IATEX — 가 TIP

version 1.0.1

CVS *

2002 2 20

```
\LaTeX (http://www.doeun.
                            KTUG(Korean TeX Users Group.
pe.kr/uselatex)
http://www.ktug.or.kr/)
     (0.1.9)
                             . KTUG
                   1.0.0
                            KTUG
               가
CTAN TeX
                                         Comprehensive
   TeX Archive Network 7 . Web http://ctan.
    tug.org, ftp ftp://ftp.dante.de/pub/tex,
    ftp://ctan.tug.org/tex-archive/, ftp://ftp.
    loria.fr/pub/TeX/CTAN, ftp://ftp.kreonet.re.
   kr/pub/CTAN
$TEXMF
                    TeX Macro Package가
      . $TEXMF $LocalTEXMF
     \texttt{C:/tex/texmf.local} 가 , \texttt{MiKT}_{E\!X}
    c:/texmf c:/localtexmf
                T_{EX} (fpT_{EX}, MiKT_{EX}...)
        Windows
         , EPS
                   LATEX
        T_EX
C{:} \\ \label{eq:constraint} \\ Image Magick
   KTUG
```

*

IATEX	?
	?
EPS	?
JPG, BMP LATEX	?
S	
EPS	, EPS
netpbm convert, jpeg2ps	?
EPS가 ? PS EP	
GhostScript PostScript	가 ?
EPS	?
Linux GSView	?
PostScript 가 PS	
PS EPS	
gnuplot EPS	가 ?
EPS ()	?
METAPOST	가 ? METAPOST EPS
xfig가 ? xfig ?	EPS
ps2eps xfig ?	
Visio Origin EPS	
•	∠r
EPS GSView	, $ ext{LAT}_{ ext{E}} ext{X}$ windvi
•	가
wmf2eps ·	
WMF2EPS PostScr	ipt 가
	WMF2EPS
wmf2eps EPS	
PDFLATEX dvipdfm EPS	?
ΈX	
_	?
71	
	1: ":"
	1: ":" ?

	23
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.subfigure .sub	
4 가 , 가 , subfig-	
ure 가	
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multicol figure가	26
twocolumn twocolumn figure 2, figure 4, figure 3 가	26
twocolumn ingule 2, figure 4, figure 3	26
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가 (landscape)	30
overpic	30
"too many unprocessed floats"	
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PSfrag EPS	31
. LATEX	
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caption ?	32
Windows	34
PowerPoint EPS ?	34
PowerPoint LATEX	34
Excel Graph LATEX	35

```
1 LATEX
                                                가 가
           LATEX
                                                       LATEX.
              • picture
                                                                         epic
                eepic
                              , overpic
                                                                        , METAFONT
                                                         METAPOST
                                                가
                    IATEX.
                                                                  \special
                 DVI
             EPS
2
          T<sub>E</sub>X System
              • grfguide.ps $TEXMF/doc/latex/graphics/grfguide.ps
              • epslatex.ps $TEXMF/doc/latex/graphics/epslatex.ps
                  가
                         epslatex.ps Keith Reckdahl 가
                                                                         Using imported
          graphics in \LaTeX 2_{\varepsilon}
                                                                     "LATEX
                                                                80
            CTAN:/info/epslatex.{ps,pdf}
                   IAT<sub>E</sub>X
                                             LaTeX Graphics Companion: Illustrating Doc-
          uments with T<sub>E</sub>X and Postscript
                                                                                Michel
          Goossens, Sebastian Rahtz, Frank Mittelbach
                                                         , Addison Wesley Longman
             1997
                                      . 480 .
3 EPS
                                           ?
                                                    FALEX
                                                                  DVI
```

```
DVI
                                           BMP WMF(EMF)
               DVI
                                  EPS
               EPS
                                       portability
                    . fpT_{E}X
                                 xdvi
                                         windvi JPG, PNG, EPS
                                   . MiKT<sub>E</sub>X yap WMF
4 JPG, BMP
                                    ?
             LATEX
        JPG, GIF PNG
                        BMP
                         DVI
                                  (dviware)
                                  , EPS
                                   EPS
                                jpeg2ps
                                                 가
          1. JPG \rightarrow EPS :
                                                          . fpT<sub>E</sub>X
          2. WMF \rightarrow EPS : wmf2eps

ightarrow EPS : ImageMagick convert
          4. netpbm
                                      (7).
                                       가
                                         graphicx,
                             EPS
                            가
                                     . epsfig
                , PDF
                                     epsfig graphicx
          \usepackage{graphicx} %% preamble ~
          \begin{figure} %% 떠다니는 그림으로 만듭니다
            \includegraphics{test} %% 그림 이름은 test.eps
            \caption{TEST FIGURE} %% 캡션을 붙입니다.
            \label{fig:test1} %% 상호참조를 위한 레이블
          \end{figure}
                                     "LAT<sub>E</sub>X
                                                       " (20
                            FAQ
```

