VSE2PDF

VSE2PDF/DJDE

VSE2PDF/Secure

VSE2PS/ESP

Reference Guide

Version 4.3.0

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Preface

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Sales and Technical Support

The following agent distributes VSE2PDF. They also provide initial Technical Support to their customers:

Barnard Software, Inc.
806 Silk Oak Terrace
Lake Mary, FL 32746

Phone: 1-407-323-4773
Fax: 1-407-323-4775
Support: bsiopti@bsiopti.com
Sales: bsisales@bsiopti.com
(Support hours: 9:00 a.m. through 5:00 p.m. Eastern Time, Monday though Friday)

Please contact your agent of sale for technical support. If a TSR (Technical Support Representative) is not available at the time of your call, please leave a message and a TSR will return your call as soon as possible. Please provide the following information: name, company, phone number, product name, product release level, and a short description of the problem.

Previous customers of Data21 should contact Thigpen Enterprises for customer support:

Thigpen Enterprises, Inc.
102 Brandiwood Court
DeBary, FL 32713

Phone: 1-386-668-1844
Support: support@vse2pdf.com
(Support hours: 9:00 a.m. through 5:00 p.m. Eastern Time, Monday though Friday)

NOTICE!

When VSE2PDF is about to expire or an invalid password has been used, an e-mail notification is automatically sent to your VSE2PDF support center. ALL information sent is logged to SYSLST. NO confidential information is sent. Message TEIP3435I will be issued to the console whenever this occurs.
This information is sent so as to better serve the customer. Our support center will then contact the appropriate customer contact so that no unexpected downtime is incurred because of a failure to notice that VSE2PDF is about to expire.
An email message is also sent the second day of each quarter (January, April, July, and October) to let us know which release you are using. We use this information to inform customers if a specific release of VSE2PDF is about to go off of support due to age.

Chapter 1

Overview

VSE2PDF runs as an External Device Driver Subsystem to POWER. POWER treats VSE2PDF in a manner similar to how it treats a real device. PSTART, PSTOP, and other POWER commands have formats to support external device driver subsystems. VSE2PDF runs in a static or dynamic partition and communicates with POWER using XPCC rules. VSE2PDF communicates with TCP/IP for VSE via Assembler calls native to TCP/IP for VSE. VSE2PDF utilizes standard Internet protocols to connect to a local SMTP server that will in turn accept the message and forward it to the recipient as soon as possible. When using a FTP destination, VSE2PDF will utilize standard Internet protocols to connect and deliver the output. VSE2PDF can optionally deliver output to a local VSE Library. Additionally, PDF output can be sent directly to printers using either LPR or Direct Port protocols.

