How to use PROMPTautomatic email, fax and other electronic print features

Summary of benefits

The printing with PROMPT is completely redesigned to permit the following:

- Automatically email or fax a document generated by order processing, purchase order, AR statement print or IC customer price report.
- Automatic means you define in the AR Customer Master File and the AP Vendor master File the electronic address (email or fax) and when the document is printed to a special printer name it is emailed or faxed
- Set up PROMPT reports to be emailed or faxes to a specific electronic address as opposed to printing locally.
- Use PROMPT Word Processing to send a document electronically to all or selected AR or AP accounts.
- Direct PROMPT documents to print to an ASCII Text file.
- Print documents from PROMPT on laser or ink jet printers that support PCL (Printer Control Language).

Design approach

The approach used to implement the electronic document printing and ASCII text file generation is to send the output normally printed to a specific printer (actually a dummy printer) named ELECTPRT and all output from this printer is probed for email, fax, print, or creation of an ASCII text file.

In the AR and AP master files the field Salutation has been changed to Doc and the length changed to 35 characters.
Possible entries are **fax.**9-999-999-9999 or for email
www.abusiness@somewhere.com

In Linux we use a software program named HylaFAX to automatically send a fax. Primary documents we expect to be faxed or emailed are PO's, Invoices, Quotes, Price Lists and Statements, but much more is possible.

The approach to electronic reports that become an ASCII text file is to park these files in a directory for later processing as desired.

A new Linux program has been written named **edxdocpb** that will do a file probe of each document printed to ELECTPRT like this:

- It will set in the background running all the time
- It will look at print tasks sent to ELECTPRT for files to be processed
- When it finds a document it will be probed to get this routing information
    - An email address, or fax phone number
    - Recipient's short search name
    - Subject – The reference field for PO's and Invoices
    - Sender – Short search name of sender account
    - Contact – Contact name of recipient

- Using the recipient's name, document number, date & time as the file name, the document will be sent and also written to a fax, email, or reports directory as a "sent" document
- If the doc path starts with **fax.** it will be automatically faxed by HylaFAX.
- If it starts with **www.** it will be automatically emailed by Linux Sendmail.
- Otherwise it will go to the reports directory /edx/edxdocpb/print.

Somewhat technical documentation – but definitely worth reading

A temporary data string is used
A document directed to the printer named **ELECTPRT** by specific programs will have a temporary data string imbedded at the front of the document beginning in character 1 that is 108 characters long. After the string has been probed by the program edxdocpb this data string line is deleted.

The PROMPT programs #BOPENT, #BOPPRT (Sales Order Entry and batch print), #POPENT, #POPOPN (Purchase Order Entry and batch print), #BARSTMT (AR statement print) and #BINCPR (Customer price report) have been modified to automatically create this temporary data string if their print is directed to ELECTPRT.

#PDBW_P (Word Processing) has been modified to allow entry of a new print command @EP that causes the electronic print string to be generated with data from variable fields of the variable file. For example in the "PASTDUES" letter found in the Interim Aging Menu this new command could look like this: @CF(16,AR,1,29,Mid-American, PAST DUE BAL,15). The numbers in the string would be translated to values from the file ARIAGFLE, for example field 16 is the new field DOC holding the electronic address of the customer getting a past due notice.

#PDBGRF, #PDBGRE (Report writer and editor) have been modified to make ELECTPRT output device 4. Reports will have **no** automatic data string created but the user can create a string if desired using the report header specifications and following the string definition defined below.

String definition
The first segment of the data string is 35 characters beginning with either "fax." or "www." , or "prt."(The quotes are not in the string but the period is) followed by a phone number if fax, email address if email. The use of prt. is explained below. If a phone number is used, there may or may not be separators between the numbers, and the remainder of this segment will be blank. This segment of the string is totally under user control as it is the data to be entered in the Customer or Vendor master file in the field previously named salutation (Now Document routing or Doc for short).

Subsystem code. Following the addressing segment of the string the next 2 characters will be a subsystem code of OP or PO or AR or IN, or RP for a report.

Document number. Following the subsystem code will be a document number that will be up to 9 characters long. The characters will always be numbers and the source is: OP or PO use the order number, AR statements and price lists use the customer number

Recipient short name. Next will be the recipient short name of 14 characters and blanks are to be considered as valid characters. This comes from the customer master file or Vendor Master file.

