

```
/* $Id$ */

import java.io.*;
import java.util.*;
import java.awt.image.*;

import org.apache.pdfbox.exceptions.*;
import org.apache.pdfbox.pdmodel.*;
import org.apache.pdfbox.util.*;

import javax.imageio.*;
import javax.imageio.stream.*;
import javax.imageio.metadata.*;

/**
 * Test scan from Xerox WorkCentre 5030. sakelley@ucsd.edu
 */
public class TestRender {
    File infile;
    File outfile;
    private PDDocument document;
    private int imageType = BufferedImage.TYPE_INT_RGB;
    private int resolutionDPI = 96;
    private float imageQuality = 0.75f;

    public TestRender(String filename) {
        infile = new File(filename);
        outfile = new File(infile.getName().replaceAll("\\.pdf", "")+".jpeg");
    }

    public void render() throws IOException {
        System.out.println();
        System.out.println();
        System.out.println("Rendering "+infile+" to "+outfile);
        document = PDDocument.load(infile);
        List pages = document.getDocumentCatalog().getAllPages();
        PDPage page = (PDPage)(pages.get(0));
        BufferedImage image = page.convertToImage(imageType, resolutionDPI);

        BufferedOutputStream outStream = new BufferedOutputStream(
            new FileOutputStream(outfile));
        ImageOutputStream imageOutputStream
            = ImageIO.createImageOutputStream(outStream);
        ImageWriter iWriter = null;
        try {
            iWriter = ImageIO.getImageWritersByFormatName("JPEG").next();
            ImageWriteParam params = iWriter.getDefaultWriteParam();

            params.setCompressionMode(ImageWriteParam.MODE_EXPLICIT);
            params.setCompressionType("JPEG");
            params.setCompressionQuality(imageQuality);

            iWriter.setOutput(imageOutputStream);

            IIOMetadata meta = null;

            // object to aggregate image, thumbnails, and metadata
```

```
        IIOImage iioImage = new IIOImage(image,null,meta);

        iWriter.write(
            null,          // optional stream metadata. null=use default
            iioImage,     // object w/image, thumbnails, and metadata
            params);      // params for writing process
    } finally {
        if (iWriter!=null) iWriter.dispose();
        outputStream.close();
    }
}

public static void main(String[] args) {
    try {
        // File exported as PDF from OmniGraffle 5.2.3 (OS X 10.6)
        new TestRender("pdf/ItDoesntWorkExport.pdf").render();

        // File printed as PDF (OS X 10.6)
        new TestRender("pdf/ItDoesntWorkPrinted.pdf").render();

        // File printed on paper, then scanned w/Xerox WorkCentre 5030
        new TestRender("pdf/ItDoesntWorkScan.pdf").render();

        // This code, printed as PDF from BBEdit 9.6.3 (OS X 10.6)
        new TestRender("pdf/TestRender.pdf").render();

    } catch(Throwable t) {
        t.printStackTrace();
    }
}
}
```