Oracle[®] Fusion Middleware

Oracle WebCenter Forms Recognition Web Verifier User's Guide

11g Release 1 (11.1.1)

E50189-02

November 2015

Documentation for WebCenter Forms Recognition Web Verifier, that describes how to configure and use the application to verify documents, and to perform Supervised Learning Workflow.



Oracle Fusion Middleware Oracle WebCenter Forms Recognition Web Verifier User's Guide, 11g Release 1 (11.1.1)

E50189-02

Copyright © 2009, 2015, Oracle and/or its affiliates. All rights reserved.

This software and related documentation are provided under a license agreement containing restrictions on use and disclosure and are protected by intellectual property laws. Except as expressly permitted in your license agreement or allowed by law, you may not use, copy, reproduce, translate, broadcast, modify, license, transmit, distribute, exhibit, perform, publish, or display any part, in any form, or by any means. Reverse engineering, disassembly, or decompilation of this software, unless required by law for interoperability, is prohibited.

The information contained herein is subject to change without notice and is not warranted to be error-free. If you find any errors, please report them to us in writing.

If this is software or related documentation that is delivered to the U.S. Government or anyone licensing it on behalf of the U.S. Government, then the following notice is applicable:

U.S. GOVERNMENT END USERS: Oracle programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, delivered to U.S. Government end users are "commercial computer software" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, use, duplication, disclosure, modification, and adaptation of the programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, shall be subject to license terms and license restrictions applicable to the programs. No other rights are granted to the U.S. Government.

This software or hardware is developed for general use in a variety of information management applications. It is not developed or intended for use in any inherently dangerous applications, including applications that may create a risk of personal injury. If you use this software or hardware in dangerous applications, then you shall be responsible to take all appropriate fail-safe, backup, redundancy, and other measures to ensure its safe use. Oracle Corporation and its affiliates disclaim any liability for any damages caused by use of this software or hardware in dangerous applications.

Oracle and Java are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.

Intel and Intel Xeon are trademarks or registered trademarks of Intel Corporation. All SPARC trademarks are used under license and are trademarks or registered trademarks of SPARC International, Inc. AMD, Opteron, the AMD logo, and the AMD Opteron logo are trademarks or registered trademarks of Advanced Micro Devices. UNIX is a registered trademark of The Open Group.

This software or hardware and documentation may provide access to or information about content, products, and services from third parties. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to third-party content, products, and services unless otherwise set forth in an applicable agreement between you and Oracle. Oracle Corporation and its affiliates will not be responsible for any loss, costs, or damages incurred due to your access to or use of third-party content, products, or services, except as set forth in an applicable agreement between you and Oracle.

Contents

1	Wha	t Is Web Verifier?	6
	1.1	Some Helpful Terms	6
	1.2	Quality Assurance with WebCenter Forms Recognition	8
	1.3	About WebCenter Forms Recognition Workflow	9
2	Abo	ut Installation	11
	2.1	About Language Support	
2			
3	Start 3.1	and Exit Web Verifier About Starting Web Verifier	
		0	
	3.2	About Logging into Web Verifier	
	3.2.1 3.2.2	Login to Web Verifier About Windows Authentication	
		2.2.1 Login Using Windows Authentication	
	3.2.3	Issues You May Encounter During Login	
	3.3	Exit Web Verifier	
4		s, Groups and Roles	
	4.1	Change Your Login Password	
5	Abo	ut Configuring Web Verifier	
	5.1	Open the Settings Page	15
	5.2	General Settings	15
	5.2.1	About Specifying the Project File	15
	5.2.2	About Specifying the Application Language	
	5.2.3	About Automatic Batch Refresh	
	5.2.4	About Specifying Tabbing Behavior	
	5.2.5	About Enabling Auto-Completion	
	5.3	About Group Settings	
	5.4	About the Workflow Settings	
	5.4.1	Configure Tasks to Perform at the Workstation	
	5.5	About Exception Handling Settings	
	5.5.1 5.5.2	Select States	
	5.6	Configuring Exception Handling	
		Configuring Supervised Learning	
	5.7	About Batch Filtering	
	5.7.1	Configure Batch Filter Conditions	
6	Gett	ing Familiar with the User Interface	
	6.1	Access Batch View	
	6.1.1	Batch View Shortcut Keys	
	6.1.2	Batch View Toolbar Buttons	
	6.1.3 6.1.4	Table of Batches Batch View Columns	
	6.1.4 6.1.5	Sort in Batch View	
	6.1.6	Select a Batch in Batch View	
	6.2	About Document View	
	6.2.1	Open Document View	
	6.2.2	Document View Keyboard Shortcuts	

	6.2.3	Main Toolbar Buttons	
	6.2.4	About the Batch Structure Area	
	6.2.5	Navigate in the Document View	
	6.2.6	About Splitting and Appending Documents	
		.6.1 Split a Multipage Document	
	6.2	.6.2 Append Two Documents	
	6.2.7	Viewer Toolbar Buttons	
	6.2.8	Document View: Document Area	
	6.3	About the Verification View Classification Window	
	6.4	Open the Verification View Classification Window	
	6.5	Classification Window Keyboard Shortcuts	
	6.5.1	Verification View Classification Window Toolbar Buttons	
	6.5.2	Verification View Classification Window Document Area	
	6.5.3	About the Class Selection List	
	6.5.4	Set or Change a Classification Result	
	6.6	About the Verification View Indexing Window	
	6.6.1	Open the Verification View Indexing Window	
	6.6.2	Increase or Decrease the Image Area	
	6.6.3	Indexing Window Keyboard Shortcuts	
	6.6.4	Verification View Indexing Window Toolbar Buttons	
	6.6.5	Form Area	
	6.6.6	Field Area	
	6.6	.6.1 Navigate the Field Area	
	6.6.7	About the Current Input Area	
	6.6.8	Verification View Indexing Window Document Area	
	6.7	Print a Document	
	6.7.1	Printing Verified Data Content	
7	Worl	c with Web Verifier	
		About the Classification Results	
		Classify an Incorrectly Classified Document	
		Page Separation Workflow in Web Verifier	
	7.3.1	Configure Settings for Document Separation	
		About Manual Correction of Automatic Document Separation	
	7.4.1	Toggle the Unsure Status	
	7.4.2	Split the Document into Two Separate Documents	
	7.4.3	Merge the Selected Document with the Previous One	
	7.4.4	Go to the Next Unsure Page About Page View Modes	
	7.4.5	.5.1 Change View Modes	
	7.4.6	Reorder Pages	
		About Manually Correcting Classification Results	
	7.5.1	Manually Correct Classification Results	
		About Processing Documents Classified to Obsolete Document Classes	
	7.7	About Manual Correction of Extraction Results	
	7.7.1	Correct Invalid Results	
		1.1. Form Elements and Field Types	
		1.2 About Editing Text Fields 1.3 About Auto-Completion	
		1.1.4 About Inserting Words in Fields	
	1.1		
	7.7	1.1.5 Use a Word That Is a Candidate for a Field	41
	7.7 7.7		

	7.7.2	Finish the Validation	42
	7.8	About Manual Correction of Classification and Extraction Results	43
	7.9	About Manual Indexing	43
	7.9.1	Manually Index a Document	43
	7.10	Check Entire Batches	44
8	Abo	ut Working with Tables	45
	8.1	About Automatic Training and Extraction of Verified Table Data	45
	8.2	Traditional Training and Correction Methods	45
	8.2.1	Insert Candidate Words in Table Cells	45
	8.2.2	Insert Non-Candidate Words in Table Cells	45
	8.2.3	Correcting Table Structure	45
	8.3	Table Extraction and Correction	46
	8.3.1	Learning Lines	46
	8.3.2	About Learning Mappings of Columns	47
	8.3.3	About Correcting Fields in Tables Created with Brainware Table Extraction	47
	8.3.4	Use the Standard Method for Table Extraction	47
	8.3	3.4.1 Show the First Row Sample	48
		3.4.2 Learn Mapping in the Row You Learned	
		3.4.3 Learn Missing Lines	
		3.4.4 Learn and Adjust the Mapping of Missing or Wrong Columns	
		3.4.5 Manually Correct Table Fields and Validate a Table	
	8.3.5		
		3.5.1 Learn a Block of Secondary Lines	
		3.5.2 Unlearn a Line	
	8.3	3.5.3 Learn a Line as a Wrong Line	51
9	Freq	uently Asked Questions	52

1 What Is Web Verifier?

Web Verifier is a web-based extension of the Verifier client application. It is an application module to allow users to verify documents with no software installed on the client side. The processing of activities primarily occurs on a central server allowing use of thin client devices running only a web browser.

This results in easier system management and allows for central management of storage and backup, and provides for easier security.

Web Verifier offers higher flexibility, as the only thing you need to work on your project is a workstation running a web browser and an Internet connection. You are able to access your project or the current batch list from everywhere. Furthermore, the system is able to remember the application state after the user's last session. When the user starts the application next time, the system will load the last application state. As this information is stored in the database on the central server (as user-level project settings), access to it through authentication using your login information from every device irrespective of the operating system is possible.

In addition, users of the Web Verifier module have the option to apply lockers to resources for exclusive use. Thus, no other module or user will be able to use this resource. However, in order to prevent dead locks, each locker is provided with a timeout. This means that upon exiting the application, the system will remove all user owned lockers.

