



TIFF Pilot For ASP.Net Reference Guide Version 2.0

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1 INTRODUCTION

Tiff Pilot provides dynamic TIFF to PDF conversion, allowing a web site or intranet to convert TIFF files to PDF format “On The Fly”. In addition the product can process TIFF images stored in a SQL Server database, as well as in regular files.

1.1 Server Requirements

- IIS 5.0 or later with Version 5 of the MS Scripting Engines
- Version 1.1 of the .Net Framework
- Windows 2000/2003 or Windows XP Professional
- Approximately 50MB of disk space
- Acrobat reader 5.0 or later is recommended

1.2 Supported TIFF File Formats

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

2 INSTALLATION AND CONFIGURATION

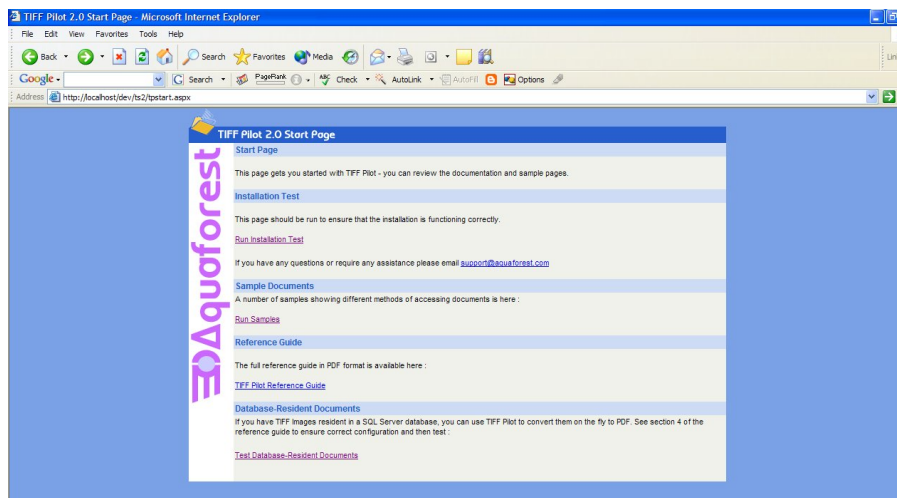
2.1 Installing Tiff pilot

The source media zip file contains a Windows Installer setup.msi which will install Tiff pilot under a specified virtual directory and web server. By default the product will be installed under /tiffpilot on the default (port 80) web server – this typically maps to the directory c:\inetpub\wwwroot\tiffpilot.