EPS

EPS EPS EPS ImageMagick netpbm . ImageMagick ImageMagick 가 1. ImageMagick http://www.imagemagick.org/ . KTUG MIRROR ImageMagick 2. . ImageMagick d:\ImageMagick-win2k , Windows 98 , autoexec.bat SET MAGICK_MODULE_PATH=d:\ImageMagick-win2k . Windows 2000 **PATH** 3. ImageMagick 4. convert test.gif test.eps test.gif **GIF EPS** . ; -) ? 6 PBM 가 가 netpbm The idea behind Netpbm is to define 3 very basic (and inefficient) portable graphics formats: PBM for black and white, PGM for grayscale, and PPM for color. These are collectively referred to as PNM. To convert from one common graphics format to another, you use a PNM format as an intermediate format. So if you want to convert among N image formats, you only need $2 \times N$ conversion filters, instead of the N^2 you would need if you wrote each conversion tool separately. PBM, Netpbm PGM, PPM 가 가 **PNM** , N 가 **PNM** 가 , PNM $2\times N$

```
7 netpbm convert, jpeg2ps
        netpbm http://netpbm.sourceforge.net/
                                                       netpbm Fabrice Popineau
               가
                                       .http://ftp.ktug.or.kr/mirrors/
             fptex/
        convert http://ftp.ktug.or.kr/mirrors/ImageMagick/.
             ageMagick
        jpeg2ps http://www.pdflib.com/jpeg2ps/index.html.fpTeX
8 EPS가
                                               가 ?
                ? PS
                           EPS
         PS
               -PostScript
                             — Adobe
                                               PS
                 PS
                             . EPS(Encapsulated Postscript) , PS
               PS
                         PS
                                                           (Bounding Box)
                       가
                                         EPS
9 GhostScript PostScript
                                가 ?
                    . PostScript
                                                    . GhostScript PostScript
10 EPS
         MS Windows(98,NT)
                              EPS
           • GhostScript http://www.cs.wisc.edu/~ghost/aladdin/
           • GSView http://www.cs.wisc.edu/~ghost/gsview/
                        KTUG
                  .http://ftp.ktug.or.kr/mirrors/ghost/.
              GhostScript
                                                             GhostScript
                                         , AFPL GS \phantom{0}7.03, GNU GS \phantom{0}6.52
        AFPL GNU
          GSView EPS
                        (PS/ PS)
                                    EPS, PS
        GSView
                                                                ) PS
                         (
                                 PS
                                                EPS
                가
```

```
GSView
                                               ...?
11 Linux
                                     ghostscript ghostview가
                  Linux
                                                                   CD
                                                                        RedHat
                             http://rpmfind.net
            Linux
                                                        , debian
                                                                           http:
          //www.debian.org/
                             가 http://www.ghostscript.com
            gs, gv
                  Linux
                              ghostview
                                             gν
12 PostScript
                   가
                            PS
                                                                    가 ?
          PS
                                                 PS
                                                                        , PostScript
                                       PS
                             가
                                                                          PS
                                             redirect
            Windows
                                            . Windows
            1. 가
                                                                           가
                                             . [
                                                   ]-[
                                                         ]-[
                                                                 ]-
            2. "
                         가
                                                                              , PS
                                              , "Apple Color LW 12/660 PS"
                                                                     "LPT1:"
            3. [
                          "FILE:"
                                           가
            4.
            5.
                                  가
                                             가
                              Windows
            6. [
                   가
            7.
                                       ]-[
                                              ]-[
                 가
                                 [Font] "Always Use TrueType Font"
                         . [PostScript]
               Encapsulated Postscript(EPS)
                                                                    PostScript
            8.
                                                            C:\
                                        prn
                                                                  ps
                         EPS
13 PS
          GSView(ghostview)
            1.
                   ghostview
                                 ps
```

```
2. file menu extract
          3.
                                         EPS
                                                       가
                                                 가
                  pstoeps
                               ps
          psutils ps2eps가
          가 2
           psselect -p2 test.ps tst.ps
           ps2eps tst.ps
          psselect PS
                                                               -p2
                 select
          2
                                   . psselect
          가
                   , EPS
                                                              . ps2eps
                           12
          psutils PS
        http://www.tardis.ed.ac.uk/~ajcd/psutils
14 gnuplot
                                      가 ?
             EPS
          set terminal post eps %%이공훈님의 지적, eps 넣음, 주철
          set output "aaa.eps"
          plot "aaa.dat" u 1:2
                                                              batch file
        aaa.eps
          set xlabel '{\rm X}/{\rm D}'
          set ylabel 'Pressure'
          plot "r2k.tec" u 1:2 w l , "r4k.tec" u 1:2 , "r6k.tec" u 1:2
          set terminal post
          set output "rjx1.eps"
          replot
          pause -1 'Hit <RETURN> key to finish'
15 EPS (
                                                          ?
                     )
                                      EPS
                                           (export)
                                           PS
        EPS export
                                    , 가
              EPS
                                                     PostScript EPS
                   .)
                MicroSoft
                                             EPS
                  가
                                 , EPS
                                          EPS
                                             가
                Windows
```

```
PS
         Mayura Draw
                . Windows
                              .http://www.mayura.com
                                                                           가
         xfig, jfig Linux
                                가
                                          가
                                          X-Window
                                                                         Win-
                                                X Server
              dows
                          . X Server
                                                 jfig
                                        , X
                             Java
                                                              . xfig
                               jfig
                                           fig2dev
              LATEX
                         LATEX
                . Windows
                                             jfig
                                                                      12
         Adobe Illustrator Adobe Illustrator
                                                  EPS
                                                            EPS
16 MetaPost
                                      가 ? METAPOST
                                                          EPS
         ?
                            가 mpintro.ps
          METAPOST가
         $TEXMF/doc/metapost/
          METAPOST
                       METAFONT
                                                    (John Hobby)
                                                                       META-
         FONT
         가
                        , METAPOST
                             . , METAPOST
                                            PS
            )
           1.
                                                        test.mp
               beginfig(1);
                a=.7in; b=0.5in;
                z0=(0,0); z1=(a,0); z2=(0,b);
                z0=.5[z1,z3]=.5[z2,z4];
                draw z1..z2..z3..z4..cycle;
                drawarrow z0..z1;
                drawarrow z0..z2;
                label.top(btex $a$ etex, .5[z0,z1]);
                label.lft(btex $b$ etex, .5[z0,z2]);
                endfig;
                end
```

```
2. metapost