Push Mode - Email

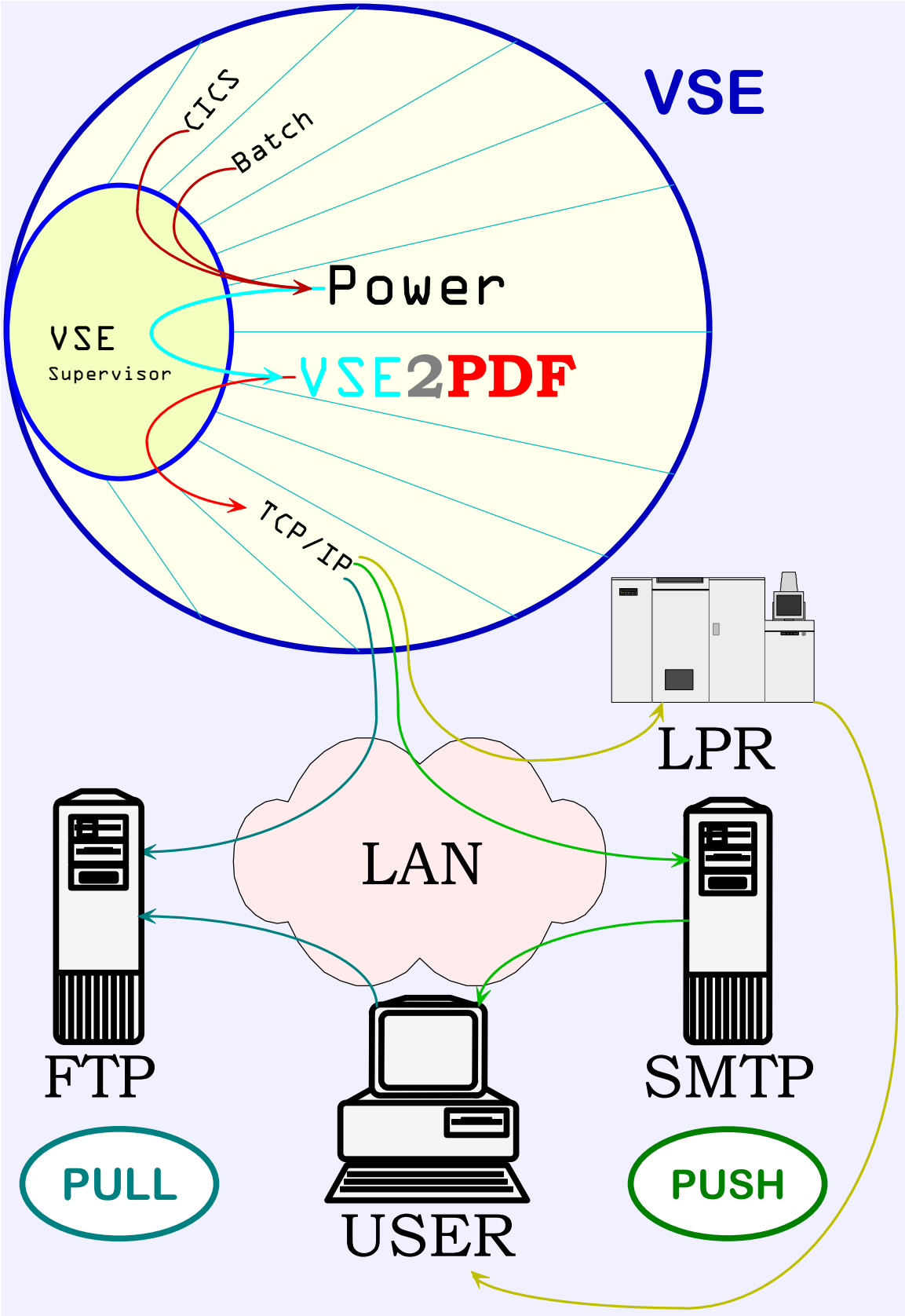
When running in "Push Mode", all actions are performed to deliver the report to the user's PC. The only requirement of the user is to open his e-mail and attachment. Delivery is automated via E-Mail.

Push Mode – LPR

When using LPR as the delivery protocol, the report is automatically 'pushed' to the printer. Human intervention is required to transport the report from the printer to the user. To print overlays, the printer must support the PDF datastream unless an intermediate server is used to convert the PDF datastream to a format compatible with the printer.

Pull Mode - FTP

When running in "Pull Mode", some actions are required to be performed by the user to access the report. Normally this requires the user to use an FTP client to retrieve the report from an FTP server.



Chapter 2

Installation

System Requirements

Operating Systems

- VSE/ESA 1.4 or higher

TCP/IP

One of the following:

- Barnard Systems, Inc. (BSI) TCP/IP Tools TCP/IP Stack option
- Connectivity Systems, Inc. (CSI) TCP/IP for VSE
- IBM TCP/IP for VSE Base Pack

System GETVIS

VSE2PDF does not directly use VSE system GETVIS. However, when VSE2PDF is used with either the CSI or IBM TCP/IP for VSE product, the assembler socket interface may require up to 64K of 24-bit system GETVIS to process each socket request. The system GETVIS is released when the socket request has been processed. When VSE2PDF is used with the BSI TCP/IP product, there is no use of system GETVIS.

Partition Execution

VSE2PDF can run in any partition, including dynamic partitions.

Virtual Partition Size

The minimum size of the VSE2PDF partition is 8MB.