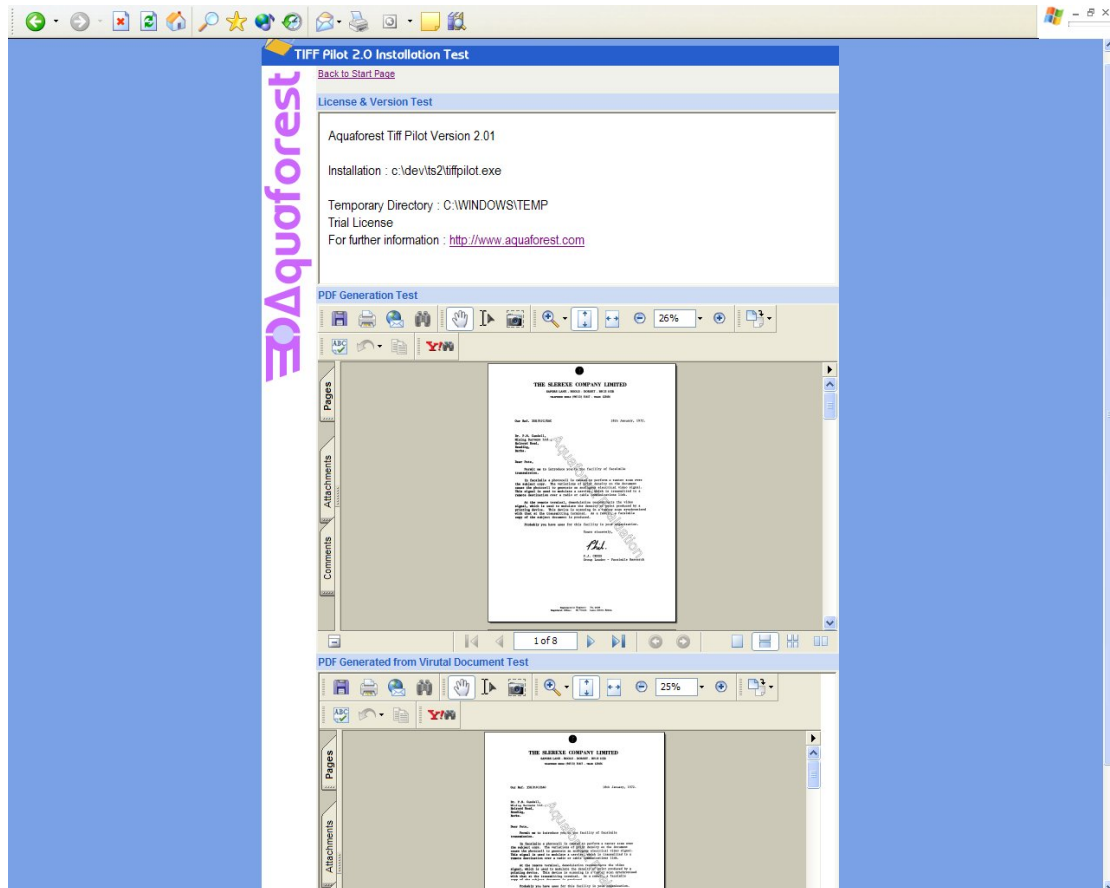
2.2 Testing The Installation

To test the installation, run the test and sample pages from <http://yourserver/tiffpilot/tpstart.aspx> Any problems running this sample application should give evident error messages, but if you are unable to resolve a problem please contact support@aquaforest.com See the section below for troubleshooting information.

Start Page :



Expected Installation Test Results :

