



# Enhanced Laser Printing *ELP*

User Guide

Revision 8.2

For

MS Windows NT based platforms

Unix, Linux, Solaris, VMS,

AS/400 and AIX

As firmware extension for various laser printers

## **About this manual**

This manual describes the user interface, which usually is not needed at all, as ELP works in 90% of all implementations fully in the back ground.

This manual describes for the standard end user:

1. How to collect page counters form network printers
2. Reprinting from the archives
3. Managing print jobs.

The following manuals are available:

1. Installation and First steps
2. Administration
3. Question and Answers
4. Self training.

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## Contact and support address

**Please open the PAdmin software -> License Tab -> about  
or start the convert.exe software without any argument  
or ask your system administrator**

## Introduction

The Enhanced Laser Printing Print Server Processor (*ELP*) is a software tool based mainly upon PCL 5 and with some restrictions also on Postscript data streams. PCL is Hewlett-Packards Printer Command Language which is used by nearly all Laser and Business InkJets printer. The *ELP* implementation does follow as much as possible industry standards. The available functions are printing:

- All known 1D barcodes plus the 2D code: PDF 417 and UPS Maxicode in PCL and Postscript, as well as Data Matrix in PCL only.
- A Kyocera PreScribe emulation for their way of barcode printing
- Electronic Forms, with de- / encryption of forms and data streams, as well as compressing data streams (Decompression and decryption in the printer using an ELP Firmwareextension DIMM or SD / MFCARD.
- Including reprints with additional forms and paper path settings
- Accounting, print verification and reporting; job ticketing
- Additional Fonts, HexEmulation, Epson FX Emulation, PPDS, VGL, TIFF, CALS etc.
- eMailing and faxes, Database researches.
- Automatic eMails and Converting into Acrobat™ PDF Format
- PDF direct printing to Postscript printers, or postscript to PCL
- Monitored printing, error recovery and user information

Intelligent trigger routines enable any product function on demand. In addition, *ELP* also provides a simple way to change or erase any data stream code.

The software can be installed on the following operating systems:

- MS NT based Windows systems. Because *ELP* does use only a printer queue, the print data can be received from any platform to be sent to any platform.
- Any Unix or Linux platform handling print files and/or installed as a pipe directly in the LPR command using STDIN/OUT methods.
- AIX and Solaris, usage like Unix
- AS/400 (with some limitations)
- VMS
- DOS or as sources in your application

## **ELP functions overview**

Basic *ELP* functions:

- Easy generation and activation of macros / forms / logos etc out of print files (prn), and insert them on demand in data stream by searching for the macro PCL sequences.
- Search and add/insert or replace any text or any command, in any data stream. This functionality can be used for example to insert forms on demand.
- Setting the printer to EconoMode
- Allow only gray printing on HP color devices
- Allow only printing from certain applications etc.
- Traymapping

1D Barcode

- Intelligent barcodes emulation which supports even more 1D barcodes than the JetMobile<sup>(TM)</sup> BarDIMM.
- FreeEscape support.
- OMR support for inserting letters into envelopes, postal optimisation.
- PCL and Postscript

2D Barcode: PDF417 Barcode, Datamatrix and UPS Maxicode<sup>TM</sup>

*ELP* Functions

- Enabling all *ELP* commands like reprinting, copy and page definitions etc.
- Trigger those functions using infile TRIGGER\_...keys
- Report Line Generator

Epson Emulation FX 100 9 Needle

Proprinter / PPDS Emulation

VGL Emulation

PGL Emulation

- Those emulations are developed for customers, they are not a 100% emulation. But on request and problems we can always add missing functions or correct any problem.

TIFF printing and CALS Emulation.

PDF Converter

- Converts on request print files to Adobe Acrobat PDF format and send it to the archive or *ELP* is using SNMT communication to send the data as an eMail to any address.

- The PCL5/PCL6/TIFF to PDF converter is optional and is licensed per server.

#### eMail Function

- Sending fully automatic eMails to any adress, found in the data stream. If the PDF converter is available as PDF attachment.
- Using trigger functions, you can define any subject and body text, for example to differentiate between for example orders or invoices, or languages German or English etc.

Fax Function (pretty simiar to eMail.)

PCL Compression 8: Realises the conversion from PCL Compression Mode 8 to 5.

