St. Louis Pro/Engineer User Group

PDF Creation Using Ghostscript, FreeDist and Pro/Batch

Presented by

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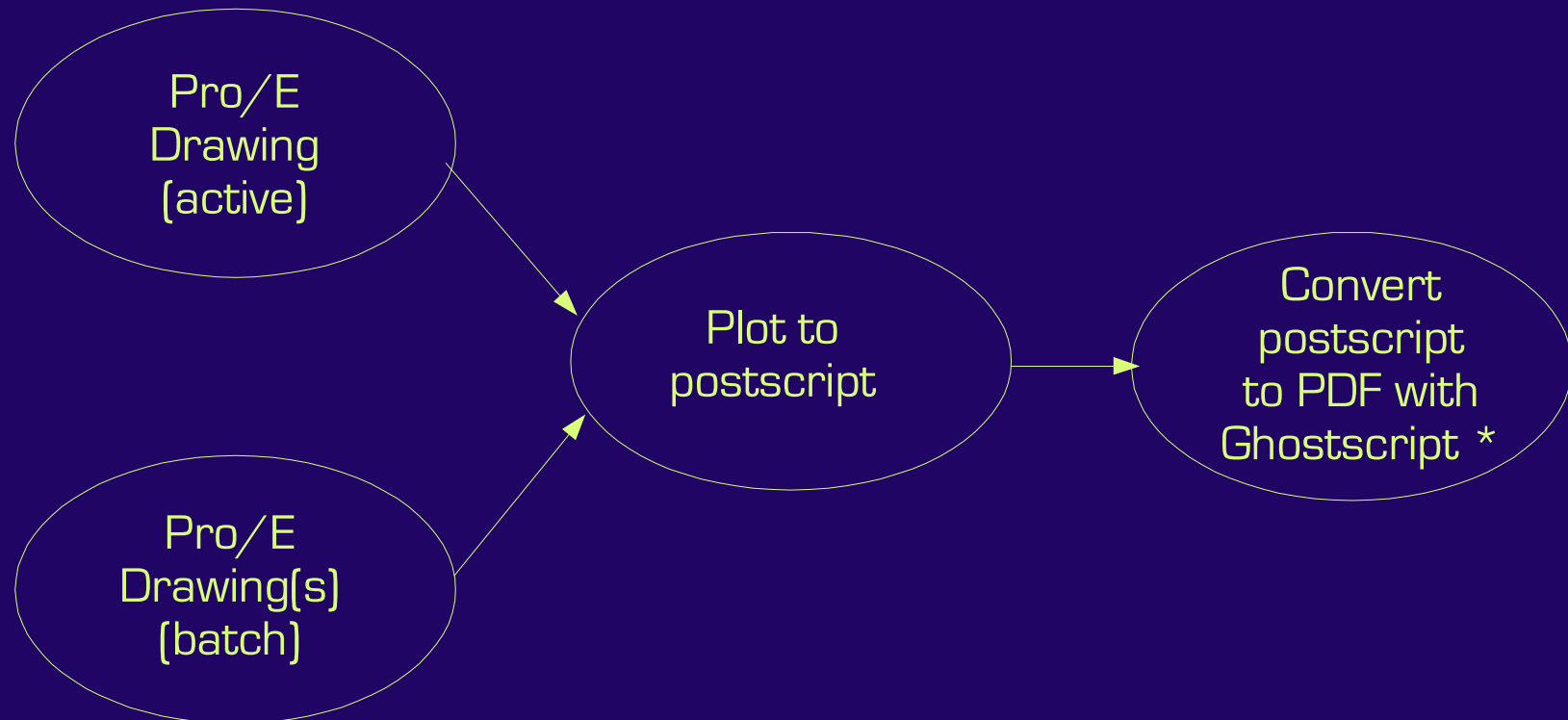Sunnen Products Company

December 3, 2003

Purpose

- Provide a no cost solution for the creation of PDF files from Pro/Engineer drawings

- Replicate functionality of Adobe Acrobat

- Automate the creation of PDF files using Pro/Batch

No Cost Software Components

- AFPL Ghostscript 8.11
  http://www.cs.wisc.edu/~ghost/doc/AFPL/index.htm

- FreeDist 1.10
  http://home.hccnet.nl/s.vd.palen/index.html

- Acrobat Reader 6.0
  http://www.adobe.com/products/acrobat/readstep2.html

Process Overview

Pro/E Drawing (active)