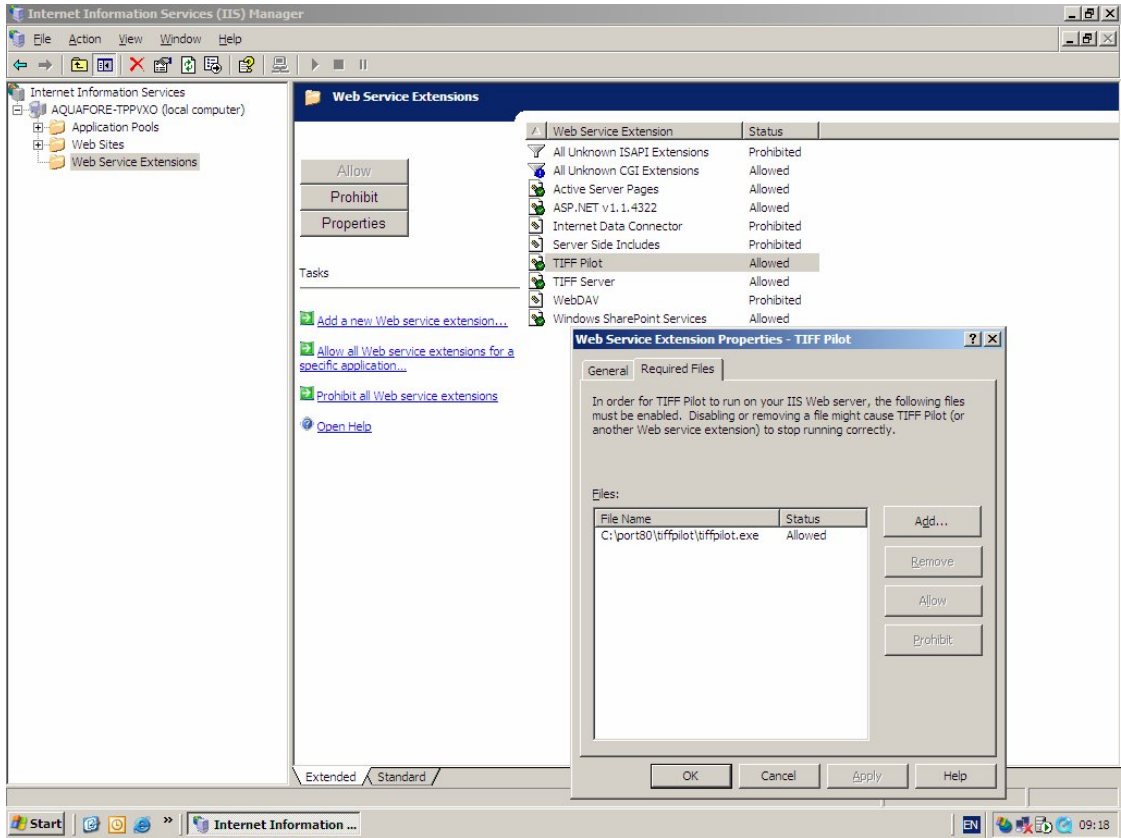


2.3 Licensing

The software requires the user of a licence key file (key.txt in the Tiffpilot\bin directory). The licence file is used to determine whether the software is a trial version or for permanent keys which version of the software has been licensed. The downloaded product includes a trial license which has no time limit, but all document pages are stamped. To see information relating to the product version and licence file, see the “Version Information” section of the test.aspx test page.

2.4 Windows 2003 Users

IIS 6 on Windows 2003 is by default “locked down” so that neither ASP nor CGI executables are able to run. To configure IIS for use with Tiff pilot you will need to use the “Web Service Extensions” of IIS manager and ensure that ASP.Net Pages and either .exe CGI executables (in general) or the Tiff pilot executables (specifically) are allowed. See below for an example configuration :



3 ACCESSING DOCUMENTS

Tiff pilot supports the concepts of defining documents for display in a variety of ways.

3.1 Accessing Documents via Paths or UNC's

A single document may be accessed using Paths or UNC's with the `at_url` parameter. Where a path is used, this must be a path recognized on the machine where Tiff pilot is installed.

<http://localhost/tiffpilot/tiffpilot.aspx?FN=C:\images\doc1.tif>

3.2 Accessing Documents on Remote File systems

This can be achieved by either of the following methods. In the example a remote server DOCSTORE has a share called images. There can be security issues relating to remote file access –see below.

Using a UNC :

<http://localhost/tiffpilot/tiffpilot.aspx?FN=\\DOCSTORE\images\doc.tif>

3.2.1 Related Security Issues

Use of the product to access files residing on network drives may require a minor adjustment of IIS security parameters, as the default security model (IIS running as IUSR_ServerName) will not enable IIS to invoke programs (such as the Tiff Image Server) to access remote files.

The simplest solution to this issue is to set the security properties of the following file using the IIS administration tool.

tiffpilot.aspx
tiffpilot.exe

To do this, navigate down to the Tiff Pilot directory in the IIS administration tool. Right click on the file(s) that you need to change. Choose Properties | File Security |Edit. You can set Anonymous Access and specify an appropriately empowered domain user and password as the account that will be used to execute tiffpilot.exe and tiffpilot.aspx.

If your security model mandates an alternative approach, the principle still applies that quatiff.exe and aquatiffpdf.exe must be run under an account with sufficient privilege.

3.3 Accessing Documents via URLs

This can be done by using XML virtual documents (see 3.6).

3.4 Directory Documents

Tiff pilot allows multiple *single page* TIFF files to be merged on the fly into a single document. The `at_url` parameter should specify a directory which contains a set of TIFF files (most commonly an ordered set of single page tiff files). Pages will be ordered in windows sort order.

UNC Example

<http://localhost/tiffpilot/tiffpilot.aspx?FN=\\DOCSTORE\images\directory1234>

3.5 Compound Documents

A set of single-page TIFF documents (that may or may not be in the same directory) may be specified. Along with the page ordering by using a compound document which requires the use of an XML virtual document. A brief example is shown below & Section 3.6 goes into detail :

<http://localhost/dev/ts2/tiffpilot.aspx?FN=C:\tiffpilot\samples\d3.xml&VD=path>

Where the contents of vd3.xml may be :

```
<?xml version="1.0" encoding="ISO8859-1" ?>
<ts_vdoc>
<ts_vdoc_type>multifile</ts_vdoc_type>
<ts_vdoc_url>samples/single_page_tiffs/p1_split_ab.tif</ts_vdoc_url>
<ts_vdoc_url>samples/single_page_tiffs/p1_split_ac.tif</ts_vdoc_url>
<ts_vdoc_url>samples/single_page_tiffs/p1_split_ad.tif</ts_vdoc_url>
</ts_vdoc>
```

3.6 XML Virtual Documents

All of the types of document definitions in 5.1 through 5.6 may be specified through the use of an XML virtual document. Each document will have a structure as follows

```
<?xml version="1.0" encoding="ISO8859-1" ?>
<ts_vdoc>
<ts_vdoc_type>document type</ts_vdoc_type>
    document specifications
</ts_vdoc>
```

