



TIFF Junction Reference Guide Version 3.0

Standard and Professional Editions

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1 INTRODUCTION

TIFF Junction provides a set of processing tools for TIFF files, including splitting, merging, conversion to PDF and setting of security and other attributes of the converted PDF files. The Professional Edition additionally provides the ability to create Searchable PDFs from TIFF files and Image-Only PDF files, and to generate OCR text files.

The product has both a GUI and command-line interface. Batch processes can be defined using the GUI to create an XML Job Ticket file which can be run using the GUI, or using the command line.

1.1 System Requirements

- Windows 2003, Windows XP or Windows Vista.
- Approximately 140Mb of disk space is required.
- To use the WSH Scripts WSH 5.6 or later is recommended. This will be installed automatically by the install program if it is not present. It can also be downloaded from <http://msdn.microsoft.com/scripting> if necessary for any reason.

1.2 Supported TIFF File Formats

- CCITT Group 3 (1-D), Group 3 (2-D)
- CCITT Group 4
- CCITT RLE
- JPEG (Type 6 Compression)
- Uncompressed (Bitonal)

1.3 Installation

The setup.exe installation script will guide you through the process of setting up TIFF Junction.

1.4 Licencing and Purchasing

Unlicensed versions are fully functional and not time-restricted, but all generated TIFF and PDF files have an additional page which indicates that the document was generated with an unlicensed version of the product.

When a license is purchased (see <http://www.aquaforest.com/en/buy001.asp>) a permanent license key will be issued for use with the product which should be entered using the Help | License option of the GUI. There is no need to download another version of the software.

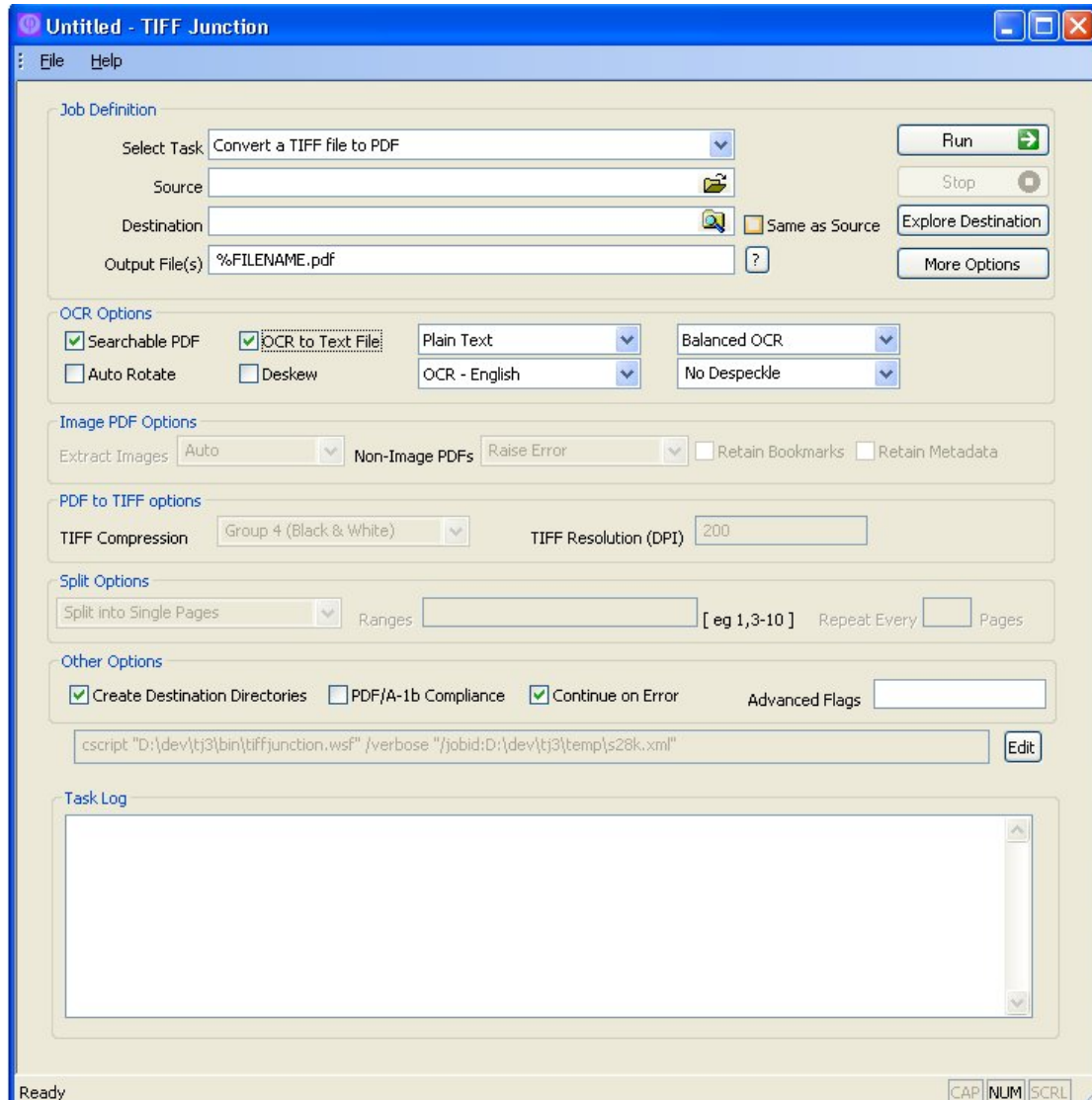
1.5 Conventions

Throughout this guide type in **bold courier** is used to represent operating system commands and *TIFFJUNCTIONDIR* represents the directory in which TIFF Junction was installed, by default C:\Program Files\TIFF Junction.

2 USING THE TIFF JUNCTION WINDOWS INTERFACE

2.1 Main Window

When TIFF Junction is launched, the main window is displayed as shown below. This allows the definition and running of jobs, as well as saving and loading job definitions to and from files.



2.1.1 Job Definition Section

Screen Field / Button	Description
Run	Runs the current job. Job output will appear in the “task log section of the screen”.
Stop	Halts processing of the currently running job.
Explore Destination	Launches Windows Explorer using the destination as the starting point.
More Options	This launches a set of property sheets which can be used to set properties of the generated PDF files, such as security and metadata values. See sections 2.2 through 2.5 for more details.

Screen Field / Button	Description								
Select Task	<p>This defines which task is to be run and may be one of :</p> <p>Convert a TIFF file to PDF Convert a Folder of TIFF Files to PDF Convert a Folder Tree of TIFF Files to PDF</p> <p>Merge a Folder of TIFF Files Merge TIFF files in each Folder in Folder Tree</p> <p>Merge a Folder of TIFF Files to PDF Merge TIFF files in each Folder in Folder Tree to PDF</p> <p>Split a TIFF File Split a Folder of TIFF Files Split a Folder Tree of TIFF Files</p> <p>Show Information for a TIFF File</p> <p>OCR an Image-Only PDF File OCR a Folder of Image-Only PDF Files OCR a Folder Tree of Image-Only PDF Files</p> <p>Convert a PDF file to TIFF Convert a Folder of PDF Files to TIFF Convert a Folder Tree of PDF Files to TIFF</p>								
Source	The source TIFF file or directory.								
Destination	The location where the generated TIFF or PDF file(s) will be placed. This can be set to be the same as the source location.								
Output File(s)	<p>This defines the template output file name.</p> <table border="1" data-bbox="671 1328 1353 1731"> <tbody> <tr> <td data-bbox="671 1328 898 1391">%FILENAME</td> <td data-bbox="898 1328 1353 1391">Source file name without .pdf</td> </tr> <tr> <td data-bbox="671 1391 898 1574">%UNIQUEn</td> <td data-bbox="898 1391 1353 1574">For use with split operations. Unique number starting at 1. If n is supplied, then zero padding to n digits is used. If n is not supplied or is zero, then zero padding is not used.</td> </tr> <tr> <td data-bbox="671 1574 898 1668">%DIRNAME</td> <td data-bbox="898 1574 1353 1668">Source directory name of the directory currently being processed.</td> </tr> <tr> <td data-bbox="671 1668 898 1731"><i>String</i></td> <td data-bbox="898 1668 1353 1731">(Any string)</td> </tr> </tbody> </table> <p>For example, a split operation using %FILENAME-part%UNIQUE6.pdf would give <i>filename.pdf</i> split into <i>filename-part000001.pdf filename-part000002.pdf</i> etc.</p>	%FILENAME	Source file name without .pdf	%UNIQUE n	For use with split operations. Unique number starting at 1. If n is supplied, then zero padding to n digits is used. If n is not supplied or is zero, then zero padding is not used.	%DIRNAME	Source directory name of the directory currently being processed.	<i>String</i>	(Any string)
%FILENAME	Source file name without .pdf								
%UNIQUE n	For use with split operations. Unique number starting at 1. If n is supplied, then zero padding to n digits is used. If n is not supplied or is zero, then zero padding is not used.								
%DIRNAME	Source directory name of the directory currently being processed.								
<i>String</i>	(Any string)								