Pro/E Drawing(s) (batch)

Plot to postscript
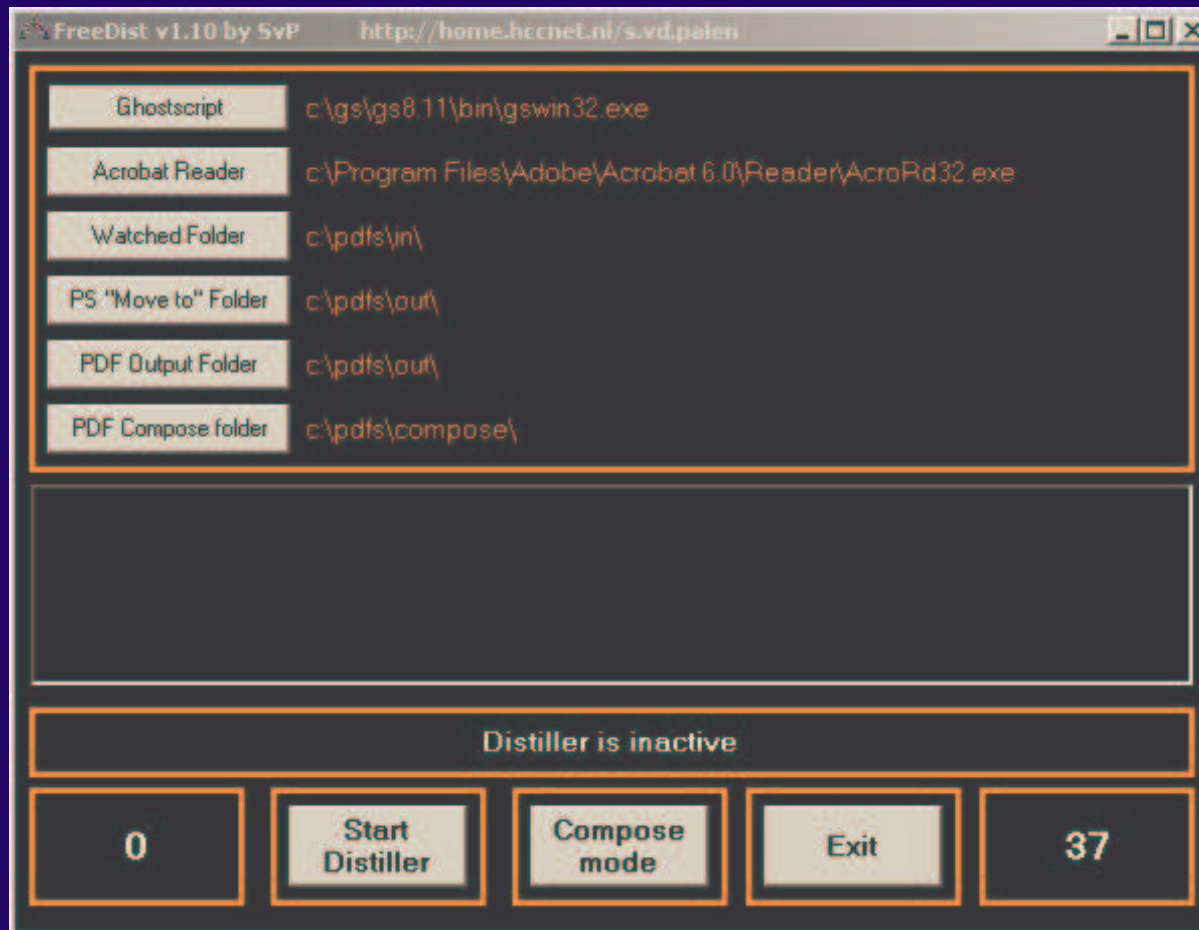
Convert postscript to PDF with Ghostscript *

* FreeDist provides the front end for Ghostscript. This simulates Acrobat Distiller "watched folder" functionality.

Installation Details

- Create system directories
  - c:\pdfs\
  - c:\pdfs\in
  - c:\pdfs\out
  - c:\pdfs\compose
  - c:\freedist

- Install Ghostscript using default options

- Place FreeDist in c:\freedist directory. Create desktop shortcut if desired.