3.6.1 document type

Where document type is one of the following :

ts_vdoc value	Description
file	A single document file
directory	A single directory document
multidoc	An ordered set of documents
multifile	An ordered set of single path TIFF files

3.6.2 document specifications

Files are specified using either URLs such as

```
<ts_vdoc_url>samples/ccitt.tif</ts_vdoc_url>
```

Or Paths/UNCs such as

```
<ts_vdoc_path>\\YOUR-447023AE6B\IMAGES\directory1234\ccitt.tif</ts_vdoc_path>
```

3.6.3 Referring to XML Virtual Documents :

The FN parameters may be used to refer to the XML file and the VD parameter should be set as shown.

<http://localhost/dev/ts2/tiffpilot.aspx?FN=c:\samples\vd3.xml&VD=path>

3.6.4 Examples

Single File URL

```
<?xml version="1.0" encoding="ISO8859-1" ?>
<ts_vdoc>
<ts_vdoc_type>file</ts_vdoc_type>
<ts_vdoc_url>samples/ccitt.tif</ts_vdoc_url>
</ts_vdoc>
```

Directory UNC

```
<?xml version="1.0" encoding="ISO8859-1" ?>
<ts_vdoc>
<ts_vdoc_type>directory</ts_vdoc_type>
<ts_vdoc_path>\\YOUR-447023AE6B\IMAGES\directory1234</ts_vdoc_path>
</ts_vdoc>
```

Compound Document

```
<?xml version="1.0" encoding="ISO8859-1" ?>
<ts_vdoc>
<ts_vdoc_type>multifile</ts_vdoc_type>
<ts_vdoc_url>samples/single_page_tiffs/p1_split_ab.tif</ts_vdoc_url>
<ts_vdoc_url>samples/single_page_tiffs/p1_split_ac.tif</ts_vdoc_url>
<ts_vdoc_url>samples/single_page_tiffs/p1_split_ad.tif</ts_vdoc_url>
</ts_vdoc>
```

3.7 Session-based XML Virtual Documents

Virtual XML documents may also be stored as an ASP.Net Session variable AT_VDOC. In this case the following URL may be used.

<http://localhost/dev/ts2/tiffpilot.aspx?VD=session>

Here is an example of setting the AT_VDOC session variable :

```
<%
// Example Session Virtual Document

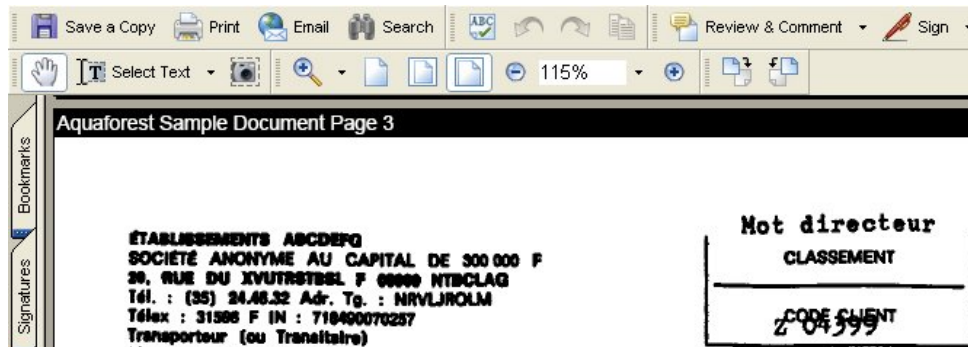
var s='<?xml version="1.0" encoding="ISO8859-1" ?>';
s+='<ts_vdoc>';
s+='<ts_vdoc_type>multifile</ts_vdoc_type>';
s+='<ts_vdoc_url>samples/single_page_tiffs/p1_split_ac.tif</ts_vdoc_url>';
s+='<ts_vdoc_url>samples/single_page_tiffs/p1_split_aa.tif</ts_vdoc_url>';
s+='<ts_vdoc_url>samples/single_page_tiffs/p1_split_ab.tif</ts_vdoc_url>';
s+='</ts_vdoc>';

Session["AT_VDOC"]=s;

%>
```

3.8 PDF Annotation Box Feature

The PDF “Annotation Box” feature creates a fixed “annotation” at the top of each page. The annotation will be a text box (black background, white text) with contents determined by the parameters marked with an * below – an example is shown below.



