FileHold
Document & Record Lifecycle Software

INTEGRATION WITH ABBYY FLEXICAPTURE 10

Proprietary Notice

CONTENTS

1. OVERVIEW

This document describes how to integrate FileHold System with ABBYY FlexiCapture. It shows different ways of export documents with metadata from ABBYY FlexiCapture software and how to utilize available possibilities to integrate it with FileHold System. Document contains also detailed description of plugin which allows exporting documents in format compatible with FileHold Import functionality (Quick Scan Pro format).

2. EXPORTS IN ABBYY FLEXICAPTURE

ABBYY FlexiCapture shares a few predefined types of export. Depending on the type, they allow to export extracted data to: data files (XML), image files (most popular formats), compatible databases and SharePoint.

Except predefined export types, ABBYY allows to define custom exports based on many different script languages.

2.1. Custom export (script)

Scriptable Export provides the ability to create custom export modules that deliver data and images directly to any external application, such as ECM, CRM, ERP etc. ABBYY FlexiCapture provides special script editor. Users can write their scripts in few languages: JScript, VBScript, JScript.Compact, C# .NET, VB .NET and JScript .NET. Furthermore, users can divide their script into two parts. First part, Global Export Script Module is used to declare procedures which will be used in more than one export script (second part). Additionally, FlexiCapture software allows to use external *.dll components. In that case, it is necessary to attach assembly file in '.NET References' tab. This tab is available for three levels: project, batch or document definition properties.

In our solution, script invokes special external component which exports selected documents to Quick Scan Pro (QSP) format.

3. INTEGRATION COMPONENT DESCRIPTION

This section describes characteristics of integration component.

For the simplest configuration, 'Export to FileHold Settings' window will be shown each time when the document is exported. It lets to define export properties such as export destination or image format etc. There are a few ways to avoid displaying the Settings Form each time. They will be described in next part of this documentation.

Activities performed by the component when exporting documents:

1. Record settings template in general directory (by default it is the "[user_name]\My Documents\FlexiCapture2FileHold").

2. Creation output structure according to settings.

3. Placement all pages of document in appropriate folder.

4. Generating XML file which contains extracted metadata of exported document in format compatible with FileHold Import functionality.

3.1. Features

Export component has following properties:

- Settings window will be displayed in a few situations and they depends of the scripts configurations:
    - Window is displayed each time when the document is exported
    - Using the FileHold.ABBYYSettingsEditor.exe
    - Using the FileHold Toolbar (requires additional configuration described in section 4.2.
- Settings form will make possible to:
    - Save or load export templates (templates are stored in the general directory)
    - Defining following export attributes: directory, format, quality and color
    - Configuring output structure of exported documents
- Every exported documents will be saved into defined directory
- Process of exporting document will consist of:
    - Folder creation, where will be stored every pages of exported documents as separate files (images) or single file (PDF)
    - XML file creation compatible with Quick Scan Pro format which is supported by FileHold Desktop Application
    - Exporting the image with appropriate settings

3.2. XML file

For each exported document, will be created one XML file compatible with QSP format.

Content:

1. About document
    a. File Name
    b. DocumentID – the ID of the image in ABBYY FlexiCapture
    c. Batch Name – name of the batch which contain the exported image
    d. DocumentSchema – Document Definition name of the exported image
2. Metadata fields
    a. Field1
    b. Field2
    c. Field3
    d. …

Example:

```xml
<?xml version="1.0" encoding="utf-8"?>
<Batch>
  <Page>
    <Field>
      <Name>File Name</Name>
      <Value>188_1\188_1.pdf</Value>
    </Field>
    <Field>
      <Name>DocumentID</Name>
      <Value>188</Value>
    </Field>
    <Field>
      <Name>BatchName</Name>
      <Value>TestBatch</Value>
    </Field>
    <Field>
      <Name>DocumentSchema</Name>
      <Value>docDef</Value>
    </Field>
    <Field>
      <Name>InvoiceNr</Name>
      <Value>FF/20120101/1234</Value>
    </Field>
  </Page>
</Batch>
```

Name of file will be the combination of definition name and ID of exported document. To avoid duplicating names in export directory, additional sub-indexes will be inserted at the end of document names.

3.3. Exporting images

Files are exported to directory created together with XML file. According to output format, name of the XML file will be *export.xml* or *export_definitionName.xml*.
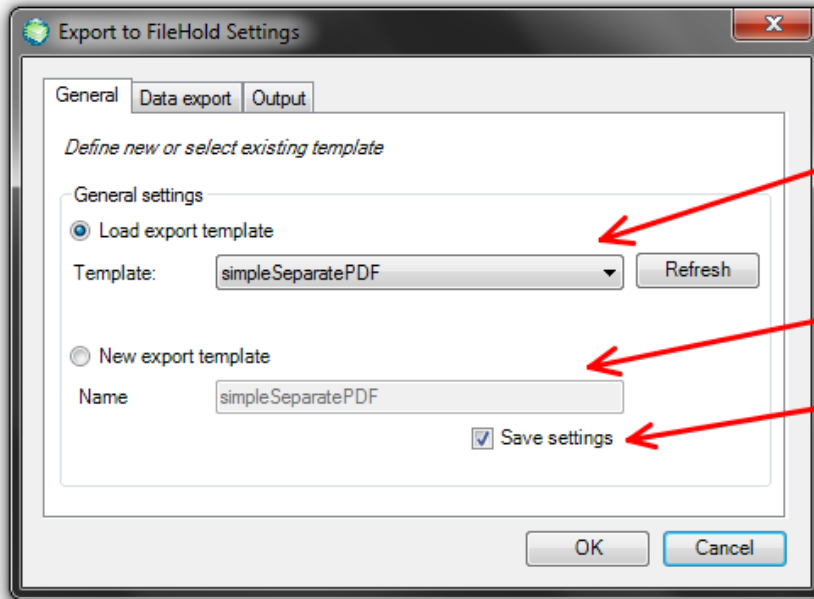
Name of each file (except PDF) will be created according to scheme: *definitionName_documentID_page_pageID*.

Supported types of exported images:

- TIF
- BMP
- JPG
- PNG
- PDF

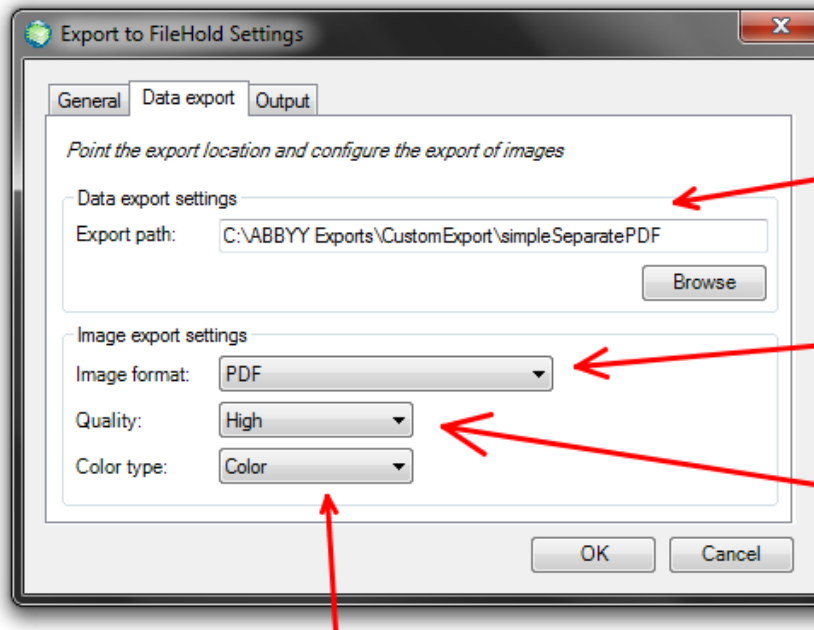## 3.4. Export to FileHold Settings window description

3.4.1. General page

3.4.2. Data export page

The export path can be a normal or the UNC. In case of the UNC path, any authentication windows cannot be displayed when accessing to the shared directory.