2.1.2 OCR Options Section

Screen Field / Button	Description
Searchable PDF (Professional Edition Only)	PDFs generated from TIFF files include searchable hidden text recognised by TIFF Junction's OCR Engine.
OCR to Text File (Professional Edition Only)	Create a separate text file of text recognised by TIFF Junction's OCR Engine.
Other Options (Deskew, Autorotate, Despeckle, Max Speed / Balanced / Max Quality OCR)	See section 5 for further explanation of the OCR options.

2.1.3 Image PDF Options Section

Screen Field / Button	Description
Extract Images	<p>This allows control over the method used to extract images from PDF files for OCR processing when using the "OCR an Image-Only PDF". The options are :</p> <ul style="list-style-type: none"> • Auto – TIFF Junction will select the most appropriate method. • Via Bitmap – The PDF is rasterized using bitmap conversion • Extract TIFF – The embedded TIFF images are extracted directly. • Convert to TIFF – The PDF is rasterized using conversion to PDF. <p>Note - Extracting PDF images via TIFF is well suited to PDFs with one scanned image per page, but certain documents that have multiple images on a page, or a mixture of image and text (eg a scanned document with text bates stamps) – for these images the Bitmap or conversion to TIFF method is required.</p>
Non-Image PDFs	<p>This allows control over the treatment of non image-only PDFs, ie PDFs that have some text in them as well as images. The options are :</p> <ul style="list-style-type: none"> • Rasterize and OCR. The document will be converted to a set of images which will then be processed in the normal way. Note that this actually changes the non-image parts of the PDF to image + text. • Raise Error. The task will terminate with an error. If "On Error Continue" is set this then behaves as Skip. This is the default. • Skip. The document will not be processed. • Pass Through. The file will not be processed, but a copy of the document will be made and named as if the processing had occurred.

Retain Bookmarks	Bookmarks from the original PDF are copied to the searchable result PDF.
Retain Metadata	Metadata from the original PDF are copied to the searchable result PDF.

2.1.4 PDF to TIFF Options Section

Screen Field / Button	Description
TIFF Compression	For black & white documents “Group 4” should be selected. For color, “LZW” should be used.
TIFF Resolution	This specifies the DPI resolution.

2.1.5 Split Options Section

Screen Field / Button	Description				
Split Type	<i>One of :</i> Split into single pages Split by ranges (See below) Split by repeating ranges (See below)				
Page Ranges	Set of page ranges separated by commas that defines which pages from the original should be extracted. The following types of page ranges are allowed : <table border="1" data-bbox="671 1111 1353 1178"> <tr> <td>1</td> <td>Specifies a single page</td> </tr> <tr> <td>1-3</td> <td>Specifies a range of pages</td> </tr> </table>	1	Specifies a single page	1-3	Specifies a range of pages
1	Specifies a single page				
1-3	Specifies a range of pages				
Repeating Range	Apply the page range to each set of <i>Page Ranges</i> pages within the document. For example if 2-4 is specified for page ranges, and 4 is specified as the repeating range, then the range is re-applied every 4 pages. Hence the file is split such that the first output file contains pages 2-4 from the original document, the second contains pages 6-8 and so on.				

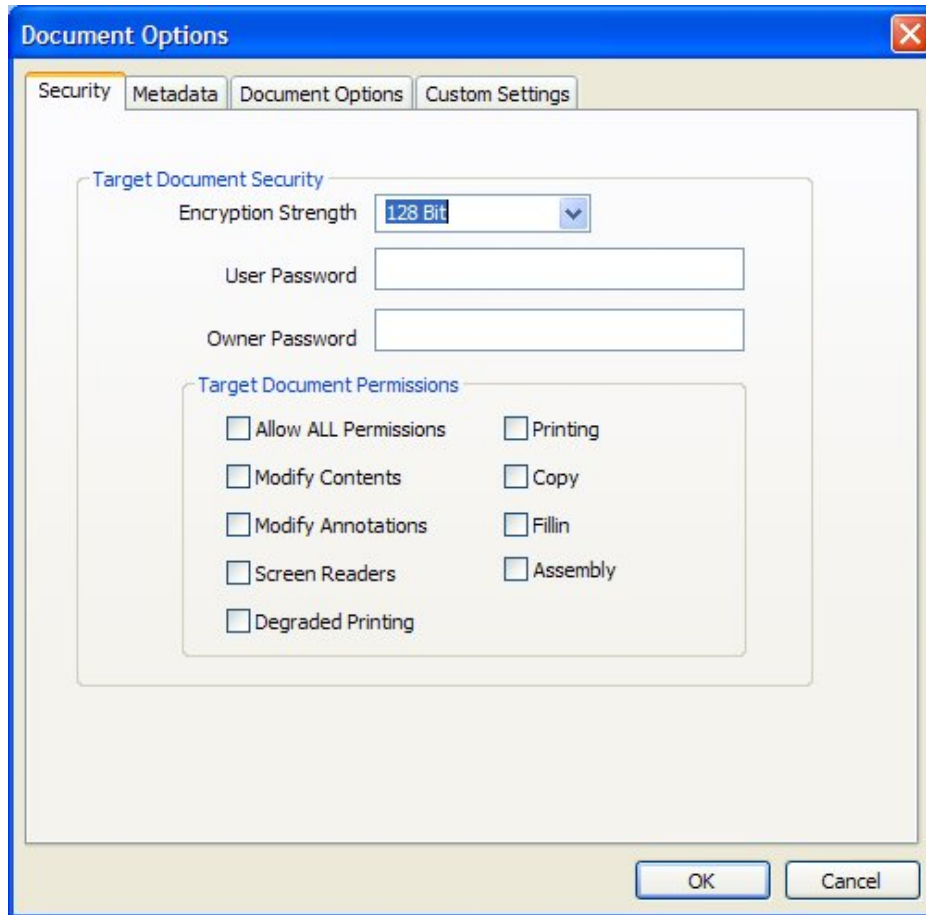
2.1.6 Other Options Section

Screen Field / Button	Description
Create Directories where required	If checked, when processing a tree, subdirectories will be created in the target directory tree when required.
Continue on Error	When checked, folder and tree processing jobs will continue even if there is an error processing individual files.
PDF/A-1b Compliance	Processes the output PDF file to ensure it is compliant with ISO 19005 / PDF/A-1b. See section 6 for more details.
Advanced Flags	Additional TIFF Junction advanced command line flags may be entered here (see section 3)

2.1.7 Task Log Section

Screen Field / Button	Description
Command	This is the operating system command that is used to run the job. It can be edited after using the “Edit” button, although there is normally no need for this.
Task Output	The output of the job appears here.