Configure FreeDist

Configure FreeDist

Program	Program Path
Ghostscript	c:\gs\gs8.11\bin\gswin32.exe
Acrobat Reader	c:\Program Files\Adobe\Acrobat 6.0 \Reader\AcroRd32.exe
Watched Folder	c:\pdfs\in
PS "Move to" Folder	c:\pdfs\out
PDF Output Folder	c:\pdfs\out
PDF Compose Folder	c:\pdfs\compose

Create Plotter Configuration File

To obtain the correct output in the postscript file, you must create a text-based plotter configuration file for use in Pro/E and Pro/Batch.

pdf_win.pcf

button_name	pdf_win
button_help	Create Postscript file for Ghostscript
plotter	postscript
paper_size	a b c d e
plot_sheets	all
plot_destination	file
pen_table_file	<drive>:\<path>\table_pdf.pnt

Set the following config.pro options:
    pro_plot_config_dir <drive>:\<path to .pcf file>
    plot file dir c:\pdfs\in

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Create Pen Mapping File

A pen mapping file is a text-based file that defines the line width in the output file based on the entity color in Pro/E.

table_pdf.pnt

```
pen 1 thickness 0.015 cm;color 0.0 0.0 0.0;letter_color
pen 2 thickness 0.020 cm;color 0.0 0.0 0.0;drawing_color
pen 3 thickness 0.015 cm;color 0.0 0.0 0.0;dimmed_color
pen 4 thickness 0.020 cm;color 0.0 0.0 0.0;magenta_color
pen 5 thickness 0.020 cm;color 0.0 0.0 0.0;brown_color
pen 6 thickness 0.015 cm;color 0.0 0.0 0.0;hilite_color
pen 7 thickness 0.015 cm;color 0.0 0.0 0.0;half_tone_color
pen 8 thickness 0.020 cm;color 0.0 0.0 0.0;cyan
pen 9 thickness 0.200 cm;color 0.0 0.0 0.0;blue
pen 10 thickness 0.025 cm;color 0.0 0.0 0.0;attention_color
```

PDF from active Pro/E drawing

→ Start FreeDist program and distiller process

→ Retrieve drawing into Pro/E session

→ Print to pdf_win printer option ------------>

→ Postscript placed in FreeDist watched folder

→ Distiller starts Ghostscript to create PDF

→ PDF and postscript moved to FreeDist output folder

→ Review PDF with Acrobat Reader

→ Repeat for additional drawings
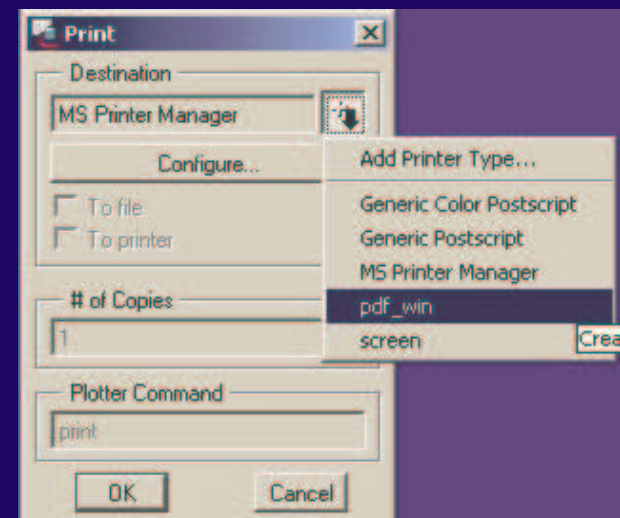
PDF Creation Demonstration
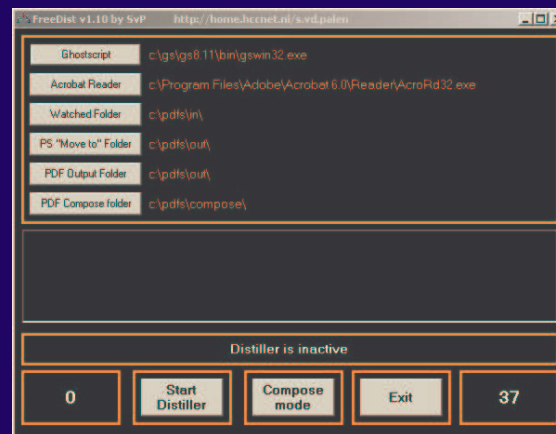
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Converting one Pro/E drawing to PDF seems easy

but,

What if we wanted to convert 50 drawings?