These are some key features of Web Verifier:

- 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 release.

These are some highlights of Web Verifier functionality:

- The structured user interface makes the application easy to learn.
- Sophisticated status management and filter techniques show you only the documents you have to check, and nothing else.
- During the application design, the user interface can be configured, providing optimum display options for each document category.
- Through automatic locking, document batches can safely be processed by teams of operators.

1.1 Some Helpful Terms

This section provides some helpful terms when using Verifier.

Batch A batch is just a stack of documents. Usually, this stack is not sorted. In the context of WebCenter Forms Recognition, batches consist of electronic documents. The documents inside such a batch may be paper-based documents that have been scanned to transform them into a digital format, or files created

	using applications such as a word processor. Various documents are normally assigned to the same batch only because they have been received within the same time period. For example, all letters received in the morning may be scanned until noon and therefore end up in the same batch.
Folder	In a business environment, folders are normally used to keep several documents together. WebCenter Forms Recognition does the same thing with folders. However, in the context of WebCenter Forms Recognition, a folder is always a structure inside a batch. This means that batches can either consist of document stacks, or they can consist of stacks of folders.
Document	A document is a piece of information that can serve as evidence of an event, situation, or business transaction. For example, a packing slip may provide evidence that an order has actually been shipped. Since people are used to working with paper, electronic documents strongly resemble paper-based documents. You will notice that WebCenter Forms Recognition documents consist of one or several pages, though the concept of a page is not really required for digital documents.
Classification	Classification means taking an unsorted stack of documents and organizing them into smaller stacks so that each stack contains only documents belonging to the same category. In other words, you start with a mess and end up with an organized stack of invoices, a second stack of resumes, a third stack of orders, and so on. Class and category are the same thing.
Indexing	Imagine you have a homogeneous stack of invoices, and you start to write out the information contained in the documents. For each document in the stack, for example, invoices, you will note the name of the supplier, the total sum to be paid, and the invoice number. This procedure is called <i>indexing</i> , and the information that was noted is the indexing information. Once you have finished, you file the invoices and use the indexing information to build your filing structure. Later, you will be able to search and identify the document with the help of the indexing information. In the context of WebCenter Forms Recognition, indexing information is applied to a set of fields associated with the document. For each document category, a different set of fields can be used.
Extraction	If you take the stack of invoices and again write out the name of the supplier, the total sum to be paid, and the invoice number, but this time it is done automatically, the procedure is called extraction. Extraction is a means for automatic document indexing. Extraction is context-sensitive; that is, the extracted information depends on the document category.
State	A state is a number that tells you how far the processing of a document has progressed. If the entire procedure of document processing consists of single steps, then the state increases with each step that has been completed. The state also indicates whether a step has been completed successfully, or whether there have been problems. In WebCenter Forms Recognition, states are determined hierarchically from the bottom up. If anything is wrong with a document, then there is also something wrong with the batch it belongs to.
Verification	Verification is a task related to quality assurance. It involves taking a document that has been processed or partially processed, checking the processing results,

	and correcting any errors.
Validation	Validation is another task related to quality assurance. Validation means confirming that a processing result is correct. This can be done at several levels:
	 For the class or a field associated to a document.
	• For the document as a whole.
	• For an entire batch.
Learnset	In classification, a learnset is a group of documents whose classification is specified by a 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.

1.2 Quality Assurance with WebCenter Forms Recognition

To properly ensure the quality of automatically processed documents, there are two things you need to understand:

- Batches are the basic entity.
- WebCenter Forms Recognition works on batches. Tasks consist of processing steps that must always be completed for an entire batch before the next task can start.

For example, if Batches 9, 10, and 11 are waiting to be classified, the application first classifies all documents in Batch 9. If this is done, the state of Batch 9 is incremented. The next task may be to classify all documents in Batch 10, or it may be to extract data from all documents in Batch 11.

What the application will not do is to classify some documents from Batch 9, then some documents from batch 10, and then go back to Batch 9 to classify the remaining documents.

If batches are the basic entities, then entire batches need to be verified and approved before they are routed to subsequent systems where other users or processes work with them.

A batch is valid only if all documents and processing results associated with the batch are valid. Because we are dealing with information and data, we do not use the terms *working* or *damaged*. Instead, we use the terms *valid* or *invalid*.

Batches consist of a restricted number of parts, with well-defined relationships. Therefore, we can easily see why a batch can be 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 it has been classified automatically, but the classification result is invalid, or data has been extracted automatically from it, but at least one or more fields are invalid.
- A classification result is invalid if no matching class could be found, or the class has been changed manually and not yet validated.
- A field is invalid if it could not be filled, its content does not comply with validation rules that have been defined, or its content has been changed manually and not yet validated.

Field validation rules may be violated for a number of reasons:

- The set of allowed characters may be restricted.
- Only uppercase characters may be allowed.
- There may be restrictions on the number of characters the field can contain.
- WebCenter Forms Recognition may enforce that characters which could not be certainly identified during the OCR process must be checked. These questionable results are indicated in red and are underlined.

Besides these formal validation rules, all kinds of custom rules are possible. For example, if the contents of *Field 3* do not equal the sum of *Field 1* and *Field 2*, then *Field 3* may be invalid. Such a rule will typically be applied for invoices. The application normally tells you why a field is invalid.

1.3 About WebCenter Forms Recognition Workflow

In WebCenter Forms Recognition, the flow of incoming documents follows a sequence of standard processing steps. Some steps can be skipped, but the order of steps is fixed.

Automatic steps are executed by the Runtime Server and include document import with batch creation, OCR and layout analysis, classification, extraction, export, and clean-up. These automatic steps are completed with two manual verification steps that ensure only high-quality output is produced:

- Verification of the classification step.
- Verification of the extraction step.

If the Runtime Server has completed an automatic step and the batch contains only valid results, the next automatic step can be accomplished without human intervention.

However, if the Runtime Server detects that the batch contains invalid results, the batch must be routed to a verification station, where a user can analyze and resolve the problem using Verifier. Invalid batches are presented to you in a task list, called the *Batch View*. The Verifier user will have to resolve each problem and validate each correction before the batch can be released. Subsequent automatic steps can be carried out only after release. Finally, when WebCenter Forms Recognition has finished processing a batch, the documents are sent to their recipients.

One of the objectives of WebCenter Forms Recognition is to get documents to their recipients as quickly as possible. On the machine side, automatic steps can be distributed to several computers to ensure that no delays occur. They can simultaneously perform the same or different tasks. Similarly, on the human side, WebCenter Forms Recognition supports a variety of task distributions in a team. For example, there can be specialized workstations, where one station's operator is only in charge of classification results and the other station's operator verifies the extraction results. This can be realized by configuring Verifier accordingly. In addition, several operators can carry out the same task at the same time, but on different batches. This is possible through a locking mechanism that avoids conflicting results by making sure that a batch cannot be changed by several persons at the same time.

As a practical example, consider two servers with Runtime Server called *Runtime_Alpha* and *Runtime_Beta* which share the time-consuming task of OCR. A third server, *Runtime_Gamma*, is in charge of the remaining automatic steps. If *Runtime_Gamma* generates an invalid classification result, the corresponding batch is routed to a member of the QA team named *Miller*. Miller corrects these results using the Verifier instance running on *Verifier_Miller*.

Normally, correcting invalid extraction results requires more effort than correcting invalid classification results. Therefore, three other members of the QA team, *Barnes*, *Hill*, and *Dawson*,

share a common work list containing batches with invalid extraction results. If any of them start processing a batch, this batch will be locked for the others. Verifier sets a corresponding marker in the work list.

2 About Installation

If your workstation is intended to run only Web Verifier, no installation steps at your workstation are necessary. All you need is a web browser, an Internet connection and your login information.

Your administrator will create a user account for you for the WebCenter Forms Recognition context using the Designer application, and will assign at least one role to you.

In context of the Web Verifier, all work associated with installation, user assignment, project design, and database creation is done at a central server. This should be done by an experienced user.

2.1 About Language Support

The Web Verifier application implements support for multiple non-Western languages. This means that the user can review and edit and validate the extraction results using multiple languages at a time.

Searching with the Associative Search engine, for example, can be applied to a pool that contains multi-language entries. In this case, the user can even search for a mixed text with a couple of non-Western words or characters typed together within one search query, but in this case the *hieroglyphic* pool items may obtain better weighting compared with the other languages. This is however specific for *Associative Search Brainware V3* based processing.

This applies to the following workflow steps in WebCenter Forms Recognition:

- Classification.
- Extraction.
- Validation.
- Learning.

3 Start and Exit Web Verifier

3.1 About Starting Web Verifier

If Web Verifier is installed as recommended, you can launch it from your web browser using the server or application address. After you log in, the application displays a window where you can select a project and the job.

If you start Web Verifier on a machine for the first time, all of the controls may not display. If this is the case, you have to first add the Web Verifier site to the trusted sites list of your Internet browser.

3.2 About Logging into Web Verifier

When you log in to an existing project in Web Verifier, supply your WebCenter Forms Recognition user name and password. Your user name and password are assigned to you by your project administrator.

After you first log in, a dialog may open for a password change if your administrator configured this requirement. If this is the case, you must change your password before using the application.