Sender short name. Next will be the sender short name of 14 characters and blanks are to be considered as valid characters. Same as previous but from the record set up for your company in AR or AP or IC. In the case of email the sender is the email address entered in the edxdocpb.sys file

Subject. Next will be a 14 character field of subject and blanks are to be considered valid characters. OP or PO from the reference field, and text of "Price List" for price list and the text "Statement" for statements. If no subject passed the by OP or PO the subject "ELECTRONIC DOC" is used.

Contact name: Last will be the 20 character contact name.

Email message: You enter in edxdocpb.sys an email message for all email documents. We have been using a message like this: If questions about this document call 999-999-9999.

File naming convention
The document file name begins with the subsystem code followed by date and time as in YYYYMMDDHHMMSSMMM followed by a hyphen followed by the nine character document number followed by either the recipient or sender 14 character short name. Since there can be no blanks in a file name, a blank in the text is replaced by an underscore in the file name. Example file names follow:

```
PO20030620180312142-123456789GOOD_VENDOR_O.TXT  (purchase order)
OP20030620180313211-012345678MID-AMERICAN_C.TXT (sales order)
AR20030620180314183-234567890MID-AMERICAN_C.TXT (statement)
IN20030620180315224-012345678GOOD_CUSTOMER.TXT  (price list)
RP20030620180316173-AR_PAYMENTS_AND_ADJUSTMEN.TXT (report)
```

Everything else meaning not fax. or www or prt.
Everything else printed to ELECTPRT with no string will be considered a "report" that means the document is converted to an ASCII text file. To get the file name for a report, the first line will be checked for blanks and if all blanks the program goes to line 2, etc until it finds a line with data. When 1 character of data is

found, it will be used along with the next consecutive 25 characters to create the part of file name beginning with a sub system code RP:

Other issues
We will add six new directories in the Linux server to support this new approach to printing documents. The directory names are in a new directory /edx/edxdocpb, the other new directory names are:
fax
ftp (possible later use)
wwa
www
print

Practical examples of how to use this new capability
Sales Order Processing
Set up a new session control record that prints to ELECTPRT, we suggest using a control code of "EQ" for a Quote, and "EI" for an invoice. A quote or invoice (whatever document(s) is defined in the new session control record to print will be automatically processed using the data in the (old salutation field – now document routing field) in the A/R Customer Master file.

For example if the field is fax.502-695-8129 and you are printing an invoice to ELECTPRT, the invoice will be automatically faxed to 502-695-8129.

If the field is www.garvin@prompt-usa.com and you generate invoice number 12345678 on June 20 at 3:00 PM to Mid-American Control Corp. using ELECTPRT the invoice will be automatically emailed and you will find a file in the directory /usr/edx/edxdocpb/www on the Linux server with the file name:
OP200306201524024-012345678MID-AMERICAN_C.TXT
The file is an exact print image of the document that was automatically emailed.

Purchase Orders
The same approach used for sales orders works for purchase orders too as the purchase order printer is defined in a session control file. However, the document routing data field is found in the AP vendor master file under "P O Information". There is also a document distribution field for the "check" vendor address in the AP master file.

Price Lists (#BINCPR)
A price list is directed to the default printer in the terminal hard copy device unless there is an override printer name found at **PD** option **PC** with the Access Key #BINCPR0. To utilize this new feature you would make an entry in the printer control file at **PD** and **PC** with the access key **#BINCPR0** printer name **ELECTPRT** type **IBM** page length **66**.

A/R Statements
Statements work exactly like Price List explained above except the Access Key to use is **#BARSTM0**. In both the Price List and the Statement the document distribution data (electronic address) comes from the AR master file.

Batch print uses prt.
Don't overlook the power of batch print of sales orders, purchase orders or statements! We have designed the print to ELECTPRT to generate the electronic documents as described above. However, if you enter **prt.** in the document routing field in the A/R Customer Master File or A/P Vendor Master File the document will print on the printer defined in electdoc.sys and the default is ($SYSPRTR). Obviously, this means that when you do a batch print and mail the documents that appear on the system printer, you are done with document distribution, because the system has automatically sent the faxes and emails.