Pro/Batch Information

- Pro/Batch is a utility installed with every Pro/E installation

- Can perform 10 separate functions
  (plot, stl, set, step, vda, dxf, cadamin, clfile, cgm, vrml)

- Can run unattended and up to 24 hours into the future

- Runs Pro/E without graphics so it is very fast

- Poorly documented by PTC over the years.

- Wildfire introduces Distributed Pro/Batch
 http://www.ptc.com/WCMS/files/4566en_file1.pdf

Pro/Batch Configuration

Pro/Batch runs without user interaction, you must make sure the output from Pro/E is going to look correct.

Set the following config.pro options

```
spin_center_display no
axis_display  no
datum_display  no
datum_point_display  no
display_coordinate_system  no
```

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PDFs using Pro/Batch

→ Export drawings from Intralink workspace to empty directory.

→ Copy plotter configuration file (.pcf) to user Pro/E startup dir.

→ Start Pro/Batch from DOS shell in user Pro/E startup dir:
   c:\<proe loadpoint>\bin\pro_batch.bat
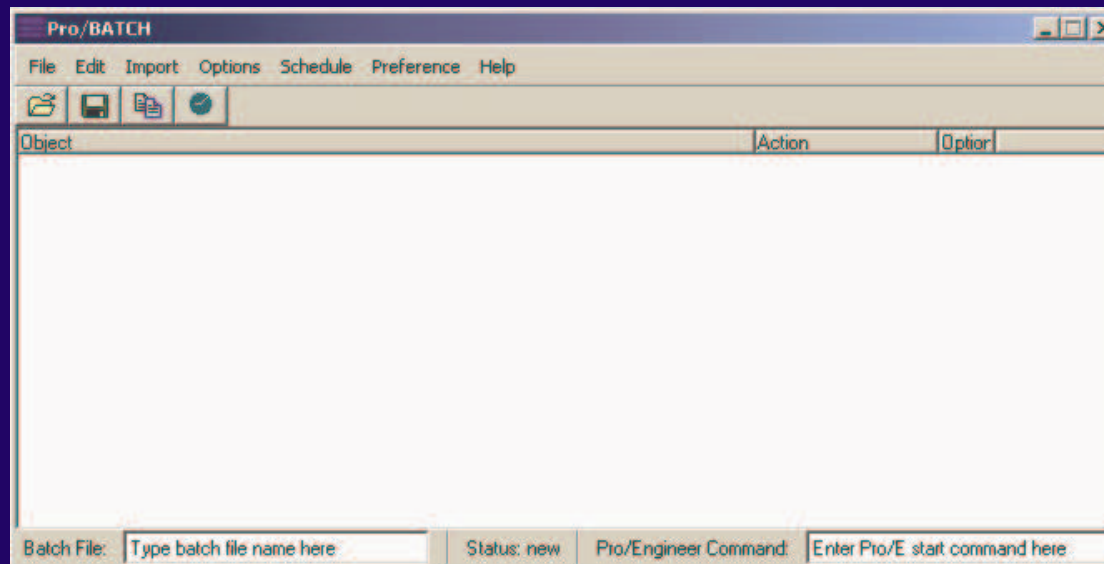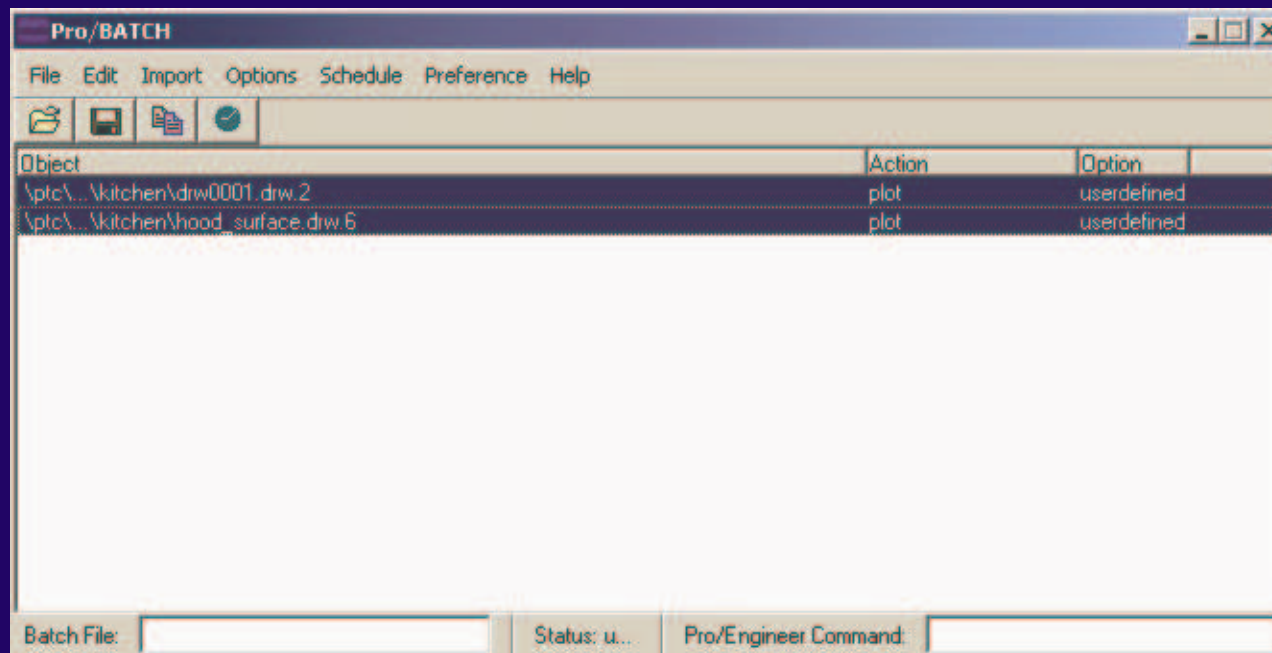