The user name and password are used for the login to the Web Verifier platform. The user name and password also set the user rights for the active session. The name of the current user is displayed in the top-right corner of the Web Verifier window.

Note: If you have questions or problems with your user name or password, please contact your project administrator. If you forget your password, your administrator can reset it for you.

Your project administrator can give you the option to remember your user name and password between logins. This has been enabled if the **Remember Me Next Time** checkbox appears on the login form. To remember your user name and password between logins, complete your user name and password and check the **Remember Me Next Time** option before clicking **Log In**. The next time you login with the same computer, the system will complete the user name and password automatically. You also have the option to select the language for the application from the list in the bottom-right corner.

3.2.1 Login to Web Verifier

To log into Web Verifier, start an Internet browser and open the *Login* page of Web Verifier. This address is provided by the project administrator.

Note: The login for Web Verifier is configured by the project administrator using either the Web Verifier login or Windows authentication.

3.2.2 About Windows Authentication

In order to use Windows authentication, your administrator needs to configure the Web Verifier service to allow Windows authentication.

The Windows authentication login for Web Verifier shows the following special behavior.

- A canceled or failed authentication opens an error page. Press the reload button to open the *Login* page again.
- You can switch to another user by opening the **File** menu and clicking **Re-login**. The standard Web Verifier *Login* page opens.
- Windows authentication mode prevents changing your password.
- The **Logout** link terminates the session on the server. Reloading a Web Verifier page in the same browser instance will create a new session on the server for the current user.
- In order to completely logout from the system, it is necessary to close all open browser sessions. Otherwise, returning to the starting page would automatically restore the last session. A message at the end of the logout step reminds you of this:

```
Thank you for using Web Verifier. To complete the logout, you may now exit all opened browser windows.
```

3.2.2.1 Login Using Windows Authentication

To log in using Windows authentication, complete the following steps:

- 1. Open the start page of the Web Verifier application.
- 2. If the current computer user is configured for Web Verifier Windows authentication by the project administrator, the Web Verifier interface opens. The Windows authentication form may display.
- 3. Complete your Windows credentials if the Windows authentication form appears.
- 4. When logged in with Windows authentication, the Web Verifier window shows the domain and computer name in the top-right corner.

3.2.3 Issues You May Encounter During Login

To maintain the workflow with several users, a Web Verifier session ends automatically after 20 minutes of no activity. All batches are released and lose their changes that were applied during the last session. Any action in Web Verifier after a timeout opens the *Login* page with the following information:

```
Your session is currently expired due to either a log out, or a timeout of 20 minutes. Please log on once more.
```

3.3 Exit Web Verifier

To exit Web Verifier, complete the following steps:

- 1. Click the **Logout** link in the top-right corner.
- 2. Close your web browser.

4 Users, Groups and Roles

To load a Verifier project, you must log in with your user name and password. If you work on more than one Verifier project, your user name and password are probably the same for all of them.

The user name and password combination not only lets you access a project; it governs what you can do within it. User name and password combinations were set up by your project administrator while configuring your project in Designer.

Your administrator also set up user groups and assigned you to at least one of these groups. In turn, the administrator assigned one or more roles to each user group.

Administrator	The Administrator role is to manage users, groups, and user-to-group assignments. Administrators install the system, configure applications, and manage data. They also design and maintain projects. This role is the most powerful of the six roles, because it encompasses the permissions for all other roles.
Learnset Manager	The Learnset Manager role is to define, modify, and maintain the learnset.
Supervised Learning Verifier	The Supervised Learning Verifier role is to collect and manage local training data. Supervised Learning Verifiers are subject-matter experts who can propose learnset candidates to improve system performance.
Verifier	The role of the Verifier group is to verify documents that the system could not automatically process.
Verifier Settings	The role of the Verifier Settings group is to allow changes to the Verifier configuration.
Verifier Filtering	The Verifier Filtering role is to allow a Verifier user to configure custom filtering of batches. By application design, Verifier Filtering users would be able to use the filtering feature even if they do not have the Verifier Settings role.

There are six roles, as described below:

4.1 Change Your Login Password

To change your password, complete the following steps. For users logged in with Windows authentication, the Change Password option is not available.

- 3. Select **Change Password** from the **Options** menu.
- 4. Type in your existing password in the **Old Password** field.
- 5. Enter and confirm a new password in the respective fields.
- 6. Click OK.

5 About Configuring Web Verifier

Configuring Web Verifier requires specifying which batches of documents are processed at a given station. This includes:

- The project file that contains the settings used to process the documents.
- The name of the job that contains the batches to be verified.
- The processing steps that you want to verify, i.e. classification, extraction, document separation, or all of them.
- The status of batches before and after processing.

You can only work with Web Verifier after these settings are established. Only experienced users should change the settings.

5.1 Open the Settings Page

The *Settings* page is where you configure Web Verifier. To open the *Settings* page, Click the **Settings** button in the toolbar, or go to the **Options** menu and select **Settings**.

5.2 General Settings

For general settings, such as referenced project and job, select the **General** tab. Web Verifier presents the **My Settings** view. When the administrator creates users, they are assigned to one of the available groups with specific roles assigned. Depending on the roles the current user has been granted, different *Settings* views will be displayed.

Users who have been granted the *Administrator* role can assign settings to other user groups by selecting the **Group Settings** option, then selecting the group to configure from the dropdown list. The defined settings will then become the default settings for all users who are members of that group.

The **Supervised Learning** tab is only available for users who have been granted the *Administrator*, *Supervised Learning Manager* or *Supervised Learning Verifier* role.

5.2.1 About Specifying the Project File

The **Use Project File** option is for selecting the file name of the WebCenter Forms Recognition project used to process the documents. This contains the design of the indexing form that you will use to verify the extraction. The following scenarios are possible for the project loading procedure:

- When you log in to Web Verifier for the first time, and the project is already configured for you, the system prompts you to let you know that the project is loading.
- When you select a new project and click **Save** to save the settings made, the selected project loads after you returned to the *Batch View* and click **Show Batches**.
- If you are using the **Use Batch Specific Project File** option, the project loads as soon as you attempt to open a batch, and each time a batch is opened for a different project.

5.2.2 About Specifying the Application Language

The application language can be changed in the **General** settings.

Web Verifier supports an extended list of languages:

- Chinese (Simplified or Traditional).
- Danish.
- Dutch.
- English.
- French.
- Finnish.
- German.
- Italian.
- Japanese

- Korean.
- Norwegian.
- Polish.
- Portuguese.
- Romanian.
- Russian.
- Spanish.
- Swedish.
- Turkish.

Note: By default, the Chinese language selection points to Traditional Chinese. In case Simplified Chinese language is required, please contact your system administrator.

5.2.3 About Automatic Batch Refresh

If you select the **Automatic Batch Refresh** option, the *Batch View* automatically shows newly generated batches with matching states. If you do not want the automatic update, you can clear the checkbox. This leaves you the option to refresh the *Batch View* manually, by clicking the **Refresh** button at the bottom of the batch list.

5.2.4 About Specifying Tabbing Behavior

You can customize the way the system behaves when a user presses the [Tab] key.

If you select the **Tab Through Invalid Fields Only** option, when the user presses the [Tab] key in *Document Verification* mode, the system tabs through invalid fields only. Similarly, when the user presses the [Tab] key inside a table control, the system tabs through invalid table cells only. This option also applies for tabbing in a backwards direction when the user presses [Shift] + [Tab].

5.2.5 About Enabling Auto-Completion

You can select the **Enable Text Typing Auto-Completion** option to speed up typing. When you start to type, auto-completion completes the word, suggesting the best match among all of the words or candidates available after OCR and Format Analysis.

You can also enable this function for **Use Currently Opened Page Only**. This checkbox is only available when the auto-completion option is checked.

5.3 About Group Settings

This part of settings is only available for users who have the *Administrator* role assigned. Other users configure their own settings under **My Settings**. The **Group Settings** option will not be accessible for them.

The administrator can configure settings of different groups here by choosing the specific group from the dropdown list.

5.4 About the Workflow Settings

Runtime Server assigns pre-defined output states to batches after each processing step. Different states are used to distinguish successful steps from failures. If the state indicates a failure of the latest processing step, or if a step is to be carried out manually, the corresponding batch is forwarded to Verifier, where you correct the errors and supply missing results. Therefore, you need to know the output states used by your Runtime Server installation. They determine the input states used by the Verifier stations.

After verification, each batch must be returned to Runtime Server. Again, the output state of the verification step and the input state of the following step must match.

For example, assume that Runtime Server uses the input and output states described below to process batches:

Process Step	Input State	Success Output State	Failure Output State
Import		100	50
OCR	100	200	150
Classification	200	300	250
Extraction	300	700	550
Export	700	800	750
Clean Up	800		

In this case, a Verifier station conducting classification and extraction verification, or document separation, should use the settings shown below to verify whether this is correct:

Process Step	Input State	Output State
Document Separation	215	230
Classification Verification	250	300
Extraction Verification	550	700

Normally, the workflow should be configured with the following settings.

- Manual indexing or extraction correction after manual classification. Note that if a document could not be classified, automatic extraction will not succeed.
- Export after manual indexing or extraction correction.

However, it is not required to have everything done at one workstation. Tasks can be distributed among multiple workstations.

The export step is normally defined in custom scripts. Therefore, there is no default mechanism to handle export failures. However, there is the option of implementing a custom routine for this purpose. This should be done by an experienced user.

