied for all Brainware Table Extraction tables in the document.

### About Correcting Fields in Tables Created with Brainware Table Extraction

Any time you train a table interactively, complete the required training first and then manually verify the table.

Brainware Table Extraction can train line types and column mapping for each type of line.

When working with interactive table extraction, learn the lines before you map the columns.

Because of the way interactive table verification works, you cannot manually delete data from a cell. Rather, if you want to discard cell data, unmap the column and re-extract the table to remap the column. Although it will seem as if you deleted the data, the data is still be there until you unmap the column.


### Use the Standard Method for Table Extraction

The standard method for table extraction is the simplest way to use interactive Brainware Table Extraction learning. To use the standard method, complete the following steps.

1. [Show the first row sample.](#)
2. [Learn mapping.](#)
3. [Learn missing lines.](#)
4. [Learn and adjust the mapping of missing or wrong columns.](#)
5. [Apply corrections.](#)
6. [Learn the document.](#)

## Show the First Row Sample

To show the first row sample, complete the following steps.

1. To select the Brainware Table Extraction table, click any table field inside the table grid.
2. Click the **Correct Tables**  button.
3. Double-click the first row and select the **Learn As Row** function to show the row sample.

**Note:** Turning off the **Correct Tables** button causes the loss of learned rows and columns. Turning the **Correct Tables** button back on leads to the loss of mapped table data.

4. Optional. To learn a new line as a primary line, right-click any gray line on the document, and then select **Learn Line**.
5. Optional. To learn a block of lines as primary lines, drag over the primary lines on the document, right-click, and then select **Learn as Primary Line(s)**.
6. Optional. To learn a block of lines as a table row, drag over the primary lines on the document, right-click, and then select **Learn as Row**.

**Note:** Do not try to learn the rest of the missing secondary or primary lines now. If you attempt to train all different line samples now, you would need to learn the columns mapping separately for every line class. If you first learn the column mapping for the row you just learned, the next time you learn another line sample, the engine tries to apply existing mapping rules for the newly learned row automatically, significantly reducing the time to train the table.

## Learn Mapping

To highlight the row you learned, complete the following steps.

1. Right-click a line and select **Show column**.
2. Mark the location of the first cell item in the row you learned.

The system displays a special mapping control asking for the data column to extract the data to.

3. Right-click the first cell item in a column. Choose **Map Column**, select the required data column, and then click the selection.
4. Repeat the steps for the cell items in the first row.

## Learn Missing Lines

To learn if text is missing from a row, complete the following steps.

1. Switch to the lines highlighting mode.

**Note:** Pressing Ctrl + Q switches the highlighting between three modes: cells, lines, and columns. Press Ctrl + Q twice to switch from columns learning to lines learning.

2. Mark the next missing row and learn it as before.
3. Repeat the steps for all rows on all pages, and then continue if nothing is missing.

## Adjust Mapping

To adjust the mapping of a missing or incorrect column, complete the following steps.

1. Return to columns mapping learning mode.
2. Find incorrect or missing mapping, and then correct the mapping.
3. If you can't map the missing columns, switch back to the lines highlighting mode, and then learn the row where the mapping is missing.
4. Switch to columns highlighting. If the mapping is still missing, mark the missing part and map it.

**Note:** The Brainware Table Extraction engine may determine the mapping automatically.

5. Repeat steps until the data is completely extracted. The extraction results may not reach 100 percent.

## Apply Corrections

To apply corrections and validate table fields, complete the following steps.

1. Switch to cells highlighting mode and manually correct missing data and OCR errors.

**Note:** Do not use interactive learning because every Brainware Table Extraction learning action reactivates extraction and replaces all your manual inputs instantly.

2. To validate the table, press Enter.
3. Optional. Click the **Add Current Document to Local Learnset** button to add the document to the learnset and then learn it, which is known as cross-document learning. Do this if the system did not suggest learning the document automatically.

**Note:** The only requirement for cross-document learning is correctness and completeness of the table data to train. This means that location, content, and format of every cell item is accurate.

## Learn the Document

After table learning and validation are complete, you may want to add this document to the learnset and then learn it. This is known as “cross-document” learning, in contrast with “in-document” interactive Brainware Table Extraction learning.

- If you want to learn a document that the system did not automatically learn (the Add Current Document to local learnset button is not cleared), you can activate learning by clicking Add Current Document to Local Learnset.

**Note:** The only requirement for cross-document learning is correctness and completeness of the table data to train. This means that location and content of every cell item should be correct. Also, ideally, the content of cell items should not be formatted.

### Advanced Learning with Brainware Table Extraction

It is necessary to use secondary lines explicitly when a row begins on one page and ends on the next, or when learning an unmapped secondary line leads to an extraction. Refer to the following cases to understand more about these circumstances.

#### Case 1: A row begins on one page and ends on the next

If a table row begins on one page and ends on the next page, you must use the Learn as Secondary Lines function in lines learning mode to train missing secondary lines.