#### Archiving and MyPrintArchive

- Sends print files into an archive directory, optional in Adobes PDF format.
- *PPAdmin* provides a search and view/eMail/print function
- *ELP* writes an HPS index file, so data can be sent to any global archive system with automatix indexing.
- Uses user defined file names for archiving
- Reload automatically archived jobs and print and delete them
- MyPrintArchive stores all jobs from a user/searched item etc. send to a specific queue and on dmand resend them to any printer

#### Accounting

- Records into a text (CSV format) or DBase file all print job, page size, from whom, when etc, including collected document informations like check numbers etc.
- With Monitored printing also the true paeg counters are stored for real print cost calculation.

#### Monitored printing

- Send data streams direct to IP connected printers and monitor the print job. On printer error send a user notification and start recovery actions.

#### Variable management

- User name, time, day, week, etc. can be used on any page.
- External files can be used to search for any place holder, which are replaced by the value.
- *ELP* can setup its own item counters, as well page counters.

Distributed printing, page

- Send data stream to different ports, queues or archives.  
Depending upon: Copy factors or file size.
- Call any other software or communication tool and readback data
- Split a print job, for example to archive each invoice
- Send Data to any external software, including own defined command line parameters

Symbol set conversion

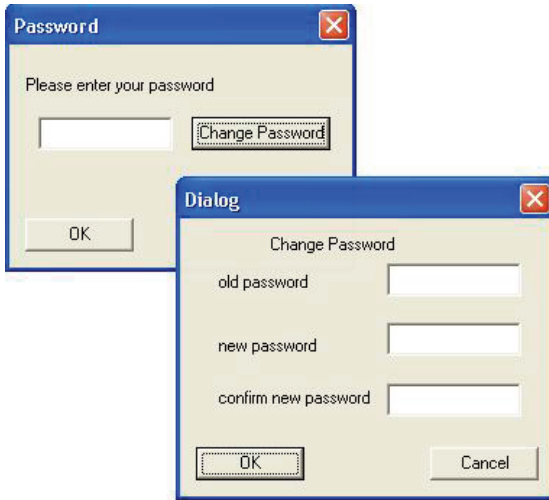
- For example to EBCDIC to ASCII.

Miscellaneous

- Reverse printing.
- Print color jobs optional on HP printers only in gray scale.
- Set toner save mode.
- Do not print at all, maybe print streams from software the user is not allowed to use
- The data stream is analysed and will be sent to the best fit paper roll.



## First steps with *ELP* Windows Software



Start *PPAdmin* and if displayed enter your password. Default there is none or the funktion is turned off by your administrator.

By clicking on the button “Change Password” a new password can be set.

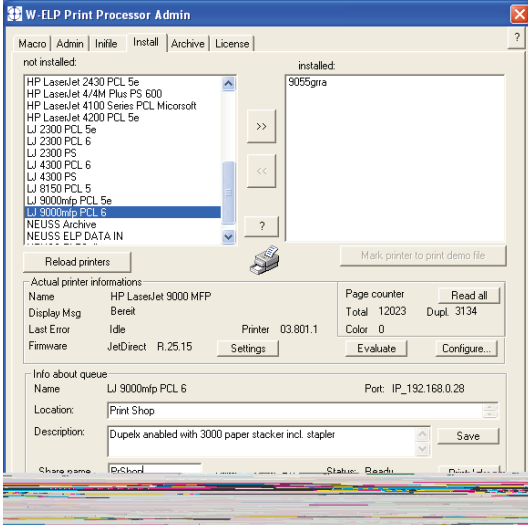
If you do not want to set a password, simply click OK. In order to erase a set password, enter the old password and leave the other entries empty.

ON default system setup, when *PPAdmin* is started the first time also a Startup Agent is shown.

Both, Password request and the Startup Agent can be turned off. Please ask your administrator or read the installation manual.

## Read page counters and display printer status

ELP can be setup in a way, that only the archive functionality is displayed. In this case, please skip this chapter.