5.4.1 Configure Tasks to Perform at the Workstation

To specify the tasks to be carried out at the current Web Verifier station, select the **Workflow** tab, and then choose from among the following options:

- 1. To configure classification verification, extraction verification, or document separation, select one of the following options in the list.
 - Classification verification.
 - Extraction verification.
 - Document separation.

Note: One or more of these steps can be performed at the workstation.

2. To add an input value, right-click on the **Input** box and select **Add State** on the shortcut menu.

Note: You can also change states and remove states this way.

- 3. To set an output value, select it from the **Output** box.
- 4. To force WebCenter Forms Recognition to attempt to automatically extract data after you manually classify the document, select **Perform Automatic Extraction After Manual Classification**.

Note: To select this option, the output state of the **Classification Verification** workflow step must be entered as an input state for the **Extraction Verification** input step.

- 5. To skip validated documents and show the next invalid document when you click the **Next Document** button, select **Disable Navigation to Valid Documents**.
- 6. To go directly to the next invalid batch without the confirmation release dialog, select **Hide Batch Release Dialog**.
- 7. To determine the next invalid batch to be presented without prompting, select **When Entering Document Verification Mode, by Default Open Next Available Invalid Batch**.

Note: When this option is selected, the next batch number will be presented. When this option is cleared, the first batch at the top of the queue will be presented.

5.5 About Exception Handling Settings

To specify what to do if the verification cannot be finished normally, select the **Exception Handling** tab.

A document with an unexpected error may not be suitable for verification. Without a mechanism to handle unexpected failures, operators will not be able to remove the batch with this document from their task list. This is why Verifier incorporates an exception handling mechanism. It allows operators to manually assign special states to documents with unexpected errors.

The corresponding documents can be forwarded to verification stations that specialize in collecting exceptions.

5.5.1 Select States

For each selected state, a menu command is available in the *Verification View*. The menu commands allow for case-specific handling of various types of unforeseeable errors. The

description represents the menu command's label. To select a state and set its description label, complete the following steps:

7. On the **Exception Handling** tab, to enable a state, select the corresponding checkbox.

- 8. To set the description label, right-click on the existing label and select **New Description** from the popup menu.
- 9. Type the label into the corresponding field and confirm.

Note: The maximum length allowed for a description is 128 characters.

5.5.2 Configuring Exception Handling

The following settings are available for exception handling:

Before Moving a Document to an Exception State, Save It Automatically	Saves a document automatically before moving it to an exception state. This applies only to the respective current document.	
Create New Batches with Documents Marked for Exception Handling	When this option is selected, the documents that are marked for exception handling will be moved to an exception batch. A batch is created for each exception code. The new batch receives a new batch ID. Documents from all verified batches are moved to the same exception batch in the <i>Batch View</i> . These batches can be released manually or automatically.	
	When this option is disabled, documents marked for exception handling stay in their batches. These batches keep their batch ID but are renamed according to the state description.	
Automatically Release All Available Pending Exception Batches	When this option is selected, an exception batch is released once it contains more than the defined number of documents, or is older than the defined number of minutes. This allows critical exception documents to be processed without waiting for manual intervention. Exception batches will also be released when user has exited the application and logged in again.	

5.6 Configuring Supervised Learning

Supervised Learning allows users to nominate documents to the knowledge base job. Only users with the *SLV* role assigned will be able to access this *Settings* tab. The following settings are available for Supervised Learning:

Activate Supervised	Supervised Learning Workflow allows the user to copy documents
Learning Workflow	from current job to knowledge base job.

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.

Knowledge Base Job	The database job name that is used to keep track of the documents added to the knowledge base.		
Always Automatically Re- Extract Data for Poorly Processed Documents	Global extraction will be applied on documents with low extraction rates.		
Only if Activated by the User	Copying of the document to the global knowledge base has to be triggered by the user manually by clicking the Nominate for Learning button on the <i>Document View</i> page.		
Automatically if Unclassified or More	Documents will be copied automatically to the knowledge base if they meet the configured criteria.		
than % of Fields Are Invalid	If the Only if Activated by the User option is not selected, and the document does not meet the criteria to be copied automatically, you can still copy a document to knowledge base by clicking the Nominate for Learning button on the <i>Document View</i> page.		

5.7 About Batch Filtering

The *Batch Filter* function enables you to specify filter conditions on which batches should be displayed. This is useful if you want to find a subset of batches in a large job, or to limit Verifier user activities.

The filtering dialog window is accessible outside the settings dialog so that users without a **SET** role but with the **FLT** role are able to filter batches. Only users having the **FLT** role assigned will be able to configure filter conditions.

The saved filtering settings apply to the current *Batch View*, and the application saves them for future sessions.

5.7.1 Configure Batch Filter Conditions

To configure your filter settings, complete the following steps:

- 1. Select **Filtering** from the **Options** menu, or click on the **Batch Filter** icon. Users with the *SET* role assigned can also access the filtering window from within the *Settings* page.
- 2. In the filtering configuration, double-click on an entry in the left pane to select a batch attribute, and then double-click on a filter condition in the right pane.
- 3. On the status bar, the currently applied filter conditions are displayed. You can clear the filter condition settings by clicking on **Clear Condition** within the filtering dialog. The filtering conditions are combined with the *Show Batches* condition using a logical *AND*.
- 4. Within the **Group Settings** section, administrators can easily define filter conditions for several user groups:
 - Select a group from the dropdown list.
 - Click **Configure Filtering**.
 - Establish the filtering conditions and confirm by clicking **Apply**.

Click **Save** to save your settings. Users assigned to this group will now be presented with a subset of batches matching the filter conditions.

Note: In Web Verifier, the filtering settings are saved for the next sessions.

6 Getting Familiar with the User Interface

6.1 Access Batch View

The first page that is displayed after starting Web Verifier is called the *Batch View* because it shows a list of batches. This is your work list.

To access the *Batch View*, click the **Batch View** icon.

Note:	If Web Verifier is not	vet configured, the list of	batches will appear empty.

6.1.1 Batch View Shortcut Keys

The following shortcuts are available in the *Batch View*:

Keyboard Shortcut	Command
[Ctrl] + [0]	Print.

6.1.2 Batch View Toolbar Buttons

Button	Description
	Display the Settings page where you can configure Web Verifier.
27	Display a dialog where you can configure the batch filtering conditions properties.
	If you click on the arrow to the right of this button, the available filters for the list of batches are displayed. You can select one of the following options:
	All Batches.
•	 Batches to Verify, Classification Only.
	 Batches to Verify, Indexing Only.
	Batches to Verify.
۲	Start the verification of the currently selected batch. Depending on the batch state, the batch is either displayed in the classification window or in the indexing window. From the list you can select one of the following options:
	 Verify the selected or next batch.
	Verify the first invalid batch.
	Display the batch structure of the currently selected batch. Selecting a document shows the <i>Document View</i> , which provides an overview of the documents inside the batch.

6.1.3 Table of Batches

In the table of batches, a batch is represented by a single row. For each batch, an icon indicates its status. When no icon is shown, the batch state is out of workflow. You can select another batch or change the settings for the workflow.

Symbol	Status
	Batch is finished and ready for export.
2	Batch requires a correction of the classification results.
đ	Batch requires a correction of the extraction results.

	Batch is locked and unavailable, as it is in use by another application. Therefore it cannot be opened for correction.
8	Batch contains documents with exception statuses. When it is unavailable, it needs to be released before you can work on it again.

6.1.4 Batch View Columns

The batch list can be sorted by each column. The table columns display the following information about the batch:

Batch ID	A number that can be used to uniquely identify the 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 how urgent it is that a job be finished, where 1 is the highest priority and 9 is the lowest.
Name	An arbitrary name that is easier to read than the batch ID. Because the name is optional, it might be missing or set to a default value.
Folders	Documents in a batch can be grouped in structures called <i>folders</i> . 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	Contains N/A as this column is not currently used.
Last User / Module	The computer name of the operator who has processed the batch before and the name of the application that most recently processed the batch.
Last Access	Displays the date when the batch was last processed.
External Group ID	Optional. The group ID which has been assigned to a batch relating to security. Batches can be assigned to user group via a unique ID.
	This column is not displayed by default.
External Batch ID	Optional. The name of the batch group. This can be used to represent any piece of information you would like to associate with a batch. For example, an external system ID or storage box ID.
	This column is not displayed by default.
Transaction ID	Optional. The transaction ID assigned to a batch. This allows the developer to synchronize a newly created batch of documents with another external system. It can be used to identify originators of

	batch of documents. This column is not displayed by default.
Transaction Type	Optional. The transaction type assigned to a batch. This allows the developer to synchronize a newly created batch of documents with another external system. It can be used to identify the types of documents in batches or the source of the documents.
	This column is not displayed by default.

6.1.5 Sort in Batch View

You can sort any column in Batch View. To sort any item, click on the title of the column.

Batches sort according to their position on the list. If you select the first batch, and then click the **Batch** column label, it moves to the bottom of the list. For other items, the values toggle between ascending and descending order, whether numeric or alphabetical.

6.1.6 Select a Batch in Batch View

To select a batch in *Batch View*, click the batch you want to select in the table of batches. Depending on the status of the batch, either the classification or the extraction *Verification View* opens.