3.4.3.Output page
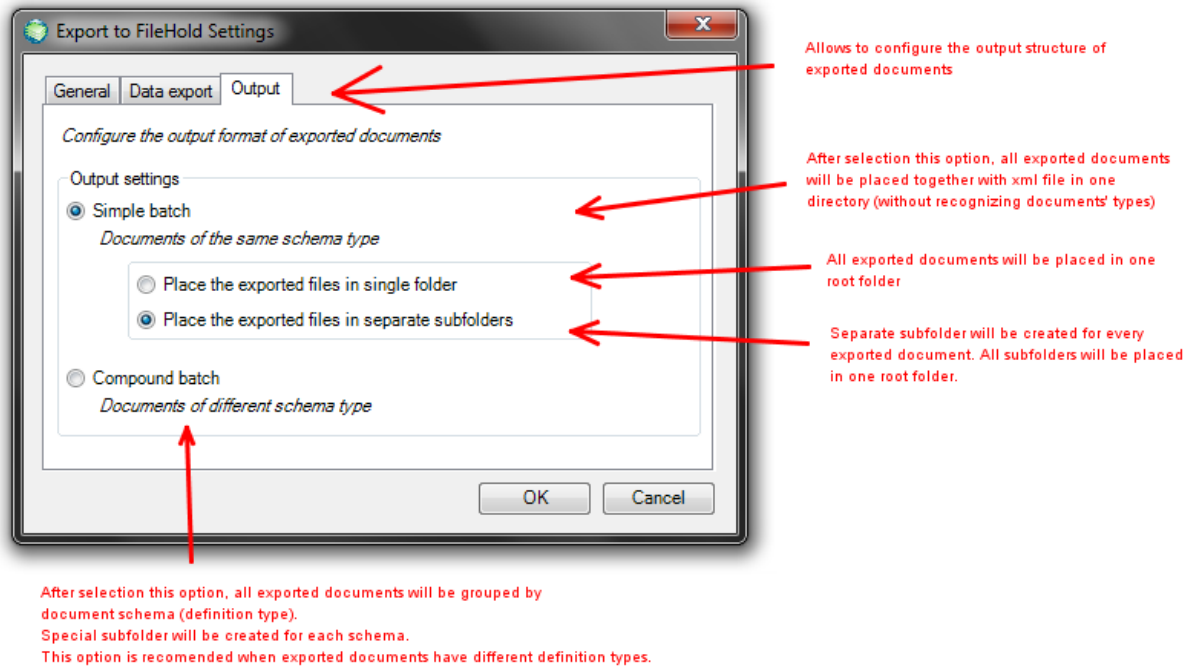
3.5. Error logging

Connector has got implemented extended handling of exceptions. Every exception is logged in special file named ABBYYConnectorErrors.log. File by default is located in the '[user_name]\My Documents' folder. There is possibility to set custom path in the configuration file.

3.6. Using the FileHold.ABBYYConnector.FileHoldExporter class

The FileHold.ABBYYConnector.FileHoldExporter class provides several methods and properties.

3.6.1.Properties

FileHold.ABBYYConnector.FileHoldExporter.GeneralDirectory Property

Sets a value of the directory which the connector will use to store the settings templates and other data. In can be normal or UNC path.

For distributed environments, is recommended to use the UNC path to the shared directory on the Application Server machine. NOTE: any authentication windows cannot be displayed when accessing to the shared directory!

Initial value of that property is: "%SystemDrive$\Users\[user_name]\FlexiCapture2FileHold".

Syntax:

```
public string GeneralDirectory { set; }
```

Example:

```
        FileHold.ABBYYConnector.FileHoldExporter exp2 = new
        FileHold.ABBYYConnector.FileHoldExporter();
        exp2.GeneralDirectory = @"\\fh-srv-x64\SettingsTemplates";
        //exp2.GeneralDirectory = @"C:\ABBYY\FlexiCapture\SettingsTemplates";
        exp2.ShowSettingsForm();
```

FileHold.ABBYYConnector.FileHoldExporter.DefaultSettingsTemplate Property

Sets a name of the settings template which should be used as default. Specified settings template should exist in the general directory. When the connector is able to find settings template with provided name, the Settings Form will not be displayed.

Syntax:

```
        public string DefaultSettingsTemplate { set; }
```

Example:

```
        FileHold.ABBYYConnector.FileHoldExporter exp2 = new
        FileHold.ABBYYConnector.FileHoldExporter();
        exp2.GeneralDirectory = @"\\fh-srv-x64\SettingsTemplates";
        exp2.DefaultSettingsTemplate = "bank_account_template";
        exp2.ExportDocument(ref Document);
```

FileHold.ABBYYConnector.FileHoldExporter.UseTheLastSettings Property

Sets the value indicating whether the last settings template edited via Settings Form should be used for the next export. If the value is set to true, user can open and choose existing (or define a new) settings template which should be used for the next export. This property works correctly with the Settings Editor tool or when the FileHold Toolbar is configured. It allows to avoid displaying the Settings From each time when the document is exported.

Syntax:

```
        public bool UseTheLastSettings { set; }
```

Example:

```
        FileHold.ABBYYConnector.FileHoldExporter exp2 = new
        FileHold.ABBYYConnector.FileHoldExporter();
        exp2.GeneralDirectory = @"\\fh-srv-x64\SettingsTemplates";
        exp2.UseTheLastSettings = true;
        exp2.ExportDocument(ref Document);
```

3.6.2. Methods

FileHold.ABBYYConnector.FileHoldExporter.ExportDocumet Method

The most important method. Exports the document with appropriate settings.

Syntax:

```
        public void ExportDocument(ref IDocument DocRef)
```

DocRef – reference to object in FlexiCapture of the exported document

Example:

```
FileHold.ABBYYConnector.FileHoldExporter exp2 = new
FileHold.ABBYYConnector.FileHoldExporter();
exp2.GeneralDirectory = @"\\fh-srv-x64\SettingsTemplates";
exp2.DefaultSettingsTemplate = "bank_account_template";
exp2.ExportDocument(ref Document);
```

FileHold.ABBYYConnector.FileHoldExporter.ShowSettingsForm Method

Displays the Settings Form window. Should be used during building the script for the FileHold Toolbar.

Syntax:

```
public void ShowSettingsForm()
```

Example:

```
FileHold.ABBYYConnector.FileHoldExporter exp2 = new
FileHold.ABBYYConnector.FileHoldExporter();
exp2.GeneralDirectory = @"\\fh-srv-x64\SettingsTemplates";
exp2.ShowSettingsForm();
```

4. DEPLOYMENT

This instruction demonstrates step by step process of preparation ABBYY FlexiCapture to export documents in format compatible with FileHold Import.

First, please compile FileHold.ABBYYConnector project and copy FileHold.ABBYYConnector.dll library to any easy to access directory.

### 4.1. Configuring the Document Definitions

Follow the installation steps:

1. Run ABBYY FlexiCapture Administrator Station of Project Setup Station and open any project.

2. Select 'Document Definitions…' option from 'Project' menu strip.

3. Create new or edit existing definition in 'Document Definitions' window.

4. Select 'Document Definition Properties…' option from 'Document Definition' menu strip.

5. Select '.NET References' tab and click 'Add' button.

6. Set Type to 'Attached file' and point reference to FileHold.ABBYYConnector.dll using 'Browse…' button. 'Document Definition Properties…' should look like this:[1]

[1] Note: the screen below presents an old name of the connector, a new name is "FileHold.ABBYYConnector.dll"
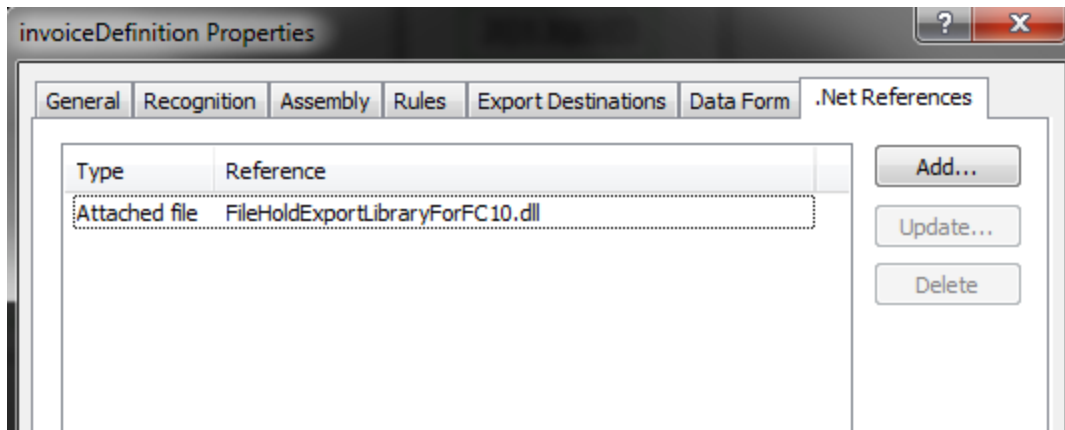
7. Now, go to 'Export Destinations' tab and click 'Add…' button.