                              test.mpx, test.log, test.1
               mpost test
           3.
                    test.1 PS
                                                              test.ps
                  GSView
              가
               Unrecoverable error: undefined in cmmil0
                    cmmi10
                                     가
                               가
                                                          cmmi10
                               PostScript
              cmmi10 GhostScript Fontmap
                                                                   PS
           4. test.ps
                %!PS
                %!PS-Adobe-3.0 EPSF-3.0
                                           (%
                /fshow {gsave scalefont setfont show grestore} def
                /cmmi10{/Times-Italic findfont} def
                %%Page: 1 1
                                                 cmmi Times-Italic
           5.
                  GSView
           6.
                             test.eps
                                            .(
                                                                      .)
                                                             , METAPOST
                                                          (http://my.dreamwiz.
         com/konghoon/)가
17 xfig가
                                                                ?
                 ? xfig
                                          EPS
          xfig X-Window
                                                             . X-Window
                                                                 (de facto stan-
                          Linux
         dard)"
                  . xfig
                               , fig2dev
                                                             Postscript
                        epic LAT<sub>E</sub>X
               (
                                                              xfig
           xfig jfig
               EPS
                             fig2dev
```

```
, xfig/jfig
                                              "EPS export"
            fig2dev -L eps test.fig test.eps
                    fig2dev
                              PS
                                                        bounding box
         ps2eps
            fig2dev -L ps test.fig test.ps
            ps2eps test.ps
18 ps2eps
                                           ?
                   PS
                            EPS
                                                                     Ghostscript
                                        가
                     ps2epsi
                                                , ps2eps가
                                                                         PS
                                            bounding box
         bbox
           ps2eps
                   CTAN://support/ps2eps
                    PERL Script
                                         PERL
                                                    가
                                                                       . Win-
         dows
                 PERL
                                    http://www.activestate.com/(ActivePerl)
           PERL
                                   GSView "PS to EPS"
                    ps2eps
         ps2eps
19
                              ?
            xfig
                              , X-Window가
                                                                       xfig
                             MS-Windows
                                                                   X Server가
                                             X Server
                       xfig
                                             Windows
         Cygwin
                                                                       ...).
                                                       (
                    X Server
             http://www.rahul.net/kenton/xsites.html
            • MS-Windows
                             xfig
              http://www.cs.usask.ca/grads/wew036/latex/xfig.html
            • Linux xfig
             http://www-epb.lbl.gov/xfig/i18n.html
           jfig jfig
                   Java
                            xfig
                                                              X Server
                                                fig2dev
         xfig
         X Server
         http://tech-www.informatik.uni-hamburg.de/applets/javafig/
         javafig.html
                                Java Run-time Library가
             JavaSoft(http://www.javasoft.com)
                                                    1.2
                                                             SDK
                     , Windows
                                                      가
                                    javaw
```

```
가
                                                                    ?
20 Visio Origin
                       EPS
          Visio
                   EPS export
                                          EPS가 LAT<sub>E</sub>X
                                                                              가
                    . :-( Visio
                                     EPS Exporting
                                                            tiff
                                          default
                                                   EPS
            KTUG
                       (http://www.ktug.or.kr/)
               . Visio
            1. EPS Export
                                      ʻtiff
                                                 (tiff preview)
                                        가
            2.
                                               PS
                          PS
                                                  PostScript
                                                                 EPS
            3. WMF
                                 wmf2eps
                                                     EPS
         WMF2EPS
                                      14
                           EPS 가
           Visio
                                            Visio
                           가
                                            GSView
                                                                         가
                                                   portability
                             . Origin 6.0
                                                Visio
                                    EPS
                                  fig2dev
            xfig/jfig

    Mayura Draw

            • png, gif, jpg
                                             convert
            • wmf2eps
            • PS
            • ps2eps postscript
            • gnuplot
                     EPS
            • Visio, Origin, PaintShop Pro
                                                                      "EPS ex-
              port"
                                           EPS export
                                                                           WMF
                    (8
                            ) PS
                                                            EPS
                             wmf2eps
21 EPS
              GSView
                                        , LATEX
                                                           windvi
                   가
    dvips
                       EPS
                                    가
                                                  가
```

```
EPS
                                                            가
                                                                               dvips가
                            EPS
             2.
                      가 가
                                        EPS
                                                               가
                                                                              가
                                 EPS
                  46 2D 33 2E 30 0D 0A 25 25 43 72 65 61 74 6F 72 ; F-3.0...**Creator
3A 20 41 64 6F 62 65 20 49 6C 6C 75 73 74 72 61 ; : Adobe Illustra
74 6F 72 28 54 4D 29 20 37 2E 30 0D 0A 25 25 46 ; tor(TM) 7.0..**F
                        %!PS-Adobe-3.0 EPSF-3.0
                                                                                          가
                                     EPS
                   %%EOF
                                                              가
                                                                           . 가 convert
              3. ImageMagick convert가
                    convert test1.eps test2.eps
                                                                            가
                 test2.eps.0 test2.eps.1
                                               EPS가
                                                        가
                   (
                                                                                    가
                                                  *.eps
                                                                     PS
                        EPS가
                                                    가
22 wmf2eps
              1. WMF2EPS
                http://www.tex.ac.uk/tex-archive/support/wmf2eps/
                                          wmf2eps1.31.zip
                                                                                  가
             2.
                                                        C:\WMF2EPS
              3. PostScript
                                   "가 PS
                                                                           . wmf2eps가
                                                               "가
                                  가
                                                    "PS
```