6.2 About Document View

Document View displays the batch structure of the currently selected batch. Selecting a document provides an overview of the documents inside the batch. You can use *Document View* to investigate the documents in a selected batch.

6.2.1 Open Document View

To open document view, click the **Show Selected Batch** icon.

6.2.2 Document View Keyboard Shortcuts

The following keyboard shortcuts are available in *Document View*:

Keyboard Shortcut	Command
[Ctrl] + [0]	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 age.
[Ctrl] + [Space]	Select next unsure page.
[Ctrl] + [1]	Display the Batch View.
[Ctrl] + [+]	Zoom in.

[Ctrl] + [-]	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 the image.
[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] + [H]	Fit to height.
[Ctrl] + [W]	Fit to width.
[Ctrl] + [F]	Best fit.
[Ctrl] + [J]	Increase image area.
[Ctrl]+ [K]	Decrease image area.

6.2.3 Main Toolbar Buttons

Button	Description
÷	Not available in document view.
	Displays the <i>Batch View</i> .
•	Start the verification of the currently selected batch. Depending on the batch state, the batch is either displayed in the classification window or in the indexing window. A dropdown list allows users to open the selected batch or open the next invalid batch.
	 Displays the available filters for the batch structure. You can select from among the following options. All Documents. Documents to Classify. Index Documents to Classify Documents to Index.
	Displays the first page of a document. This button is only enabled if the current document has more than one page.
	Displays the previous page in document.
	Displays the next page in document.
	Displays the last page in document. This button is only enabled if the current document has more than one page.
A	Rotates the current page clockwise.
	Shows a single page.
	Shows two pages horizontally.
3×	Shows three pages horizontally.
	Shows two pages vertically.
М	Displays the first document in the batch.
4	Displays the previous document in the batch.

	Displays the next document in the batch.
M	Displays the last document in the batch.

6.2.4 About the Batch Structure Area

In the batch structure, Web Verifier displays a hierarchical representation of the batch contents. The levels of this hierarchy are:

- Batch.
- Folder.
- Document.

For each document entry, Web Verifier provides the following information:

ID	A number that can be used to uniquely identify the batch, folder, or document.
State	An integer value between 0 and 999 that indicates the progress of batch processing. The batch state is calculated from the states of its folders. It corresponds to the lowest value of all folder states. The folder state is in turn calculated from the states of the documents. It corresponds to the lowest value of all document states.
Name	An arbitrary batch or folder name that is easier to read than the ID. Because the name is optional, it might be missing or set to a default value.
Document Class	A document's classification result. This entry might be missing if the document has not been classified.

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 that you have access to.

6.2.5 Navigate in the Document View

To navigate in the batch structure, choose from the following options:

- To select a document in the batch structure, click on it.
- To expand or collapse a folder, double-click on it, or click the plus sign or minus sign next to it.

6.2.6 About Splitting and Appending Documents

In the document list, you can split multipage documents into separate documents, with the exception of the first page of a document, which cannot be split. You can also merge consecutive pages of documents into one with multiple pages.

6.2.6.1 Split a Multipage Document

To split a multipage document, complete the following steps:

- 1. Select View > Show Selected Batch, or click Show Selected Batch.
- 2. In the document list, click on the desired multipage document. This document must have at least two pages.
- 3. Right-click on the page.
- 4. Select **Cut Pages into a New Document**. The document is now split into two documents.

6.2.6.2 Append Two Documents

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

- Select View > Show Selected Batch > All Documents from the main menu, or click Show Selected Batch > All Documents.
- 2. Select the document to append to the previous document.
- 3. Right-click the document.
- 4. Select **Append This Document to Previous One**. The document now appears in the list as a multipage document. Web Verifier keeps the document name of the previous document for the new multipage document.

6.2.7 Viewer Toolbar Buttons

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

Button	Description
\$	Fits the document to window height.
⇔	Fits the document to window width.
萨勒	Provides the best fit for an image.
٩	Zooms in.
R	Zooms out.
—	Moves image to the left.
	Moves image to the right.
	Moves image upwards.
	Moves image downwards.

6.2.8 Document View: Document Area

This area shows the first page of the document selected in the batch structure.

6.3 About the Verification View Classification Window

Verification involves taking a document that has been processed, or partially processed, checking the processing results, and correcting any errors.

When you open verification view, the classification window displays automatically if the next document that is to be verified requires a correction of the classification result. Whether this is the case depends on the state of the document.

6.4 Open the Verification View Classification Window

To display *Verification View*, complete the following steps:

- 1. Select a batch from the list that requires verification.
- 2. Click the Verify Selected Batch button.

6.5 Classification Window Keyboard Shortcuts

The following keyboard shortcuts are available in the classification window:

Keyboard Shortcut	Command
[Ctrl] + [0]	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 age.
[Ctrl] + [Space]	Select next unsure page.
[Ctrl] + [1]	Display the Batch View.
[Ctrl] + [+]	Zoom in.
[Ctrl] + [-]	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 the image.
[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.
[F7]	Reclassify manually.
[F9]	Move to exception state.
[Ctrl] + [E]	Release exception batches.
[Ctrl] + [T]	Correct tables.
[Ctrl] + [Q]	Switch table highlighting.
[Ctrl] + [J]	Increase image area.
[Ctrl] + [K]	Decrease image area.
[Ctrl] + [H}	Fit to height.
[Ctrl] + [W]	Fit to width.
[Ctrl] + [F]	Best Fit.

Button	Description
işi	Not available in classification view.
	Displays the <i>Batch View</i> .
۲	Not available in classification view.
	Displays the document view.
8 -	 The scope of this command depends on the <i>Exception Mode</i> set on the Options menu. Two options are available: Move Document to Exception State. Move Batch to Exception State. 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. 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.
	Highlights candidates. Not available in classification view.
\$	Fits the current image to the height of the window.
\$	Fits the current image to the width of the window.
陈 荷 始 道	Fits the current image to the width or height of the window so that maximum enlargement is obtained.
e	Zooms in.
ار	Zooms out.
۲	Not available in classification view.
	Keeps the established zoom settings on each document you view in the batch.
	Moves image to the left.
	Moves image to the right.
	Moves image upwards.
	Moves image downwards.
R	Displays the first page of a document. This button is only enabled if the current document has more than one page.
4	Displays the previous page in document.
	Displays the next page in document.
	Displays the last page in document. This button is only enabled if the current document has more than one page.
<u>^</u>	Rotates the current page clockwise.
М	Displays the first document in the batch.
4	Displays the previous document in the batch.
	Displays the next document in the batch.

6.5.1 Verification View Classification Window Toolbar Buttons

Displays the last document in the batch.
--

6.5.2 Verification View Classification Window Document Area

This area shows the current document. All words that are recognized during the OCR process are highlighted by default.

6.5.3 About the Class Selection List

When filled, this box shows the classification result of the current document, or it is empty if there is no result determined. If you open the list, you will see all available classes.

6.5.4 Set or Change a Classification Result

To set or change a classification result, make sure that you are not in browsing mode, then click on the arrow on the right side of the list box to open the list, and then select a class.

Note: If you know the correct class name, you can type the first characters and wait until the system automatically displays the full class name.

6.6 About the Verification View Indexing Window

The indexing window displays fields and documents specific to your organization. The layout of the window can be customized by an application designer.

The indexing window displays automatically if the next document that is to be processed requires a correction of the extraction result. Whether this is the case depends on the state of the document.

6.6.1 Open the Verification View Indexing Window

To display Verification View, complete the following steps:

- 1. Select a batch from the list that requires verification.
- 2. Click the Verify Selected Batch button.

6.6.2 Increase or Decrease the Image Area

To increase or decrease the image area, drag the vertical split bar between the image area and field area either to the right or left.

6.6.3 Indexing Window Keyboard Shortcuts

The following keyboard shortcuts are available in the indexing window.

Keyboard Shortcut	Command
[Ctrl] + [0]	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 age.
[Ctrl] + [Space]	Select next unsure page.
[Ctrl] + [1]	Display the Batch View.
[Ctrl] + [+]	Zoom in.
[Ctrl] + [-]	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 the image.
[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.
[F7]	Reclassify manually.
[F9]	Move to exception state.
[Ctrl] + [E]	Release exception batches.
[Ctrl] + [T]	Correct tables.
[Ctrl] + [Q]	Switch table highlighting.
[Ctrl] + [J]	Increase image area.
[Ctrl] + [K]	Decrease image area.
[Ctrl] + [H}	Fit to height.
[Ctrl] + [W]	Fit to width.
[Ctrl] + [F]	Best Fit.

6.6.4 Verification View Indexing Window Toolbar Buttons

Button	Description
	Not available in indexing mode.
	Displays the <i>Batch View</i> .
۲	Not available in indexing mode.
	Displays the document view.
	 The scope of this command depends on the <i>Exception Mode</i> set on the Options menu. Two options are available: Move Document to Exception State.
8 -	 Move Batch to Exception State. 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. 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.
	Highlights candidates. Not available in classification view.
\$	Fits the current image to the height of the window.
⇔	Fits the current image to the width of the window.
降荷酸酸酯	Fits the current image to the width or height of the window so that maximum enlargement is obtained.
٩	Zooms in.
e	Zooms out.
۲	Not available in classification view.
	Keeps the established zoom settings on each document you view in the batch.
—	Moves image to the left.
	Moves image to the right.
1	Moves image upwards.
	Moves image downwards.
	Displays the first page of a document. This button is only enabled if the current document has more than one page.
۵	Displays the previous page in document.
	Displays the next page in document.
	Displays the last page in document. This button is only enabled if the current document has more than one page.
A	Rotates the current page clockwise.
M	Displays the first document in the batch.
4	Displays the previous document in the batch.
•	Displays the next document in the batch.
	Displays the last document in the batch.
*	Apply global extraction.
3	Add document to the knowledge based and nominate for learning.
đ	Correct tables.