8. Select 'Custom export (script)' from types list. Other options may be unchanged.
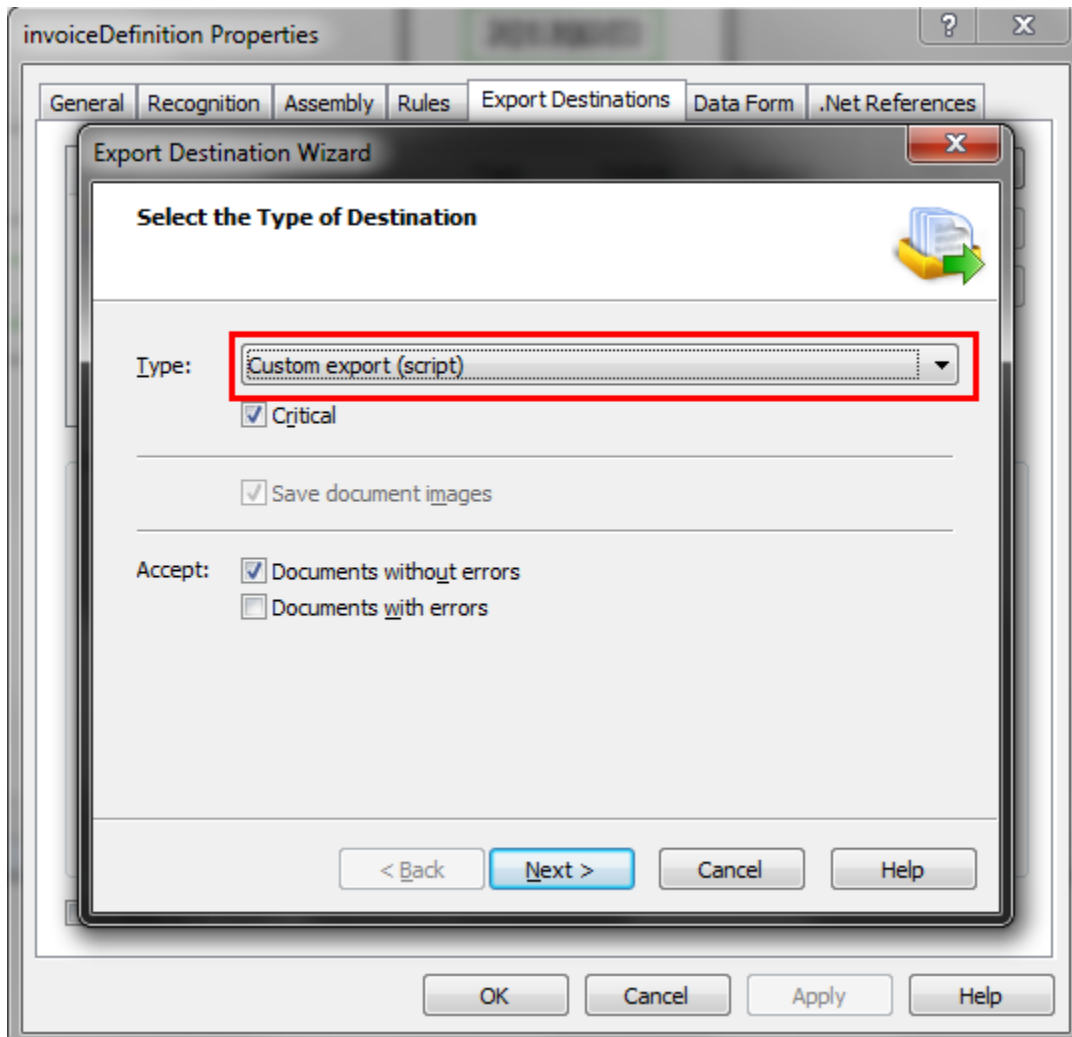
Click 'Next' button.

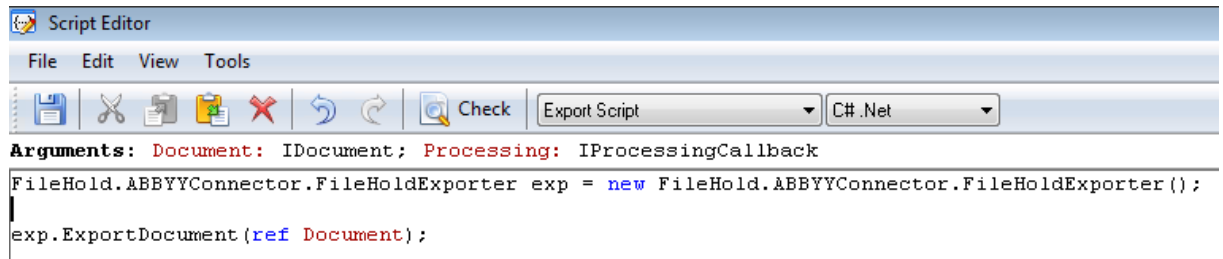9. Click 'Edit Script…' button. Script Editor should be displayed.

Select 'Export Script' from the drop-down list on the toolbar. Make sure that in second drop-down list is selected 'C# .NET' language.
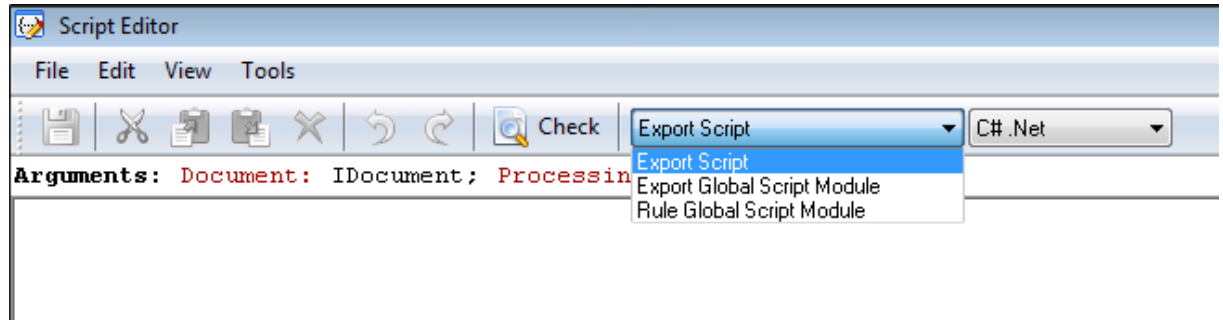
Next, in Export Script paste the code below:

```
FileHold.ABBYYConnector.FileHoldExporter exp = new
FileHold.ABBYYConnector.FileHoldExporter();

exp.ExportDocument(ref Document);
```


This is the minimum what you need to export any document. There is possibility to use other properties described in section 3.6.1 as required.