<u>Required</u>

→ Batch file name
→ Pro/E command

PDFs using Pro/Batch

- Designate drawings to plot by selecting File, Browse, filter for .drw files. Highlight drawing files and choose Add Objects, Close Browser
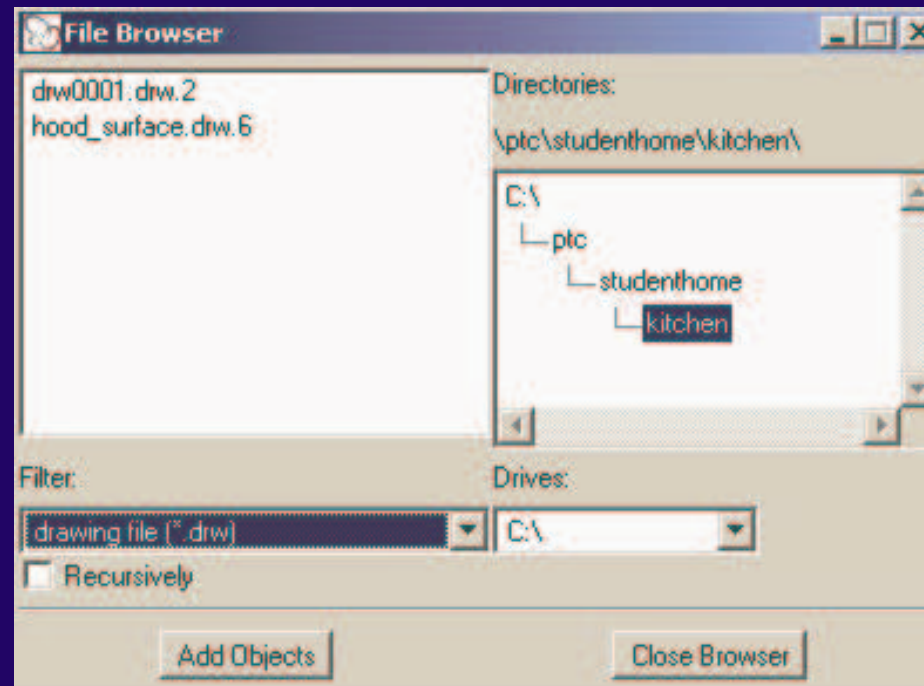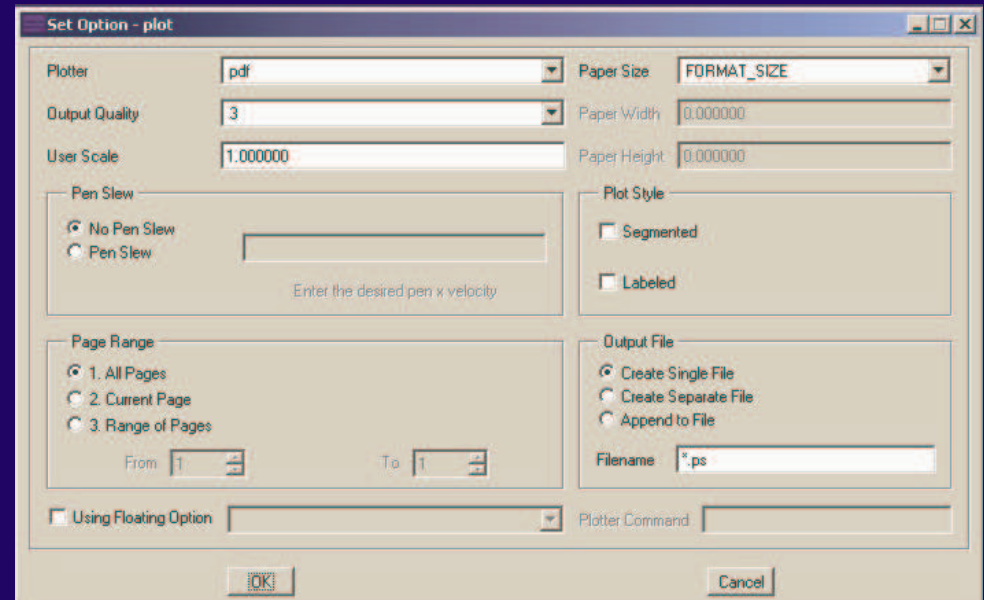
PDFs using Pro/Batch