3.9 TIFF Pilot Parameter Summary

Parameter	Allowable Values	Notes
FN	Fully qualified file name of the TIFF document or virtual document to be displayed.	Mandatory.
VD		If FN represents a virtual document, this should be set to <i>path</i>
PD	1.	Mandatory.
SN	Stamp Name	
SV	Stamp Value	Value to be substituted for %s in the stamp definition string.
*AS	String	Annotation string. May include %p which will be replaced by the page number., and %n which will be replaced by the total number of pages in the document.
*AH	Integer	Annotation “box” height (default value=13)
*AF	1-3	Font : 1=HELVETICA (default) 2=COURIER 3=TIMES-ROMAN
*AZ	Integer	Font Size (default value=9)
*AJ	1-3	Justification : 1=LEFT (default) 2=CENTER 3=RIGHT
SF	Scale Factor	SF allows a scale factor to be applied to the image. So, for example SF=0.9 will scale the TIFF Images to 90% of their original size.

*only available when access via tiffpilot.exe rather than tiffpilot.aspx

4 DATABASE-RESIDENT DOCUMENT IMAGES

Tiff pilot 2.0 supports the access of document images stored in SQL Server 2000 image columns. To configure the product for use with a database, the `tpconfig.inc` file in the Tiff pilot directory needs to be modified.

(a) Firstly, locate the following lines, and change GDI to DB

```
// Backend Config - Allowable Values : .NET or DB
var ts_backend=".NET";
```

(b) Then the default database settings need to be changed where necessary :

```
else if(ts_backend=="DB")
{
    var ts_url_mappath=false; /* URL Should be mapped to path before passing to any
of the following */
    var ts_image_url="tssp.aspx"; /* Backend Image Processing */
    var ts_an_url="tsspan.aspx"; /* Backend Annotation Processing */
    var ts_info_url="tssp.aspx"; /* Image Info Delivery */
    var ts_pdf_url="tssp.pdf.aspx"; /* Backend PDF Generation */

    /* Default Database Settings */
    /* Default Database Settings */
    var ts_cstring="Server=127.0.0.1;User Id=sa;Password=;Initial
Catalog=tiffserver_docs;";
    var ts_image_table="tiffserver_docs_table";
    var ts_image_table_key="doc_id";
    var ts_image_column="doc_contents";
    var ts_annotation_table="tiffserver_docs_table";
    var ts_annotation_table_key="doc_id";
    var ts_annotation_column="doc_annotations";
}
```

Variable	Description
<code>ts_cstring</code>	Database Connection String
<code>ts_image_table</code>	Name of the table containing the document images
<code>ts_image_table_key</code>	The key column of the table [A single key column is required]
<code>ts_image_column</code>	Name of the <i>image</i> column holding the document image
<code>ts_annotation_table*</code>	Name of the table to hold annotations
<code>ts_annotation_table_key*</code>	The key column of the table [A single key column is required]
<code>ts_annotation_column*</code>	Name of the <i>text</i> column to hold annotations

* A table is always required, even if TIFF Server has not been used to create the annotations.

(c) For test purposes, a backup of a sample database – tiffserver_docs.bak is included in the samples directory. If this is restored to a database of the same name, and the default connection string adjusted for your database server, you will be able to use <http://server/tiffpilot/dbsample.aspx> to test database connectivity. The database contains a single table tiffpilot_docs_table with one sample row. The table has the definition shown below :

```
CREATE TABLE [dbo].[tiffpilot_docs_table] (  
    [doc_id] [int] NULL ,  
    [doc_contents] [image] NULL ,  
    [doc_annotations] [text] COLLATE SQL_Latin1_General_CP1_CI_AS NULL ,  
    [timestamp] [timestamp] NULL  
) ON [PRIMARY] TEXTIMAGE_ON [PRIMARY]
```

(d) Accessing database-resident documents can be made by using the at_url parameter and passing the key of the required row.

For example <http://localhost/dev/ts2/tiffpilot.aspx?FN=1234> will use the where clause “WHERE doc_id=1234”.