For example, the distributed environments, should be used following property: FileHold.ABBYYConnector.FileHoldExporter.GeneralDirectory. The code:
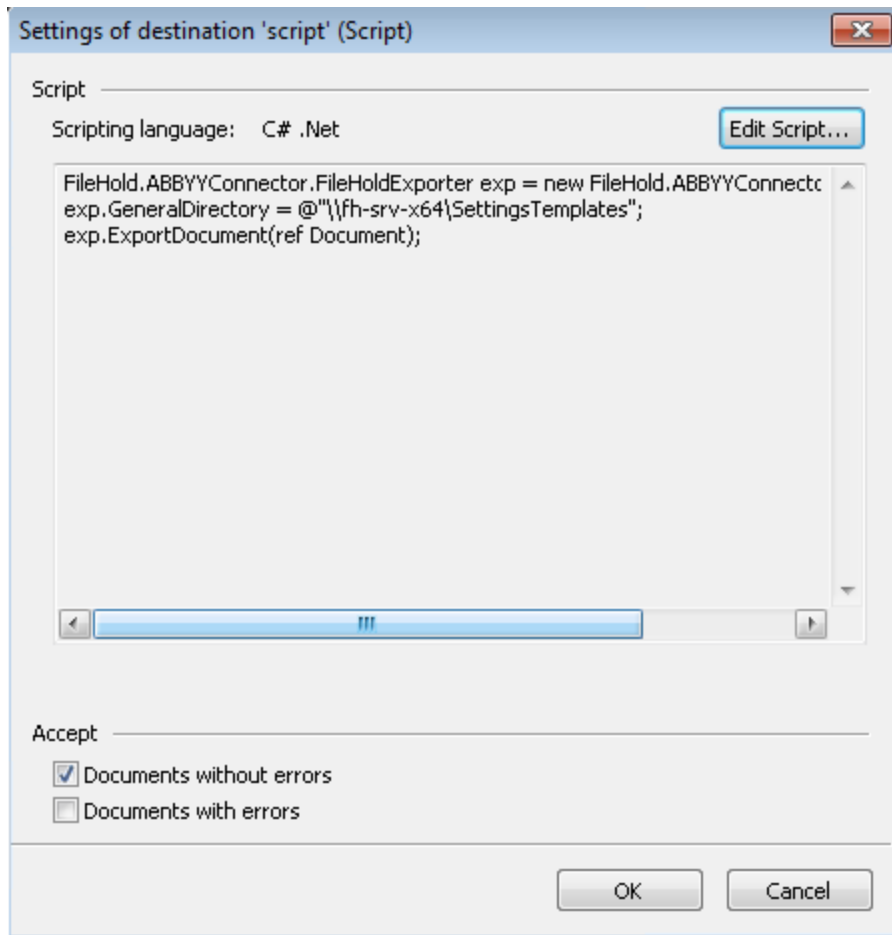
```
FileHold.ABBYYConnector.FileHoldExporter exp = new
FileHold.ABBYYConnector.FileHoldExporter();
exp.GeneralDirectory = @"\\fh-srv-x64\SettingsTemplates";
exp.ExportDocument(ref Document);
```

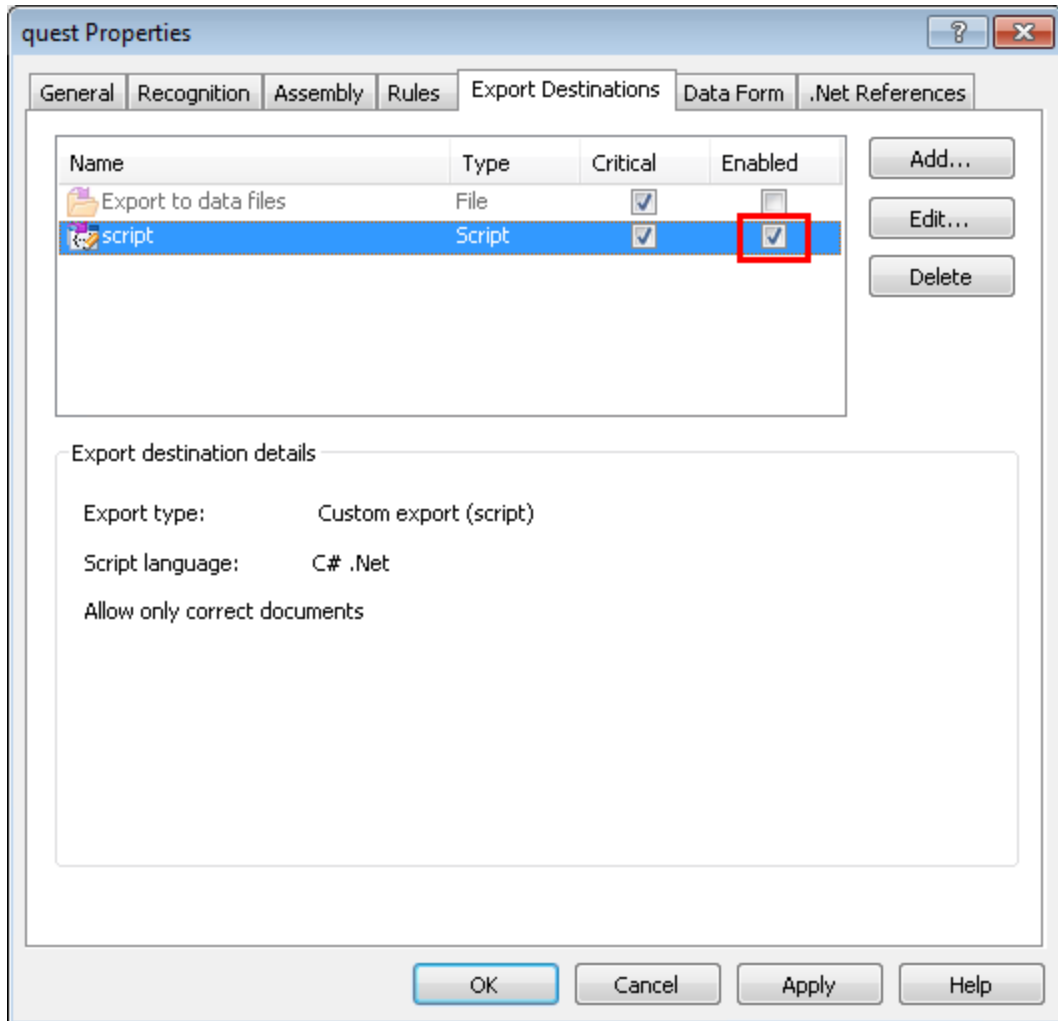Be sure to use the UNC paths for distributed environments.
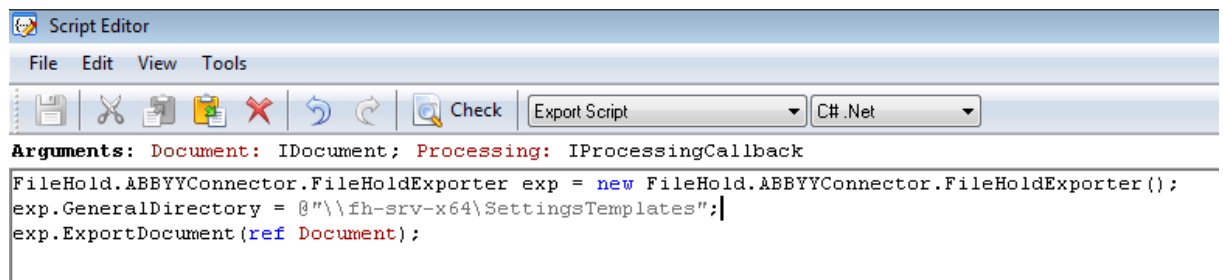
Save changes and close Script Editor.

'Export Destination Wizard' window should look like this:

Click 'OK' button to confirm the changes.

10. Export Destination should be added. Make sure that your export destination is Enabled.

11. Click OK to save changes. Save changes in Document Definition and close it.

12. The last thing to do is to publish changes of created definition in 'Documents Definitions' window.

    FileHold integration with ABBYY FlexiCapture is now configured and ready to work.

   ### a. Creating the FileHold Toolbar in the project

    This option is not required but could be very useful future usage of the ABBYY Connector. Creating the FileHold Toolbar allows to define the button for displaying the Settings Form. With the inclusion of the option UseTheLastSettings it allows to avoid displaying the Settings From each time when the document is exported.