Installation Steps

1. Run job stream VSE2PDF. This job will prompt for a library/sublibrary that is to be used for the installation. The library and sublibrary must exist prior to running the job.
2. For initial installation verification, no changes are required to POWER and an IPL is not required.
3. Punch out the PDF.Z sample JCL from the installation library. This will start VSE2PDF. Modify the JCL as required for your site standards.
4. Update the execution parameters as required for your site. See the section titled Startup Parameters: Initial Testing in this chapter.
5. Punch out the PDFV.Z sample JCL. This will verify the installation of VSE2PDF. Modify the JCL as required for your site standards.
6. Run job PDF.
7. Issue the following POWER command to start VSE2PDF:
   PSTART DEV,EMAIL,TEI,A
8. Run job PDFV.
9. The output of job PDFV should arrive at the E-Mail address specified in the startup options for job PDF.
10. Issue the following POWER command to stop VSE2PDF:
    PSTOP DEV,EMAIL,PARM='SHUTDOWN'
11. Make production changes to the PDF.Z sample JCL procedure as described in the section titled Startup Parameters: Production Settings in this manual.
12. Make production changes to your POWER startup procedure as described in the section titled POWER Setup.
13. Verify that your TCP/IP configuration includes a DNS1 address setting.

Startup Parameters: Initial Testing

PASSWORD	Contact your sales representative for a password. Enter exactly as documented.
SMTP_HOST	This value is the address of the local SMTP host.
SMTP_HOST_PORT	This is the destination port for the local SMTP host. The default value if not specified is '0025' (the internet standard port for SMTP connections).
EMAIL_ADDR_DEFAULT	This is the E-Mail address that will receive all reports created by the VSE2PDF processes if no E-Mail destination is included on the POWER * $$ LST JECL card. During the installation verification procedure, code the address of the person who is to receive the verification output. An example would be: 'JohnSmith@xxxx.com'.
FROM_DOMAIN	This is the Internet domain name used by VSE2PDF when it logs into the SMTP server. Should be specified as a domain address such as: 'xxxx.com'.
FAKE_FROM_ADDRESS	This is the Internet name that will be used as the 'FROM:' address for the generated E-Mail containing the report. This account will receive all 'Undeliverable' messages. This should be a real E-Mail account such as: 'HELPDESK@xxxx.com'.
EMAIL_LOGGING	This can be set to either 'YES' or 'NO'. When set to 'YES', the control data sent and received from the SMTP server is printed out on SYSLST for debugging purposes. During initial testing, this is very helpful in determining setup errors.

Startup Parameters: Production Settings

All startup parameters can also be entered either via SYSIPT JCL or via the VSE console MSG interface except for 'PASSWORD'. When entered via SYSIPT, only positions 1-72 are used. If position 1 contains an '*', the card is ignored. The input format for SYSIPT is:

Keyword = value (the spaces around the '=' are optional)

The input format for the VSE console MSG interface is:

MSG xx,DATA=keyword=value

Parameter Syntax

Parameters must follow POWER coding methods. If more than one sub-parameter exists, then they must be separated by commas and enclosed within parentheses. If the value of any parameter contains a space or comma, then the parameter must be enclosed in single quotes. If a single quote mark is part of the parameter, then use 2 single quotes. The system will convert the two single quotes into one single quote. Text values can be also be set to "nothing" by using the special value "NULL".

```
COMPANY_NAME='ACME, INC.'
COMPANY_NAME='Jones'' Warehouse'
PDFFONT=(01,TIMESROM,TimesRoman)
NULL_FILE_PRINT_LINE=NULL
```

Required Options

PASSWORD

Each year you will be issued a product password. Enter it exactly as documented.

COMPANY_NAME

Enter your site name. The field may contain spaces if incased in single quote marks. The field size is 60 characters

DOMAIN_DEFAULT

Used when a domain is not provided in the MAILTO, MAILFROM, READTO, and RECVTO directives. The use of a domain within the e-mail address is determined by the presence of the '@' somewhere within the address. The field size is 60 characters.

Normal Options

AUTHOR_DEFAULT

Used when the AUTHOR directive is not provided. The default is '&JNAME. &JNBR.'. The field may contain spaces if incased in single quote marks. The field size is 60 characters.

