

CD and DVD labels

TIMTOWTDI

Abstract

How to make CD and DVD labels by PostScript, to be printed on prefab glued paper, assisted by Photoshop for the conversion of an illustration into EPSF, is explained.

Keywords

Adobe, afii, CD-ROM, ConT_EXt, DVD, EPSF, extending encoding vector, label, lightscribe, minimal encapsulated PostScript, numero sign, OTF, Photoshop, plain TeX, PSLib, T_EXworks

Introduction

At the EuroT_EXConT_EXt 2009 meeting I attended the tutorial DECORATING CD-ROMs AND DVDs by Willi Egger. I was surprised that it was all about how to use ConT_EXt for the purpose. Nothing wrong with that, but ... TIMTOWTDI to quote Larry Wall, the author of PERL. The first NTG secretary, Gerard van Nes, used to say that all tastes should be catered for, material for a broad audience should be communicated. Moreover, we should be aware of competing tools for the purpose.

I agreed with Willi to come up with an alternative approach in PostScript, well ... combined with Photoshop and for the printing the use of prefab glued paper.

In MS Word and Nero (Version 10 with LightScribe) one can create labels interactively. LightScribe, a HP technique to burn labels on special discs as well, allows only for black and white labels.

My wife, not at all a T_EXie, designs labels in Photoshop and prints them on prefab glued paper by the tool CDFACE1.6 (Media labeling software templates for: CDs, DVDs, jewel cases, envelopes, floppy discs, audio cassettes, dat tapes, zip discs). The special tool CDFACE can handle all, no PhotoShop is needed.

Within the $\text{T}_{\text{E}}\text{X}$ community the $\text{T}_{\text{E}}\text{X}$ Collection DVD and NTG's MAPS1-24 CDROM are well-known. On the other hand there is the example in Adobe's Blue Book of 1985 – Symphony No 9 – to illustrate the typesetting along circular arcs in PostScript.



We see from the example labels that the tool must be able to handle

- text along circular arcs, in general arbitrary placement of text
- various fonts
- background colour or illustration

and not to forget

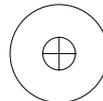
- to print the label on the right place on the prefab glued paper.

In this note I'll show how we can enrich the 1985 label of Adobe by an illustration. Nothing new, I just use what is already available. The example program can be adapted to your circumstances.

← Prefab glued paper



template for →
printing on glued paper



How?

Photoshop 9 is used to scale and convert an illustration: scale to 12cm by 12cm say (one can enrich the illustration if one wishes or add text in a fancy font) and convert from .jpg or ... into .eps. The resulting EPSF, with extension .eps, is embedded by run into the PostScript label job. The total is converted into .pdf, as usual, and printed on the prefab glued paper, et voilà.

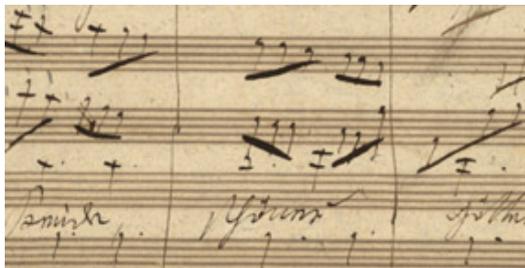
Conversion of '.jpg' into '.eps'

When I agreed with Willi I had no idea how to do the conversion.

It turned out to be very, very simple, because it has been done already by Adobe: open the picture in Photoshop, scale to the size of the disc or a little larger – 12cm by 12cm say – adjust for the required pixels, and save as (transparent, tho not relevant when the illustration is used as filling background) .eps, i.e. Encapsulated PostScript with the illustration cropped to the bounding box with the lower left corner at the origin i.e. left under on the paper. That is all. One only has to be aware of it.

Illustration

As background I selected part of the (original) score of the 9th Symphony – Ode an die Freude, also known as, The Choral Symphony (a picture of Beethoven is not suited because of the hole in the centre of the label.)



Courtesy score: <http://beethoven.staatsbibliothek-berlin.de/index.html>

Take note of the supplied BoundingBox upper values in the converted .eps file – uux uuy (in pnts) – which reflect the size of the picture.