PROMPT Report Writer
We are providing an example of how to get the "electronic string" into report so it will be automatically emailed to a specific email address when the report is printed to ELECTPRT. The example assumes some knowledge of using the report writer editor. The report modified is an actual PROMPT report "AROPNRPT" In addition to adding an electronic address the phone number of the customer (field 8) and electronic address (field 21) of ARCUSFLE were added to this report.

The electronic string was added by inserting new lines at the beginning of the header section as follows:

Pos.	Text	Spacing
1	www.CArvin@Micr	
16	oServeKY.com	
31	AR77777777	
46	7MICROSERVE	
61	PROMPT SYSTEM O	
76	PEN INVOICES	
91		1

When this report is selected from the menu (AR 2, 6) it is automatically sent as an email document to Carvin@MicroServeKY.com

Report to an ASCII Text file
Our new design also allows a printed report to become an ASCII Text file. The way it works is that a report directed to ELECTPRT will appear as a file in the directory /edx/edxdocpb/print with a file name like the examples previously given except beginning with RP like this example:
RP20030620031819345-AR_PAYMENTS_AND_ADJUSTME.TXT

Files in this directory can be transferred to a Windows desktop PC using File Transfer Protocol (FTP) We have been testing this feature using File Zilla that is a free ftp program available on the Internet. Do you see the power of this? For example, you could transfer data from a PROMPT file to be automatically loaded into an Excel spread sheet.

An extreme implementation is that you could direct all reports to ELECTPRT to be selectively sent to desktop PC's in your local area network for view or printing that would include scroll up and down capability, then the report could remain on file in this electronic file cabinet until purged. You would never have to file another paper report again! It is theoretically possible to never print to a local printer attached to the PROMPT server!

PROMPT Word Processing – a mass (electronic) mailing tool
We have revived the PROMPT Word Processor editor located at option 1 on the Marketing and Word Processing menu option MK, to enter and edit word processing documents only on the master terminal of the server.
There are at least two primary uses for the word processor with electronic document distribution. First on the AR Interim Aging Menu, option 4, the Word Processing document "pastdues" has been modified to run using ELECTPRT. This means automatic fax or email to past due accounts set up with fax. or www. in their customer master file, and if prt. past due letters will print on $SYSPRTR.

Second is the ability to communicate with your customer or prospect base via email or fax for prospecting, sending notices to selected or all accounts, or whatever meets your business needs. We have prepared a sample word processing document "mass" that can be used as a starting document.

The bottom line is the ability to send an electronic document to all or selected customers, prospects or vendors, not to mention collection efforts make it worth the trouble of learning how to use our unique word processor. You enter or edit one document that interacts with selected PROMPT data files allowing the document distribution to be based on selected data from the file, and you can even vary the paragraph in the document based on data from the PROMPT file. That is the purpose of the PROMPT Word Processor as opposed to typing a simple letter sent to only one person.

Print documents from PROMPT on laser or ink jet printers that support PCL
We are not dropping support for the Okidata printers but simply creating the possibility of using laser or ink jet printers with PROMPT. We have chosen the HP Laser Jet 2300 L printer as our standard laser printer and implemented the ability of printing laser checks from one tray and other documents from the other tray.

In our new release the Printer Control File found at **PD** and **PC** has a new field on the right of the screen headed “HP Printer PCL Control Codes”. We have provided below an example of the setup used during our testing of these new features where the HP 2300 L was installed as PRINTER4 and attached to a Windows desktop PC in our LAN.