In this case, these secondary lines appear right before the first primary line on the page. Mark all the secondary lines by right-clicking and selecting Learn as Secondary Lines.

**Note:** Never use the Learn as Row function in this case, as this tells the engine that the first secondary line is actually a new sample of primary line. As a result, the engine may split table data into new rows.

#### Case 2: Learning of unmapped secondary lines leads to unwanted extraction

Sometime the engine extracts data from secondary lines when its not a requirement for your project. In this case, not learning these secondary lines prevents unnecessary extractions.

Use the Learn as Secondary Lines function instead of Learn as Row to learn certain lines. You can also Unlearn Lines to correct or adjust the extraction.

## Learn a Block of Secondary Lines

To learn a block of secondary lines, complete the following steps.

1. On the document, click and drag over the secondary lines of a multi-line row.

2. Right-click on the selection and then click **Learn as Secondary Line(s)**.
3. Optional. Repeat the previous steps if lines did not extract.

## Unlearn a Line

Discard previously learning for a particular line with the **Unlearn Line** function. To do this, Brainware Table Extraction uses a line sample, searches for the line type, and then removes the line type from the learnset.

To unlearn a line, complete the following steps.

1. Switch to **Lines Learning** mode.
2. Right-click on the line you want to unlearn and then click **Unlearn Line**.  
Unlearned lines change from green to gray.

## Learn a Line as a Wrong Line

Learning a wrong line means training the table to not extract particular lines. This applies to similar lines in the table.

To learn a line as a wrong line, complete the following steps.

1. Right-click on any learned line or click and drag over multiple lines.
2. From the shortcut menu, select **Learn as Wrong Line**.

**Note:** These steps affect similar lines, which appear in gray.

### About the Unmap Column Method

The **Unmap Column** method can undo mapping for the specified cell item.

This will undo mapping for all cell items that were extracted from the lines that belong to the same line type as the cell item used to invoke the **Unmap Column** method.

## Undo Column Mapping






To undo incorrect column mapping, complete the following steps.












1. Right-click on any column with a blue marking or draw a rectangular selection over the cell items.
2. From the shortcut menu, select **Undo Mapping**.











**Result** Columns highlighted in red turn blue when the mapping changes. Blue indicates a column without mapping. The values no longer extract or display in the table grid.



## Verification View Toolbar Buttons

The toolbar provides quick access to some frequently used commands.

Button	Label	Description
	<b>Show batch list</b>	Displays the batch list.
	<b>Verify batch</b>	<p>Start the verification of the currently selected batch.</p> <p>Depending on the batch state, the batch is either displayed in the classification window or in the indexing window.</p> <p>A drop-down list allows users to verify the selected batch or verify the next invalid batch.</p>
	<b>Show document list</b>	<p>Displays the structure of the current batch.</p> <p>Selecting a document shows the document view, which provides an overview of the documents inside the batch.</p>
	<b>Start Learnset Manager</b>	Starts Learnset Manager.
	<b>Move Document To Exception State</b>	<p>The scope of this command depends on the Exception Mode set on the Options menu. Two options are available: Move Document to Exception State or Move Batch to Exception State.</p> <p>Clicking the arrow next to this button displays a list of exceptions. You can use these exceptions if you cannot correct a document at all—for example, because it belongs to none of the defined classes. Check with your administrator to determine which exceptions to use.</p> <p>Note that in order to avoid selection conflicts, only the toolbar button provides a list of exception handling states to choose from. The selection made here will also apply if you move a document to exception state by selecting the appropriate option within the Options menu.</p>

Button	Label	Description
	<b>Highlight All Fields</b>	Marks all areas on the current document that have been used to fill the fields. If the result is valid, the area highlights in green. If the result is invalid, the area highlights in red.
	<b>Highlight Selected Field</b>	Marks only the area on the current document that was used to fill the field that is currently selected in the field area. If the extraction result is valid, the area highlights in green. If the extraction result is invalid, the area highlights in red.
	<b>Highlight Candidates</b>	Marks the area that was used to fill the field that is currently selected in the field area. This area either appears in green or in red. In addition, all other areas that were taken into account to fill this field highlight in yellow.
	<b>Fit to Height</b>	Fit the current image to the height of the window.
	<b>Fit to Width</b>	Fit the current image to the width of the window.
	<b>Best Fit</b>	Fit the current image to the width or height of the window for maximum enlargement.
	<b>Zoom In</b>	Zoom in on the document.
	<b>Zoom Out</b>	Zoom out on the document.
	<b>Keep Focus on Field</b>	If this button appears pressed down, the application always displays the document area that is associated with the currently selected field.
	<b>Keep Zoom</b>	Keeps the established zoom settings on each document you view in the batch.
	<b>First Page in Document</b>	Displays the first page of the document. This button is only enabled if the current