- Highlight all files listed in Pro/Batch main screen.
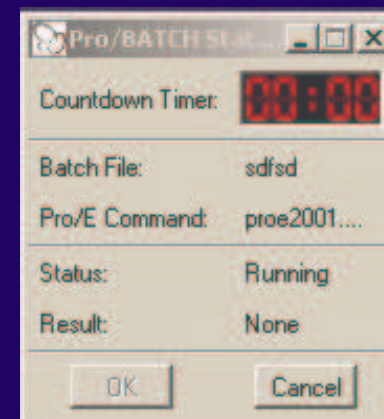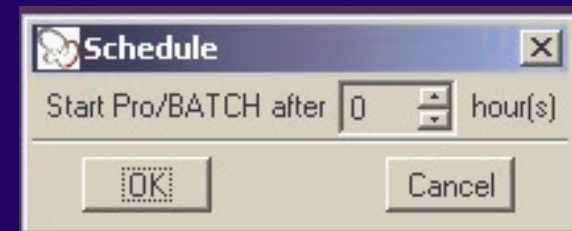
- Select Options, Set Option

PDFs using Pro/Batch

- Select pdf_win as the Plotter

- Select FORMAT_SIZE as the Format Size
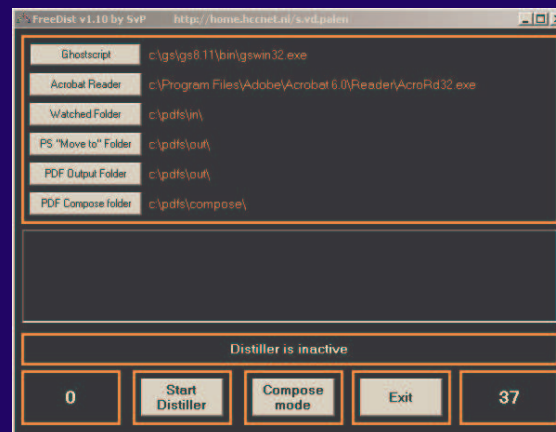
- Set *.ps as the Output Filename, OK

- Save batch file

PDFs using Pro/Batch

→ Start FreeDist Distiller

→ Schedule and start Pro/Batch job

→ Check Pro/Batch status

→ Check FreeDist output folder

Pro/Batch Demonstration

Additional Information

�é See the Fall 2003 online issue of PRO*files* magazine
    http://www.profilesmagazine.com/p25/tools.html

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Questions?