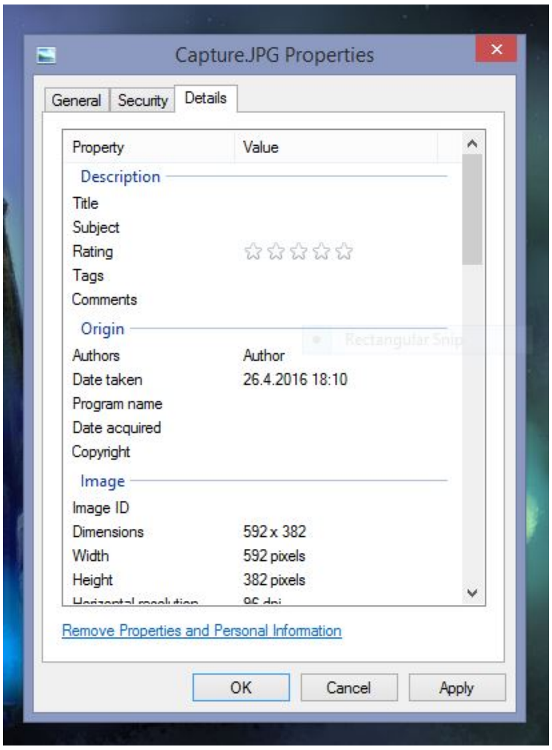
Editing jpeg EXIF data with Java

I want to edit jpg files' properties like: comments, title, date taken, camera maker, etc.



Property	Value
Description	
Title	
Subject	
Rating	☆☆☆☆☆
Tags	
Comments	
Origin	
Authors	Author
Date taken	26.4.2016 18:10
Program name	
Date acquired	
Copyright	
Image	
Image ID	
Dimensions	592 x 382
Width	592 pixels
Height	382 pixels
Horizontal resolution	96 dpi

I have found libraries to read these data. But I need a **free** library with examples to **edit** them.

I'm aware of apache's imaging (sanselan). But I was not able to edit data with it. If you have previously used it yourself, I'd accept that as an answer only if you provide an example code other than the one in their website. Because even when I use their example I was not able to edit any property other than GPS data. After i run the code, file-properties-details still have the same values.

Thanks !

Note: I also tried JHeader (https://sourceforge.net/projects/jheader/) but using it as a process with -cl option still did not changed properties list.

java image jpeg exif

edited Apr 26 '16 at 15:41

asked Apr 26 '16 at 14:32
Null Pointer
77 1 8

3 Answers

Apache commons Imaging works for me.

I have extended the sample provided here

So obviously my client code looks like this

```
public static void main(String[] args) throws ImageWriteException,
ImageReadException, IOException {
    new WriteExifMetadataExample().changeExifMetadata(new File("somefilename.jpg"),
new File("result_file.jpg"));
}
```

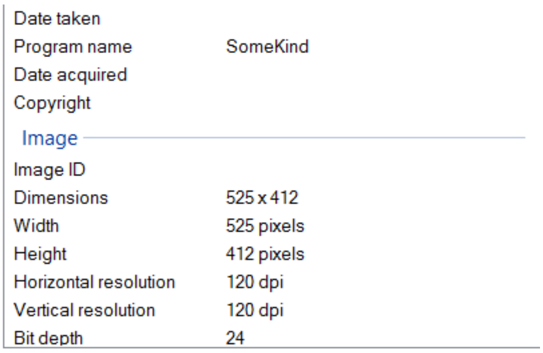
and the extended method in WriteExifMetadataExample

```
public void changeExifMetadata(final File jpegImageFile, final File dst)
        throws IOException, ImageReadException, ImageWriteException {
    OutputStream os = null;
    boolean canThrow = false;
    try {
        TiffOutputSet outputSet = null;

        // note that metadata might be null if no metadata is found.
        final ImageMetadata metadata = Imaging.getMetadata(jpegImageFile);
        final JpegImageMetadata jpegMetadata = (JpegImageMetadata) metadata;
        if (null != jpegMetadata) {
            // note that exif might be null if no Exif metadata is found.
            final TiffImageMetadata exif = jpegMetadata.getExif();

            if (null != exif) {
                // TiffImageMetadata class is immutable (read-only).
                // TiffOutputSet class represents the Exif data to write.
                //
                // Usually, we want to update existing Exif metadata by
                // changing
                // the values of a few fields, or adding a field.
                // In these cases, it is easiest to use getOutputSet() to
                // start with a "copy" of the fields read from the image.
                outputSet = exif.getOutputSet();
            }
        }

        // if file does not contain any exif metadata, we create an empty
        // set of exif metadata. Otherwise, we keep all of the other
        // existing tags.
        if (null == outputSet) {
            outputSet = new TiffOutputSet();
        }

        {
            // Example of how to add a field/tag to the output set.
            //
            // Note that you should first remove the field/tag if it already
            // exists in this directory, or you may end up with duplicate
            // tags. See above.
            //
            // Certain fields/tags are expected in certain Exif directories;
            // Others can occur in more than one directory (and often have a
            // different meaning in different directories).
            //
            // TagInfo constants often contain a description of what
            // directories are associated with a given tag.
            //
            final TiffOutputDirectory exifDirectory = outputSet
                    .getOrCreateExifDirectory();
            // make sure to remove old value if present (this method will
            // not fail if the tag does not exist).
            exifDirectory
                    .removeField(ExifTagConstants.EXIF_TAG_APERTURE_VALUE);
            exifDirectory.add(ExifTagConstants.EXIF_TAG_APERTURE_VALUE,
                    new RationalNumber(3, 10));
        }

        {
            // Example of how to add/update GPS info to output set.

            // New York City
            final double longitude = -74.0; // 74 degrees W (in Degrees East)
            final double latitude = 40 + 43 / 60.0; // 40 degrees N (in Degrees
            // North)

            outputSet.setGPSInDegrees(longitude, latitude);
        }



        final TiffOutputDirectory exifDirectory = outputSet
                .getOrCreateRootDirectory();
        exifDirectory
                .removeField(ExifTagConstants.EXIF_TAG_SOFTWARE);
        exifDirectory.add(ExifTagConstants.EXIF_TAG_SOFTWARE,
                "SomeKind");

        os = new FileOutputStream(dst);
        os = new BufferedOutputStream(os);

        new ExifRewriter().updateExifMetadataLossless(jpegImageFile, os,
                outputSet);

        canThrow = true;
    } finally {
        IoUtils.closeQuietly(canThrow, os);
    }
}
```