Button	Label	Description
		document has more than one page.
	<b>Previous Page in Document</b>	Displays the previous page in document. This button is only enabled if the current document has more than one page.
Page <input type="text" value="1"/> of 3		The text field allows you to enter a page number in order to directly navigate to that page. All invalid entries, such as alphabetic characters or page numbers out of range, will be ignored and the page number will be reset to the currently displayed page.
	<b>Next Page in Document</b>	Displays the next page of the document. This button is only enabled if the current document has more than one page.
	<b>Last Page in Document</b>	Displays the last page in document. This button is only enabled if the current document has more than one page.
	<b>Rotate Image</b>	Rotate the current document clockwise.
	<b>First Document</b>	Display the first document in the batch and switches the application to Browsing Mode.
	<b>Previous Document</b>	Display the previous document in the batch and switches the application to Browsing Mode.
	<b>Next Document</b>	Display the next document in the batch and switches the application to Browsing Mode.
	<b>Last Document</b>	Display the last document in the batch and switches the application to Browsing Mode.
	<b>Apply local extraction</b>	Applies local classification and extraction to the current document.
	<b>Add document to learnset</b>	Adds current document to local learnset.

Button	Label	Description
	<b>Learn Documents</b>	Starts document learning.
	<b>Correct Table</b>	Starts table correction.

## About the Document List

The document list displays the structure of the current batch.

Use the document list view to perform any of the following tasks.

- [Display a document](#)
- [Split a multi-page document](#)
- [Append two documents](#)
- [Classify or reclassify a document](#)


## Display the Document List

To display the document list, complete the following step.

- Click the Show document list  button.





## Access Predefined Filters






To access a predefined filter, complete the following step.

- On the toolbar, click the arrow next to the Show document list  button and then select the required filter.

## Customize the Document Viewer Pane

To customize the document viewer pane, complete any of the following steps.

- To display the first page of the selected batch or a single page of the selected document, click the  button.
- To horizontally display the first two documents of the selected batch or the first two pages of the selected document, click the  button.
- To horizontally display the first three documents of the selected batch or the first three pages of the selected document, click the  button.
- To vertically display the first two documents of the selected batch or the first two pages of the selected document, click the  button.

- To adjust the magnification used to display documents, complete any of the following substeps.
  - To adjust the document to window height, click the Fit to height  button.
  - To adjust the document to window width, click the Fit to width  button.
  - To adjust the document to best fit, click the Best fit  button.
  - To zoom in, click the Zoom in  button.
  - To zoom out, click the Zoom out  button.

## About the Batch Structure Pane

The batch structure pane displays an hierarchical representation of the batch contents.

The levels of the hierarchy are as follows.

- Batch
  - Folder
    - Document
      - Page

Each document entry provides the following information.

- **ID**: A number that uniquely identifies the batch, folder, or document.
- **State**: An integer between 0 and 999 that indicates the progress of batch processing. The batch state corresponds to the lowest value of all folder states and the folder state corresponds to the lowest value of all document states.
- The batch or folder **Name** is an arbitrary name that is easier to read than the ID.
- **Document Class**: The document's classification result.

**Note:** Depending on your access rights, the document view might list documents that are inaccessible. This is due to their input states which are out of the workflow you have access to.

## Navigate in the Document List

To navigate in the document list, perform one of the following actions.

- To expand or collapse a folder in, double-click on it, or click the plus sign or minus sign next to it.
- Perform one of the following actions.
  - To move to the first document, press Ctrl + Alt + Home
  - To move to the last document, press Ctrl + Alt + Home.
  - To move to the next document, press Ctrl + Alt + Page Down.
  - To move to the previous document, press Ctrl + Alt + Page Up.

## Display a Document

To display a document, complete the following steps.

1. In the left pane, select a document.

The first page of the document is displayed in the right pane.

**Note:** It is possible to default Verifier to display a specific page of each document instead of the first one. For more information, see “VerifierFormLoad” in the *Brainware Intelligent Capture Scripting Help*.

2. Optional. If the document contains more than one page, select the respective line in the left pane to display the desired page.

## About Splitting and Appending Documents

In the document list, you can cut multi-page documents into separate documents. You can also merge consecutive pages of documents into one multi-page document.

### Split a Multi-Page Document

To split a multi-page document, complete the following steps.

1. From the **View**, select **Show Selected Batch > All Documents**.
2. Select **Show document list**.
3. Click a multi-page document.
4. Right-click a page in a multi-page document, and then perform one of the following actions.
  - Select **Cut pages into a new document**. If the cut operation is unavailable, switch back to the original sequence.
  - Select **Cut pages into new document keeping cover page**. This option splits a single document into several smaller documents and corresponding TIF files. It also includes the cover page of the original document as the cover page for the new documents.

**Note:** To mark a page as a cover page, right-click on the first page of the document and select **Mark as cover page**.