6.6.5 Form Area

A form has three main elements: a label, a viewer, and a field.

A field might be either a text field, table field, checkbox, list box, or Yes/No field. A form may also contain buttons. A form can contain any of the following elements:

Form Fields	These are controls that are used to display and edit extracted data, and to enter data during manual indexing. You can use form fields to create checkboxes and combo boxes.
Checkboxes	These toggle selections of data input, such as on/off or yes/no. Checkboxes are derived from form fields. You can set up the

	caption with the text desired and select the default view.
List Boxes	These contain a selection list to use when verifying an item on the document. Used during manual verification, this selection works with automatic completion.
Labels	Labels are captions that help users to identify form fields, as well as viewers and tables.
Viewer	A viewer contains snippets of document areas, normally those that were extracted to fill fields or tables.
Buttons	Buttons fire actions for a new script event.
Tables	Relevant when table extraction is configured. The Verifier form supports multiple tables. However, even if you defined multiple tables, you can only display the first table on the verification form. You can display different tables on different forms.

6.6.6 Field Area

In the field area, the following markers are used to indicate the nature of the field:

- The currently selected field is indicated by a red frame.
- Valid extracted fields are framed blue.
- Fields that need to be validated because they were extracted with low confidence are marked by a red triangle in the right upper corner.

Table fields provide additional highlighting options:

- Click on a table cell to highlight the appropriate document area.
- Click on a column header to highlight the appropriate document area.

6.6.6.1 Navigate the Field Area

To navigate the field area, select one of the following options:

- Use the mouse. This method does not affect the validation state of a field.
- Press the [Tab] key. 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 part of the form's design.

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

6.6.7 About the Current Input Area

Web Verifier supports the direct view snippet, which allows you to see an increased area of the current field to verify.

This direct view control, similar to the Verifier application, is positioned at the bottom of the extraction verification screen and allows you to see an increased image area selection of the current field candidate.

The current input area shows enlarged information for the currently selected field and provides a spacious edit box. A snippet also shows an enlargement of the document area that was used to fill the field. For the extracted data, color coding is used the same way as in the field area, and you can edit the data here.

6.6.8 Verification View Indexing Window Document Area

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

Note: The highlighting colors may vary due to customization.

Red framed areas indicate the selection for the currently selected field. 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.

If you launch the table correction mode, the unlearned lines are shown in gray. As soon as the lines are learned, the highlighting of the correctly recognized lines will turn to green (or blue if the line is selected with low confidence).

6.7 Print a Document

To print a document, select **Print** from the **File** menu.

Note: Web Verifier allows all the pages of the currently selected document to be printed by selecting the **All** button, or a desired page or page range to be specified in the **Pages** field of the *Print* dialog.

This function is available in all modes of Web Verifier with the exception of batch browsing mode.

6.7.1 Printing Verified Data Content

The amount of data on a printed form can be configured from the *Print Setup* dialog. To access the *Print Setup* dialog, select **Page Setup...** from the **File** menu.

You can save your Web Verifier settings if you would like your current page setup preferences to be restored next time you start Web Verifier. When you have configured your print settings, Verifier prints the desired field names (using the *Display Name* property for each printed field) and the textual content of the fields.

The order in which the fields are printed is defined by the order of the fields configured in the project.

In addition to the content of the fields, Web Verifier also prints the document file name and currently assigned document class name in the header of the printed information.

The following print setup options are available:

Print Image

When selected, also prints pages of the document file.

Print Form	Activates printing of the verification form. The following options below are enabled only if the present one is activated. This option is selected by default.
Print Hidden Fields	When selected, Verifier prints not only the fields visible on the current verification form, but all the fields available in the loaded document.
Print Table Fields	When deselected, Verifier does not print table fields. Disabling this option might be useful for quick printing of documents with long tables.
Print column header on each printed table page	Enabled only if the Print Table Fields option is selected. When this option is selected, Verifier prints column headers on each page. This option is useful for printing long tables.
	This option is selected by default.
Always show this dialog when printing	If this option is selected, the <i>Print Setup</i> dialog will show when users print.

7 Work with Web Verifier

7.1 About the Classification Results

After classification, the result may be one of the following options:

- Documents that have not been classified display in the classification window. After you
 have assigned a class, the indexing window displays. All fields are empty and you need
 to do the indexing manually.
- Documents that have been classified correctly, but which have invalid extraction results, display in the indexing window. You need to correct the extraction results.
- Documents that have been classified incorrectly display in the indexing window.

7.2 Classify an Incorrectly Classified Document

Documents that were incorrectly classified display in the indexing window. To classify a document, complete the following steps:

- 1. Select **Classify Document Manually** from the **Options** menu to open the classification window.
- 2. Correct the class and confirm by pressing the [Enter] key. This displays the indexing window.

7.3 Page Separation Workflow in Web Verifier

7.3.1 Configure Settings for Document Separation

Define the input state for document separation in the **Workflow** tab. The final step is to activate this workflow step by clicking **Document Separation**.

7.4 About Manual Correction of Automatic Document Separation

If during automatic document separation in Runtime Server there was at least one unsure pagelevel decision for a batch of documents, the whole batch returns the *failed document separation* state.

Such a batch should be manually reviewed and, if required, corrected in the Web Verifier.

The automatic document separation results can be corrected in *Document Browsing* mode of Web Verifier. When the next batch is opened, the system automatically displays the first uncertainly split or merged page.

Here, you have the following options:

Toggle the unsure status

Note: Usually, the fields will be empty because documents belonging to different classes normally do not have the same set of fields. In most cases, you need to manually index the document.

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

7.4.1 Toggle the Unsure Status

You can toggle the unsure status of a page. This sets the page to the *manually accepted* state or to the *manually rejected* state respectively.

There are three different states of page correction status:

- The blue page icon for pages extracted with high confidence by the engine.
- The blue page icon with a red question mark for pages extracted with low confidence by the engine (unsure).
- The blue page icon with green check sign for manually accepted or corrected by the Verifier user.

These states remain the same after you close the batch in Web Verifier, and then other users can review them. If all pages of a document become accepted (the pages extracted with high confidence are accepted by default), the document is redirected to successful document separation state. Otherwise, if at least one of the pages becomes manually rejected, the whole document gets the lowest *page separation failed* state configured in Web Verifier settings.

7.4.2 Split the Document into Two Separate Documents

You can split the document into two separate documents. The *top* document receives all the pages above the currently selected one, while the *bottom* document receives all the pages below, including the currently selected page. In this case, the currently selected page and the preceding page automatically get *manually accepted* page correction status. To split the document, select the **Cut Document** option from the **Document** menu.

7.4.3 Merge the Selected Document with the Previous One

You can merge the selected document with the previous one. In this case, the first page of the currently selected document and the last page of the preceding one automatically get *manually accepted* page correction status. To merge the selected document, select the **Append Document** option from the **Document** menu.

7.4.4 Go to the Next Unsure Page

You can go to the next unsure page. This action selects the next unsure page to verify (the one with a red question mark) without changing any page states. To advance to the next unsure page, select the **Select Next Unsure Page** from the **Document** menu.

7.4.5 About Page View Modes

When verifying the correctness of automatic page separation in Web Verifier, you can now select between different convenient page view modes, for example, having two consecutive pages displayed simultaneously.

The following page view modes are available in Verifier:

- Single page view (default).
- Two pages displayed horizontally view.

- Three pages displayed horizontally view.
- Two pages displayed vertically view.

In multipage view, page presentation behaves according to the following modes:

- In the two-page mode, the selected page is on the right (or bottom in a vertical view), and the first image shows the previous page of the current document or the last page of the previous document.
- In the three-page mode, the selected page is in the middle, the first image shows the previous page of the current document or the last page of the previous document, and the third image shows the next page of the current document or the first page of the next document.

7.4.5.1 Change View Modes

To change view modes, select **Multi-Page View** from the **View** menu, and then select the option you want.

7.4.6 Reorder Pages

You can reorder the pages within the document tree. To move a page to another position, complete the following steps. Note that after reordering a page, the document has to be reprocessed.

- 1. Perform a long left-click on the desired page. A tooltip appears indicating to specify the new position.
- 2. Drag the page to the new position. A dynamic green position line indicates the new position.
- 3. Click **Yes** on the reprocessing notification to complete the page reordering.

7.5 About Manually Correcting Classification Results

Manual correction of classification results is done if the Web Verifier workstation is configured with the following settings:

- Classification verification is enabled.
- Extraction verification is disabled.

To determine your settings, check the **Workflow** tab of the Verifier *Settings* dialog.

If you do this task regularly, you may want to apply the appropriate filter in the *Batch View*. From the **View** menu, select the **Batch Filter** option, then select **Batches to Verify, Classification Only**.