GSView "PS to EPS"

GSView

1.

```
• Windows CD 가
                                                   (가
                                                          )
                         "HP LajerJet Color PS"
                                                 FILE:
                가
               . 가
                - [
                 (EPS)" .
                -[]
                WMF2EPS
                              Conversion Setup
         4.
                                                 PS-Printer
                  Printer
                             [Change]
         5. WMF2EPS
                                                        Adobe
           Postscript Printer Driver
                                        , WMF2EPS
             • WMF2EPS가
                                         ./PSprint/Standard/
             print.inf
             "(I)"フト
                                       ] "WMF2EPS Color
                            [ ]-[
                                  ]-[
              PS L2"
                                                          ).
             • [ ]
                                                           PS
                                            가
                       " "FILE:
       wmf2eps
                                                 EPS
             . ClipMeta
                                              WMF
                 EPS
                                가
23 WMF2EPS
                   PostScript
                   WMF2EPS
                                                       PS
                 "가 PS "
        가
                                             "FILE:"
                          2000 5 12
```

```
(http://www.adobe.com) 가
                                                                PS
         http://www.adobe.com/support/downloads/pdrvwin.htm
                                                              . (
24 wmf2eps
                   EPS
           1. wmf2eps print menu
                                                                  EPS
                    prn
                                  EPS
                                              ghostview
                   prn
           3. ghostview file menu
                                  pstoeps
                                                    help
                                                   automatic bounding box
                             bounding box
                           , EPS
                                                                  bounding
                   yes
             box
                                                                      EPS
               bounding box
             \includegraphics[clip=true]{foo.eps}
             \includegraphics*{foo.eps}
                                         GSView
                                                     EPS Clip
                  ,\includegraphics [clip]
                                                                   EPS
                                                            [clip=true]
                                    [clip]
                        bouding box
            \includegraphics[bb=115 110 145 165,clip]{foo}
25 PDFLATEX
               dvipdfm
                                                   ?
                           EPS
         FALEX
                     PDF
                                                     PDFL<sup>A</sup>T<sub>E</sub>X
                                                                 dvipdfm
                                      가
              LATEX
                       가
              , PDFLATEX EPS
```

```
EPS PDF PNG/JPG
                        가
                                                          PDF ,
bitmap
               PNG
       PDF
                    PDF
                                                       PDF
  1. EPS
                 *.bb
                                                       epstopdf
    ebb
                         . fpT_{E}X
                                   MiKTEX
                              ,CTAN://support/epstopdf/epstopdf.exe
                             PDF
    ebb 0.5.2
                    1.3
    PDF-1.3
                                         가
                                             1.2
                                                       PDF
       epstopdf --gsopt=-dCompatibilityLevel#1.2 test.eps
       ebb test.pdf
                        test.bb
  2. LATEX
            (source)
      %%-----그림 삽입 : PDFLaTeX----
      \usepackage[pdftex]{graphicx} %% preamble에. [pdftex] 옵션.
      \begin{figure}
      \includegraphics{test} %% test.pdf
      \caption{PDFLaTeX TEST}\label{fig:pdf}
      \end{figure}
      %%-----
  3.
        PDFLATEX
       pdflatex test
                                            (PDF)
                                                   AcroReader
                                  . PDFLATEX
                 가
                                                       가
 epstopdf
                                            epstopdf.exe
 epstopdf
     PDFL<sup>A</sup>T<sub>F</sub>X
                                                       PDFIATEX
EPS
EPS
                                     .epstopdf
```

```
[CTAN\ MACROS]/latex/contrib/supported/oberdiek/epstopdf.sty
                                          EPS
             preamble
               EPS
                          PDF
             PDF
  \usepackage{graphicx}
  \usepackage{epstopdf}
  \begin{figure}
  \centering
  \includegraphics{testfig}
  \caption{TESTFIG}
  \end{figure}
                PDFIAT<sub>E</sub>X
    pdflatex -shell-escape foo
 dvipdfm
                             가
  dvipdfm
                                   epstopdf
                                              ebb
                         dvipdfm
                                                            . test.eps
           가
   epstopdf test.eps
   ebb test.pdf
           LATEX
                      (test.tex
   \usepackage[dvipdfm]{graphicx}
   \begin{figure}
     \includegraphics{test}
   \end{figure}
   latex test
   dvipdfm test
                               . GhostScript가
                                                              dvipdfm-
                                                   PDF
0.12.6d
                      EPS PDF
                  $TEXMF/dvipdfm/config/config
  1.
                                                            (
                                                   가
                                          . D
         )
```