### Append Two Documents

To append a document to another, complete the following steps.

1. Right-click the document to append, and then select **Append this document to previous one**.

**Note:** The append operation might be unavailable if changes were made to the sorting list. Switch back to the original sequence.

## Classify or Reclassify a Document



To classify or reclassify a document in the **Document list** view, complete the following steps.

1. In the left pane, select the document whose class you want to change.
2. Press **F7** or double-click on the selected row in the **Document Class** column.  
The available classes are displayed in the drop-down list.
3. From the drop-down list, select the required class.

**Note:** To automatically extract the document data after changing a class, select the **Perform automatic extraction after classifying documents manually** option in the Verifier settings. For more information, see [Verification rules](#).



## Viewer Toolbar Buttons









The viewer toolbar allows you to adjust the magnification used to display documents using the following commands.

Button	Label	Description
	<b>Fit to height</b>	Fits the document to window height.
	<b>Fit to width</b>	Fits the document to window width.
	<b>Best fit</b>	Provides the best fit for an image.
	<b>Zoom in</b>	Zooms in.
	<b>Zoom out</b>	Zooms out.

## Document List Toolbar Buttons

The toolbar provides quick access to some frequently used commands.

Button	Label	Description
	<b>Settings</b>	Opens the Verifier properties dialog box.
	<b>Batch filter</b>	Opens the Batch Filtering Condition Properties dialog box.

Button	Label	Description
	<b>Show batch list</b>	Displays the batch list.
	<b>Verify batch</b>	<p>Start the verification of the currently selected batch.</p> <p>Depending on the batch state, the batch is either displayed in the classification window or in the indexing window.</p> <p>A drop-down list allows users to verify the selected batch or verify the next invalid batch.</p>
	<b>Show document list</b>	<p>Display the available filters for the batch structure. You can select from among the following options.</p> <ul style="list-style-type: none"> <li>• All documents</li> <li>• Documents to Classify</li> <li>• Index Documents to Classify</li> <li>• Documents to Index</li> </ul>
	<b>Start Learnset Manager</b>	Start Learnset Manager. This button is available in Verifier only.
	<b>Single Page</b>	Display the first page of the selected batch or a single page of the selected document.
	<b>Two Pages Horizontally</b>	Display the first two documents of the selected batch horizontally or the first two pages of the selected document.
	<b>Three Pages Horizontally</b>	Display the first three documents of the selected batch horizontally or the first three pages of the selected document.
	<b>Two Pages Vertically</b>	Display the first two documents of the selected batch vertically or the first two pages of the selected document.

## Document List Keyboard Shortcuts

The following keyboard shortcuts are available in the document list.


Keyboard Shortcut	Command
Ctrl + P	Print
Ctrl + Alt + Home	First Document
Ctrl + Alt + Page Down	Next Document
Ctrl + Alt + Page Up	Previous Document
Ctrl + Alt + End	Last Document
Ctrl + 8	Append Document
Ctrl + 9	Cut Document
Ctrl + Enter	Accept/Reject next unsure page
Ctrl + Space	Select next unsure page
Ctrl + 1	Display the Batch View
Ctrl + 2	Start the verification of the selected batch
Ctrl + 3	Display the selected batch in Batch View
Ctrl + N	Manually restore input focus without using the mouse
Ctrl + Add	Zoom in
Ctrl + Subtract	Zoom Out
Ctrl + Left	Move Image to Left
Ctrl + Right	Move Image to Right
Ctrl + Up	Move Image Upwards
Ctrl + Down	Move Image Downwards

Keyboard Shortcut	Command
Ctrl + R	Rotate
Ctrl + Home	First Page in Document
Ctrl + Page Down	Next Page in Document
Ctrl + Page Up	Previous Page in Document
Ctrl + End	Last Page in Document
Ctrl + M	Show selection context menu
Ctrl + Z	Undo
F7	Reclassify manually (available in Advanced Verifier)
F3	Show last verified document (available in Advanced Verifier)
F8	Get last value for selected field (available in Advanced Verifier)
F9	Move to exception state
Ctrl + E	Release exception batches
Ctrl + L	Apply local extraction (available in Advanced Verifier)
Ctrl + A	Add document to learnset (available in Advanced Verifier)
Ctrl + T	Correct tables
Ctrl + Q	Switch table highlighting (available in Advanced Verifier)

## Page Separation Workflow in Verifier

### About Manually Correcting the Automatic Document Separation

To manually correct documents after automatic separation, navigate to Document Browsing mode. When the next batch opens, the system will automatically display the first uncertain page split or merge.

When an entire batch returns to the “failed document separation” state, that means the automatic separation has at least one unsure page separation or merge. The Batch Fail  icon indicates that the batch will need a manual validation.

Here, you have the following options.