7.5.1 Manually Correct Classification Results

To correct invalid classification results, complete the following steps:

- 1. In *Batch View*, check the state column to find a batch you can verify.
- 2. Open the selected batch in the *Verification View*.
- 3. The *Verification View* opens in *Verify Mode*, with the first invalid document being displayed. The cursor is already placed in the classification list box.
- 4. To select a class, either:

- Click on the arrow on the right side of the list box to open the list and then select a class.
- Use the arrow keys to browse the list of classes and make your selection. The entries in the list are sorted alphabetically.
- If you know the correct class name, type its first characters and wait until the system automatically displays the full class name.
- 5. To confirm your selection, press the [Enter] key. The application validates the document and its state increases. The next document requiring verification is displayed automatically.

When the verification for all documents in the batch is complete, the application prompts you to select what you want to do next. Choose one of the following options:

- Verify Next Invalid Batch in the List releases the current batch and opens the next batch that needs verification.
- **Close Batch and Return to the Batch List** releases the current batch and displays the *Batch View*, where you can select the next batch.
- Verify This Batch with the Next Verification Form changes verification forms and displays the next verification form.

7.6 About Processing Documents Classified to Obsolete Document Classes

Web Verifier is able to correctly process (open) documents classified to non-existing (i.e. previously removed) document classes using internally saved information about the former parent class assignment.

Note that documents classified to non-existing document classes, which can often be the case in the context of Supervised Learning Workflow, can only be processed if their former parent class still exists in the project the document is being processed with.

This feature is very useful in context of Supervised Learning Workflow, where the vendor class is quite often deleted from the global project's configuration.

7.7 About Manual Correction of Extraction Results

Manual correction of extraction results will be done if the Web Verifier workstation is configured with the following settings:

- Classification verification is disabled.
- Extraction verification is enabled.

To determine your settings, check the Workflow tab of the Web Verifier Settings dialog.

If you do this task regularly, you may want to apply the appropriate filter in the *Batch View*. From the **View** menu, select the **Batch Filter** option, then select **Batches to Verify, Extraction Only**.

7.7.1 Correct Invalid Results

To correct invalid results, complete the following steps:

1. In *Batch View*, check the state column to find a batch you can verify.

2. Open the batch in the *Verification View*.

The *Verification View* opens in *Verify Mode*, and the first invalid document displays. The application places the cursor in the first invalid field.

7.7.1.1 Form Elements and Field Types

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	Required in the context of 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.	
List Box	A dropdown box that lists predefined strings related to the verification document. It can either show the nearest values automatically or show only selected values.	
Checkbox	A toggle selection for one of two choices of the data input for a field, for example, yes/no.	

7.7.1.2 About Editing Text Fields

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

Options for character changes include multi-line fields, combo boxes, and checkboxes. You can also insert and replace text in cells and fields, either in single words or blocks of text, using dragand-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 multiline field enables line wrap and displays a vertical scroll bar, if required.

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

The checkbox provides a binary option that toggles table data entry choices on and off. For example, with a **Yes** or **No** checkbox, checking **Yes** would bring up data entry related to the verification.

7.7.1.3 About Auto-Completion

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

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

The auto-completion feature for a header field should automatically select the best candidate from the available ones, which works within *Highlight Candidates* mode. However, 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.

7.7.1.4 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. 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.

If the word belongs in a cell area, you can append or replace a word in a cell. The *Copy* feature fills the cell with the text.

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. Or you can replace the cell text and location by the text and location of a word.

Note: It is not possible to append words from other or remote columns. If you select words or figures from different columns, the command **Append Field Text by Word** will replace the selected field's content.

7.7.1.5 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 one that matches the learned selections for the field. To copy text to the field box, complete the following steps:

1. Click on the text you want to copy. A box appears around the word.

Note: Make sure that the word fits the format analysis rules defined for that field.

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

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

7.7.1.6 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 still use it to fill a field. To use text for filling a field, complete the following steps:

1. Drag a box around the word you want to use or click on it.

Note: Make sure that the word fits the format analysis rules defined for that field.

2. Double-click on the word in the box or right-click in the document and select **Align & Copy to Current Field**.

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

7.7.1.7 Insert Blocks of Text

Inserting large blocks of text with minimal mouse movement is helpful when you have multiple word data verification elements for fields such as address information or cell descriptions. Before you can insert blocks of text, first select the settings in the *Workflow* dialog to immediately copy information. To insert large blocks of text, complete the following steps:

- 1. Click and drag over the desired text in the image viewer.
- 2. Release the mouse button. A rectangle appears around the text.
- 3. Adjust the rectangle, if necessary, by selecting the nodes at any corner.
- 4. Drag and drop the rectangle to the field or table cell. A copy of the rectangle appears over the field or table cell. Optionally, you can double-click on the rectangle. The text in the rectangle replaces the text in the field or table cell.

7.7.2 Finish the Validation

1. After you correct a field, press the [Enter] key to validate it.

Once the validation is finished, the cursor moves automatically to the next invalid field regardless of whether this field is in the same invalid document, or in the next invalid document. If you leave a document this way, it is validated automatically. In the next field, proceed as described above. When all documents in the batch are validated, the application prompts you to select what to do next.

- 2. Click Yes or No, or click Details. Clicking Details reveals the following options:
 - Verify Next Invalid Batch in the List releases the current batch and opens the next batch that needs verification.

Note: You can move or resize this rectangle by clicking in the area in the image viewer. When the rectangle appears, select the nodes to resize it, or drag it using the drag and drop method described above.

- **Close Batch and Return to the Batch List** releases the current batch and displays the *Batch View* where you can select the next batch.
- Verify This Batch with the Next Verification Form changes verification forms using the next verification form.

7.8 About Manual Correction of Classification and Extraction Results

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

- Classification verification is enabled.
- Extraction verification is enabled.
- Automatic extraction after classification is disabled.

If this option is enabled, extraction will be carried out automatically by Runtime Server. In this case, classification verification and extraction verification are two separate steps.

If you do this task regularly, you may want to apply the appropriate filter in the *Batch View* by selecting **Batch Filter** then **Batches to Verify** from the **View** menu.

7.9 About Manual Indexing

Manual indexing is done if the Runtime Server was not configured to do the extraction step. Your input consists of batches with valid classification results, but no fields have been filled so far.

For manual indexing, your Web Verifier workstation is configured as follows:

- Classification verification is disabled.
- Extraction verification is enabled.

To determine your settings, check the **Workflow** tab of the Web Verifier Settings page.

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, Extraction Only**.

7.9.1 Manually Index a Document

To index a document manually, complete the following steps:

- 1. In *Batch View*, check the **State** column to find a batch you can verify and then click on a batch to select it.
- 2. The *Verification View* opens in *Verify* mode and the first document displays. Web Verifier places the cursor is in the first field.
- 3. Enter the value for the first field.
- 4. Press the [Enter] key to validate your entry. The cursor automatically moves to the next field, regardless of whether this field is in the same or next invalid document. If you leave the document this way, it is validated automatically. In the next field, proceed as described above.
- 5. When you have finished indexing all documents in the batch, the application prompts you to select what you want to do next. The following choices display:

- Verify Next Invalid Batch in the List releases the current batch and opens the next batch that needs verification.
- **Close Batch and Return to the Batch List** releases the current batch and displays *Batch View* where you can select the next batch.
- Verify This Batch with the Next Verification Form changes verification forms, using the next verification form.
- 6. Move to the next step by clicking **Yes** or **No**.

7.10 Check Entire Batches

To browse through all documents in a batch, complete the following steps:

- 1. In *Batch View*, use the status value to determine a batch you can browse through.
- 2. Open a batch in *Verification View*. The first document that requires correction is automatically displayed.
- 3. To display the first document in the batch, use the appropriate toolbar button.
- 4. You may encounter a document that has been classified incorrectly. To correct this result, from the **Options** menu, select **Reclassify Document Manually** to open the classification window. To correct the class, select the corresponding entry from the list box at the bottom, then confirm by pressing the [Enter] key.
- 5. This displays the indexing window again.
- 6. To correct extraction results, type your corrections into the corresponding field. If a field has been changed, its state is set to invalid. Press the [Enter] key to validate the field you modified.
- 7. To get to the next document, use the appropriate toolbar button.
- 8. Repeat the above steps as appropriate until you reach the last document.

8 About Working with Tables

In WebCenter Forms Recognition, it is possible that any given table was trained by the *Brainware Table Extraction Engine*, or the traditional *Table Analysis Engine*. As a Web Verifier user you will not know which engine was being used and you will not be able to see a difference in Web Verifier.

Note: You can correct invalid cells the same way you would correct an invalid text field.

8.1 About Automatic Training and Extraction of Verified Table Data

Brainware Table Extraction supports automatic learning of verified table data. It trains documents using only the information in verified table data, the content and position of every data cell.

8.2 Traditional Training and Correction Methods

8.2.1 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 image viewer and select the respective option.
 - If you have candidates, double-click the desired candidate to replace it.
- 2. To append text with the new text, select **Append Field Text by Word**.
- 3. To replace text with the new text, select Copy to Current Field.

8.2.2 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 text with the new text, double-click the word or right-click in the image viewer.
- 2. Select Align & Copy to Current Field.
- 3. To replace text, select the word, and then select **Copy to Current Field** in the shortcut menu.