D cat %i \mid gs -q -sDEVICE=pdfwrite -dUseFlateCompression=false -sOutputFile=%o - -c quit D "gswin32c -q -dNOPAUSE -sPAPERSIZE=a0 -sDEVICE=pdfwrite $-dUseFlateCompression=false \ -sOutputFile=\verb|"%o|" \ \ "%i|" \ -c \ quit"$ 가 gswin32c -dCompatibilityLevel=1.2

가 -sDEVICE=pdfwrite PDF 2. latex dvipdfm **EPS**

\usepackage{graphicx}

,[dvipdfm]

dvipdfm

LATEX

```
가 ?
26 "
                                           가
                                                                 ).
                              가,
                                             가
                                                     가
                 가
        가
          LATEX
                                                      가
                                     가
                가
                                                            가
                                    LATEX
                                                                ,figure
                                                                figure
              table
                                        table
                                                                가
          1: \begin{figure}[!hbtp]
          2: \includegraphics{test}
          3: \caltion{그림1}\label{fig:fig1}
          4: \end{figure}
               figure
                                                      [!hbtp]
                                                                  [tbp]
                                           가
                                                                   , here,
        bottom, top
                                                              page
                                         가
                          가
                                가
                                         LATEX
                                                              가
                                                        가
        \floatpagefraction
          2
                                        \includegraphics
        graphicx
                       가 \usepackage
                                        preamble
                              figure
         3
                               label
                                                        LATEX
        1:"
                      ("
              . label
                                                                  ,\ref
          그림~\ref{fig:fig1}\을 참조하라\ldots
```

```
가
            • topnumber
                                                                  .\setcounter
            • totalnumber
                                                                 .\setcounter
            • \floatsep
                                               .\strut_{setlength}
             \textfraction
                .\renewcommand
                                              ET<sub>F</sub>X Companion
27
                                             .\caption{caption text}
                                                   (floating objects)"
                                                 table
                                 figure
            \begin{figure}
               \verb|\includegraphics{test}|
            \caption{캡션 시험}
            \end{figure}
         caption
                                 caption2, caption, ccaption, hangcap-
                         가
         tion
28
                                          1:
                ··:·
                                    가
            • 2000 3
                1:"
                1.
                     \LaTeX-0.99
                                                  1:
                      \ksnamedef{figurename}{호작질}
               2. '1'
                      \renewcommand\thefigure{\Alph{figure}}
```

```
3. ':'
          \usepackage{caption2}
          \renewcommand\captionlabeldelim{.}
    4.
          \usepackage{hangul}
          \usepackage{caption2}
          \ksnamedef{figurename}{}
          \renewcommand\thefigure{}
          \renewcommand\captionlabeldelim{}
          preamble
        ,caption2
  CTAN://macros/latex/contrib/supported/caption/
             \fnum@figure
                                                  caption2
      가
      \ksnamedef{figurename}{호작질}
      \makeatletter
      \renewcommand{\fnum@figure}[1]{\textbf{\figurename^\thefigure.~}}
      \makeatother
       , " 1:"
                                            \fnum@figure
      \renewcommand{\fnum@figure}[1]{}
                             fnum@figure
                        \Large
\makeatletter
\renewcommand\fnum@figure[1]{\textbf{\Large\figurename~\thefigure}: \Large}
\makeatother
    5
                                            \clearpage
```