- Toggle the unsure status
- Split the document into two separate documents
- Merge current document with the previous one
- Go to the next unsure page

## Working with Learnset Manager

### About Supervised Learning

The basic purpose of Learnset Manager is to use Supervised Learning (interactive training) to improve the quality and usefulness of your enterprise's learnsets.

With Supervised Learning, Supervised Learning Verifiers, and Learnset Managers, you can customize your project's learnsets by adding or removing documents, reclassifying them or creating altogether new classes or learnsets and migrating documents there. They can also promote local learnsets to a global learnset so that it can be shared across the enterprise.

In general, Learnset Manager consists of:

- Creating new classes based upon documents themselves and supplier information.
- Learning documents and adding them to the local learnset.
- Using the local learnset to improve the extraction of low-quality documents.
- Maintaining local learnsets.
- Updating and enhancing the global learnset with information from the local learnsets.

Although Supervised Learning was created for use with vendors' invoices, it can also be used with other types of knowledge. For example, a library might create classes based on type of material, subject matter, or author. Most of the illustrations and examples in this chapter use invoices.

Learnset Manager is a separately licensed add-in that can only be launched from Verifier. You have access to Learnset Manager mode only if you have been assigned to a group that has permission to work with the mode. There is no limit on the number of users who can simultaneously access Learnset Manager.

### Start Learnset Manager

To start Learnset Manager, complete the following step.

- On the toolbar, click the Start Learn Set Manager  button.

### About the Learnset Manager User Interface

Learnset Manager has two basic modes, or views.


The Accumulated Documents view where you work with local learnsets.

The Global Learnset view where you work with common and global learnsets.

When you are working with local learnsets, you can further refine the appearance of the Accumulated Documents Browser when you verify documents or manually reclassify them.


## Accumulated Documents Browsing

The **Accumulated Documents Browsing** view provides the following panes.

- The left pane displays the classes in the batch you are working on. This batch viewer shows each class as part of the batch, the user who created the batch, the date it was created, the number of documents in the batch and in each class, the number of documents successfully classified, and the number of documents successfully extracted. You can enlarge the window to see all of these categories.
- The right pane displays the current document. You can verify documents by clicking the Verify Documents  button.
- The lower pane displays the statistics. Here you can view the status of processed documents. A question mark represents documents that are awaiting processing. Successfully processed documents have a check mark, while documents that failed processing have an X.

## Global Learnset Browsing

The **Global Learnset Browsing** view provides the following panes.

- In the left pane, you can see each class in the batch you are working on. This batch viewer shows the classes in the global learnset, and the number of documents classified or extracted in each.
- The right pane displays the current document. You can verify documents by clicking the Verify Documents  button.
- In the lower pane, you can view that status of processing documents in the Learning Statistics Viewer. A question mark represents documents that are awaiting processing. Successfully processed documents have a check mark, while documents that failed processing have an X.









## Learnset Manager Keyboard Shortcuts

The following menu commands and keyboard shortcuts are available in Learnset Manager.

Keyboard Shortcut	Description
Ctrl + E	Closes Learnset Manager.
F5	Verifies documents in Supervised Learning.
F7	Manually reclassifies documents. Available to Verifiers and Managers.
F1	Opens Learnset Manager Help.




## Learnset Manager Toolbar Buttons



The Learnset Manager toolbar provides quick access to some frequently used commands.

Button	Description
	Show Settings.
	Switch to Accumulated Documents Browsing (the local learnset).
	Switch to global learnset processing.
	Verify Documents. Activates the Advanced Verifier mode.
	Correct tables. Allows you to correct data in the tables. You have to click a table field for this to be active.
	Accept documents.
	Reject documents.
	Learn documents. (Adds them to global learnset.)

## Learnset Manager Viewer Toolbar Buttons

On the Viewer toolbar, you can use the following commands to adjust the size of a document relative to the width of the Document Viewer window.

Button	Description
	Fits the document to window height.
	Fits the document to window width.
	Best fit.

Button	Description
	Zooms in. Alternatively, press [Ctrl] + [+].
	Zooms out. Alternatively, press [Ctrl] + [-].

## Using Learnset Manager


### About the Learnset Manager Process

Use Learnset Manager to work with local learnsets: first, verify the documents, decide whether they belong in the learnset, add them to the common learnset, and train the learnset.

In the common learnset, you examine the documents for inclusion in the global learnset, accept or reject them, and add them to the global learnset. After that, you train the global learnset.

### Configure Learnset Manager

To configure Learnset Manager, complete the following steps.

1. To enable Supervised Learning, complete the steps in [Configure Supervised Learning](#).
2. On the **Learnset Manager** toolbar, click the **Show Settings**  button.
3. In the **Learn Set Manager Settings** dialog box, select **Show learned state using engine-level information**.  
This setting indicates whether the system for learning was using a particular field or document. Also, a user can disable learning.
4. Optional. To prevent adding documents to the learnset that are too large, select **Automatically reject document if number of pages exceeds** and enter the number of pages in the field.  
A message box is displayed when a document exceeds the number of allowed pages. The user can decide to accept the document by clicking Yes.
5. Complete one of the following substeps.
  - To inherit the settings from **Verifier**, select the **Inherit Verifier settings** check box.
  - To use a different settings, set the following options.
    - In the **Global project path and name** field, enter or browse to the global project.
    - To store BIC core information in the database, complete the following substeps
      1. Select the **Use database as document and statistics source** check box.

