



Status of Generic PostScript Printer and PostScript Generation Problems

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Agenda

- Situation TM 2010
- Present Situation
- PS Generation Problem
- Conclusions

Situation TM 2010

- Successfull used at IPAC '10 & FEL '10 (only ?)
- Unified driver for XP/Vista/Win7 (and others)
- Easy one-file setup
 - Success to ease setup for editors
- ToDo
 - Printing problems with some pictures (samples needed!)
 - Find development space (SVN/GIT etc.)
 - Check for execution with administrator rights
 - License issue of modifying the ADIST5.PPD

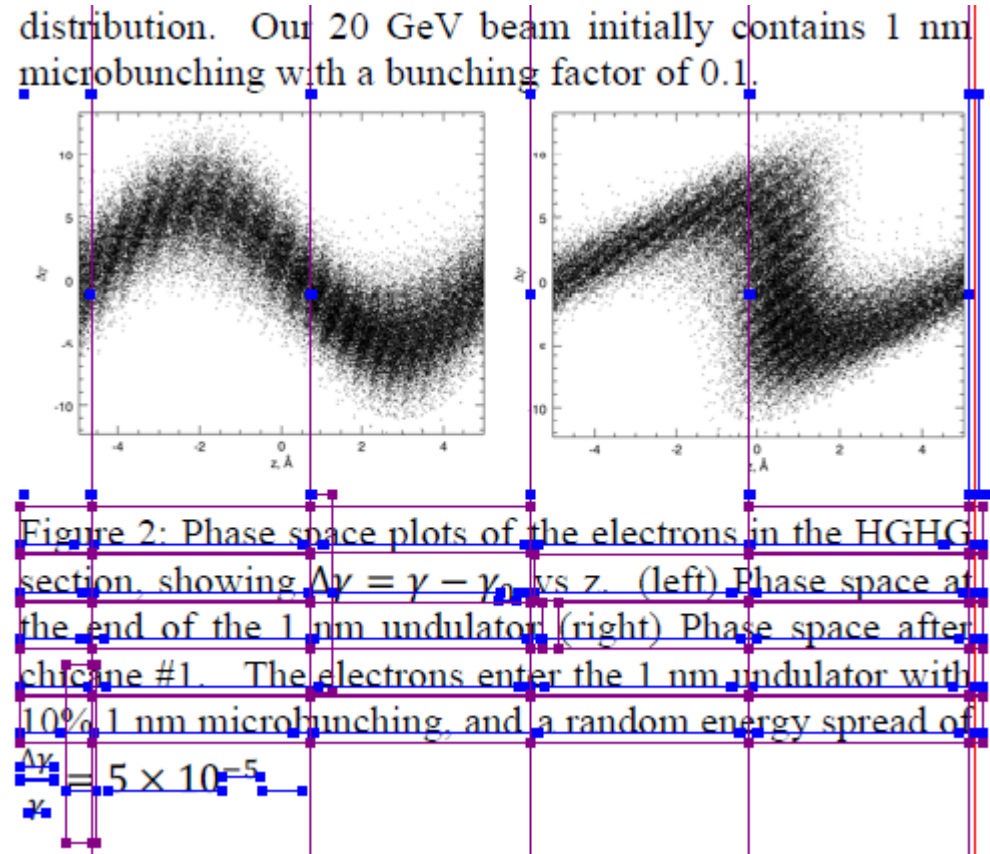
Present Situation

- The driver development will move to sourceforge (jacow-spms.sourceforge.net)
- An Installer was created that takes care of installing the driver in an elevated environment (using NSIS)
- The driver was successfully used during a lot of conferences in 2011 (e.g. NA-PAC, DIPAC, IPAC, ICALEPCS...)
- The issue of the PS generation problems has been narrowed down, but still needs to be solved

PS Generation Problem

The Problem

- Tearing of columns appears in the paper. Sometimes with visible shifts of column parts
- Text seems to be multiple times in the PDF and displaying is suppressed by bounding boxes