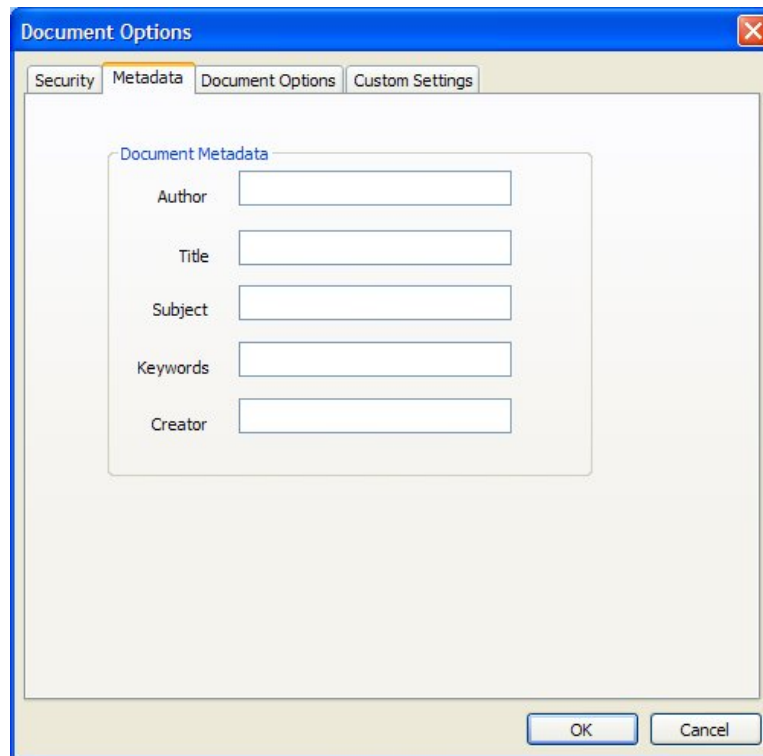
2.2 Security Settings



2.2.1 Target Document Security

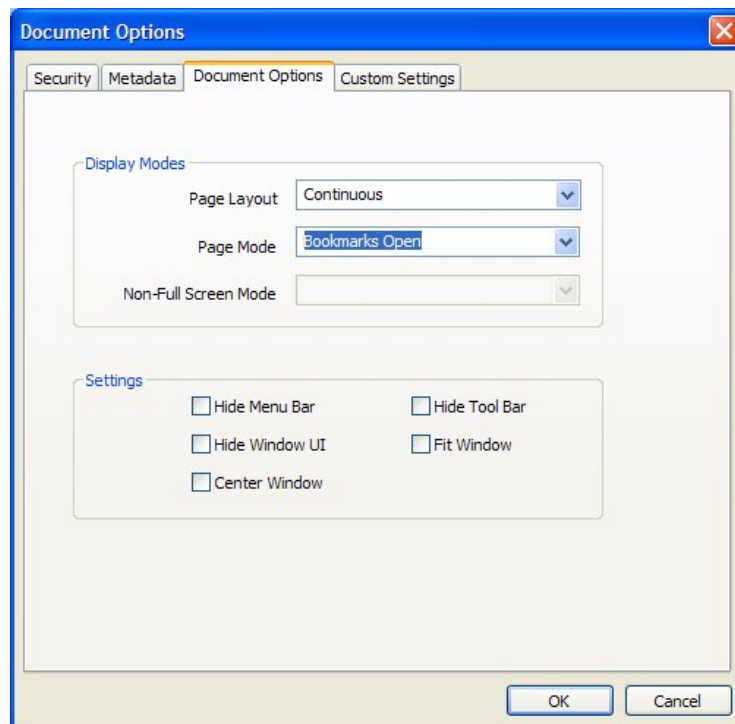
Option	Description																				
User Password	A password that will be required to open the document.																				
Owner Password	A password that will be required to change the document permissions.																				
Permissions	<table border="1"> <thead> <tr> <th>Permission</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Allow ALL Permissions</td> <td>All all the permissions below.</td> </tr> <tr> <td>Printing</td> <td>Allow high-quality printing</td> </tr> <tr> <td>Modify Contents</td> <td>Allow assembly (see below) and other document medications</td> </tr> <tr> <td>Copy</td> <td>Allow text and graphic copying and extraction</td> </tr> <tr> <td>Modify Annotations</td> <td>Allow modification of annotations</td> </tr> <tr> <td>Fillin</td> <td>Allow filling of form fields</td> </tr> <tr> <td>Screen Readers</td> <td>Allow extraction of text and graphics in support of accessibility.</td> </tr> <tr> <td>Assembly</td> <td>Allow rotation, insertion or deletion of pages.</td> </tr> <tr> <td>Degraded Printing</td> <td>Allow low-quality printing</td> </tr> </tbody> </table>	Permission	Description	Allow ALL Permissions	All all the permissions below.	Printing	Allow high-quality printing	Modify Contents	Allow assembly (see below) and other document medications	Copy	Allow text and graphic copying and extraction	Modify Annotations	Allow modification of annotations	Fillin	Allow filling of form fields	Screen Readers	Allow extraction of text and graphics in support of accessibility.	Assembly	Allow rotation, insertion or deletion of pages.	Degraded Printing	Allow low-quality printing
	Permission	Description																			
	Allow ALL Permissions	All all the permissions below.																			
	Printing	Allow high-quality printing																			
	Modify Contents	Allow assembly (see below) and other document medications																			
	Copy	Allow text and graphic copying and extraction																			
	Modify Annotations	Allow modification of annotations																			
	Fillin	Allow filling of form fields																			
	Screen Readers	Allow extraction of text and graphics in support of accessibility.																			
Assembly	Allow rotation, insertion or deletion of pages.																				
Degraded Printing	Allow low-quality printing																				

2.3 Document Metadata



This page allows setting of the generated PDF Document Properties.

2.4 Document Display Options



2.4.1 Display Modes

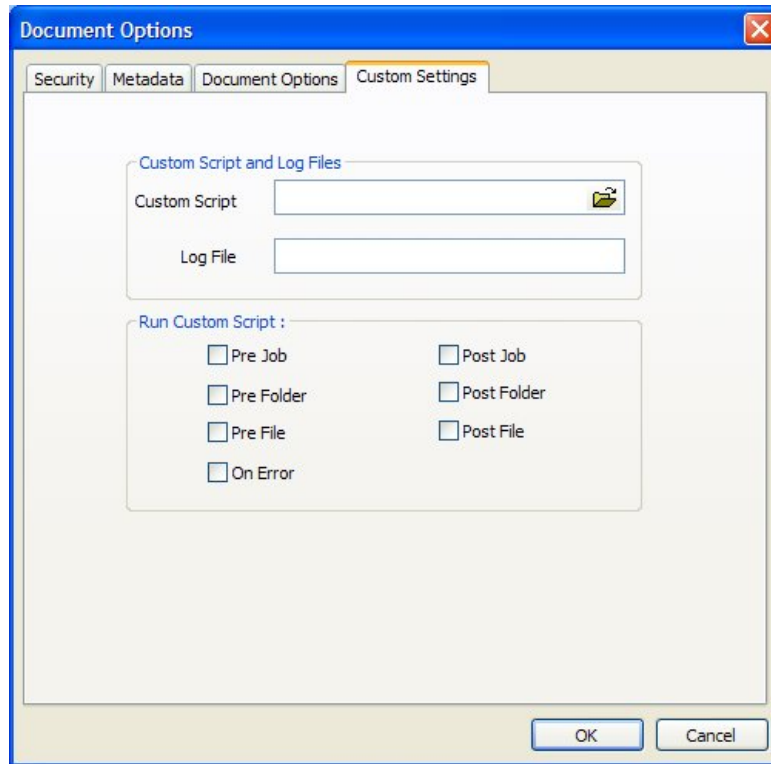
Option	Description
Page Layout	The setting for initial document page display. One of : <ul style="list-style-type: none"> • Single Page • Continuous • Continuous Facing (odd pages left) • Continuous Facing (odd pages right)
Page Mode	The setting for initial viewer mode. One of : <ul style="list-style-type: none"> • Neither Bookmarks nor Thumbnails Open • Bookmarks Open • Thumbnails Open • Bookmarks & Thumbnails Open • Full Screen
Non-Full Screen Mode	Only applicable where Page Mode=Full Screen. The setting for document page display when exiting Full Screen mode. One of : <ul style="list-style-type: none"> • Neither Bookmarks nor Thumbnails Open • Bookmarks Open • Thumbnails Open

2.4.2 Settings

Option	Description
Hide Tool Bar	The viewer's tool bar will be hidden
Hide Menu Bar	The viewer's menu bar will be hidden
Hide Window UI	The viewer's UI elements (scrollbars etc) will be hidden
Fit Window	The viewer will resize the document's window to fit the size of the first displayed page.
Center Window	The document window will be positioned in the center of the screen.

2.5 Custom Settings

See section 5 for full details of running Custom Scripts.