**Note:** To use the option **Use database as knowledge source**, the database needs a job for a common learnset. If this common learnset job is not available, create a

database 'job' from RTS with common learnset folder as the batch root.

2. Optional. Select a job from the **Select Job** list.
  - To set the path to the batch root, in the **Accumulative (common) batch root path** field, enter or browse to the path.






**Note:**

This option is not available when using the database.

6. Under **Automatic Backup**, select the files to back up automatically.

## Work with Common Learnsets


To work with common learnsets, complete the following steps.

1. Click the **Switch to Accumulated Documents Browsing**  button.
2. In the left pane, select a batch to work with and then double-click a class.
3. In the lower pane, select a document.  
The document displays in the right pane.
4. Optional. To activate **Advanced Verifier**, on the toolbar, click the **Verify Documents**  button and then verify the document.
5. Complete one of the following substeps.
  - To nominate the document for the common learnset, click the **Accept Document**  button.
  - To reject the document, click the **Reject**  button.
6. In the lower pane. select another document from the batch and repeat the previous step.
7. After verifying all necessary documents, click the **Learn**  button.  
This promotes all accepted documents to the common learnset.

**Result** The Learn Statistics window for the local learnset is now empty.

## Correct Tables

To correct tables, complete the following steps.

1. In the lower pane, select a document.  
The document displays in the right pane.
2. In the right pane, click a table cell.
3. On the toolbar, click the **Correct Tables**  button.

**Note:** This enables Supervised Learning Managers and Verifiers to interactively train all the tables in a

document. Table correction in Learnset Manager proceeds just as it does in Verifier.

### Reclassify a Document

To reclassify a document, complete the following steps.

1. From the **Document** menu, select **Reclassify**.  
This opens a drop-down list below the document.
2. From the drop-down list, select a class and then press Enter.

### About Accepting and Rejecting Documents

There are two ways to accept or reject a document or batch from a learnset.

- Using Verifier to manually screen and verify the document or batch.
- Comparing documents in the common learnset to the corresponding batch in the global learnset.

### Sort Batches

Learnset Manager can sort by vendor name across multiple batches produced by different local Supervised Learning Verifiers. This simplifies SLW decisions as to which documents to train for a specific vendor class. With the help of this feature, the user can now review all documents for the same vendor class created by different Advanced Verifier workstations at once.

The sorting options are available in Accumulated Document Browsing only.

However, in Global Learnset Browsing mode, the Vendor classes are sorted in alphabetical order. Furthermore, under the Display Class Name column, class name is shown only for the document classes that already exist in the global project.


To sort the batches, complete one of the following steps.





- From the **View** menu, select **Sort Batches by Vendor**.  
The system rebuilds the batches of documents created through multiple sessions by multiple Advanced Verifier workstations and allows the Learnset Manager user to sort by vendor name. In this connection, each vendor folder cumulates all available documents for this vendor, so that the user can select the best documents to train the global project with.

The **Created On** and **Created By** data fields are displayed separately for each particular document in the lower pane.

### Work with Global Learnsets

The global learnset is where you further refine the quality of your data before migrating it into an effective and useful global knowledge base. To work with global learnsets, complete the following steps.

1. Click the **Global Learnset Viewing**  button.
2. In the left pane, select a class.

3. In the lower pane, select a document.
4. In the lower pane, right-click the document if you are satisfied with it, and then click **Enable Document**.
5. In the lower pane, right-click the document and then click **Use to Train Base Class**.
6. Click the **Learn**  button.
7. Confirm learning the document by clicking **Yes**.
8. After verifying each field in the document, click the **Accept**  button on the toolbar to accept the document for processing, or click the **Reject**  button to reject it.
9. Retrain the learnset by clicking the **Learn**  button on the toolbar.

## Train Base Classes

The final milestone in creating or enhancing your global learnset is to train base classes. To train a base class, complete the following steps.

1. From the **Options** menu, select **Train Base Classes**.
2. Select the base class to train.
3. Under **Train Selected Base Classes**, select a value.

**Note:**

To avoid errors while maintaining the quality of your sample, select the lowest value possible.

4. Click **OK**.

## Update Local Projects

The ability to update local projects is important for keeping your learnsets in sync. During the work with Verifier, the global project's learnsets are constantly updated.

An administrator may update the local out-of-date projects with a new global project.

The administrator adds all the local projects into the main list, points to the global project template for overwriting, and then selects update.

To update local projects, complete the following steps.

