

Notes on L^AT_EX/PDF version of ABINIT Manual

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1 Compilation

1.1 Generate abinit.ps

Use the following command to get a PS file:

```
latex abinit
latex abinit
makeindex abinit
latex abinit
dvips -o abinit.ps abinit.dvi
```

1.2 Generate abinit.pdf

Use the following command to get a PDF file by using pdflatex:

```
pdflatex abinit
pdflatex abinit
makeindex abinit
pdflatex abinit
```

Or you can produce a PDF file from a DVI file by using dvipdfm:

```
dvipdfm -o abinit.pdf abinit.dvi
```

Please take notice that dvipdf doesn't work!

1.3 Clean the directory

Use the following command to clean files other than abinit.pdf and abinit.ps.

```
rm -f *~ abinit.{aux,dvi,idx,ilg,ind,log,out,toc}
```

2 Short explanation to source files

abinit.tex is the master file, which contains main L^AT_EX document structures, formats, styles and so on. A short explanation is given below:

1. This manual uses a book class printed on A4 paper using 10 points fonts.

```
\documentclass[10pt,a4paper,twoside]{book}
```

The page margins are shrunk by using “a4wide” package.

2. Other packages used in the document are:
 - (a) “makeidx” for generating index in the whole book;
 - (b) “graphicx” for inserting graphs;
 - (c) “amsmath” for using complex mathematica formula;
 - (d) “color” for using color text;
 - (e) “fancyhdr” for customizing page foot and head;
 - (f) “hyperref” for generating a fancy PDF with bookmarks and hyperlinking.
3. Files included in the documents are:
 - (a) title.tex: Title page;
 - (b) welcome.tex: i.e. Infos/welcome.html;
 - (c) relnotes.tex: i.e. Infos/Release_notes/release_notes.html;
 - (d) install.tex: i.e. Infos/Installation_notes/install.html;
 - (e) newusr.tex: i.e. Infos/new_user_guide.html;
 - (f) tutorial.tex: files in Infos/Tutorial;
 - (g) abinishelp.tex: i.e. Infos/abinis_help.html;
 - (h) inputvar.tex: i.e. Infos/var*.html;
 - (i) faq.tex: i.e. Infos/FAQ.html.

3 Styles

1. Reference to a keyword: use the `\keywd{...}` format. In the final PDF file, keywords are colored, hyper-linked to definitions and in italics.

Example:

```
\keywd{acell}  
\keywd{ecut} = 200
```

2. Hyperlink to a web page: use `\url{...}` format.
3. Hyperlink to Internet address <http://www.abinit.org> using name “abinit website”:

```
\href{http://www.abinit.org}{abinit website}
```

4. Reference to a file on local disk: use `\file{...}` format.
5. Definition of keywords in `inputvar.tex`.

Example 1:

```
\subsection{acell}  
\hypertarget{acell}{}  
\index{acell}
```

```
Mnemonics: scAle CELL\\  
Characteristic: EVOLVING, LENGTH\\  
Variable type: real array acell(3)\\
```

Gives the length scales by which dimensionless primitive translations...

Example 2:

```
\subsection{cpus, cpum, cpuh}  
\hypertarget{cpus}{}  
\hypertarget{cpum}{}  
\hypertarget{cpuh}{}  
\index{cpus, cpum, cpuh}
```

```
Mnemonics: CPU time limit in: Seconds, Minutes, Hours\\
```

Characteristic: NO MULTI; for cpum and cpuh: NO INTERNAL\\
 Variable type: real parameters\\
 Default is 0.0d0.\\

One of these three real parameters can be defined in the input file, ...

6. “ k -point”: `k--point`.
7. “...”: `\ldots`
8. “Lessons 1–4”: `Lessons 1--4`, two dashes.
9. “total-energy”: `total--energy`, two dashes.
10. “blah blah — blah blah”: `blah blah --- blah blah`, three dashes.
11. Always use `-1` (-1), don’t use `-1` (-1).
12. Quotation marks: use ‘`blah`’ for ‘blah’, and use ‘‘`blah`’’ for “blah”.
13. “ $>$ ”: `$>$`, not `>` (“ i ”)!
14. “ $<$ ”: `$<$`, not `<` (“ i ”)!
15. “ \geq ”: `\ge`, not `>=` (“ $i=$ ”)!
16. “ \leq ”: `\le`, not `<=` (“ $i=$ ”)!
17. “ \neq ”: `\ne`.
18. (more for special attention...)