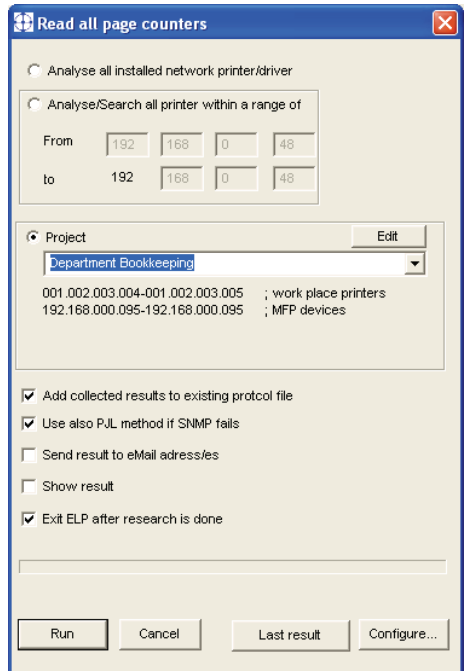
The install tab contains beside the ELP activation functionality, the possibility to read back printer informations from one or all printers, if the printer port is a valid TCP/IP address.

1. The configure button starts the default WEB browser and accesses the printers WEB pages. Now the printer is ready to be configured.
2. the Print Jobs button displays all currently queued jobs and you have the

possibility to pause, delete or copy and move them to other queues. This function is described later in this manual

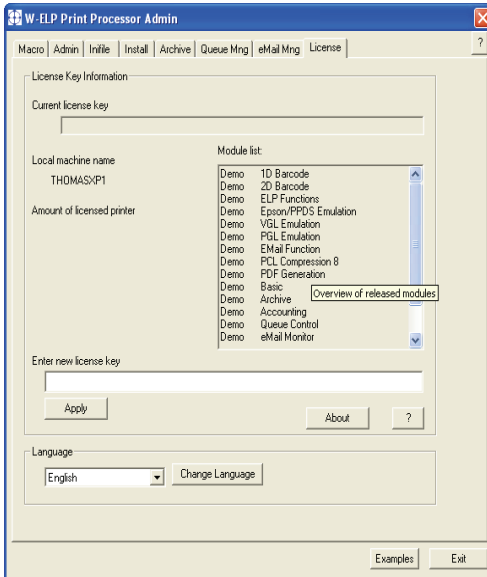
3. The Evaluate button reads back the marked printer informations like page counters, firmwares etc.
4. And finally the ReadAll button reads back all page counters from network connected printers, either of all installed printers or even within certain ranges of TCP/IP addresses.  
This functionality is also accessible via the Admin register.

For further information see chapter "Collect Page Counter .." pretty at the end of this manual.



## Change License Key

ELP can be setup in a way, that only the archive functionality is displayed. Is this the case, please skip this chapter.



On the License Tab the actual license key, the local machine name and if the key is valid, the amount of licensed printers and the Module list are shown.

To change a key, enter the new value and click on apply.

Note: The key won't be checked if it is valid. If an invalid key was entered, printing on a welpprint configured printer will not be possible. A message box will inform about that.

The contact address and the actual version are shown when the About button is clicked.

## Generate and test forms within ELP

The full functionalities are described in the ELP technical manual. As some system admin allow the user to define their own watermarks or fully real forms, like promotion advertisement of seasonal greeting, this chapter describes the most convenient way to generate forms.

The forms can be black and white, as well as in color and ELP offers possibilities to address every single page of every single copy and add there different forms, like for example advertisements.

### Forms generation

1. Generate a form with any program, like for example MS Word. You may add any font, any graphic, but we recommend to use only printer internal fonts.
2. The most convenient way to install forms is to print it (generated document) into a file. **In any case it is a must to use a PCL 5e or 5c driver!** It is recommended suggest to install the driver for your oldest used printer again and name it ELP FORM. Do not activate this queue in ELP!
3. The storage location can be anywhere, but we recommend the WorkPath directory.

**DO NOT print through an ELP enabled Queue/Driver, as ELP may then insert the Demo watermark on the page. And once you purchased the product, the mark is still there.**

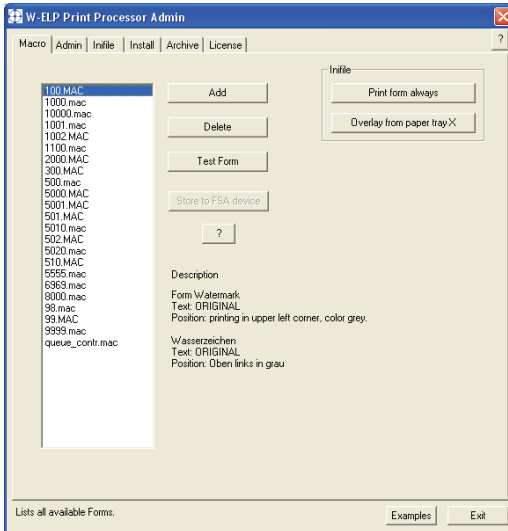
### Forms installation:

ELP offers several ways how forms/macros can be installed, normally it is recommended to use the one time installation with the windows PPAdmin software, what is here described.