PS Generation Problem

The Circumstances

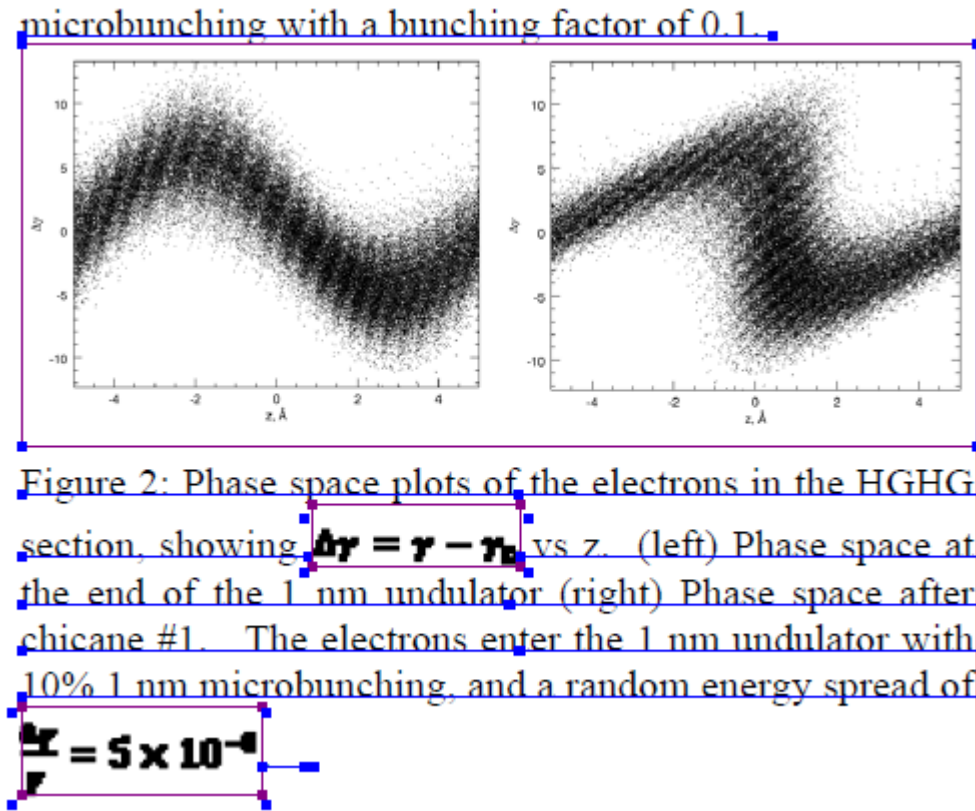
- Happens...
- ... since Office 2007
- ... using .docx format
- ... on pages with pictures
- ... when printer DPI is higher than 300

PS Generation Problem

.doc Mode

1. Save the .docx in .doc compatibility mode
2. Print to PS printer

- If equations are embedded with the new equation editor equations get distorted



PS Generation Problem

Remove, Print, Add Pictures

1. Remove the picture that is responsible for the problem
 2. Print to PS printer
 3. Add the pictures again to the paper using Acrobat/PitStop
- Source file does not really contain the paper content
 - Inserted pictures in the PDF may have higher DPI than 450

PS Generation Problem

Print Using 300 DPI

1. Switch the DPI of the PS printer driver to 300 DPI

2. Print to PS Printer

- Quality of all figures is reduced to 300 DPI

microbunching with a bunching factor of 0.1.

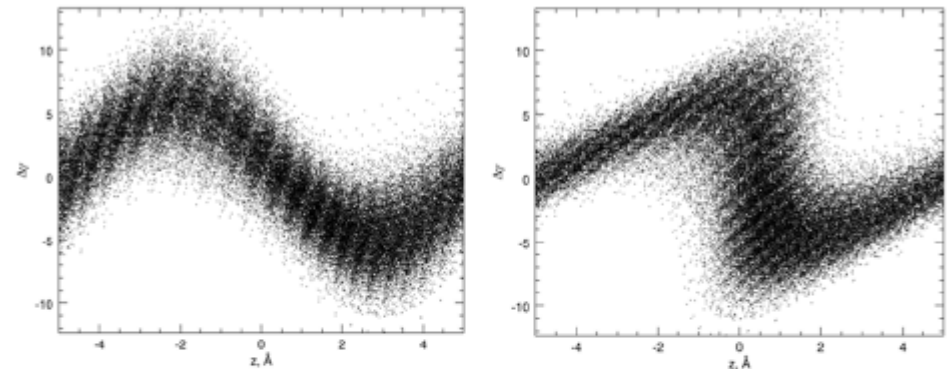


Figure 2: Phase space plots of the electrons in the HGHG section, showing $\Delta\gamma = \gamma - \gamma_0$ vs z . (left) Phase space at the end of the 1 nm undulator (right) Phase space after chicane #1. The electrons enter the 1 nm undulator with 10% 1 nm microbunching, and a random energy spread of $\frac{\Delta\gamma}{\gamma} = 5 \times 10^{-5}$.

PS Generation Problems

The Result

- Definitely related to resolution of pictures and the way it is treated during printing by Office \geq 2007
- Several workarounds exist to circumvent the problem
- We must check papers for this problem during editing in the proceedings office!

Conclusions

- PS Printer Driver performed well during this year
- General PS generation problem with Office needs to be investigated further
- Until we find an acceptable solution for the tearing problem the workarounds have to be used

The header features a collage of scientific illustrations. On the left, there are blue and orange abstract shapes resembling molecular structures or particle tracks. In the center, there are orange and yellow circular shapes, possibly representing cells or atoms. On the right, there is a detailed illustration of a particle detector or accelerator component, showing various chambers and a central beam path.

Questions?

References

- **JACoW PostScript Printer Driver**
[http://www.elettra.trieste.it/SPMS/index.php?
n=Acts.JACoWPostScriptPrinterSetup](http://www.elettra.trieste.it/SPMS/index.php?n=Acts.JACoWPostScriptPrinterSetup)
- **JACoW SPMS**
<http://jacow-spms.sourceforge.net>