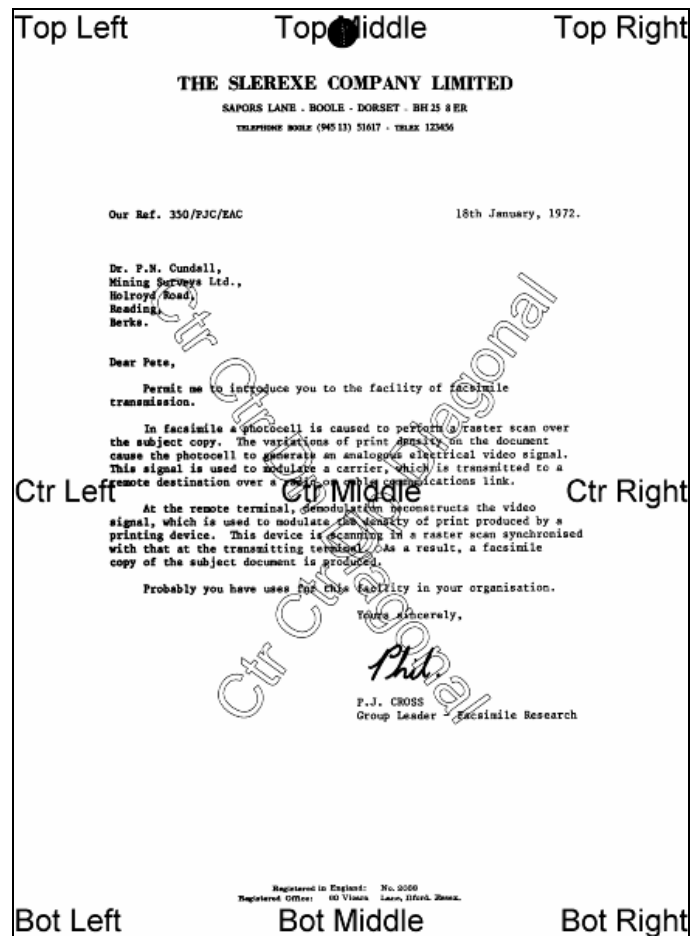
5 USING STAMPS

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

Supported compression schemes for use of this feature are :

- CCITT Group 3 (1-D), Group 3 (2-D)
- CCITT Group 4
- CCITT RLE
- Uncompressed (Bitonal)

5.1 Stamp Placement



The image above indicates the possible placement for stamps. These are determined according to the parameters in the stamps.txt configuration file (in the tiffpilot/stamps directory). The product comes with a sample set of stamps that are used with the sample images.

5.2 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 at_sn or SN parameters match the name. (See the reference guide section on integration, and the sample pages for details)
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 at_sv or SV parameters match the name. (See the reference guide section on integration, and the sample pages for details)
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).

6 TIFF PILOT DIRECTORIES

For reference, the following subdirectories are created within the Tiff pilot root folder:

6.1 Root Folder

File	Function
tiffpilot.aspx	Entry point
tiffpilot.exe	PDF Generation
tpStart.aspx	Launch page for test and samples
tpSample.aspx	Sample Documents
tpTest.aspx	Test pages
tpDbSample.aspx	Database-resident document test page
tpconfig.inc	Product Configuration and Options

6.2 Sub Folders

Directory	Contents
<i>bin</i>	Tiff pilot .Net DLLs
<i>docs</i>	Documentation
<i>images</i>	Default Icons & Images
<i>license</i>	License Key file
<i>logs</i>	Tiff pilot Log File
<i>samples</i>	Sample Documents
<i>stamps</i>	Stamp Definitions
<i>temp</i>	Temporary Files.

6.3 Temporary Files

(a) Conversion Temporary Files

The product may create temporary files where necessary in converting from one TIFF format to another – sometimes required 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 (and destroyed once the process is complete) in a directory according to the following precedence.

- (1) The directory specified by the TMP environment variable, if defined.
- (2) The directory specified by the TMPDIR environment variable, if defined.
- (3) The TIFF Pilot install directory

The CGI executable (tiffpilot.exe) will need permission to write files into this directory if such conversions are necessary.

(b) Virtual Document Temporary Files

Certain virtual documents will be constructed in the TIFF Pilot *temp* directory, with a subdirectory for each session.

7 PRODUCT VERSION HISTORY

7.1 Version 2.02

Reference	Change
202-01	TIFF Pilot upgraded to mirror Tiff Server 2.0 : <ul style="list-style-type: none">- Now based on .Net- Now includes support for database-resident images- Now supports Virtual Document Definitions