2.5.1 Custom Script and Log Files

Option	Description
Custom Script	The path of a custom script to be used with the Job.
Log File	The name of a log file (which will be placed in <i>TIFFJUNCTIONDIR</i> \logs). The log file will contain the same output as is written to the output panel. By default this will contain the same output as is written to the task output. It is possible to configure TIFF Junction to only record errors in the log file by making a modification to the <i>tiffjunction.wsf</i> file (in <i>TIFFJUNCTIONDIR</i> \bin) changing <pre> var onlyLogErrors=false; to var onlyLogErrors=true; </pre>

2.5.2 Run Custom Script

Option	Description
Pre Job	If checked, the custom script will be called at the start of the job
Post Job	If checked, the custom script will be called at the end of the job
Pre Folder	If checked, the custom script will be called at the start of processing each folder
Post Folder	If checked, the custom script will be called at the end of processing each folder
Pre File	If checked, the custom script will be called at the start of processing each file
Post File	If checked, the custom script will be called at the end of processing each file
On Error	If checked, the custom script will be called when a processing error occurs.

3 USING TIFF JUNCTION FROM THE COMMAND LINE

The command line usage is shown below

tiffjunction.exe option [-t target] [input file ...]

Parameter	Notes
-m	Merge. The set of input files will be merged to form one new Tiff file with the name and location specified by the target parameter.
-s	Split. The input file will by default be split into <i>n</i> single page per file Tiff files where <i>n</i> is the number of pages in the input file. Alternate splitting schemes may be specified using the -1 and -2 flags.
-4 <i>ranges</i>	Set of page ranges separated by commas that defines which pages from the original should be extracted.
-5 <i>repeatingrange</i>	Apply the page range to each set of <i>Page Ranges</i> pages within the document. For example if 2-4 is specified for page ranges, and 4 is specified as the repeating range, then the range is re-applied every 4 pages.
-p	Convert one or more Tiff files into a pdf file with the name and location specified by the target parameter. If more than one input file is specified, the input file set is first merged into a temporary file and the merged file is converted to pdf.
-i	Provide internal Tiff format information about each page of each input file.
-v	Provide tiffjunction product version and licence key information.
-w	Non image-only PDF file processing directive. See section 2.1.3 for more details. 0 : Rasterize and OCR 1 : Raise Error 2 : Skip 3 : Pass through
-f	Force pass-through of image formats even when Tiff Junction would normally make a conversion to ensure PDF compatability.
-r <i>resolution</i>	Force the resolution (dpi) to be passed through as <i>resolution</i> instead of the figure held within the file. When processing existing PDF files; if this flag is not specified the file images will be used as a guide : 200DPI or 300 DPI will be used depending upon which is closest to the resolution used in the file.
-d	Force creation of any directories that may be required by the -t parameter.
-c	0 : Retain metadata when processing image-only PDFs 1 : Retain bookmarks 2 : Retain bookmarks and metadata

	1000 : Force conversion of images to single strip CCITT Group 4 compression, even for images where Tiff Junction would not ordinarily make the conversion.												
-t target	Target file or directory specification.												
-o target	<p>Target file template.</p> <p>Output file name specifier. If -f is not specified, the default parameter setting is %FILENAME%UNIQUE6% which would give (for example) <i>filename.pdf</i> split into <i>filename000001.pdf filename000002.pdf</i> etc.</p> <table border="1"> <tr> <td>%BOOKMARK</td> <td>Bookmark title</td> </tr> <tr> <td>%PAGE<i>n</i></td> <td>The first page number from source file, zero padded to <i>n</i> digits. If <i>n</i> is not supplied or is zero, then zero padding is not used</td> </tr> <tr> <td>%FILENAME</td> <td>Source file name without .pdf</td> </tr> <tr> <td>%UNIQUE<i>n</i></td> <td>Unique number starting at 1. If <i>n</i> is supplied, then zero padding to <i>n</i> digits is used. If <i>n</i> is not supplied or is zero, then zero padding is not used</td> </tr> <tr> <td>%DIRNAME</td> <td>Source directory name of the directory currently being processed.</td> </tr> <tr> <td><i>String</i></td> <td>(Any string)</td> </tr> </table>	%BOOKMARK	Bookmark title	%PAGE <i>n</i>	The first page number from source file, zero padded to <i>n</i> digits. If <i>n</i> is not supplied or is zero, then zero padding is not used	%FILENAME	Source file name without .pdf	%UNIQUE <i>n</i>	Unique number starting at 1. If <i>n</i> is supplied, then zero padding to <i>n</i> digits is used. If <i>n</i> is not supplied or is zero, then zero padding is not used	%DIRNAME	Source directory name of the directory currently being processed.	<i>String</i>	(Any string)
%BOOKMARK	Bookmark title												
%PAGE <i>n</i>	The first page number from source file, zero padded to <i>n</i> digits. If <i>n</i> is not supplied or is zero, then zero padding is not used												
%FILENAME	Source file name without .pdf												
%UNIQUE <i>n</i>	Unique number starting at 1. If <i>n</i> is supplied, then zero padding to <i>n</i> digits is used. If <i>n</i> is not supplied or is zero, then zero padding is not used												
%DIRNAME	Source directory name of the directory currently being processed.												
<i>String</i>	(Any string)												
-n	Stamp Name (See Section 9)												
-l	Generate Page Labels using single page file name (See section 10)												
-z	Generate (with -m) or use (-p) Page Labels XML File. (See section 10)												
-x	Stamp Value (See Section 9)												
input file	One or more input file specifications which may include wildcards. Input files are processed in the order that they appear on the command line.												
-k <i>option</i>	<p>Perform OCR processing on the document. Requires the -p flag.</p> <p>1- Produce Searchable PDF 2- Produce OCR Text File 3 - Produce both Searchable PDF and OCR Text file. With this option the text file is named <i>filename.txt</i> where <i>filename</i> is the name of the generated PDF file. 4 - Produce Searchable PDF from an Image-Only PDF file. 6 - Produce both Searchable PDF and OCR Text file from an Image-Only PDF file.</p>												
-g <i>option</i>	<p>This option controls the type of text document produced by the OCR process.</p> <p>2 – Plain Ascii (no spacing) 4 – Smart Ascii (space formatting) 6 - HTML (Maximum Quality OCR Engine Only) 8 – RTF (Maximum Quality OCR Engine Only)</p>												