BUFFER_SIZE

This option allocates additional 64K for each work buffer. Larger buffers should only be needed if using overlays that are over 48k (49152) bytes or when creating very large PDF files. There are actually up to fourteen buffers affected, so each increase of BUFFER_SIZE by 1 could equate to an additional 672K of storage needed to run VSE2PDF. The minimum number of buffers that will be allocated is six. Up to eight additional buffers will be allocated as needed to store overlays. This affects the partition size. One buffer will be allocated in 24bit storage. (VSE LIBR access routines require a buffer in 24bit storage.) All other buffers can reside in the 31bit area. This command cannot be issued while the printer device is started to POWER. The default value is '1'. The field size is 4 hex positions.

COLORDEF

Used to define COLORDEFs to the VSE2PDF system. There are two subparameters, the library.sublibrary location of the colordef member (optional), and the colordef member name. Set as follows: COLORDEF=(library.sublibrary,name.type). For example: COLORDEF=(OEMLIB.PDF23,OURSETS.L). More information can be found under the subject "Colordef Processing".

COMPRESS_PDF

This option controls how a PDF file is internally compressed. If set to YES, internal compression will be used. Can be set to YES (default) or NO.

DDS_COPIES

If set to NO (default), only one copy is created for each report. The end user is expected to print the number of copies needed. If set to YES, the number of copies indicated by the POWER LST JECL statement will be honored. Each copy will be a separate file.

DEST_DIRECT

Indicates the actual destination used on the LST card that should equate to the DIRECT destination. The default value is 'DIRECT'. The field size is 8 characters.

DEST_EMAIL

Indicates the actual destination used on the LST card that should equate to the E-Mail destination. The default value is 'EMAIL'. The field size is 8 characters.

DEST_ELIST

Indicates the actual destination used on the LST card that should equate to the E-Mail Address List destination. The default value is 'ELIST'. The field size is 8 characters.

DEST_FTP

Indicates the actual destination used on the LST card that should equate to the FTP destination. The default value is 'FTP'. The field size is 8 characters.

DEST_LIBR

Indicates the actual destination used on the LST card that should equate to the VSE Library destination. The default value is 'LIBR'. The field size is 8 characters.

DEST_LOOPBACK

Indicates the actual destination used on the LST card that should equate to the LOOPBACK destination. The default value is 'LOOPBACK'. The field size is 8 characters.

DEST_LPR

Indicates the actual destination used on the LST card that should equate to the LPR destination. The default value is 'LPR'. The field size is 8 characters.

DEST_USER

Indicates the actual destination used on the LST card that should equate to the USER destination. The default value is 'USER'. The field size is 8 characters.

DIRECT_ADDR_DEFAULT

Used when the IPADDR directive is not provided and the destination is DIRECT. The expected format of this field will be: 1) a DNS resolvable name, or 2) an IP 4 point address. The field size is 60 characters.

DIRECT_PORT_DEFAULT

The default DIRECT port number on the printer. The default is '9100'. The field size is 4 numeric characters.

DMF_SID

If using SYSOPT_SMF=YES to log SMF records to the DMF, this option MUST be set to the same value as the SID= value used to generate the DFHDMFxx control phase.

ELIST_MEMBER_DEFAULT

Used when the MAILTO directive is not provided and the destination is ELIST. The field size is 17 characters.

ELIST_MEMBER_TYPE

Used as the VSE Library member type when none is provided for ELIST members. The default is 'ELIST'. The field size is 8 characters.

ENCRYPT_PDF

This option controls wither or not all PDF files created are encrypted. If set to YES, then all PDF files will be encrypted. Can be set to YES or NO (default). Use of Encryption requires a license to use VSE2PDF/Secure.

EMAIL_ADDR_DEFAULT

Used when the MAILTO directive is not provided and the destination is EMAIL. The field size is 60 characters.

EMAIL_LOGGING

Turning on this option causes VSE2PDF to log all EMAIL command communications to SYSLST. Data sent from VSE2PDF will be prefixed by "L" (local). Data sent to VSE2PDF from the SMTP server will be prefixed with "F" (foreign).

EMAILMSG_DEFAULT

Used when the EMAILMSG directive is not provided. The field size is 17 characters.