    To set up this option, please, follow with the steps:
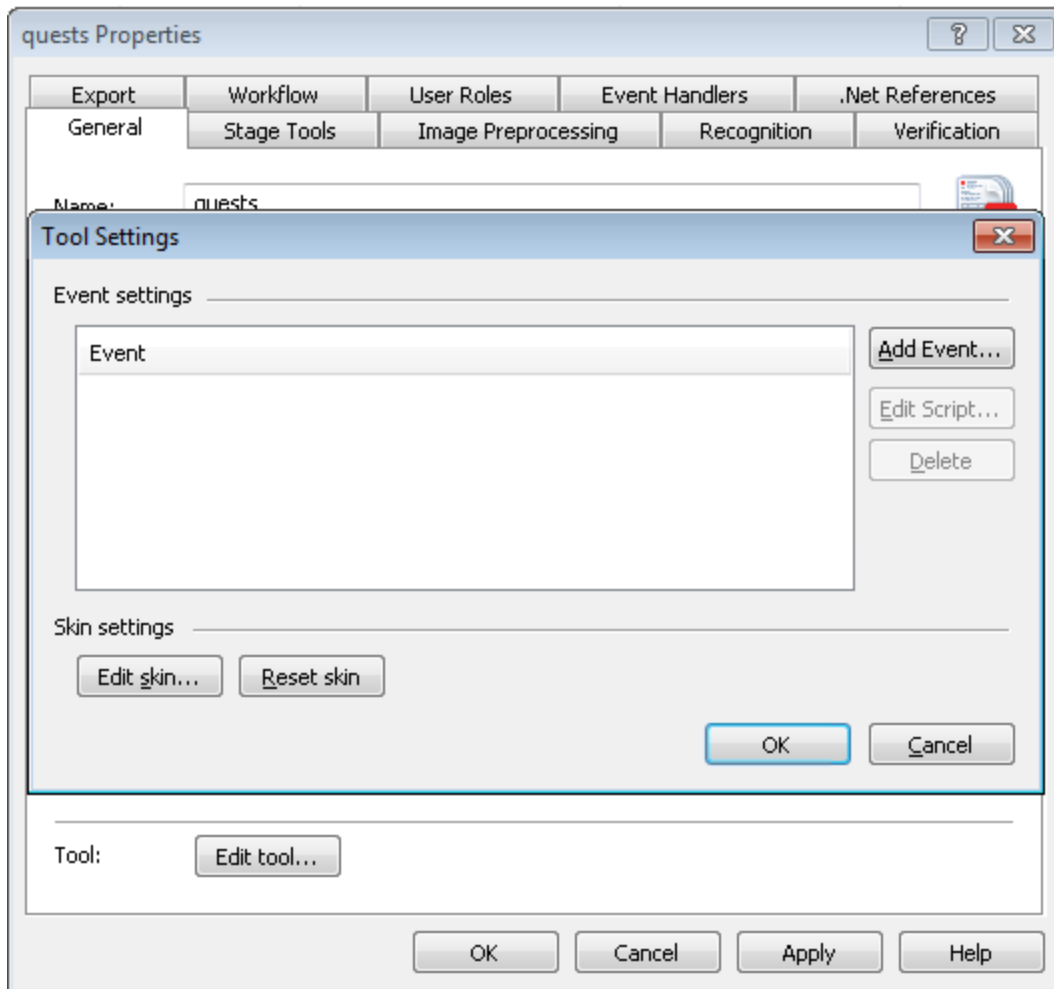
1. Open the Project Properties.
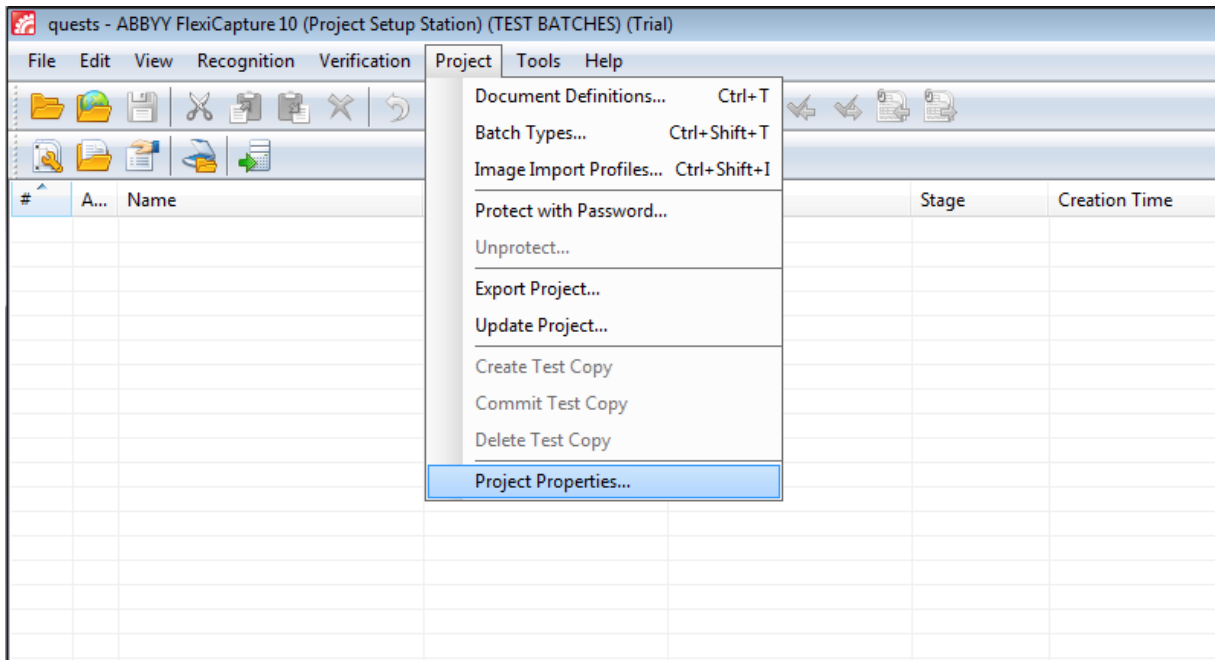
2. Select '.NET References' tab and click 'Add' button.

