

DEVELOPER'S GUIDE TO ASPRISE TIFF WRITER/READER LIBRARY

Multi-platforms

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1 Introduction

Asprise offers TIFF writer and reader library as valued add-on to our flagship products – Asprise OCR & JTwain. With this library, you can create TIFF files from separate images easily and vice versa.

The evaluation kit contains the following files:

File/Dir	Remarks
javadoc	Contains the Javadoc API for Asprise TIFF Writer/Reader classes
aspriseTIFF.jar	Contains TIFF Writer/Reader related classes;
helpScanned.gif	Sample image 1
Scanned-text-200dpi.jpg	Sample image 2
demo-write.bat/sh	Demo program. Double click to run it – this demo creates output.tiff from the two sample images.
demo-read.bat/sh	Demo program. Double click to run it – this demo extract the pages from output.tiff (generated by demo-write) into the current directory – 0.jpg & 1.jpg.

Trying them will give you some feelings about the TIFF writer and reader.

2 TIFF Writer

Main class: `com.asprise.util.tiff.TIFFWriter`

2.1 Method: TIFFWriter.createTIFFFromImages

```
public static void createTIFFFromImages(BufferedImage[] images,  
java.io.File file) throws java.io.IOException
```

This is the simplest method to create a TIFF file from multiple images. The images must be supplied as *BufferedImage*. If you got only *java.awt.Image*, you can use the utility method: *TIFFWriter.getBufferedImageFromImage(Image img)* to convert it to *BufferedImage*. If your JVM does not support *ImageIO*, you can use the *com.asprise.util.tiff.ImageReader* to load various formats (gif, JPG, bmp) into *BufferedImage*. If you need more controls on TIFF creation, see next function.

2.2 Method: TIFFWriter.createTIFFFromImages

```
public static void createTIFFFromImages(BufferedImage[] images, int  
conversion, int compression, java.io.File file) throws IOException
```

This method creates a TIFF file from the specified images. Before the images are put into the TIFF, you can optionally convert them to gray (*TIFF_CONVERSION_TO_GRAY*) or black-white (*TIFF_CONVERSION_TO_BLACK_WHITE*) to reduce the file size. Also, you can set the compression algorithm for TIFF.

Parameters:

- ◆ **images** -- list of images to be put into the TIFF file.
- ◆ **conversion** -- converts the images into the specified format before putting into the TIFF.
Valid values:
 - TIFF_CONVERSION_NONE - Do not convert images.
 - TIFF_CONVERSION_TO_BLACK_WHITE - Converts images into black white.
 - TIFF_CONVERSION_TO_GRAY - Converts images into gray.
 - All the constants are defined in the same class: *TIFFWriter*
- ◆ **compression** -- compression algorithm used for TIFF.
Valid values:
 - TIFF_COMPRESSION_NONE - Indicates no compression.
 - TIFF_COMPRESSION_GROUP3_1D - CCITT run length encoding.
 - TIFF_COMPRESSION_GROUP3_2D - CCITT T.4 compression for bilevel only.
 - TIFF_COMPRESSION_GROUP4 - CCITT T.6 compression for bilevel only.
 - TIFF_COMPRESSION_DEFLATE - Zip in TIFF compression (lossless).
- ◆ **file** -- the TIFF file to be written to.

In rare cases, you might encounter color inversion problem – black background & white text. If this is undesired, try to set *TIFFWriter.reverseColorDuringConversion* to true.

2.3 Resolution Setting

Before creating TIFF files, you can use *TIFFWriter.preferredResolution* to set the desired resolution:

```
TIFFWriter.preferredResolution = 150; // set the resolution to 150 DPI
```

2.4 TIFFWriter.main

TIFFWriter.main is a simply console utility tool to create TIFF file from image files.

```
Usage: java com.asprise.util.tiff.TIFFWriter [tiff file to be created]
```

```
[image conversion option, set -1 to use default] [TIFF compression option,  
set -1 to use default] [path of image1] [path of image2] ...
```

3 TIFF Reader

Main class: **com.asprise.util.tiff.TIFFReader**

The following code demos how to use TIFF reader:

```
1. TIFFReader reader = new TIFFReader("C:\\my.tiff"); // loads the TIFF
   file.
2.
3. for(int i=0; i<reader.countPages(); i++) {
4.     System.out.println("Page #" + i);
5.     RenderedImage image = reader.getPage(i); // extract page
6.     ImageIO.write(image, "jpg", new File("page" + I + ".jpg"));
7. }
```

The above code reads a TIFF file, extracts each page and saves each into a JPG file.

Methods used:

public TIFFReader(java.io.File tiffFile) throws java.io.IOException

Creates a TIFF reader on the specified file.

public int countPages()

Returns the total number pages in the TIFF file.

public RenderedImage getPage(int index) throws IOException

Returns an image that contains the decoded contents of the specified page of the TIFF. 0 refer to the first page, 1 to the second, and so on.

4 License Schemes

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