EXPIRE_EMAIL_ADDR

When VSE2PDF is about to expire or if an invalid PASSWORD is used, an email will be sent to this address. This is in addition to the email sent to the VSE2PDF support email address. If no address is available, then no email is sent. The default is spaces. The field size is 60 characters.

FAKE_FROM_ADDRESS

This is the Internet name that will be used as the 'FROM:' address for the generated E-mail containing the report. This account will receive all 'Undeliverable' messages. This should be a real E-Mail account such as: 'HELPDESK@xxxx.com'. The field size is 60 characters.

FCB_DEFAULT

The name of the FCB phase to be used for any job that does not specify an FCB. The default value is '$$$$'. The field size is 8 characters.

FCB_PREFIX

This setting indicates the value to use to replace the '$$$$' prefix on device independent FCBs. The field size is 8 characters.

FILENAME_DEFAULT

Used when the second operand of the FILENAME directive is not provided. The default value is 'MAINFRAME.PDF'. The field size is 60 characters.

FILENAME_TEMP

Temporary filename used during FTP transfers when SYSOPT_FTP_PRESERVE is set to 'YES'. The default value is 'VSE2PDF.TMP'. The field size is 60 characters.

FONTDEF

Used to define font definitions to the VSE2PDF system. There are two subparameters, the library.sublibrary location of the fontdef member (optional), and the fontdef member name. Set as follows: FONTDEF=(library.sublibrary,name.type). For example: FONTDEF=(OEMLIB.PDF23,OURSETS.L). More information can be found under the subject "Fontdef Processing".
Caution: The values for the startup options TEXT_FONT, TEXT_FONTSIZE and TEXT_LINESIZE used as defaults during the processing of the FONTDEF startup option. As startup options are processed sequentially, the order of these startup options is significant.

FORMDEF

Used to pre-load FORMDEFs to speed up processing. All related PDFFORMS are also pre-loaded. This option requires additional partition storage. Specify the full FORMDEF name including the two character prefix not specified on a LST card.

FORMDEF_DEFAULT

The name of the FORMDEF to be used for any job that does not specify a FORMDEF. The default value is spaces (no FORMDEF). The field size is 6 characters.

FROM_DOMAIN

This is the Internet domain name used by VSE2PDF when it logs into the SMTP server. Should be specified as a domain address such as: 'xxxx.com'. The field size is 60 characters.

FTP_ADDR_DEFAULT

Used when the IPADDR directive is not provided and the destination is FTP. The expected format of this field will be: 1) a DNS resolvable name, or 2) an IP 4 point address. Unlike the FTP_HOST startup option, this address is resolved via DNS every time it is used. The field size is 60 characters.

FTP_HOST

Used when the IPADDR directive and the FTP_ADDR_DEFAULT startup option both fail to resolve to an IP 4 point address. The value must be in an IP address number format. An example would be 192.1.1.22. VSE2PDF can also accept a value in named format (host.domain:port), but VSE2PDF may be unable to FTP files if the TCP/IP stack partition is either not available or a valid DNS entry cannot be found when this command is processed.

FTP_HOST_PORT

The FTP port number on the FTP host. Normally this would be allowed to default, but some FTP hosts allow for alternate port usage to bypass security rules or file size restrictions. The default is '21'. The field size is 4 numeric characters.

FTP_PASSWORD

The password used to log onto any FTP server that is to receive a file. The field size is 30 characters.

FTP_PATH_DEFAULT

The default path to be used to store FTP transferred output.

FTP_LOGGING

Turning on this option causes VSE2PDF to log all FTP command communications to SYSLST. Data sent from VSE2PDF will be prefixed by “L” (local). Data sent to VSE2PDF from the FTP server will be prefixed with “F” (foreign).

FTP_USER

The user identification used to log onto any FTP server that is to receive a file. The field size is 30 characters.

HOSTIP

HOSTIP=(xxxx)
Defines the VSE2PDF system variable &HOSTNAME. The field size is 15 characters. The normal format for this option would be dotted decimal format (“192.168.001.034”), but the value is not edited so any data could be entered into this field and used for the VSE2PDF system variable.
Note: VSE2PDF will automatically change this value based on a GETHOSTNAME call to the TCP/IP stack whenever VSE2PDF evaluates a TCP_SYSID startup value.