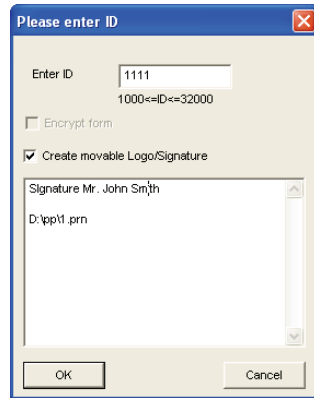
After the start of PPAdmin the macro register is shown, unless your PPAdmin is started with /A or /P parameter.

To delete a macro/form from the list select the macro and click on “Delete”.

The listbox in the macro register , displayed on the next page, shows all installed Macros/Forms including a description about the content of the selected form/macro. To add a macro click on “Add” or within the list the right mouse key and “Add”.



In the first step please select your printed form file. After opening it, the windows blow uis displayed



Please provide a unique form/macro number between 1000 and 32000. Usually the implementor of the rules will tell you, which number you need to use for which result. The numbers are used in the predefined ELP printing rules.

Do not activate the “Generate movable Logo / Signature, this is only for the admin.

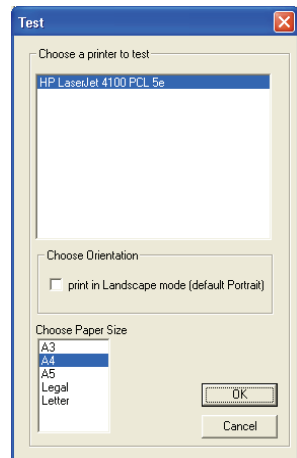
Then the form is installed and displayed in the list. It can be immediately used.

### A quick print test with the form

After selecting the test button, this popup window appears.

In the upper listbox the all printers are displayed, which are installed with the ELP printing process. Please select the printer you want to use if there is more than one printer installed.

By clicking the checkbox the format can be defined. The default format is Portrait, by clicking the checkbox Landscape will be the format. In the listbox at the bottom the paper size can be chosen by selecting the proper size. Then click OK to generate a test print.



If the form number is used within defined ELP rules, the new form is already usable.

## **Searching and reprinting from archives**

If *ELP* serves several archives, the DropDown field des display them all for selection.

If the hook at “Search autostart” is enabled, *ELP* does automatically display the content of the first archive.

In the field “Search Value” can be inserted any expression to search for. You can insert several words separated by a blank or you can type an expression in quotation marks to search for a complete expression.  
e.g.: Mister “Mister Rost”

With the “Created Date from:” fields you can limit the search for archives created within this period.

No entry in the search field displays all files of the selected archive.

To start the search click “Start Search”. After this the results are displayed in the bottom list field. By clicking on “Stop Search” the search will be aborted.

Any found results can be sorted by clicing on each column header like Filename etc. in order to sort the list.

For View, Print or send the selected File as Email, you need to select it in the list field, and press the appropriate Button.

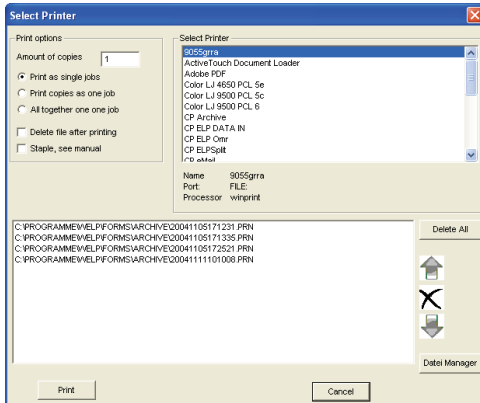
### **View Archive File**

You can only “View” the archived File as an automatically converted PDF document if the PCL2PDF converter is installed.

