

ConTExT

The background of the entire page is a dense, overlapping pattern of stylized document icons. Each icon is a rectangle with a white border and a gray fill, containing several horizontal lines representing text. The icons are arranged in a way that they appear to be floating or overlapping each other, creating a textured, layered effect.

title : ConTExT User Module
subtitle : Degrading JPEG images
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```
1 \writestatus{loading}{Degrading JPEG images on the fly}
```

```
2 \unprotect
```

In this module we suppose, that original figures are either eps or jpg. When creating pdf, eps is converted to pdf, and when creating dvi, jpg is converted to eps. Furthermore, jpg-images can be degraded to a given resolution, to get smaller documents.

`\DegSetup` Sets the resolution, the directory for degraded images and the directory, where the original images can be found (source directory).

Default setup:

```
\DegSetup{Res=100,Dir=degrade,SDir=.}
```

Example:

```
\DegSetup{Res=600,Dir=degraded-images,SDir=/home/peter/jpegs}
```

```
3 \def\DegSetup#1{\getparameters{Deg}[#1]}
```

```
\DegSetup{Res=100,Dir=degrade,SDir=.}
```

In order to use this module, you must use `\externalfigure` in the following way: `\externalfigure[file-prefix][options]`, where `options` must contain the width or the height. Furthermore, `\write18` must be enabled. The shell-script is in a buffer, just to keep this module in only one file.

```
4 \startbuffer[degrade-script]
```

```
5 for i in epstopdf jpeg2ps convert identify bc; do
  if ! type $i &>/dev/null; then
    echo Error: $i is not installed.
    exit 1
  fi
done

6 if [ -s "$1.jpg" ]; then
  if [ "$2" = eps ] && [ "$1.jpg" -nt "$1.eps" ]; then
    jpeg2ps "$1.jpg" >"$1.eps"
  fi
else
  if [ "$2" = pdf ] && [ "$1.eps" -nt "$1.pdf" ]; then
    epstopdf "$1.eps"
  fi
fi
```

```
7 X=
[ $3 = h ] && X=x
FORMAT="%$3"
FILE="$6/$1.jpg"
DFILE="$7/$1.jpg"
DFILE_EPS="$7/$1.eps"
DPI="$4"
IW="$5"
MODE="$2"
INCH=72.27
```

Degrading JPEG images

```

8  mkdir -p $7

9  if [ -s "$FILE" ]; then
    W=`identify -format "$FORMAT" "$FILE" `
  else
    rm -f "$DFILE"
    exit 0
  fi

10 NW=`echo "$DPI * $IW / $INCH" | bc`

11 if [ $NW -ge $W ]; then
    rm -f "$DFILE"
  else
    if [ -s "$DFILE" ] && \
      [ `identify -format "$FORMAT" "$DFILE" ` -eq $NW ]; then
      exit 0
    else
      convert -verbose -resize $X$NW "$FILE" "$DFILE"
      [ $MODE = eps ] && jpeg2ps "$DFILE" >"$DFILE_EPS"
    fi
  fi
  \stopbuffer

12 \def\Command{\immediate\write18}
   \let\externalfigure0=\externalfigure
   \def\externalfigure[#1][#2]{%
     \getparameters{Deg}[height=,#2]%
     \processaction[\Degheight][%
       \s!default =>\scratchdimen=\Degwidth \def\Deg@WH{w},
       \s!unknown =>\scratchdimen=\Degheight \def\Deg@WH{h}]%
     \Command{bash ./\jobname-degrade-script.tmp #1 \ifcase\pdfoutput eps\else
       pdf\fi\space\Deg@WH\space\DegRes\space\withoutpt\the\scratchdimen\space
       \DegSDir\space\DegDir}%
     \doiffileexistselse{\DegDir/#1.jpg}{\def\Deg@File{\DegDir/#1}}{%
       \def\Deg@File{#1}}%
     \externalfigure0[\Deg@File][#2]}

13 \protect

14 \doifnotmode{demo}{\endinput}

15 \starttext
   \externalfigure[hacker][width=0.2\textwidth]
   \stoptext

```

\DegSetup 1