8.2.3 Correcting Table Structure

You may need to correct the table structure. Under the table within the verification mask, there are buttons for modifying the table structure.

The available commands are summarized in the table below:

Button Command	Description
----------------	-------------

	Delete all rows	Deletes all rows from the table. You will need to relearn the lines on the document.
1	Insert new row above	Inserts an empty row above the current one.
	Delete selected row	Deletes the currently selected row. To select a row, click on its number. The appropriate line on the document is unlearned and loses its color highlighting.
-	Append	Appends an empty row at the bottom of the table.

8.3 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 sections.

Note that functionality is available for the Supervised Learning Verifiers.

8.3.1 Learning 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 <i>Brainware Table Extraction</i> 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 <i>wrong</i> 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 the **Options** menu, or with the context menu options **Show Lines** and **Show Columns**.

If you have documents with many line items, you will benefit from the table navigation feature. In the **web.config** file, you are able to define how many lines should be displayed on one table page. If this number is exceeded, you'll be able to browse between the table pages by using the table controls below the table.

8.3.2 About Learning Mappings of Columns

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 the first set of mapping rules for the lines classified to the first line type, and the second set of mapping rules 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.

8.3.3 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, un-map 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 there until you unmap the column.

8.3.4 Use the Standard Method for Table Extraction

This section describes the simplest way to use interactive *Brainware Table Extraction* learning. If this method does not work, proceed to the advanced method described in the following sections. To use the standard method, complete the following procedures:

- 1. Show the first row sample.
- 2. Learn mapping in the row you learned.
- 3. Learn missing lines.
- 4. Learn and adjust the mapping of missing or wrong columns.
- 5. *Manually correct the table date and validate the table.*

8.3.4.1 Show the First Row Sample

- 1. Select your *Brainware Table Extraction* table by clicking any table field inside the table grid.
- 2. Click the **Correct Tables** button.
- 3. In the lines highlighting mode, use the **Learn as Row** function to show the row sample. This function automatically learns the first line as a *primary line* and the rest of the lines as *secondary lines*. This function is also available by double-clicking on the selected row area. Select the whole first row and learn it.
 - **Note:** The visual indicators for valid, invalid and questionable table lines are as follows: valid lines are highlighted green, invalid lines are highlighted gray, and questionable lines are highlighted blue.

Deselecting the **Correct Tables** button causes the loss of learned rows and columns. Selecting the **Correct Tables** button again leads to the loss of mapped table data.

- 4. Optional. To learn a new line as a primary line, complete the following actions:
 - Right-click on any line marked in gray in the Image Viewer.
 - On the popup menu, select **Learn Line**.
 - The learned lines change from gray to green, or to blue if the line is extracted with low confidence.
- 5. Optional. To learn a block of lines as primary lines, complete the following actions:
 - In the Document Viewer, draw a rectangular selection over the primary lines.
 - Right-click on the selection.
 - On the shortcut menu, select Learn as Primary Line(s).
 - All correctly selected primary lines will be learned and highlighted in green (or blue if the line is selected with low confidence), and all other lines will be similarly extracted and displayed.

Note: If some lines were not extracted, try relearning the lines singly or in a block.

- 6. Optional. To learn a lines block as a table row, complete the following actions:
 - In the Document Viewer, draw a rectangular selection over the required multiline (or single-line) table row.
 - Double-click or right-click on the selection.

• From the popup menu, select **Learn as Row**.

If some lines were not extracted, repeat the procedure described above.

Do not try to learn the rest of missing secondary or primary lines now. Mapping is defined on the basis of line type. 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.

8.3.4.2 Learn Mapping in the Row You Learned

- 1. Switch to the columns highlighting mode. Select **Switch Table Highlighting** from the **Option** menu, or right-click a line and select **Show Column** and mark the location of the first cell item in the row you learned.
- 2. Right-click the first cell item in a column. Choose **Map Column**, select the required data column, and click the selection.
- 3. Repeat this step for the rest of the cell items in the first row.

8.3.4.3 Learn Missing Lines

Complete the following steps to learn if text is missing from a row.

- 1. Switch back to the lines highlighting mode.
- 2. Mark the next missing row and learn it as before.
- 3. Repeat this step for all rows on all pages where something is missing. Go to the next step only after you are sure nothing is missing.

8.3.4.4 Learn and Adjust the Mapping of Missing or Wrong Columns

To learn and adjust the mapping of a missing or incorrectly mapped column, complete the following steps:

- 1. Return to column mapping learning mode and look for incorrect or missing mapping.
- 2. Correct any missing mappings. If you can't map the missing columns, switch back to the lines highlighting mode and try to learn the row where the mapping is missing.
- 3. 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.

4. Repeat these steps until the data is completely extracted or cannot be learned correctly.

Note: There is always a chance that you will not get 100 percent extraction results.

8.3.4.5 Manually Correct Table Fields and Validate a Table

To manually correct table fields and validate a table, complete the following steps:

1. Switch to the cells highlighting mode and manually correct missing data, OCR errors, and so on.

- **Note:** Do not use interactive learning anymore because every *Brainware Table Extraction* learning action reactivates extraction and replaces all your manual inputs instantly.
- 2. To validate the table, press the [Enter] key.
 - **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.

8.3.5 Advanced Learning with Brainware Table Extraction

This section discusses the special cases in which it is necessary to use secondary lines explicitly. There are two such cases:

• The table 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 (on the next page). In this case, these secondary lines are placed right before the first primary line on the page. Mark all the secondary lines as before: right-click and select **Learn as Secondary Lines**.

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 extracted table data into new rows.

Learning of unmapped secondary lines leads to unwanted extraction.

Your project may require that data from secondary lines not be extracted. Usually, this will not be a problem, but sometimes the engine extracts the data from these lines anyway. In this case, not learning these secondary lines will prevent unwanted extractions. Use the **Learn as Secondary Lines** function instead of **Learn as Row** if you would like to learn just selected lines and not all lines that belong to the row. You can also **Unlearn Line** to correct or adjust the extraction.

8.3.5.1 Learn a Block of Secondary Lines

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

- 1. In the *Document Viewer*, use the mouse to draw a rectangular selection over the required secondary lines of a desired multi-line row.
- 2. Right-click on the selection.
- 3. On the popup menu, select Learn as Secondary Line(s).

All correctly selected primary lines will be learned and all other lines are similarly extracted and displayed. If some lines were not extracted, repeat the procedure described immediately above.

8.3.5.2 Unlearn a Line

The **Unlearn Line** function can be used to discard previously applied learning for a particular line. To do this, *Brainware Table Extraction* uses a line sample, searches for the line type, and removes the line type from the learnset. To unlearn a line, complete the following steps:

1. Switch to *Lines Learning* mode and right-click on the line you want to unlearn.

2. On the shortcut popup, click **Unlearn Line**. Unlearned lines change from green to gray.

8.3.5.3 Learn a Line as a Wrong Line

Learning a *wrong line* means to train the table such that a particular line will not be extracted. This applies to other lines of the same type in the table. To learn a line as a wrong line, complete the following steps:

- 1. Right-click on any learned line or draw a rectangular selection over the required lines.
- 2. On the popup menu, select **Learn as Wrong Line**. The selected lines and similar lines to it are now highlighted in gray. Information from these lines will not be extracted.

9 Frequently Asked Questions

The frequently asked questions and their answers below may help to resolve some situations that you might experience during the extraction and validation process.

- Q. My document contains an invalid extraction result. However, this result is precisely what I need, and I want to validate the field. What can I do?
- A. This depends on the design of your project. However, in most cases, you will have to press the [Enter] key three times while the cursor is in the field.
- Q. 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. I cannot release the batch as it is. What can I do to finish my job?
- A. Normally, your organization will have specialized workstations where people are in charge of handling special cases that only occur as exceptions.
- Q. In one of my batches, there is a document I have already validated. However, I've overlooked a mistake in this document. I don't want to release the batch without correcting it.
- A. You can use the *Document Mode* to get to the document. Select the document and switch to *Verify Mode*. Make corrections and press the [Enter] key.
- Q. Sometimes the indexing window looks unusual. It has no field area, only the current input area. How do I get to the next field?
- A. This is not a problem. You can use all keyboard shortcuts for field navigation from within the current input area.
- Q. When I switch from one field to the next, the document is not moving as well. I find this annoying. Is there a way to stop that?
- A. Yes, there is. With your current settings, the application always searches the document area associated with the current field's content. This area is then displayed. To turn this off, click on the *Keep Focus* button in the toolbar. Alternatively, you could just use a different magnification ratio.
- Q. I want to start Learn Set Manager, but I don't want to have to go through Verifier first. Can I do it?
- A. No. Learn Set Manager is an add-in that can only be started in Verifier.

Q. I tried to start Learn Set Manager in Verifier, and I still can't do it. Why?

- A. There are two common reasons for this:
 - 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 Learn Set Manager mode.

- Learn Set Manager might not be enabled for the project. Again, contact your project administrator.
- Q. I want to change the default colors, background colors and fonts for Elements of Verification forms. Can I do it?
- A. WebCenter Forms Recognition supports a set of script methods to dynamically or statically adjust fonts, colors, and background colors for verification forms and their verification elements. Refer to the *Oracle WebCenter Forms Recognition Scripting User's Guide* for more details.