By Clicking on the View button the selected file is converted into the PDF format, and then shown within the default program for display PDF files on your system.

## Print Archive File

Several archived files can be selected for reprinting by holding down in the archive result window the Shift or Control key and the files are selected with the mouse or with the cursor keys.



It is also recommended to move the main PPAdmin window to the left of the screen, so you can add later easily new Archived files to the printing list.

By Clicking the print Button a new Window will appear to select

- A printer to print to
- The amount of copies, several selected jobs are printed in sets, so

the first copy of the first job, then the first copy of the second job, ... second copy first job....

- If the files should be deleted after being printed
- A selection of how the files should be processed. If you print only one copy and only one file use the radio default button.

If several files or copies are printed you have the following options:

- A) Print them as single jobs, so 3 files 2 copies will result into 6 print jobs
- B) Print each copy as one job
- C) Generate only one job for all copies and print files.

- The printing position of the print files in that list can be changed by those methods:
  - A) Mark then and move them up or down in the list clicking on the arrow icons
  - B) Delete one file by clicking on the X icon
  - C) Adding more files:
    - C.1) Clicking on the explorer button select the archive and drag & drop the additional files to the list
    - C.2) Go back to the archive register select more files and add them to the list, using the proper right mouse option or by clicking on the Print button.
- You may enter optional the information from pages and to pages, then *ELP* will print only from Page Number A to B per JOB.

Examples:

3 Jobs each with 5 pages, selection is made from page 2 to 3 and they are printed on time as.

As single jobs: Then from job 1, 2 and 3 always page 2 and 3 are printed

As a copy or all in one job: Only page 2 and 3 from the first job is printed

3 Jobs with each 5 pages, selection is made from page 2 to 3 and they are printed with copy factor 2 as.

As single jobs: Then from job 1, 2 and 3 always page 2 and 3 are printed, copy 1 and 2

As a copy job: Only page 2 and 3 from the first job is printed, two times

All as one job: Only page 2 and 3 from the first job is printed, one time

- With certain limitations described below, you can even staple the jobs. Therefore the previous ways of printing become a big role.
- You may enter the page numbers from and to for narrowing down the printed part of the document, copy or even whole document.

Notes:

You are able to resend the jobs to any ELP activated queue, but if the jobs are already as they have to be, you can send them to any queue. This is why PAdmin shows all printers for selection.

For convenience PAdmin offers the ability to staple the selected job/s. But as indicated above there are some rules, and if they do not apply, please resend them through an *ELP* process.

The stapling rules:

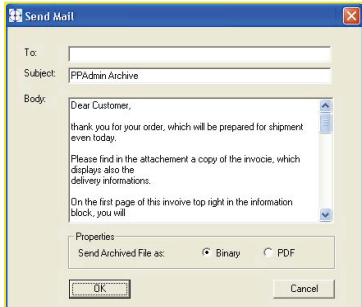
- Do not use a stapling command with the archived jobs.
- Do not use out tray commands, as the pages may be feed in the incorrect tray
- Currently only one staple command of the LaserJet 9000/9500 series printers are implemented. If you need other model or brands supported, please let us know, or use an ELP process to apply.
- The different printing methods do apply. Depending the selected mode, you may staple every job, every copy or all jobs from all copies.



## Send Archive File as Email

The eMail client needs to be installed and configured before this function is usable.

After a single file is selected and the eMail button pressed, this new window pops up :

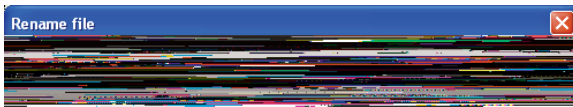


There you can fill in the eMail address, the subject and edit the default body text.

In the properties you can select, whether the archived file is inserted Binary or as a PDF file. The option PDF is only available if the PDF Module is installed or the archived file exists in the PDF format.

By clicking “OK” the email will be sent, and the body text stored in the archive directory as a text file. Next time sending the same archive the stored text file is displayed as the default text for email body.

## Rename an archived file



If you do not like the default archive file name then you have three possibilities to change :

- A) Mark the file and use the rename button to change the file name
- B) Use the file explorer to move the file and/or change the name
- C) Ask your administrator if ELP can automatically use generated file names out of the print job.