Please pay attention only to line where I add additional tag

```
final TiffOutputDirectory exifDirectory = outputSet
                .getOrCreateRootDirectory();
        exifDirectory
                .removeField(ExifTagConstants.EXIF_TAG_SOFTWARE);
        exifDirectory.add(ExifTagConstants.EXIF_TAG_SOFTWARE,
                "SomeKind");
```

as a result EXIF tag was properly added



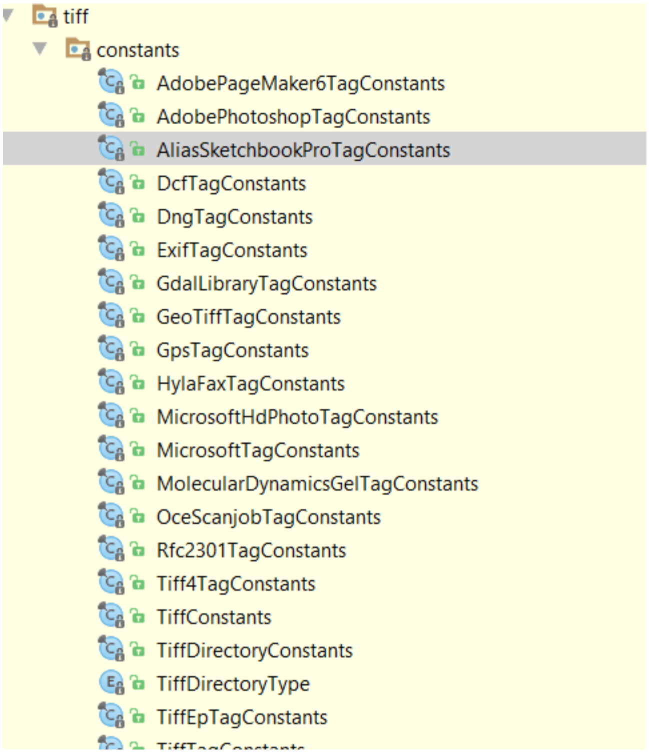
Date taken	
Program name	SomeKind
Date acquired	
Copyright	
Image	
Image ID	
Dimensions	525 x 412
Width	525 pixels
Height	412 pixels
Horizontal resolution	120 dpi
Vertical resolution	120 dpi
Bit depth	24

To change the comments tag you can do the following

```
        final TiffOutputDirectory exifDirectory = 
outputSet.getOrCreateRootDirectory();
        exifDirectory.removeField(MicrosoftTagConstants.EXIF_TAG_XPCOMMENT);
        exifDirectory.add(MicrosoftTagConstants.EXIF_TAG_XPCOMMENT, "SomeKind");
```

the full list of available constants is in the package:

```
org.apache.commons.imaging.formats.tiff.constants
```