Access Key	Printer Name	Form Type	Page Length	HP Printer PCL Control Codes
#BAPAGE0	PRINTER4	IBM	66	27 “&l1H” 27 “(s17H”
#BAPENTD	PRINTER4	IBM	66	27 “&l1H” 27 “(s17H”
#BAPAGEQ	PRINTER4	LDS	59	27 “&l4H” 27 “(s12H”
#BARSTM0	PRINTER4	IBM	66	27 “&l1H” 27 “(s12H”
#BGLAPA0	PRINTER4	IBM	66	27 “&l1H” 27 “(s17H”
#BGLFSX0	PRINTER4	IBM	66	27 “&l1H” 27 “(s17H”
#BGLJEM0	PRINTER4	IBM	66	27 “&l1H” 27 “(s17H”
#BINCPR0	PRINTER4	IBM	66	27 “&l1H” 27 “(s17H”
#BOPBAT0	PRINTER4	IBM	66	27 “&l1H” 27 “(s17H”
#BOPBIU0	PRINTER4	IBM	66	27 “&l1H” 27 “(s17H”
#BOPEOD	PRINTER4	IBM	66	27 “&l1H” 27 “(s17H”
#BOPSAR0	PRINTER4	IBM	66	27 “&l1H” 27 “(s17H”
#BPRCAL0	PRINTER4	IBM	66	27 “&l1H” 27 “(s17H”
#BPRPRT0	PRINTER4	LDS	59	27 “&l4H” 27 “(s12H”
#PBSCFP0	PRINTER4	IBM	66	27 “&l1H” 27 “(s17H”
#PDBGRF0	PRINTER4	IBM	66	27 “&l1H” 27 “(s17H”
#PDBGRF1	LINEPRTR	IBM	66	
#APSTUBPR	PRINTER4	IBM	66	27 “&l1H” 27 “(s17H”

It is important to understand the difference between the implementation of specific programs verses the Report Writer (#PDBGRF). A specific program, for example #BPRPRT0 prints Payroll Checks to a specific printer, therefore there will be only one entry for this program in the printer control file. However, the Report Writer might print to any printer and if directed to a printer NOT in the Printer Control file it will print like it did before this upgrade. However, if the printer that the Report Writer is directed to IS in the printer control file it can have PCL codes passed to determine the tray, if applicable, and the print size. For example, the control code 27 “&l4H” feeds from tray 1, 27 “&l1H” feeds from tray 2 and 27 “&l5H” feeds from tray 3. The font size control code 27 “(s12H” is equivalent to the Okidata 12 CPI and 27 “(s17H” is equivalent to the Okidata 17 CPI.

Settings on the panel of the HP 2300 L must be modified in “Configure Device”, go down to “System Setup” and on “Tray” set to use “Requested Exclusively” and in “PCL” set “Forms Length” to 66.

Really technical Information

The program edxdocpb resides in /edx/bin and has a control file edxdocpb.sys that resides in /edx/ plus a log file edxdocpd.log residing also in /edx.

The control file edxdocpb.sys holds the following information:

- Log file destination directory
- fax report destination directory and program parameters
- email report destination directory and program parameters
- ftp report destination directory
- Command line substitutions that are:
  - %a – address
  - %c – subsystem code
  - %d – doc number
  - %r – recipient
  - %s – sender
  - %u – subject
  - %n - contact
  - %p – path name of report file
- Remember to use quotes (‘’’ or ‘’) around parameters that may contain spaces

Implementation is accomplished by creating the printer ELECTPRT in the sysgen and create a printer entry in termxref.sys like shown below:

ELECTPRT | /edx/bin/edxdocpb:

Printing from PROMPT to a printer attached to a PC in a LAN

The printer has to be defined in PROMPT in /edx/termxref.sys such as this example:

PRINTER4 | lp - Phplj:

Next an entry must be made in the Linux spooler such as this example:

Queue	Type	Details
hplj	LPD	hpmary@192.168.1.50

Finally, the actual printer must be attached to a PC in the LAN with the PC having the IP address 192.168.1.50 The printer is installed in the normal manner on this PC using Windows. Alphacom (the terminal emulation package we use with Linux) must be installed on this PC and the printer setup configured in Alphacom to point to the HP laser printer spooler and the printer name to be used by Alphacom must be hpmary.

Why are these new features only available under Linux, Version 9?
The Linux Operating System is rapidly replacing the Unix Operating system. PROMPT under Linux is different than PROMPT under UNIX because we support local and wide area networking under Linux. Linux is the future and will be around for a long, long time because it is a free public operating system and has the strong support of IBM, HP and many other large companies because a private company does not control it.

In Version 9 of Linux, Red Hat implemented a completely new version of the spooler called “CUPS” with very powerful printing capabilities. To take advantage of these features Linux, version 9 must be the Operating System installed on your PROMPT Server.

End of document