HOSTNAME

HOSTNAME=(xxxx)
Defines the VSE2PDF system variable &HOSTNAME. The field size is 64 characters.
Note: VSE2PDF will automatically change this value based on a GETHOSTNAME call to the TCP/IP stack whenever VSE2PDF evaluates a TCP_SYSID startup value.

HTML_AS_IS

When set to “YES”, VSE2PDF will not attempt to format HTML output. The data will be sent without any additional HTML tags. The default is ‘NO’. Valid settings are ‘YES’ or ‘NO’.

H2OMARK_DEFAULT

The default watermark. The field size is 30 characters.

H2O_FONT

The default font for any watermark text. The default is “BF01”. The field size is 8 characters. Additional information on fonts can be found in the PAGEDEF section of this manual.

H2O_FONTSIZE

The default font size for any watermark text. The default is 180.000. Must be positive and may contain decimal points but has a field size limit equivalent to 9(4)V9(3). Additional information on fonts can be found in the PAGEDEF section of this manual.

H2O_PLACE_X

The default X coordinate location for any watermark text. The default is 108.000. Must be positive and may contain decimal points but has a field size limit equivalent to 9(6)V9(3). Additional information on line placement can be found in the PAGEDEF section of this manual.

H2O_PLACE_Y

The default X coordinate location for any watermark text. The default is 108.000. Must be positive and may contain decimal points but has a field size limit equivalent to 9(6)V9(3). Additional information on line placement can be found in the PAGEDEF section of this manual.

H2O_RENDER

The default text rendering mode for any watermark text. The default is '2'. The field size is 1 character. Additional information on character settings can be found in the PAGEDEF section of this manual.

H2O_ROTATE

The default text rotation angle for any watermark text. The default is 45. The field size is 3 characters. The value must be between 0 and 360. Additional information on line placement can be found in the PAGEDEF section of this manual.

H2O_SKEW_A

The default á skew angle for any watermark text. The defaults is 0. The field size is 2 characters. The value must be between 0 and 84. Additional information on line placement can be found in the PAGEDEF section of this manual.

H2O_SKEW_B

The default â skew angle for any watermark text. The defaults is 35. The field size is 2 characters. The value must be between 0 and 84. Additional information on line placement can be found in the PAGEDEF section of this manual.

JSEPDEF

Used to pre-load JSEPDEFs to speed up processing. This option requires addition amounts of partition storage.

JSEPDEF_DEFAULT

Used when the JSEPDEF directive is not provided. The default is spaces (no JSEPDEF). The field size is 8 characters.

JSEPLOC_END

Used to set the value of the text string to be used when the variable &JSEPLOC is used at the start of a report. The default is `' END '`. The field size is 8 characters.

JSEPLOC_START

Used to set the value of the text string to be used when the variable &JSEPLOC is used at the end of a report. The default is `' START '`. The field size is 8 characters.

LIBR_DEFAULT

Used when the first operand of the FILENAME directive is not provided when destination is LIBR. Required when using destinations LPR and DIRECT as a location to store the output file prior to transmission. The field size is 17 characters.

LIBR_MEMBER_TYPE

Used as the VSE Library member type when none is provided for FORMDEF, PAGEDEF and STOCKDEF members. The default is 'T'. The field size is 8 characters.

LPR_HOSTNAME

Used by LPR to designate where the print job originated. The default is 'VSE2PDF'. The field size is 31 characters.

MAX_PAGES

This option controls the segmentation of reports. If a report exceeds this value, VSE2PDF will force a new report segment, and a new e-mail. This option also controls the allocation of some internal work areas. Each page requires 44 bytes. This affects the partition size. All work areas area allocated in 31bit storage. This command cannot be issued while the printer device is started to POWER. The default value is '5000'. The field size is 8 positions.