	If not specified, the default is 4.																																																																														
-h <i>language</i>	Sets the dictionary and character recognition to be used for the OCR process : <table border="1" data-bbox="501 315 991 1543"> <tr><td>English</td><td>0</td></tr> <tr><td>German</td><td>1</td></tr> <tr><td>French</td><td>2</td></tr> <tr><td>Spanish</td><td>3</td></tr> <tr><td>Italian</td><td>4</td></tr> <tr><td>UK English</td><td>5</td></tr> <tr><td>Swedish</td><td>6</td></tr> <tr><td>Danish</td><td>7</td></tr> <tr><td>Norwegian</td><td>8</td></tr> <tr><td>Dutch</td><td>9</td></tr> <tr><td>Portuguese</td><td>10</td></tr> <tr><td>Brazilian</td><td>11</td></tr> <tr><td>Galician</td><td>12</td></tr> <tr><td>Icelandic</td><td>13</td></tr> <tr><td>Greek</td><td>14</td></tr> <tr><td>Czech</td><td>15</td></tr> <tr><td>Hungarian</td><td>16</td></tr> <tr><td>Polish</td><td>17</td></tr> <tr><td>Romanian</td><td>18</td></tr> <tr><td>Slovak</td><td>19</td></tr> <tr><td>Croatian</td><td>20</td></tr> <tr><td>Serbian</td><td>21</td></tr> <tr><td>Slovenian</td><td>22</td></tr> <tr><td>Luxembourgish</td><td>23</td></tr> <tr><td>Finnish</td><td>24</td></tr> <tr><td>Turkish</td><td>25</td></tr> <tr><td>Russian</td><td>26</td></tr> <tr><td>Byelorussian</td><td>27</td></tr> <tr><td>Ukrainian</td><td>28</td></tr> <tr><td>Macedonian</td><td>29</td></tr> <tr><td>Bulgarian</td><td>30</td></tr> <tr><td>Estonian</td><td>31</td></tr> <tr><td>Lithuanian</td><td>32</td></tr> <tr><td>Afrikaans</td><td>33</td></tr> <tr><td>Albanian</td><td>34</td></tr> <tr><td>Catalan</td><td>35</td></tr> <tr><td>Irish gaelic</td><td>36</td></tr> <tr><td>Scottish gaelic</td><td>37</td></tr> <tr><td>Basque</td><td>38</td></tr> </table>	English	0	German	1	French	2	Spanish	3	Italian	4	UK English	5	Swedish	6	Danish	7	Norwegian	8	Dutch	9	Portuguese	10	Brazilian	11	Galician	12	Icelandic	13	Greek	14	Czech	15	Hungarian	16	Polish	17	Romanian	18	Slovak	19	Croatian	20	Serbian	21	Slovenian	22	Luxembourgish	23	Finnish	24	Turkish	25	Russian	26	Byelorussian	27	Ukrainian	28	Macedonian	29	Bulgarian	30	Estonian	31	Lithuanian	32	Afrikaans	33	Albanian	34	Catalan	35	Irish gaelic	36	Scottish gaelic	37	Basque	38
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Scottish gaelic	37																																																																														
Basque	38																																																																														
-1 <i>pdfmetadata</i>	Sets metadata attributes for the resulting PDF file when using -p. See section 3.5.1.																																																																														
-2 <i>pdfoptions</i>	Sets open options for the resulting PDF file when using -p. See section 3.5.2.																																																																														
-3 <i>pdfsecurity</i>	Sets security attributes for the resulting PDF file when using -p. See section 3.5.3.																																																																														
-y <i>ocrquality</i>	Selects the quality versus speed setting in a range of 0 – 255. 0 : Maximum Speed 100 : Balanced OCR 255 : Maximum Quality																																																																														
-6	Deskew (straighten) the image. (Maximum Quality Engine Only)																																																																														
-7	Auto-rotate the image – this will ensure all text oriented normally, suitable for																																																																														

	OCR (Maximum Quality Engine Only)
-8 <i>pixels</i>	Despeckle the image – remove isolated dots up to <i>pixels</i> width in size (Maximum Quality Engine Only)
-0 [zero]	When used in combination with the despeckle option, this has the effect of despeckling the page for OCR processing, but the image retained in the final file is not despeckled.
-j	Defines the method for extracting images from PDFs : 0 – Auto 1 – via Bitmap 2 – Extract TIFFs 3 – Convert to TIFF
-a	Ensure that the output file is PDF/A compliant.
-e	Specifies a temporary folder to be used for bitmap images used during OCR processing. If this is not specified, the first of the following environment variables that is defined will be used : TMP, TMPDIR, TEMP.

3.1 Examples of Merging Tiff Files

Merge all the tiff files in d:\aquaforest\tiff\orbera into a file called ace3.tif in the current directory

```
tiffjunction.exe -m -t ace3.tif d:\aquaforest\tiff\orbera\*.tif
```

Merge all the tiff files with a name beginning with “s” in the current directory into a single file called ace2.tif in ..\test

```
tiffjunction.exe -m -t ..\test\ace2.tif s*
```

3.2 Example of Splitting Tiff Files

Create a set of single page per file Tiff files. One file will be created for each page in c:\test\1c00.tif. The output files will be placed in the d:\test directory and named splitaa.tif, splitab.tif etc.

```
tiffjunction.exe -s -t d:\test\split c:\test\1c00.tif
```

Split by ranges : Extract pages 1-3 into one file, and pages 9-12 into another :

```
tiffjunction.exe -o %FILENAME%UNIQUE6.tif -s -4 "1-3,9-12" -t  
"C:\dev\ts\120f\samples" "C:\dev\ts\120f\samples\ccitt.tif"
```

Split by repeating ranges, each file will have 3 pages in :

```
tiffjunction.exe -o %FILENAME%UNIQUE6.tif -s -4 "1-3" -5 3 -t  
"C:\dev\ts\120f\samples" "C:\dev\ts\120f\samples\ccitt.tif"
```

3.3 Examples of Converting Tiff Files to PDF

Convert d:\aquaforest\tiff\709245.tif to a PDF file called ace4.pdf in the current directory :

```
tiffjunction.exe -p -t ace4.pdf d:\aquaforest\tiff\709245.tif
```

Merge all the tiff files with a name beginning with “s” in the current directory into a single PDF file called ace9.pdf in ..\test

```
tiffjunction.exe -p -t ..\test\ace9.tif s*
```

3.4 Creating Searchable PDF Files

Generate a searchable PDF to C:\dev\ts\120f\samples\ccitt000000.pdf and a text file to C:\dev\ts\120f\samples\ccitt000000.txt

```
tiffjunction.exe -k 3 -o %FILENAME%.pdf -p -t  
"C:\dev\ts\120f\samples" "C:\dev\ts\120f\samples\ccitt000000.tif"
```

3.5 PDF Output File Options

3.5.1 metadata specification (-1 Flag)

This may be used to specify metadata properties as in the following example :

```
tiffjunction.exe -o %FILENAME.pdf -p -t "C:\dev\ts\120f\samples"  
-1 "Author=Tony Blair;Title=Forthcoming Election;"  
"C:\dev\ts\120f\samples\ccitt000000.tif"
```

The attributes that may be set are :

- Author
- Title
- Subject
- Keywords
- Creator

3.5.2 docoptions specification (-2 Flag)

This may be used to specify document viewing preferences as in the following example :

```
tiffjunction.exe -o %FILENAME.pdf -p -t "C:\dev\ts\120f\samples" -2  
"pagelayoutsinglepage,pagemodeusethumbs,"  
"C:\dev\ts\120f\samples\ccitt000000.tif"
```

Property	Description
pagelayoutsinglepage	Single Page (SinglePage)
pagelayoutonecolumn	Continuous(OneColumn)
pagelayouttwocolumnleft	ContinuousFacing [odd pages left] (TwoColumnLeft)
pagelayouttwocolumnright	ContinuousFacing [odd pages right] (TwoColumnRight)
pagemodeusenone	No Thumbnails or Bookmarks Visible (UseNone)
pagemodeuseoutlines	Bookmarks Visible (Use Outlines)
pagemodeusethumbs	Thumbnails Visible (UseThumbs)
pagemodefullscreen	Full Screen Mode (FullScreen)
hidetoolbar	The viewer's tool bar will be hidden
hidemenubar	The viewer's menu bar will be hidden
hidewindowui	The viewer's UI elements (scrollbars etc) will be hidden
fitwindow	The viewer will resize the document's window to fit the size of the first displayed page.
centerwindow	The document window will be positioned in the center of the screen.
nonfullscreenpagemodeusenone	On exiting full screen mode, neither outline or thumbnail images are shown.
nonfullscreenpagemodeusenoutline	On exiting full screen mode outlines are visible.
nonfullscreenpagemodeusethumbs	On exiting full screen mode thumbnails are visible.

3.5.3 security specification (-3 Flag)

This may be used to specify security properties as in the following example :

```
tiffjunction.exe -o %FILENAME.pdf -p -t "C:\dev\ts\120f\samples" -3
"strength=128;userpassword=secretsquirrel;permissions=allowdegradedprinting,
" "C:\dev\ts\120f\samples\ccitt.tif"
```

Parameter	Description																				
Userpassword	A password that will be required to open the document.																				
Ownerpassword	A password that will be required to change the document permissions.																				
Permissions	A comma separated list of document permissions <table border="1" data-bbox="501 871 1353 1254"> <thead> <tr> <th>Permission</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>allowprinting</td> <td>Allow high-quality printing</td> </tr> <tr> <td>allowmodifycontents</td> <td>Allow assembly (see below) and other document medications</td> </tr> <tr> <td>allowcopy</td> <td>Allow text and graphic copying and extraction</td> </tr> <tr> <td>allowmodifyannotations</td> <td>Allow modification of annotations</td> </tr> <tr> <td>allowfillin</td> <td>Allow filling of form fields</td> </tr> <tr> <td>allowscreenreaders</td> <td>Allow extraction of text and graphics in support of accessibility.</td> </tr> <tr> <td>allowassembly</td> <td>Allow rotation, insertion or deletion of pages.</td> </tr> <tr> <td>allowdegradedprinting</td> <td>Allow low-quality printing</td> </tr> <tr> <td>allowall</td> <td>Allow all the permissions</td> </tr> </tbody> </table>	Permission	Description	allowprinting	Allow high-quality printing	allowmodifycontents	Allow assembly (see below) and other document medications	allowcopy	Allow text and graphic copying and extraction	allowmodifyannotations	Allow modification of annotations	allowfillin	Allow filling of form fields	allowscreenreaders	Allow extraction of text and graphics in support of accessibility.	allowassembly	Allow rotation, insertion or deletion of pages.	allowdegradedprinting	Allow low-quality printing	allowall	Allow all the permissions
Permission	Description																				
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allowscreenreaders	Allow extraction of text and graphics in support of accessibility.																				
allowassembly	Allow rotation, insertion or deletion of pages.																				
allowdegradedprinting	Allow low-quality printing																				
allowall	Allow all the permissions																				
strength	Unless this is set to some other value (such as 40), the default of 128 is used.																				