29

2000 가

```
\clearpage
           \begin{figure}
           \centering
           \includegraphcs{....}
           \end{figure}
           \clearpage
30
                           가
           1.
                                                       \includegraphics
                         figure
                                                                      가
                               body
                                         (\textwidth)
                \begin{figure}
                \centering%
                \includegraphics{testfig1}\hfill
                \includegraphics{testfig2}
                \caption{두 그림 넣기}
                \end{figure}
                         , testfig1.eps, testfig2.eps
                                     가
                                                ?
                                                              box
                                                                     reference
              point
                                         . reference point baseline
           2. minipage
                                            . minipage
                                                      .b
                                                               reference point
                                                 top line
                            가
                                                                 minipage
                                          testfig1.eps testfig2.eps
                                                                        mini-
                                                                .caption float-
              page
                               figure
              ing
                   \begin{figure}
                    \begin{minipage}[b]{9cm}
                      \centering%
                      \includegraphics[width=9cm,height=8cm]{testfig1}
                    \end{minipage}\hfill
                    \begin{minipage}[b]{9cm}
                      \centering%
                      \includegraphics[width=9cm,height=8cm]{testfig2}
                    \end{minipage}\\
                    \begin{minipage}[b]{9cm}
                    \centering%
                    \caption{TEST FIG (1)}\label{fig:test1}
```

```
\end{minipage}\hfill
                  \begin{minipage}[b]{9cm}
                   \centering%
                   \caption{TEST FIG (2)}\label{fig:test2}
                  \end{minipage}
                 \end{figure}
                                       \ref
                                                        1,
                                                                    2
                           가
           3.
                              subfigure
                                                                .subfig-
                                                                    subfig-
             ure
                                                              subfigure
             ure
                                                  preamble
                                                             \usepackage{subfigure}}
                                             ).
                             .)
               \begin{figure}
               \centering
               \mbox{%
                  \subfigure[TEST FIG (1)]{%
                    \includegraphics[width=9cm]{testfig1}
                    \label{fig:test1}
                  }\quad
                  \subfigure[TEST FIG (2)]{%
                    \includegraphics[width=9cm]{testfig2}
                    \label{fig:test2}
               }}
               \caption{subfigure 시험}
               \end{figure}
                              \ref{fig:test2}
                                                                1(b)
31
                    subfigure
                                                         , subfigure
             label
                      \end{figure}
        \label
                                                                 .subfig-
        ure
          \usepackage{graphicx, subfigure} % subfigure ± $\frac{\pi}{2}$. preamble
           . . . .
          \begin{figure}[hbt]
          \centering%
            \subfigure[Sobel Operator]{%
                                                   %% 작은 그림의 캡션 [ ]
                           \includegraphics{sobel}}\hfill
             \subfigure[Log Operator]{%
                           \includegraphics{log}}
           \caption{Figure}\label{fig:fig1} % 두 그림 전체 참조를 위한 label
           \end{figure}
```

```
subfigure
                                              gap
           \newcommand\goodgap{%
             \hspace{\subfigtopskip}%
              \hspace{\subfigbottomskip}}
                                         \goodgap
                 subfigure
                             , (a), (b)
           \subfigure[TEST PICTURE]{\label{testpic}%
               \includegraphics{test.eps}}
                                                   % \label은 그림삽입 명령 앞에
                     label
          \ref{testpic}
                     subfigure
32
                                  .subfigure
                                                         . sub
                       가
                                                                      가
                                  ,subfigure
             , Continued Figures
                                                ... epslatex.ps
                                         가
         \subfigure
           \begin{figure}
          \centering
          \subfigure[First Part]{%
             \label{fig:graphics:a}
             \includegraphics[width=\textwidth]{file1.eps}
          \caption{Large Graphics}
           \label{fig:graphics}
           \end{figure}
          \addtocounter\{figure\}\{-1\}
          \begin{figure}
           \addtocounter{subfigure}{1}
          \centering
           \subfigure[Secont Part]{%
             \label{fig:graphics:b}
             \includegraphics[width=\textwidth]{file2.eps}
          \caption{Large Graphics : continued}
          \end{figure}
                                                        CTAN
                                                    (
                                가
          ) Jim Fox
                                       dpfloat
          http://staff.washington.edu/fox/tex/dpfloat.shtml
```

```
33 multicol
                           figure가
         multicol
                           figure가
                                                           figure*
                                                     가
                           figure*
                                     .multicol
                                                                   , 2
                               twocolumn
                figure, figure* 가 가
                                                         .multicol
                 balancing
                              가
                                                   flushend.sty ,
        1
                 2
                                                            cuted.sty
          http://www.vtex.lt/tex/download/macros/
          \documentclass[twocolumn]{article}
          \usepackage{cuted,flushend}
34 twocolumn
         figure*
           \begin{figure*}
           \includegraphics{test}
           \caption{TEST}\label{fig:fig1}
          \end{figure*}
35 twocolumn
                          figure 2, figure 4, figure 3
                               figure figure*
                             fix2col
                                                .fix2col
        가
          \documentclass[twocolumn]{article}
          \usepackage{fix2col}
          fix2col.sty
          CTAN://macros/latex/contrib/supported/carlisle/
36
                  (watermark)
                                           ? MS-Word
                                                               .:-)(
                              , PaintShop Pro
                   gif
                                                adjust
        ImageMagick convert EPS
                          EPS
                                                        01.eps
```

```
\verb|\usepackage{graphicx,eso-pic}| & preamble|
 \AddToShipoutPicture{%
  \setlength{\unitlength}{1mm}
  \put(0,0){\makebox(210,296)[b]{\includegraphics[width=210mm]{01.eps}}}}
                                    eso-pic
                         \ClearShipoutPicture
                                                     .eso-pic
                                       eso-pic ms
                                                            ev-
                                        eso-pic가
eryshi.sty
 CTAN://macros/latex/contrib/supported/ms/contrib/
       , fancyhdr
    epslatex.ps 가
 \usepackage{graphicx,fancyhdr}
 \newsavebox{\mygraphic}
 \sbox{\mygraphic}{%
   \includegraphics[keepaspectratio,height=.8\textheight,
   width=.8\textwidth]{test}}
 \pagestyle{fancy}
 \fancyhead{}
 \fancyhead[C]{\setlength{\unitlength}{1in}
   \begin{picture}(0,0)
     \put(-2.2,-6){\usebox{\mygraphic}}
   \end{picture}}
 \fancypagestyle{plain}{%
   \fancyhead{}
   \fancyhead[C]{\setlength{\unitlength}{1in}
   \begin{picture}(0,0)
     \put(-2.2,-6){\usebox{\mygraphic}}
   \end{picture}}}
 \begin{document}
 \end{document}
DRAFT
      draftcopy
                                      .draftcopy
 CTAN://macros/latex/contrib/supported/draftcopy/
           draftcopy-test-1.tex
```