- tiff
  - constants
    - AdobePageMaker6TagConstants
    - AdobePhotoshopTagConstants
    - AliasSketchbookProTagConstants
    - DcfTagConstants
    - DngTagConstants
    - ExifTagConstants
    - GdalLibraryTagConstants
    - GeoTiffTagConstants
    - GpsTagConstants
    - HylaFaxTagConstants
    - MicrosoftHdPhotoTagConstants
    - MicrosoftTagConstants
    - MolecularDynamicsGelTagConstants
    - OceScanjobTagConstants
    - Rfc2301TagConstants
    - Tiff4TagConstants
    - TiffConstants
    - TiffDirectoryConstants
    - TiffDirectoryType
    - TiffEpTagConstants
    - TiffTagConstants

edited Apr 27 '16 at 11:44
Null Pointer
77 1 8

answered Apr 26 '16 at 19:19
yurko
562 3 11

Previously I used Sanselan library thinking it would be functionally same with Imaging (I wasn't able to download Imaging's jar). And actually I had problems using Sanselan's example. I'll try Imaging by Maven with your code and report the results. – Null Pointer Apr 27 '16 at 7:24

Your code is succesful at editing Program name tag, but as i said I needed to update tags such as comments, title, date taken, camera maker. I couldn't find a documentation which explains what ExifTagConstants maps to what. Also what data type of value should be used for add method. – Null Pointer Apr 27 '16 at 8:53

MicrosoftTagConstants worked like magic. Thanks a lot. I'll search other constants too. – Null Pointer Apr 27 '16 at 10:49

Would an example like this work for you?

I'd assume using packages like org.apache.commons.imaging.util.IoUtils and import org.apache.commons.imaging.Imaging would be of great help to you here.

answered Apr 26 '16 at 16:59
johnao
85 2 8

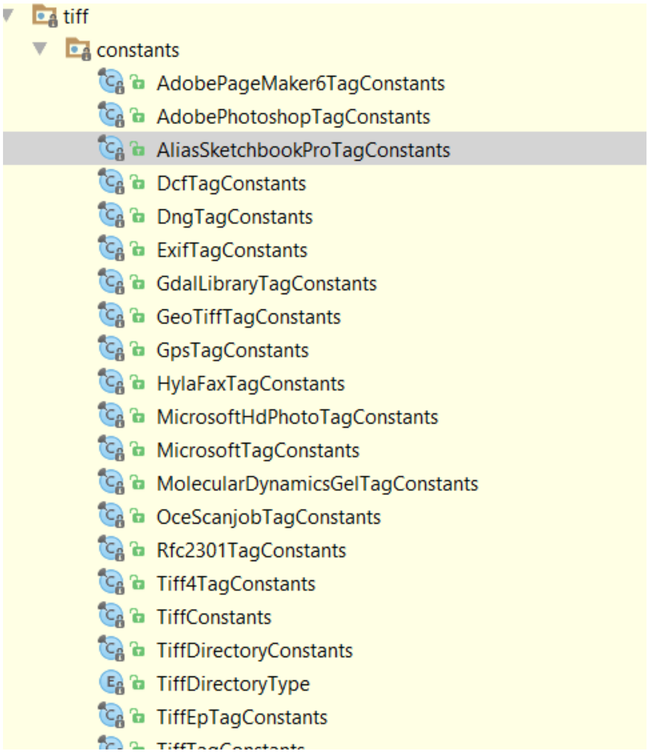
I guess @yurko already mentioned the same library. I'll test it and report the results thanks a lot. – Null Pointer Apr 27 '16 at 7:25

To change the comments tag you can do the following

```
        final TiffOutputDirectory exifDirectory =
outputSet.getOrCreateRootDirectory();
        exifDirectory.removeField(MicrosoftTagConstants.EXIF_TAG_XPCOMMENT);
        exifDirectory.add(MicrosoftTagConstants.EXIF_TAG_XPCOMMENT, "SomeKind");
```

the full list of available constants is in the package:

```
org.apache.commons.imaging.formats.tiff.constants
```



- tiff
  - constants
    - AdobePageMaker6TagConstants
    - AdobePhotoshopTagConstants
    - AliasSketchbookProTagConstants
    - DcfTagConstants
    - DngTagConstants
    - ExifTagConstants
    - GdalLibraryTagConstants
    - GeoTiffTagConstants
    - GpsTagConstants
    - HylaFaxTagConstants
    - MicrosoftHdPhotoTagConstants
    - MicrosoftTagConstants
    - MolecularDynamicsGelTagConstants
    - OceScanjobTagConstants
    - Rfc2301TagConstants
    - Tiff4TagConstants
    - TiffConstants
    - TiffDirectoryConstants
    - TiffDirectoryType
    - TiffEpTagConstants
    - TiffTagConstants

answered Apr 27 '16 at 9:48
yurko
562 3 11