

dvipdfmx, an eXtension of dvipdfm

Jin-Hwan Cho

Korea Institute for Advanced Study

chofchof@ktug.or.kr

Thursday July 24, 2003

Abstract In this presentation I would like to introduce a DVI to PDF translator, *dvipdfmx* (formerly *dvipdfm-cjk*), which is an extension of *dvipdfm* developed by Mark. A. Wicks.

People might ask why we consider a DVI to PDF translator at this moment, because we already have a powerful \TeX software, \pdfTeX , which generates a PDF result directly from \TeX sources without using the DVI format. It is true for people using languages which make use of the Latin alphabet (or other 8-bit character set) that \pdfTeX is sufficient.

However, the situation is quite different if we use Northeast Asian languages (Chinese, Japanese and Korean; simply CJK) or Unicode using 16-bit characters. Actually the current version of \pdfTeX has no ability to handle 16-bit characters. Even though a PDF viewer shows 16-bit characters in a PDF file generated by \pdfTeX , the codes are not 16-bit but 8-bit. It means that extracting and searching those 16-bit characters are impossible. Furthermore, it is quite hard to generate a PDF file with \pdfTeX having bookmarks or text annotations with 16-bit characters.

That is the main reason why I am going to introduce *dvipdfmx* at this moment. The DVI driver software, *dvipdfmx*, handles 16-bit character using CID-keyed font technology which is already included in the PDF specification. Therefore, *dvipdfmx* works well with almost all \TeX variants including ASCII \pTeX , the most popular \TeX software in Japan, and Omega. In particular, it might be interesting to show the audience a PDF example containing 16-bit characters from dozens of different languages, which are extractable and searchable as a matter of course.

Recently there was a revolutionary progress in developing *dvipdfmx*, that was when *dvipdfmx* began to support \ConTeXt . Many source codes of *dvipdfmx* were rewritten in this stage. At present *dvipdfmx* handles many \ConTeXt documents containing complex MetaPost figures (color shading too) and interactive forms (JavaScript too). I would like to show those fantastic examples in the presentation.

There are also many features in *dvipdfmx* not mentioned above, PDF encryption for example. More information on *dvipdfmx* can be found in the project homepage from the following URL.

<http://project.ktug.or.kr/dvipdfmx/>

The `dvipdfm.x` project is a combined work of the `dvipdfm-jpn` project by Shunsaku Hirata and its modified version, `dvipdfm-kor`, by Jin-Hwan Cho.