37

```
\usepackage{draftcopy}
          \newcommand{\xx}{
          Test 1\ is a test page \ wfill
          This is a testpage \thepage \newpage
          \begin{document}
          Should print DRAFT over all pages, quite dark.\\ \
          \verb|\usepackage{draftcopy}|\\
          \langle xx/xx/xx/xx \rangle
          \end{document}
            , draftcopy
                             dvips
                                        PostScript
                 . windvi
38
                                                  floating option
                                                               p(page)
                      가
                               . floating objects
                                                   [tbph!]
               , endfloat
             , \processdelayedfloats
                                                     figure, table
                                      가
                       가
                                                               ligature
39
             가
                      .floatflt
                                            가
                , $TEXMF
                         $LocalTEXMF
            \usepackage{graphicx,floatflt}
            \includegraphics[width=.3\textwidth]{test}
            \caption{floatflt TEST}\label{fig:fig2}
            \end{floatingfigure}
        CTAN://macros/latex/contrib/others/floatflt/
               , Donald Arseneau
                                 wrapfig
          .wrapfig
                wrapfig
```

\documentclass[a4paper]{article}

```
\usepackage{graphicx,wrapfig}
          \begin{wrapfigure}{r}{.33\textwidth}
          \includegraphics[width=.33\textwidth]{test}
          \caption{wrapfigure TEST}\label{fig:wrapfig}
          \end{wrapfigure}
        wrapfig가
          CTAN://macros/latex/contrib/others/misc/
                  floatflt
                                                              floatflt
         floatingfigure
                                wrapfig wrapfigure
                ( enumerate, itemize )
                , LATEX-2.09
                                                    가
                                      picins
                                \LaTeX 2\varepsilon
        \LaTeX2.09
                                          가
                     floatflt가
                          picins
          \usepackage{picins,graphicx}
           8.....
           \parpic[r]{%
                  \includegraphics{fig1}
           역기에서 문단이 시작됩니다.
          picins
          [KTUG-TeXLiveCD]/texmf/tex/latex/picins/
40
                                 crop
                                    가
                                                                     IAT<sub>E</sub>X
                                                              가 ImageMag-
        ick
                     10%
                             crop
           mogrify -crop 10% test.eps
                                  test.eps bounding box가
                    ps2eps
                                    bounding box
                    , LATEX
          ,\includegraphics
                                      crop
                   grfguide.ps
           \usepackage{graphix}
           \includegraphics[bb= 115 110 135 145,clip]{test}
```

```
41
              가
                    (landscape)
            가
                             , sidewaysfigure
           1. rotating
                rotating
                                  endfloat, rotfloat
                     .(
                                   sidewaystable
                                                                    .)
                \begin{sidewaysfigure}
                 \usepackage{graphicx,rotating}
                 \includegraphics{test}
                 \caption{ROTATING TEST\label{fig:rottest}}
                \end{sidewaysfigure}
           2. lscape
                             landscape
                 \usepackage{graphicx,lscape}
                 \begin{landscape}
                 \begin{figure}
                 \centering
                 \includegraphics{test}
                 \caption{LandScape TEST}
                 \end{figure}
                 \end{landscape}
                          , windvi
                                                                 . dvips
                                         가
               PS
                                                         (
              )
42 overpic
          overpic
                                 EPS ps
           \usepackage[percent]{overpic}
           \begin{overpic}[scale=.5]{sample1.eps}
            \put(55,10){\includegraphics[scale=0.2]{sample2.eps}}
           \end{overpic}
                     , sample1.eps
                                                     sample2.eps가
                                                                     가
                                                   55%,
                                                               10%
            . , sample1.eps
         sample2.eps 가
                                  가
                                            sample1.eps가
                                      ) sample2.eps
         (
                        50%
               100%
```

```
43
                                 "too many unprocessed floats"
          LATEX
                                     floating objects
           1. \clearpage
           2. "too many unprocessed floats"
                                                                        가
                                          ! figure
                 \begin{figure}{htp!}
           3. 28
                                 endfloat
                                      가
                                                        endfloat
                                              .endfloat
              CTAN:macros/latex/contrib/supported/endfloat/
                             ,\processdelayedfloats
                             (Queue)
                                                   가
              가
44 PSfrag
                     EPS
                          EPS
          PSfrag
                      EPS
                                  가
           1. EPS
                               Text1, Text2
           2. LaTeX
                        (sample.tex)
                 \documentclass{article}
                 \usepackage{hfont} %%<- 한글 사용을 위해서.
                 \usepackage{graphicx,psfrag}
                 \begin{document}
                 \thispagestyle{empty}
                 \begin{figure}
                 \propto frag{Text1}{\$\setminus p(x_i , x_j )\$}
                 \psfrag{Text2}{텍스트삽입}
                 \includegraphics{testx}
                 \end{figure}
                 \end{document}
```

```
3.
                                           (latex sample), 'Text1'
              \sum p(x_i, x_j)ידן, 'Text2'
                                                          가
              dvips
                                           ghostview
                            ps
              xdvi
                        PSfrag replacement
45
                                                   IATEX
          figure
                                                             LATEX
                    (float)
                                                                가
                  LATEX
                                          가
                                                                       가
           (typography)
                                             float
                 . LATEX
                          가
                                                              ETFX
                                      가
                                IATEX.
                      가
                                가
                                           trial and error
            1. !h
                \begin{figure}[!h]
                \include graphics \{foo\}
                \end{figure}
            2. float
                                        [H]
                \begin{figure}[H]
                \includegraphics{foo}
                \end{figure}
            3.
                              float
                                                 . ,\includegraphics
                   figure
                                                                 \caption
                                           fixedcaption
                      , ccaption
                  .(32
                                                .)
                                                    ?
46
                              caption
          \caption
                                                       (figure, table)
                                ccaption
```