3. Set Type to 'Attached file' and point reference to FileHold.ABBYYConnector.dll using 'Browse…' button. Project Properties should look like this:
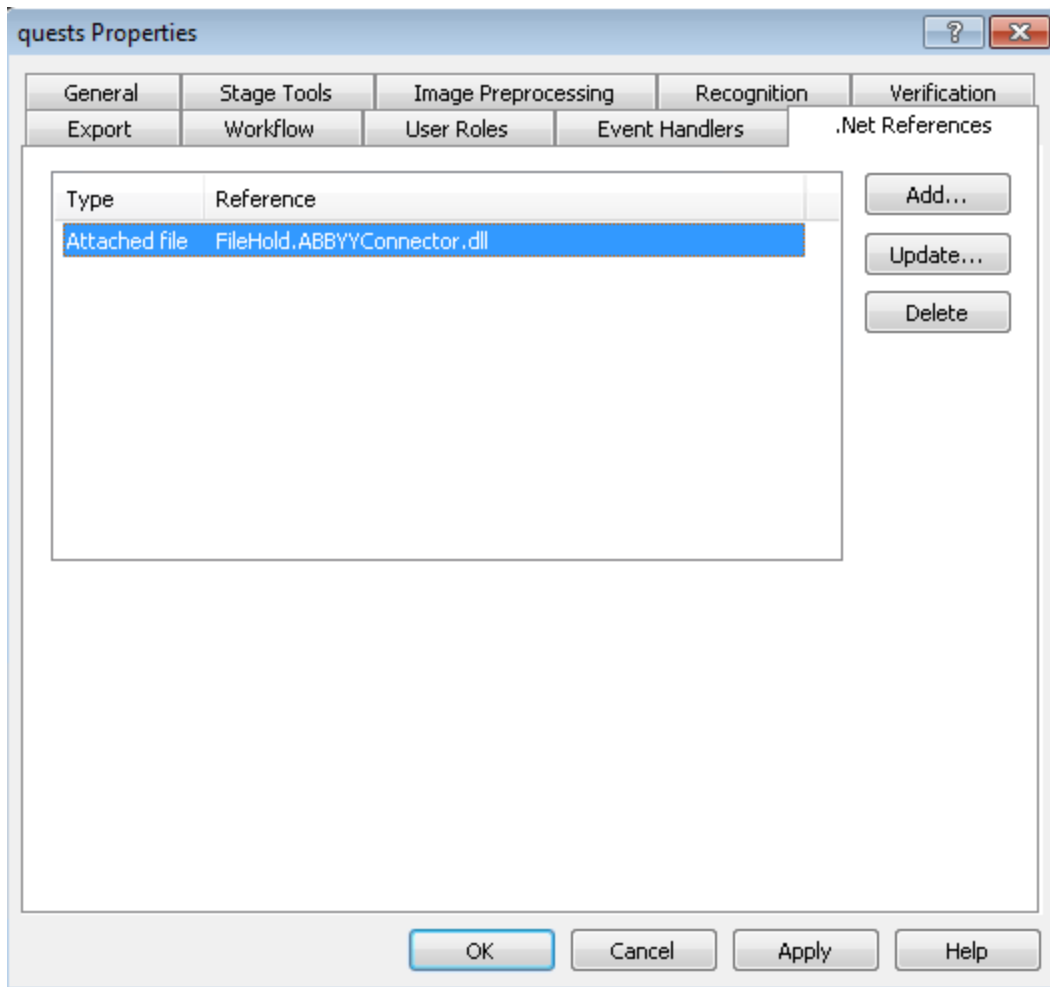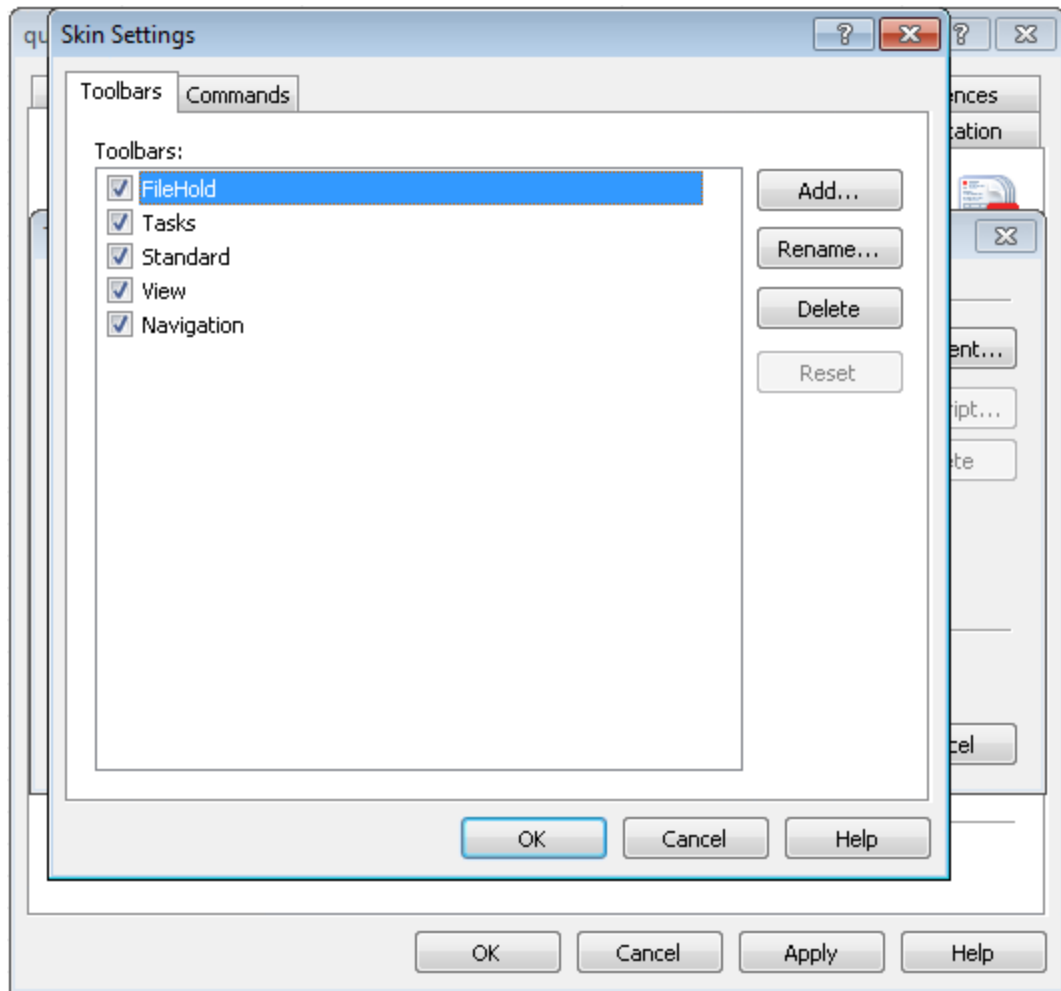
Click 'Apply' button after this operation.

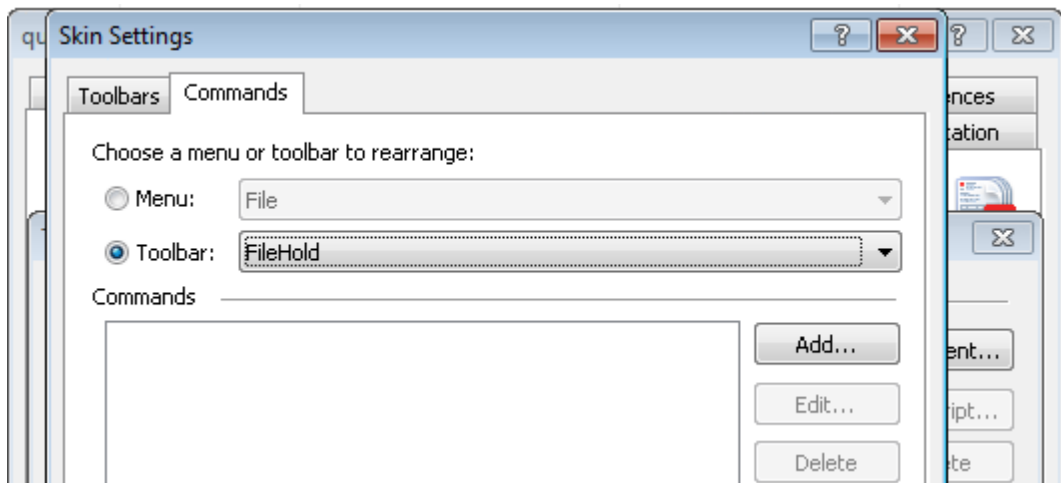4. Select 'General' tab and click the 'Edit tool…' button. Tool Settings window should be displayed.