The inclusion of the illustration – partituur9e.eps – is done by

```
(C:\CD-DVD-labels\partituur9e.eps) run
```

but ... we have to position the illustration over the place of the disc on the template of the prefab paper before the above by the invoke –.5uux –.5uuy translate, i.e. transform the origin of PostScript's User Space, appropriately.

The result

In the script the order of invokes is important because of the opaque nature of the PostScript painting operators. In the case at hand the illustration is painted first on the clipped area, the upper disc on the template of the prefab paper.

At the end the texts along circular arcs are typeset by `outsidecirltext` respectively `insidecirltext` onto the disc and painted to the current page, as prompted by Program 10 of Adobe's Blue Book.



```

%!PS-Adobe-3.0
%%Title: Blue Book label with score illustration
%%Creator: Kees van der Laan, kisa1@xs4all.nl
%%CreationDate: March 2011
%%BeginProlog
(C:\PSlib\Bluebook.eps)
run %inclusion of BlueBook library
%
/toplabel {
/mm {72 25.4 div mul} def
105 mm 212 mm translate 0 0 60 mm 0 360 arc
20 mm 0 moveto 0 0 20 mm 0 360 arc
0 -20 mm moveto 0 20 mm lineto
-20 mm 0 moveto 20 mm 0 lineto
} def
%
/Numerovec [8#43 /afii61352]
def %numero sign mod in encoding vector
%%EndProlog

```

```

%
%---Program--- the script
%
/MinionPro-Regular
/MPR Numerovec ReEncodeSmall %Courtesy Adobe BlueBook Program 18, p207
%
3 setlinewidth toplabel gsave stroke grestore eoclip
%
gsave
-170 -170 translate %reposition origin
(C:\CD-DVD-labels\partituur9e.eps) run %embed illustration
grestore
%
%annotations as prompted by Program 10 of Adobe's Blue Book
1 setgray %but ... with annotations in white
/size 27 def %and larger
/MPR size
selectfont %LRM3 concatenation of findfont scalefont setfont
(Symphony No. 9 (The Choral Symphony)) size 90 135 outsidecircuitext
/size 20 def
/Times-Roman size
selectfont %LRM3 concatenation of findfont scalefont setfont
(Ludwig von Beethoven) size 90 118 outsidecircuitext
(The New York Philharmonic Orchestra) size 270 118 insidecircuitext
showpage
%%EOF

```

There is nothing new in the design of the jewelcase inlay. The (vertical) text at the back can be obtained easily in PostScript after rotating User Space by 90°.

If outlines are wanted for the texts use `oshow`, `outline show`, from my `PSlib` library, or create an outline font variant as prompted by Program 16 of Adobe's Blue Book.

Related work

John Deubert's Acumen J. nov 2004 explains in detail how to include graphic files into (handwritten) PostScript. Useful. (His editing of EPSF is no longer necessary.)

A quote from John Deubert

“If you do variable data or any other handwritten PostScript code, EPS is the greatest thing since coffee. It allows you to effortlessly incorporate into your PostScript output graphics and images from any professional software.”

Don Lancaster in 1997 provided his own filter and hoped it will work generally. Well ... when conversion is done by an Adobe tool it works.

Acknowledgements

Thank you Willi Egger for your inspiring tutorial which gave rise to this work. Thank you Adobe for your maintained, adapted to version 3 since 1997, good old, industrial standard PostScript and Acrobat to view it, Don Knuth for your stable plain T_EX, Jonathan Kew for the T_EXworks IDE, Hàn Thé Thành for your pdfT_EX&Co.

Karel Horák drew my attention to No, the numero symbol, which is typographically not correct typeset in the Adobe example, as admitted by Adobe, says Karel, although Wikipedia mentions variations in use. As bonus I have adjusted the flaw.¹

Thank you MAPS editors for improving my use of English, Jos Winnink for your opinion and suggestions, and Taco Hoekwater for procrusting my plain T_EX note into MAPS format.

Notes

1. The T_EXnique is to associate the PostScript 8#43 code of the #-key with the (Adobe) name afii61352 for the numero character which on its turn is associated with the numero glyph in the MinionPro-Regular font. A nice application of the ReencodeSmall procedure as given in Program 18 p.207 of the Blue Book.

My case rests, have fun and all the best.

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