3.6 Directory Processing from the Command Line

Processing of directories requires use of the TIFF Junction WSH (Windows Script Host) file, `tiffjunction.wsh`. This can be used in conjunction with XML Job Ticket files (See section 4 below) – these can most conveniently be generated by setting the required parameters in the TIFF Junction GUI and using File | Save to save the job ticket file.

Example :

```
cscript "C:\Program Files\TIFF Junction\bin\tiffjunction.wsf" /verbose  
"/jobid:C:\dev\tj2\jobdefinition.xml"
```

Parameter	Notes
/jobid:value	If used, specifies the full path of an XML Job Ticket file saved from the GUI or generated by some other means. Job files in the TIFF Junction jobs directory may be referred to by a shorthand method of <i>jobname</i> where the Job Ticket file is <i>jobname.xml</i> .
/verbose	Verbose progress messages
/debug	Debug progress messages
/silent	No progress messages
/onerrorcontinue	Allow job to continue after errors

Notes

1. `cscript.exe` is required to run the command. This is usually included in a standard PATH, but if not would need to be specified explicitly

Eg `C:\WINDOWS\SYSTEM32\cscript.exe ...`

2. Options that contain spaces will need to be quoted. For example `"c:\output files"`

3.7 Converting PDF to TIFF From the Command Line

The command line usage is shown below

```
pdf2tiff.exe /source=value /target=value /output=value /tiffresolution=value /tiffcompression=value
```

Parameter	Notes
/source	The source PDF file.
/target	The target folder for the output TIFF file
/output	Specifies the output file name. %FILENAME may be used as part of the string and will be replaced by the filename without the file extension. If this is not specified, a value of %FILENAME.tif will be used.
/tiffresolution	The resolution in DPI of the output TIFF file. The default is 200.
/tiffcompression	The image compression scheme to be used in the TIFF file. Either GROUP4 (for bitonal images) or LZW.

4 XML JOB TICKET FILES

TIFF Junction uses XML Job Ticket files to store details of a particular job specification before this is run using the product either from the GUI or using the /jobid option from the command line – see 3.6. Note that some functionality, in particular custom scripts and logfiles can only be used in conjunction with XML Job Ticket files. Other functionality can also be used via the equivalent command line flags.

Developers may wish to create or generate XML job files using the information below. A sample job file is shown here :

```
<pdfjunction_job>
<operation>split</operation>
<sourcetype>folder</sourcetype>
<sourcefiles>C:\qatest\pj\in\set001</sourcefiles>
<target>c:\qatest\pj\out\qa001</target>
<joboptions>-o -c -f %F%\%U%</joboptions>
<metadata></metadata>
<security></security>
<docoptions></docoptions>
<advancedflags></ advancedflags>
<custom_script>custom.wsf</custom_script>
<custom_script_pre_job>>true</custom_script_pre_job>
<custom_script_post_job></custom_script_post_job>
<custom_script_pre_folder></custom_script_pre_folder>
<custom_script_post_folder></custom_script_post_folder>
<custom_script_pre_file>>true</custom_script_pre_file>
<custom_script_post_file></custom_script_post_file>
<custom_script_on_error></custom_script_on_error>
<logfile>qa001.txt</logfile>
</pdfjunction_job>
```

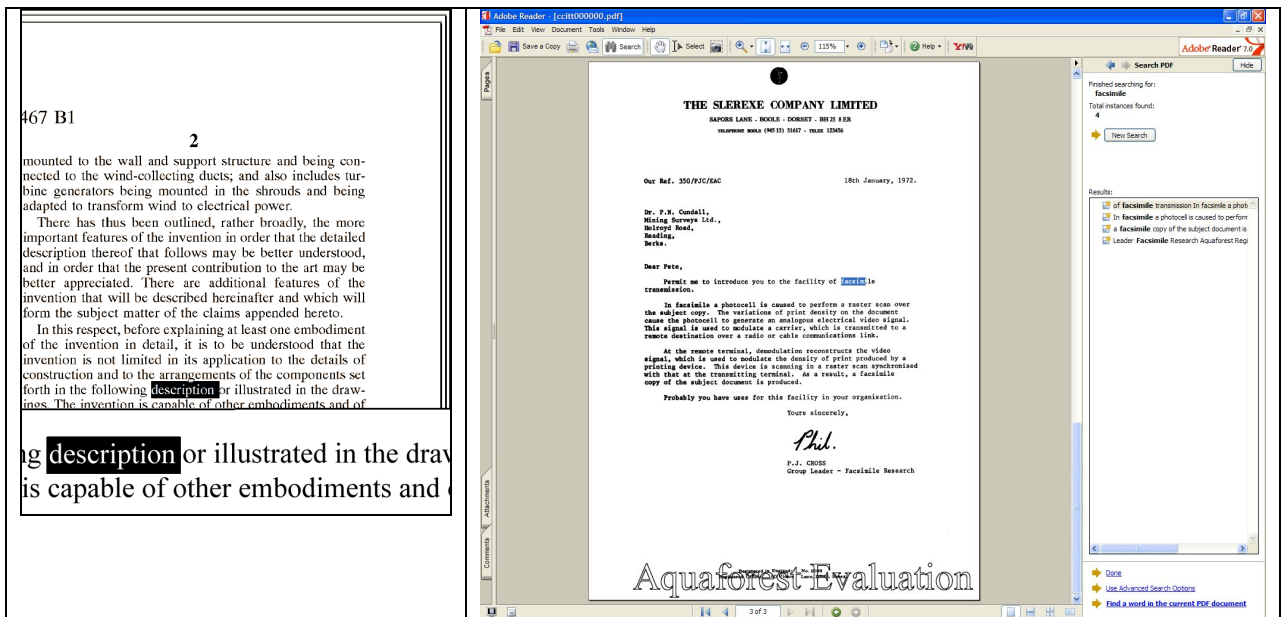
Attribute	Description
operation	Must be split, merge, set or get
sourcetype	Source type (file, folder, tree). The default value is file.
target	Target directory for result files. If not specified, the source directory will be used as the target.
Joboptions	Set of options for the specified operation. Described in detail in section 5.3.
Metadata	Metadata settings for result PDF files. By default metadata fields are left blank. Described in detail in section 5.4.
Security	Security settings for result PDF files. By default files are not secured. Described in detail in section 5.5.
docoptions	Document option settings for result PDF files. Described in detail in section 5.6.
Advancedflags	Advanced command line flags
Sourcefiles	Source TIFF file, folder or tree. May be multiple files for merge operations.
custom_script	If not left blank, specifies the name of a custom windows script file in <i>PDFJUNCTIONDIR</i> \custom that will be called in accordance with the custom_script_* settings below.
custom_script_pre_job	If =Y, the custom script will be called at the start of the job
custom_script_post_job	If =Y, the custom script will be called at the end of the job
custom_script_pre_folder	If =Y, the custom script will be called at the start of processing each folder
custom_script_post_folder	If =Y, the custom script will be called at the end of processing each folder
custom_script_pre_file	If =Y, the custom script will be called at the start of processing each file
custom_script_post_file	If =Y, the custom script will be called at the end of processing each file
custom_script_on_error	If =Y, the custom script will be called when a processing error occurs.
logfile	If specified, output will be logged to afile with this name in <i>TIFFJUNCTIONDIR</i> \logs

5 CREATING SEARCHABLE PDFs AND TEXT FILES (PROFESSIONAL EDITION ONLY)

By using the Searchable PDF option, TIFFs or Image-Only PDFs are run through an OCR (Optical Character Recognition) process to extract the text from them. The resulting PDF files contain both the images from the original file, together with a searchable layer of hidden text that may be searched using the standard Adobe Reader search facility as shown below :

5.1 What is a Searchable PDF?

A searchable PDF file is a PDF file that includes text that can be searched upon using the standard Adobe Reader “search” functionality. In addition, the text can be selected and copied from the PDF. Generally, PDF files created from Microsoft Office Word and other documents are by their nature searchable as the source document contains text which is replicated in the PDF, but when creating a PDF from a scanned document and OCR process needs to be applied to recognize the characters within the image.