5. Click 'Edit Skin' button. In 'Toolbars' tab, click 'Add…' button to create new toolbar named 'FileHold'.

6. Select 'Commands' tab. Check the 'Toolbar' option and select 'FileHold'.

7. In the 'Commands' section, click 'Add…' button.

8. In the 'Categories' list, select the 'User Commands' and mark the 'User commands #0' command.

9. In the 'Properties' section. Type a name i.e. 'FH Export Settings' and a tooltip i.e. 'Show the FileHold Export Settings Form'.
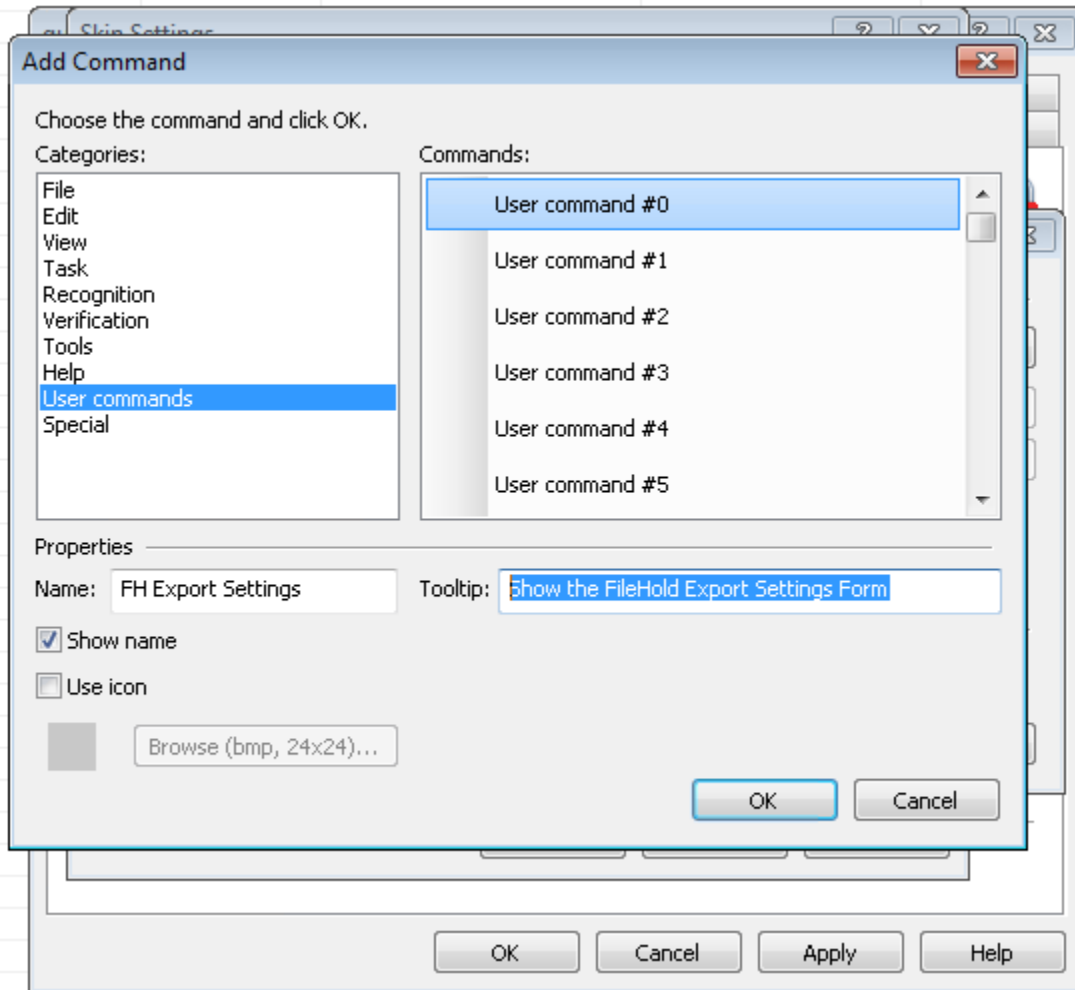

10. Confirm settings by clicking the OK button in 'Add Command' and 'Skin Settings' window.

11. In the 'Tool Settings' window, click 'Add Event…' button.

12. In the 'Add Event' window, set the new event to 'On User Command' and click 'Edit Script…' button.

13. Set the language to 'C# .Net' and paste the code below:

```
            ABBYY.FlexiCapture.ClientUI.TCommandID commandID =
    (ABBYY.FlexiCapture.ClientUI.TCommandID)(CommandId);
            ABBYY.FlexiCapture.ClientUI.TCommandID userCommand =
    ABBYY.FlexiCapture.ClientUI.TCommandID.CI_UserCommand;
            ABBYY.FlexiCapture.ClientUI.TCommandID userCommand0 =
    (ABBYY.FlexiCapture.ClientUI.TCommandID)((int)userCommand + 0);

            if (commandID == userCommand0)
            {
                FileHold.ABBYYConnector.FileHoldExporter exp2 = new
    FileHold.ABBYYConnector.FileHoldExporter();
                exp2.ShowSettingsForm();
            }
```
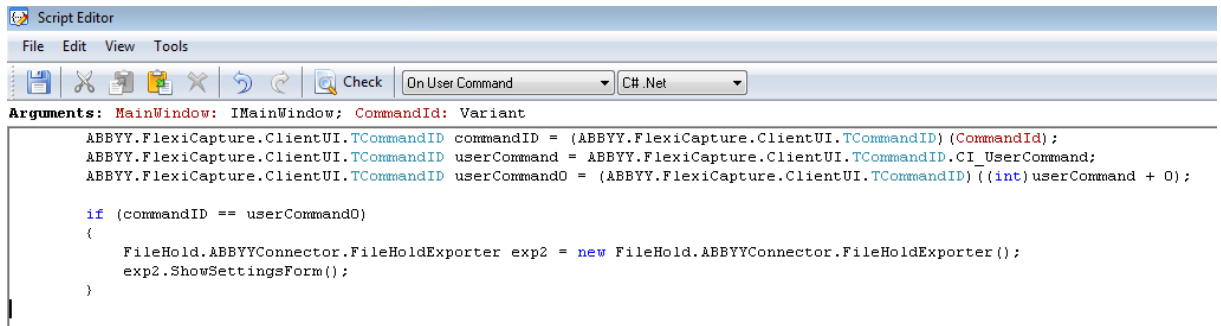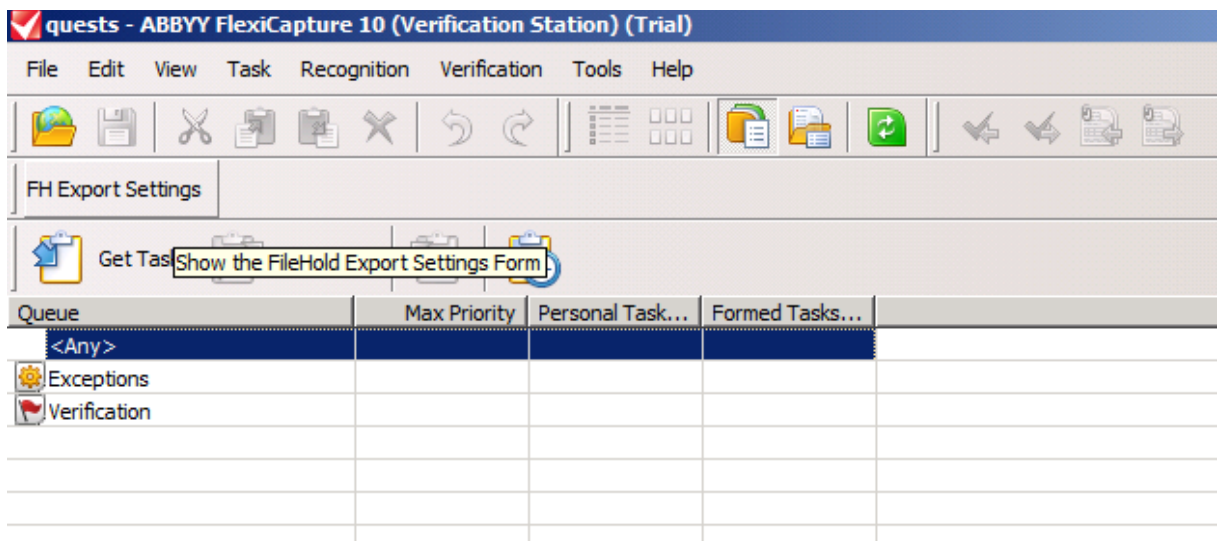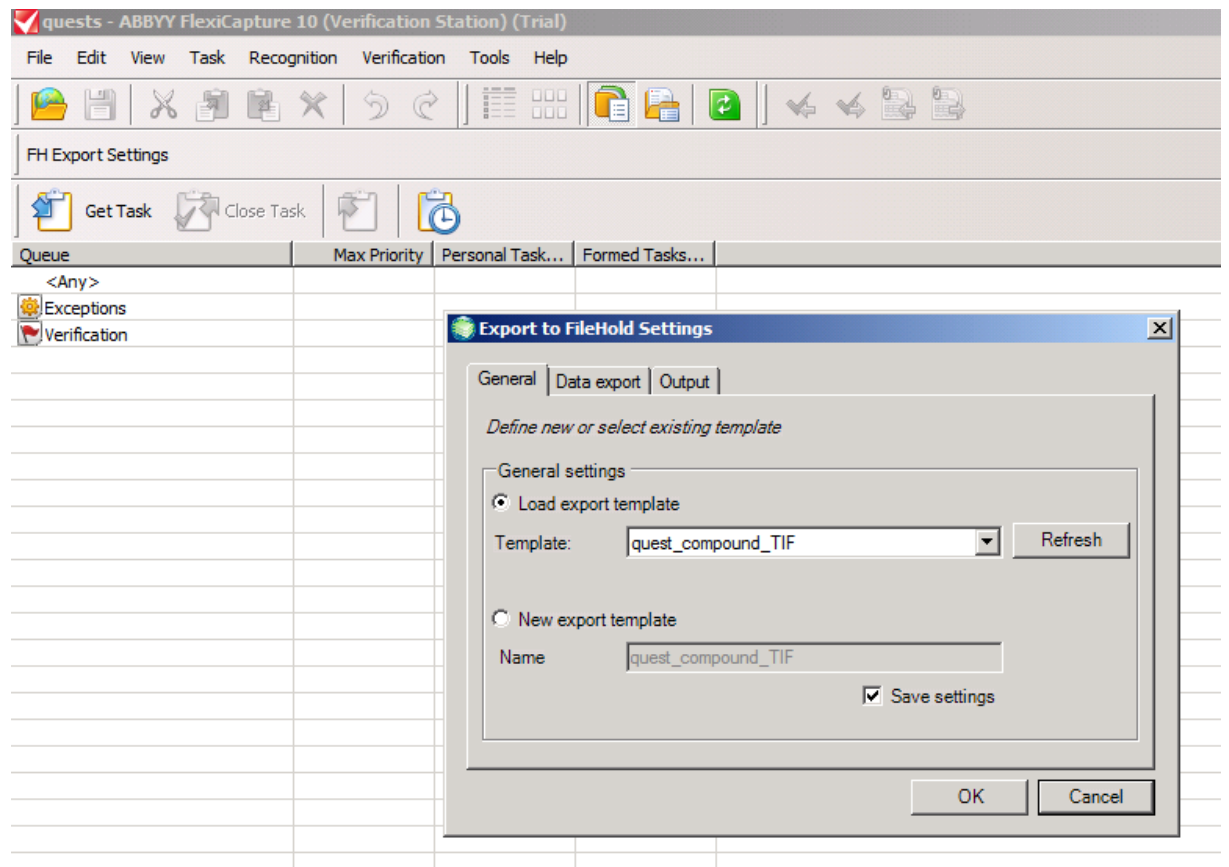