1. From the **Options** menu, select **Update Local Projects**.
2. In the **Update Local Projects** dialog box, configure the selections described below and then click **Update**. This procedure can take a while, especially if you are updating projects on a network.

**Note:** Locked projects will not update.

- To add project paths to the Update list, click the **Add** button and then select the project.
- To remove paths from the Update list, click the **Remove** button and then select the project.
- To change existing project paths, click the **Change** button and then select the project.

- To view a history of all Verifier workstations that connect to the common learnset, click the **History** button. The history shows the workstation name, time, and date of its last connection.
  - To see the most recent information, click the **Refresh** button. This list updates every time a Verifier station creates a new batch of locally learned documents in the common learnset.
  - To empty the template cache, in the **Empty Template Cache Project** field, enter or browse to the project. This updates the local project.
3. Complete one of the following substeps.
- To update the list of projects, click the **Update** button.
  - To save the new criteria without actually updating the projects, click the **Save** button.

## Result

**Note:** For each configured path, the dialog box shows whether a project is up-to-date, whether it is locked, and whether the project is available. An up-to-date project has a green check mark and a out-of-date project has a red X. Path names of unavailable projects are dimmed. Also, the settings above are available for any workstation when Learnset Manager is open.

## About Using Learnset Manager on Several Workstations

Learnset Manager can be used simultaneously on more than one workstation thanks to the application's ability to lock projects and files.

Learnset Manager supports three levels of protection that facilitate this ability.

- Batch-level locking.
- Allowing all Learnset Manager workstations to view changes made by all Supervised Learning Managers.
- Locking project files and learnsets while they are being trained.

### About Batch-Level Locking

Batches are locked when they are in process. This it prevents several users from updating the same batch at the same time. No one else can access the batch until processing is completed and the batch is closed.

### About Tracking Changes Made by Supervised Learning Managers

The changes applied by one Learnset Manager user should be visible to all other Learnset Manager users. To accomplish this, Learnset Managers must use two predefined batch document states: "981, accepted" and "982, rejected".

When learning is executed, the Learnset Manager application checks to see if documents with either of these assigned states have been added to the local learnset. Documents with a state of 981 are added to the global learnset. Documents with a state of 982 are not added to the global learnset.

### About Project File and Learnset Locking During Training

Only one workstation can do learning at one time. This means that the learning process is locked, and therefore not available for other users, if one user has initiated learning.

## Print a Document

To print a document, complete the following step.

1. Select **File > Print**.

**Note:** This function is not available in the batch list view.

2. In the **Print** dialog box, select the required settings and then click **Print**.

## Configure Print Settings

To configure the print settings, complete the following steps.

The order that the fields print depends upon the order of the fields in the Form Design mode of the Designer application.

When a document prints, the header includes the document file name and the document class.

1. From the **File** menu, select **Print Setup**.
2. In the **Print Setup** dialog box, select any of the following options.
  - **Print image:** Prints the pages of the document file.
  - **Print form:** Activates printing of the verification form.
  - **Print hidden fields:** Prints the visible fields on the current verification form and all the fields available in the document.
  - **Print table fields:** Prints the table fields.
  - **Print column header on each printed table page:** This option is available only when **Print table fields** is selected.
  - **Always show the dialog when printing:** Displays the **Print Setup** dialog box when the users presses print.

## Troubleshooting

The tips in this topic can help to resolve some situations during the extraction and validation process.

**In one of my batches, there is a document that must be classified manually, but it does not belong to one of the available classes. What can I do to release the batch?**

Normally, your organization will have specialized workstations where people are in charge of handling special cases that only occur as exceptions.

**In one of my batches, there is a document I have already validated. However, I've overlooked a mistake in this document. I do not want to release the batch without correcting it.**

You can use the Document Mode to get to the document. Select the document and switch to Verify Mode. Make corrections and press Enter.

**Sometimes the indexing window looks has no field area, only the current input area. How do I get to the next field?**

You can use keyboard shortcuts for field navigation from within the current input area.

**When I switch from one field to the next, the document does not move. Is there a way to stop that?**

The application searches the document area associated with the content of the current field. This area is then displayed. To turn this off, select a different magnification ratio.

**I tried to start Learnset Manager, but I do not want to go through Verifier. Can I do this?**

No, the Learnset Manager can only be started in Verifier.

**OK, I tried to start Learnset Manager in Verifier, this will not work. Why?**

There are three reasons for this behavior.

- You may not have permission to use this add-in. Check with your project administrator to see if you are assigned to a group that can work with Learnset Manager mode.
- Learnset Manager might not be enabled for the project. Again, contact your project administrator.
- A third reason might be that Learnset Manager mode is not properly licensed. Learnset Manager gets its license through a Runtime Server process. If you've been able to get into to Learnset Manager mode before, but you cannot now, it may be that Runtime Server has stopped.