## Manage print jobs

*ELP* can manage for you print jobs in three ways:

1. Automatically: Using Queue Control for automatically queue management
2. Automatically: Use the monitored printing option from *ELP*
2. Using direct PPAdmin.

The first two possibilities are described in the administrator manual, here is the online version:

Start PPAdmin, open the Install register, mark any queue and select in the right low corner the button “Print Jobs”



The first thing you may want to do is to set the queue totally on hold by setting the hook into the Queue on hold check box. Now all jobs will be queued and up to the time the hook is deleted, nothing will be printed.

In order to perform actions please mark first any job(s) by single click and or Shift – click and or Ctrl – click “standard windows mechanisms”.

After that select any command in the drop down box and click Perform. Especially you may here kill jobs, but also move them to other queues.

## Job Ticketing

Job Ticketing enables a user to easy setup for each job different reprinting rules. ELP needas to be installed together with the print driver on the users PC.

As explained in the next chapter, Job Accounting is also able to do the same job, but all the settings through that method need to be predefined. So the flexibility is gone, but the possibilities are much more.

After the system is installed and setup, for every printed job this screen pop up.



If the menue is exited with Cancel, the job is printed as it is. Nothing will be changed, unless not other rules are performed.

The menue allows to select the reprint order, either X times the whole job or X times each page. The default vaule is the first one. The X is calculyted by the sum of the values in the “Amount of Copies” colomnn.

The windows also allowes to set the stapling conditions for this job.

Jop Ticketing offers up to four different reprinting settings. Each setting can define several similar copies.

Usually the table is filled out like this:

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Amount of Copies	Enter the amount of similar copies, e.g. First line defines only the first copy then insert 1 Copy, but the second line defines 2 additional copies, then insert there 2. If a fourth copy should be generated, e.g. for the book keeping department, then enter again 1 in the third line.
Papertype	Leave it open, if the job should use the default papertype, otherwise select the proper media type. Of course the printer's paper tray needs to be setup in the corresponding way.
Outtray	If your printer serves different out trays or a sorter, then every copy can be stored in a special out tray. Like customer copies in tray 1 and the bookkeeping copy in tray 2.
Macros/ Watermarks	To every copy a unique form can be assigned.

The frame "First page different" holds the same possibilities. If one of the items is selected, *ELP* does perform the first page of each entered copy as this setting and not as the "All pages" setting.

The clear button erases all entered settings, and you may restart the settings. Click on "Macro description" for getting the overview of all installed macros / forms / watermarks, and their descriptions. So it is easier to select the proper one in the pull down given list.

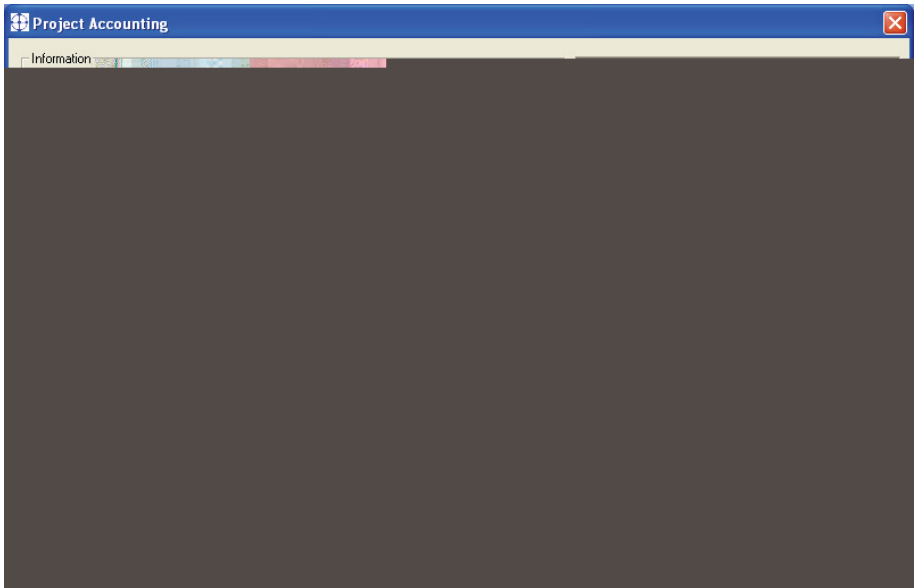
## Project Accounting

A second so called CallAtStartUp utility is the ACC\_PROJECT.EXE, the project accounting module of ELP.