14. Check the script and save it if the script is correct. Close the Script Editor.
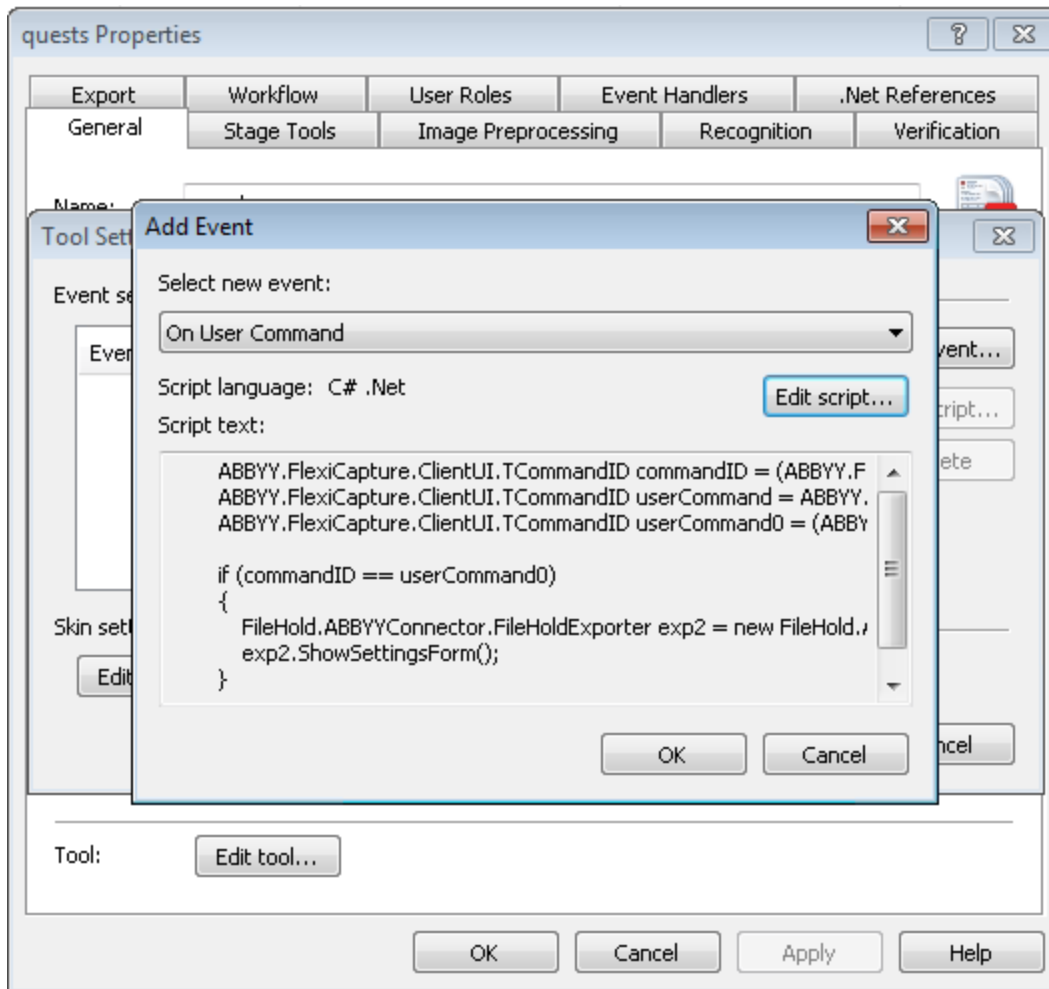
15. Confirm changes by clicking OK button in every opened window.

16. Open i.e. Operator or Verification Station and open your project.

17. Note that the FileHold Toolbar is available.

After clicking the 'FH Export Settings' button, Export Settings window should be displayed.

5. EXPORT PROCESS

ABBYY FlexiCapture supports wide variety of methods for scanning, recognizing and exporting documents. The following sample was the basic scenario during development. If this is not sufficient, others scenario must be suggested to tests.

5.1. Sample export scenario for Standalone environment

2. Open project with configured Document Definition to export documents to format compatible with FileHold Import functionality.

3. Create new batch.

4. Load images.

5. Match loaded images to specific Document Definition and run recognition process.

6. Select few correctly recognized documents (may be whole batch) and click 'Export' button from processing toolbar.

7. Depending on configuration, 'Export to FileHold Settings' window will be displayed.

8. Define settings template, export destination and parameters of exported images.

9. After that, all documents will be exported to specified directory according to QSP format and settings.

5.2. Recommendations for using the ABBYY Connector with Distributed environments

1. Use the **FileHold.ABBYYConnector.FileHoldExporter.GeneralDirectory** property to define custom general directory – this should be a shared directory located on the Application Server and disabled password authentication

2. When using the UNC paths, remember to disable the password authentication for accessing the shared directories

3. Use the **FileHold.ABBYYConnector.FileHoldExporter.DefaultSettingsTemplate** or the **FileHold.ABBYYConnector.FileHoldExporter.UseTheLastSettings** properties with cooperation with FileHold.ABBYYSettingsEditor or FileHold Toolbar to avoid displaying the Export Settings Form. Appearance of this window could hold whole exporting process.

6. FILEHOLD.ABBYYSETTINGSEDITOR.EXE USAGE

FileHold.ABBYYSettingsEditor.exe allows to define new and changing existing settings templates. The tool by default looks for the settings templates located in: "%SystemDrive$\Users\[user_name]\FlexiCapture2FileHold". There is possibility for changing the general directory by simple edition of the FileHold.ABBYYSettingsEditor.exe.config file.