## Helpful Terms

### Items

**Accumulated Learnset**

A common learnset is known as a Accumulated Learnset.

**Automatic Supervised Learning**

This process uses the Associated Search Engine to process, classify, and extract information.

**Base class**

The highest level of a classification.

**Batch**

A batch is a stack of electronic documents. The electronic documents may be paper-based or files created using applications.

**Brainware Table Extraction**

An extraction method that facilitates interactive table training.

**Candidate**

Set of possible values for a field.

**Child class**

A class spawned by a parent class. Also called a sub-class.

**Class**

A set of documents that are grouped by common content. Each class usually has a mnemonic name that describes its contents.

**Common Learnset**

An accumulation of local learnsets.

**DocClass**

A parent document class.

**Document**

Any electronic file mainly consisting of ASCII text. If this is initially the case, OCR or filtering must be applied to create the text representation classified, have fields used for extraction, and have one or more images attached.

**Export**

The system no longer manages documents released by the export function.

**Folder**

A logical structure inside a batch for coherent documents. For example, a folder may consist of all pages of a correspondence with many folders inside one batch.

**Global Learnset**

A general learnset that encompasses similar classes or projects. See also Local Learnset.

**Learning**

Given a view with a set of documents in vector representation and their class assignment, a neural network is created, so that the defined classes can be reproduced without error. This neural network is the used in all subsequent classification tasks.

**Learnset**

In classification, a learnset is a set of documents whose class assignments are specified by the user. For each view and each class, the user must provide a sufficient number of representative documents. Similarly, in extraction, a learnset is a set of documents whose field contents are selected by the user from a set of candidates.

### **Local Learnset**

A learnset specific to a document class.

### **Neural network**

An artificial neural network is an application that in some ways works like a human brain. This includes the ability to learn. It consists of artificial neurons that are linked into a network of layers. The neural network can receive signals through an input layer, process it within the internal layers, and send signals through the output layer. During learning, a specified input (called a teacher signal, such as documents from a Learnset) and the desired output (such as the corresponding classes) are presented to the network together. Processing is then adjusted until the desired output can be produced from the teacher signal.

### **Optical Character Recognition (OCR)**

The reading and recognition of symbols of text from a piece of paper or a scanned image. OCR detects the symbols and converts them into characters and words that can be read electronically.

### **Parent class**

A class with derived class, called children.

### **Project**

A collection of customer settings for applications. Projects are created in Verifier and sent to Runtime Server for productive operation.

### **Smart Indexing**

Smart indexing uses a database lookup to determine document attributes. It can be used for automatic indexing and to support manual indexing.

### **Sub-class**

A derivative class. Also called a child class.

### **Workdoc**

An internal structure representing the logical structure of a document. The Workdoc represents the data created during processing of a single document and contains all OCR and analysis results.

## **Processes**

### **Analysis**

Analysis means the document content is analyzed and a set of possible values for a field are generated called candidates.

**Classification**

Classification means assigning one or more classes and corresponding confidence values to one or more unknown documents.

**Evaluation**

Evaluation means determining a class or the contents of a field from confidence levels, weights, or distances for classes or candidates.

**Extraction**

Extraction means automatic document indexing and its information that helps to sort, file and search documents.

**Importing**

Importing means bringing documents into the system for management and processing.

**Indexing**

Indexing means assigning attributes to a document. This can either be done manually, semi-automatically (Smart Indexing), or entirely automatically (Extraction).

**Validation**

Validation involves confirming whether a processing result is correct.





**Verification**








Verification is related to quality assurance. It involves taking a processed document, checking the processing results, and correcting any errors.

## Toolbar Buttons










This is a quick reference to some of the commonly used toolbar buttons.






**Main Controls**

Icon	Control
	Batch View
	Start Verification
	Batch Structure
	Display Properties












Icon	Control
	Display Batch Filter Dialog
	Start Learnset Manager
	First Batch Page
	Previous Batch Page
	Next Batch Page
	Last batch Page
	Refresh



## Verification View

Icon	Control
	Exception State
	Highlight Candidates
	Keep Focus on Field
	Keep Zoom
	Previous Page in Document
	Next Page in Document
	Rotate Image (90 degrees)
	First Document in Batch
	Previous Document in Batch








Icon	Control
	Next Document in Batch
	Last Document in Batch
	Correct Tables
	Add Current Document to Local Learnset
	Classify and Analyze Current Document

## Document View

Icon	Control
	Fit to Height
	Fit to Width
	Fit to Size
	Zoom In
	Zoom Out
	Single Page View
	Two Pages View horizontally
	Three Pages View horizontally
	Two Pages View vertically
	Move Image Downwards
	Move Image to Left

Icon	Control
	Move Image to Right
	Move Image Upwards

## Learnset Manager

Icon	Control
	Show Properties
	Accumulated Documents Browsing
	Global Learnset Browsing
	Verify Document
	Accept Document
	Reject Document
	Learn Documents