5.2 Inside a Searchable PDF

In the context of Document Imaging, a searchable PDF will typically contain both the original scanned image plus a separate text layer produced from an OCR process. The text layer is defined in the PDF file as invisible, but can still be selected and searched upon. PDF files are able to store images using most of the native compression schemes used in TIFF files, so for example Group 4 TIFF files do not usually require any format conversion.

5.3 OCR Accuracy

A number of factors affect the accuracy of the text produced by the OCR process – 100% accuracy is certain possible under good conditions but each of the following issues, and OCR processing options will have an impact.

5.3.1 Original Image Quality

Although some pre-processing options such as despeckle and deskew can help in some cases, the visual quality of the original scan is of paramount importance.

5.3.2 Image DPI and Format

The image resolution should be at least 150 DPI for OCR processing, and preferably 300 DPI for optimal results, although for good quality scans 200 DPI is often sufficient. Non-lossy formats (TIFF Group 4, LZW etc) are preferred over lossy formats such as JPEG compression.

5.5 Hardware and Performance

5.5.1 CPU Power

The OCR process is highly CPU intensive and will benefit from being given as much CPU power as possible. As a guide about 1,000 pages per hour can be processed on a 2.5GHz processor, although this will vary according to the source document and OCR options chosen.

5.5.2 Exploiting Multiple CPUs

To take advantage of multiple CPUs, multiple conversion jobs should be run concurrently. This can most conveniently be done by using the Job Management facilities of [Autobahn DX](#).

5.5.3 Memory

Memory can be a limiting factor when creating the final PDF, in the case of very large documents. A rule of thumb would be to have 1GB – 1.5 GB of memory per processor.

6 CREATING PDF/A COMPLIANT FILES

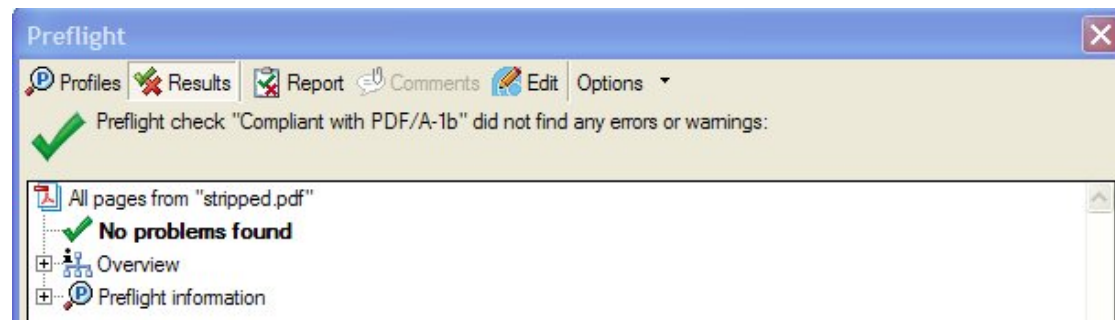
6.1 Background

The PDF/A standard (ISO 19005) defines a file format based on PDF which provides a mechanism for representing electronic documents in a manner that preserves their visual appearance over time, independent of the tools and systems used for creating, storing or tendering the files.

There are two levels of conformance possible for PDF/A : Level A and Level B. Documents derived from scanned images are suitable for Level B compliance as they do not include the logical structure, chapters, sections etc required for Level A conformance that may be obtained by (for example) a Microsoft Word document converted to PDF.

6.2 PDF/A Level B Support

TIFF Junction allows generated PDF Files to be generated in a manner that is PDF/A-1b compliant and can be verified as such by using the PDF/A compliance preflight tool in Adobe Acrobat Professional 7.0.7 and later.



6.3 Note : Trial Version

Note that the **trial version** of TIFF Junction places stamps in the PDF files, and these stamps do not use embedded fonts and as such will not be PDF/A compliant.

One exception is when the file is generated using the Maximum Quality OCR engine, and the stamps are embedded in the image so these files will be compliant.

6.4 Document Options

The only PDF document settings (from “More Options”) supported in conjunction with creation of PDF/A compliant files are metadata settings for Title, Author, Subject and Keywords. Security options and Document Options are not supported.

6.5 Further Information

More information relating to ISO 19005-1:2005 and PDF/A can be found on the AIIM website at <http://www.aiim.org/standards.asp?ID=25013>

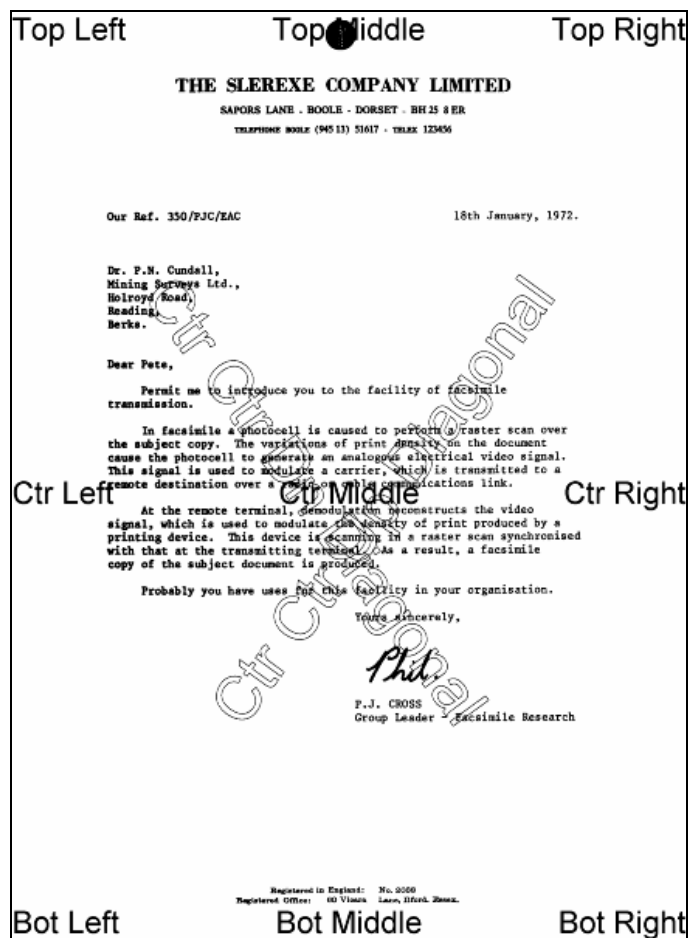
7 USING STAMPS

TIFF Junction allows dynamic and static textual stamps to be placed onto the PDF documents generated by the product by means of a stamps configuration file (stamps.txt in the stamps directory) together with appropriate parameters.

Note : Files generated using Stamps can not be PDF/A compliant in the current release of TIFF Junction.

Note : Stamps are not supported in combination with the maximum quality OCR engine. **To STOP stamps being generated**, either delete or rename the stamps.txt file (by default in C:\Program Files \TIFF Junction\bin) or edit the file to remove or rename any stamps that have afsName=STAMP (which tells TIFF Junction to always produce that stamp).

7.1 Stamp Placement



The image above indicates the possible placement for stamps. These are determined according to the parameters in the stamps.txt configuration file. The product comes with a sample set of stamps.