With this tool you can easily track printing costs of any project or client, including all available informations like paper size, color/black and white etc. But also, depending of the implementation, setup special print tasks by selection them with one term.

For pure project accounting the displayed window for each print job could look like that:

A view of the data stream content, a possibility to enter text, which is printed at a special place on the forms, and finally the project list, which can be extended by "Add" or reduced by "Deleted" or simply selected in the pull down menu.



More information how this can be used as job ticketing can be found in the manual. In that case, the ADD function should not be used at all.

A project name can be up to 45 characters, but don't use any semicolons.

## Collect Page Counter from your network printers

ELP can collect from all network printers quite some informations, beginning with actual page counters and ending with any MIB information you can get out of the printer.

Within PPAAdmin there are 2 ways to start this function :

1. Admin – Page count
2. Install – Read All

The main screen offers three different ways to define the printers, from which the information is collected:

1. Analyse all installed network printers :

ELP will read all local installed printers from your server, and if a port is using the TCP/IP communication method, ELP opens the communication with the printer and reads back all available informations

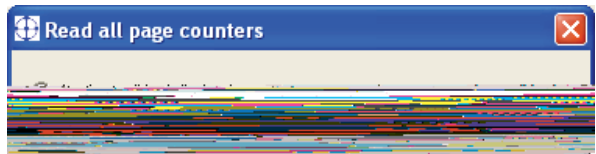
2. Analyse/Search all printer within a range

You may enter here a single IP-Address or a complete range of them, from address to address.

Note: It may take a pretty long time to analyse each possible address, so keep the range as narrow as possible.

3. Project

You may want to setup several projects with individual address ranges to search for. Simply click on the Edit button and ELP will bring up the ini-file into notepad with a detailed description of how to setup these projects.



Each project can hold as many IP-Address ranges as you like. A Range can be only one printer address or two addresses: FROM up to TO. Both addresses are included in the research.

In addition each project can define a unique project file name, to which *ELP* stores the results.

Independent which mode is used, the following parameters can be set. They are used mainly for the automatic time scheduled processment, described later.

All result files are stored into the PGCOUNT directory below the main installation directory as a ASCII based CSV file (Comma Separated ASCII files). They can be opened with nearly any spreadsheet application or even any text editor.

- “Add collected results to existing protocol file” advises *ELP* to append the collected results to an existing protocol file, either the pagecounter.csv file for mode A and B or the file name defined in the project definition.
- “Use PJJ method if SNMP fails” offers a second way of collecting at least the total printer counter and the printer name. This method will even work, if for example the printers SNMP protocol is turned off.
- “Send result to eMail addresses is only selectable if the eMail system is configured in the Admin register and in the configure Windows one or more eMail addresses are defined.  
Then *ELP* will automatically send right at the end of the process the final documentationfile to the provided addresses. This function realizes for example automatic page counter evaluation on a repeated time based schedule.
- “Show result” calls the CSV file right after the process is finished. The file extension CSV must be detected to a installed spread sheet application.  
The result could be like this:

IP-Adress	Windows-Name	PageCount	Duple x	Color
192.168.0.28	NEUSS ELPSplit	12023	3134	0
192.168.0.45	LJ 4300 PCL 6	740	20	0
192.168.0.48	HP LaserJet 4/4M Plus PS 600	200	2	0
192.168.0.44	Color LJ 4650 PCL 5e	13390	4069	11743
- “Exit *ELP* after research is done” is mainly used for time scheduled operation. The *PPAdmin* is automatically ended after the research is finished.

## *Enhanced Laser Printing*

### User manual

The Install manual describes, the configure windows and how to add printers with new MIB addresses for new counters, as well as time sceduled operation.



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## **Technical support**

For questions, inputs, additional support or any other reasons, please contact your local distributor. The address can be found in the info box with PPADMIN at the license register.

Also you may have a look at:

1. The Question and Answers document located in the Manual section of the program start selection: "Enhanced Laser Printing ELP"
2. Chapter examples the administration document
3. If you need personal help, please contact your distributor listed in PPAdmin's license tab -> info box.

Thank you for looking and maybe even using our product.