.

```
\usepackage{ccaption}
%%.....
\newfixedcaption{\outfigcaption}{figure}
{\centering\includegraphics[scale=.6]{figtest}%
\outfigcaption{test figure}\label{fig:test}}
\newfixedcaption \outfigcaption
```

.

Windows

```
47 PowerPoint
               EPS
         PowerPoint
                                         "PS
                                                 가
                     EPS
                           가 가
                                                           가
           가
                           가
                                    EPS
                                         WMF
          GSView
                                    가
                  pstoedit
                                            ).
                                                          pstoedit
                    .)
          1. GSView EPS
                 [Edit]-[convert to vector format]
          2.
          3.
                        WMF
                                           PowerPoint
                      EPS가
                  EPS
                                  ImageMagick convert
                                                          GIF JPG,
       PNG
48 PowerPoint LATEX
         가
             !
                        IAT<sub>E</sub>X
                                         dvi
                                              Math'n Table 1.0.80^1
                     HPack 1.0(http://physics.kyunghee.ac.kr/~reds/
       Hpack_Project/default.htm) KTUG HPack
                                                     (http://physics.
                                           (!)
       kyunghee.ac.kr/~reds/Hpack_Project/mathntable_powerpoint.01.
       htm)
                        IATEX.
                                                    . ,$ $,$$ $$,
       \[ \],\begin{equation} ~\end{equation}
                                 가
                                                                [
                 (ctrl+C)
         ]-[
                  ]
                         ctrl+V
         1
                                     TEXpoint가
```

```
1.
                                                                                     ).
             2.
             3.
                                (portrait),
                                                  (landscape)
49 Excel
                   Graph LATEX
                                                                                     가
           Windows
                                                      WMF(EMF)
                 . MS
                                                      wmf
                                                            ClipMeta
               ClipWMF
            Excel
                   (Ctrl-X)
                                                    ClipMeta
                   , wmf2eps
                                                       EPS
                                            wmf \\
                   , 1999 12
                                                                                   가
                 . clipwmf
           clipwmf.exe
                                                                                 "bib-
           tex
                                                                  가
           clipwmf.exe
           clipwmf.zip
                                      , clipwmf.exe
                                                                             copy
           cut
                                                                Save, About, Exit
                 clipwmf
             가
                                                             *.wmf
                        save
                                                                  clpwmf
                                                copy
                                                                            ,
가
                                                                             가 가
                                                          , cut
                                              cut
                        clpwmf
                                          wmf
                                            wmf
                                                                         EPS(TeX
                                                      wmf2eps
                                           , Paint Shop Pro
                                EPS
                   wmf
             ^aClipWMF.zip
```

: 7 (http://chem.skku.ac.kr/~wkpark) . clipmeta clipwmf ... wmf LaTeX ...

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