7.2 Stamp Specifications

For example, the stamp that reads "Ctr Ctr Up Diagonal" would be produced by the following lines in the file :

```
BEGINSTAMP
afsName=STAMP
afsText=Ctr Ctr Up Diagonal
afsFontSize=63
afsFont=HELVETICA
afsTextMode=1
afsVpos=CENTER
```

```
afsHpos=CENTER
afsDiag=UP
ENDSTAMP
```

Here is a description of each of the parameters *which are case sensitive* :

Parameter	Description
BEGINSTAMP	Required to mark the beginning of a stamp specification.
ENDSTAMP	Required to mark the end of a stamp specification.
afsName	Stamp name. If the stamp name is "STAMP" then the stamp will always be applied. Any other name is used as an identifier and the stamp will only be applied when the -n parameters match the name.
afsText	Stamp text. This may be a fixed piece of text, or may include %p (which will be replaced by the page number) or %s which will be replaced by the value of the -x parameter.
afsFontSize	Point size for the stamp text.
afsFont	Font to be used. The following are supported : TIMES-ROMAN HELVETICA COURIER
afsTextMode	1=Outlined Text 2=Sold Text
afsVpos	Vertical Position of the stamp, which may be one of the following : TOP CENTER BOTTOM
afsHpos	Horizontal Position of the stamp, which may be one of the following : LEFT CENTER RIGHT
afsDiag	Diagonal orientation of the stamp, which may be one of the following : NONE UP DOWN
afsWeight	Font Weight : 0 (default) – 5 (most bold)
afsStartPage	First page of the document to which stamps should be applied (default 1)
afsEndPage	Last page of the document to which stamps should be applied (default 0 which means there is not a limit)
afsPageIncrement	Determines whether stamps should only be applied every <i>n</i> th page where <i>n</i> is afsPageIncrement. Default is 0 which means stamps will be applied to all pages (subject to start/end page specifications).

7.3 Example of Using Stamps

Convert 709245.tif to a PDF file called 709245.pdf in the current directory using stamp PRODCODE with a value of "XR19 Rev1" :

```
tiffjunction.exe -p -n PRODCODE -x "XR19 Rev1" 709245.tif
```

8 CUSTOM SCRIPTS

The functionality of TIFF Junction can be extended by using custom scripts which may be called at various points during the processing of a particular job. The custom scripts are Windows Script Files which allow scripting in either VBScript or Jscript.

Custom scripts reside in *TIFFJUNCTIONDIR*\custom. In order to implement custom scripts, a developer should take a copy of the script template (custom.wsf , shown below) and implement the script according to their requirements. The custom script name should be specified and required exists should be flagged as being called, either using the GUI or directly in the Job Ticket File (See section 4).

Parameters are passed as follows :

Parameter	Description
jobid	The current job id
currentfolder	The path of the folder currently being processed, or "null" for non-applicable exits (eg job_start)
currentfile	The path of the file currently being processed, or "null" for non-applicable exits (eg job_start)
exitpoint	One of the following string values, according to the exit point that was called. pre_job post_job pre_folder post_folder pre_file post_file on_error

```
<job>
<runtime>
  <named name="jobid" helpstring="Job ID" type="string" required="false"/>
  <named name="currentfolder" helpstring="Current Folder" type="string" required="false" />
  <named name="currentfile" helpstring="Current File" type="string" required="false" />
  <named name="exitpoint" helpstring="Script Exit Point" type="string" required="false" />
</runtime>
<script language="VBScript">
'
' Use this section for VBScript
'
'jobID=WScript.Arguments.Named("jobid")
'currentFolder=WScript.Arguments.Named("currentfolder")
'currentFile=WScript.Arguments.Named("currentfile")
'exitPoint=WScript.Arguments.Named("exitpoint")
'WScript.StdOut.WriteLine("Parameter Values - "+jobID+" "+currentFolder+" "+currentFile+" "+exitPoint)
</script>
<script language="JScript">
//
// Use this section for JScript
//
var jobID=WScript.Arguments.Named("jobid");
var currentFolder=WScript.Arguments.Named("currentfolder");
var currentFile=WScript.Arguments.Named("currentfile");
var exitPoint=WScript.Arguments.Named("exitpoint");
WScript.StdOut.WriteLine("Parameter Values - "+jobID+" "+currentFolder+" "+currentFile+" "+exitPoint);
</script>
</job>
```

9 TIFF JUNCTION FILES AND DIRECTORIES

After installation, the following subdirectories are created in the TIFF Junction install directory :

Directory	Contents
bin	Executables and Scripts. OCR resource files
docs	Reference Guide
jobs	Standard directory for XML Job Ticket files.
License	License and License key file
logs	Log files
stamps	Stamps configuration file.
temp	Temporary storage for XML Job Ticket files.

9.1 Temporary Files

The product creates temporary files where necessary in converting from one TIFF format to another – sometimes necessary when generating PDFs to ensure that the TIFF format is compatible with that accepted by PDF.

These files (named TMP999.tif where 999 is the process ID) will be created in the current directory. They will be destroyed upon completion of the process.

10 PDF PAGE LABELS

PDF page labels (which appear under the page thumbnails in Acrobat) by default use the page number. TIFF Junction allows control of these labels in two ways :

10.1 Deriving Page Labels from Source File Names

TIFF Junction allows page labelling to be automatically derived from a file name rather than being sequentially numbered from 1. In the case where a PDF is generated from a set of single page TIFF files, the `-l` flag may be used. When the flag is set, page labels will be generated by taking the source file name, removing leading zeros and removing the file extension.

10.2 Custom Page Labels

When a multi-page TIFF file is generated from a set of single page TIFF files (using `-m`), the `-z` flag allows the generation of a special page label XML file. The file will be placed in the same location as the generated multi-page TIFF (*filename.tif*) and will be named *filename.xml*

The XML file will contain content such as :

```
<page_labels>
<page number=1 label=1></page>
<page number=2 label=1a></page>
.....
<page number=500 label=457></page>
</page_labels>
```

Page labels will be generated by taking the source file name, removing leading zeros and removing the file extension. If required, for any reason, the XML could be editing prior to PDF generation to further cusotmize the page labels.

When using `-p` to generate a PDF from a multi-page TIFF file (*filename.tif*) , the `-z` flag will make use of *filename.xml* and generate page labels in accordance with the XML file contents.

11 PRODUCT VERSION HISTORY

11.1 Version 3.01

Reference	Change
301a01	New options for processing non image-only PDFs
301a02	New options for PDF image extraction
301a03	Support for PDF to TIFF conversion
301a04	Support for preserving bookmarks and metadata when converting image-only PDFs (-c flag)
301a05	Temp folder specification support (-e flag)

11.2 Version 2.52

Reference	Change
252a01	Added PDF/A Compliance support.

11.3 Version 2.5

Reference	Change
25a01	Added new maximum quality OCR engine.

11.4 Version 2.01

Reference	Change
201a01	Add support for generating searchable PDF and OCR Text files.
201a01	Added support for setting PDF file attributes

11.5 Version 1.10

Reference	Change
110u01	Add support for custom PDF page labels

110h01	Added support for stamps on generated PDF files
110a01	Added Windows Front-End to command line operations
110a02	Added Installshield install wrapper

11.6 Version 1.02

Reference	Change
102h01	Added WSH Scripts to enable support of drag & drop, context menu and directory processing.
102f01	Added the flag : -d (create target directory if none exists)
102e01	Added the flag: -r (force resolution dpi)
102c01	Changed location of temporary files, for CGI use. Files will be placed in \$TMP if defined otherwise \$TMPDIR, or finally in tiffjunction\bin.
10201	Added the flag : -w (Display Tiff Warnings). This flag should be used when required to enable display of Tiff library warnings and messages.
10202	Added the flag : -f (Force Pass-Through). This can be used to avoid image conversion even when the product would ordinarily convert the image.
10203	Added the flag : -c (Force Conversion). Force conversion to single strip Group 4 TIFF, even when not strictly required.
10204	Corrected a conversion problem where the product wasn't adjusting the image height and width correctly when the ppi varied from the default of 200 ppi.
10205	The product now gives appropriate messages when trying to process images with unsupported compression types such as LZW

11.7 Version 1.01

Reference	Change
101	First Public Release

12 SUPPORT

Any problems running this application should give evident error messages, but if you are unable to resolve a problem please contact support@aquaforest.com