MESSAGE_OPTION

Used to modify the message displays for the VSE2PDF system. There are three subparameters, the message number, the display location ('C' for console, 'L' for listing), and a option flag (values 'Y' to display, 'N' to not display or 'S' to display a 'sticky' console message that will not roll off the console display). Set as follows: MESSAGE_OPTION=(message_number,display_location,flag). For example:
MESSAGE_OPTION=(0024,C,N) will suppress the displaying of message TEIP0024I on the console.
MESSAGE_OPTION=(1030,C,Y) will cause message TEIP1030I to always display on the console.
MESSAGE_OPTION=(0110,C,S) will cause message TEIP0110I to always display on the console until deleted by the operator.

NOTIFY_DEFAULT

Used when the NOTIFY directive is not provided. If a value is entered, all output would force the creation of an e-mail notification. Use with care. The field size is 60 characters.

NULL_FILE_PRINT_LINE

When an empty LST queue entry is processed, this text is inserted as a print line so that a valid PDF file is created and transmitted. This is so the receiver knows the job was run but just created no valid output. If set to spaces, no output file will be created or transmitted. The default is "No output to display." The field size is 40 characters.

PAGE_LOGGING

Turning on this option causes VSE2PDF to log the page contents to SYSLST. This can be helpful when debugging scripts based on page data.

PAGEDEF

Used to pre-load PAGEDEFs to speed up processing. All related COLORDEFs, FONTDEFs, and FCBs are also pre-loaded. This option requires additional partition storage. Specify the full PAGEDEF name including the two character prefix not specified on a LST card.

PAGEDEF_DEFAULT

The name of the PAGEDEF to be used for any job that does not specify a PAGEDEF. The default value is spaces (no PAGEDEF). The field size is 6 characters.

PDFFONT

Used to add user fonts to the VSE2PDF system. There are two subparameters, the font name as stored in a VSE LIBR member, and an optional long name (maximum of 30 characters). Set as follows: PDFFONT=(font_name,long_name). For example: PDFFONT=(TIMESROM,TimesRoman). The font_name field must be used in any scripts that specify a FONT= value. More information can be found under the subject "User Defined Fonts".

PDFFORM

Used to pre-load PDFFORMs to speed up processing. This option requires EXTENSIVE amounts of additional partition storage.

PDFOPT_FIT_WINDOW

Normally, PDF files created by VSE2PDF will open to the user's default PDF window settings. The default setting for Adobe PDF reader is to not display the full page, but default to either the report page width or report page height. If this option is set to 'YES', then the PDF files generated by VSE2PDF will always open in a 'FIT WINDOW' size. This ensures that the full page is visible to the user, but on some reports, this may force the font to be too small to read.

PDFSEC_DEFAULT

The user password use for any PDF report job that does not specify a PDFSEC directive. This is the password required to open a PDF report. If you set this value, then ALL PDF files will have a read password. The field size is 32 characters. Use of encryption requires a license to use VSE2PDF/Secure. This directive is ignored if VSE2PDF/Secure is not licensed.

PRTQUEUE_DEFAULT

Used when the PRTQUEUE directive is not provided for a report going to an LPR destination. The default is "raw". The field size is 60 characters.

PSTART_ALL_DIRECT

Set to YES if you wish the destination DIRECT to be started when the command 'PSTART DEV,ALL,TEI,..' is issued. The default is 'NO'. Valid settings are 'YES' or 'NO'.

PSTART_ALL_ELIST

Set to YES if you wish the destination ELIST to be started when the command 'PSTART DEV,ALL,TEI,..' is issued. The default is 'NO'. Valid settings are 'YES' or 'NO'.

PSTART_ALL_EMAIL

Set to YES if you wish the destination EMAIL to be started when the command 'PSTART DEV,ALL,TEI,..' is issued. The default is 'NO'. Valid settings are 'YES' or 'NO'.

PSTART_ALL_FTP

Set to YES if you wish the destination FTP to be started when the command 'PSTART DEV,ALL,TEI,..' is issued. The default is 'NO'. Valid settings are 'YES' or 'NO'.

PSTART_ALL_LIBR

Set to YES if you wish the destination LIBR to be started when the command 'PSTART DEV,ALL,TEI,..' is issued. The default is 'NO'. Valid settings are 'YES' or 'NO'.

PSTART_ALL_LOOPBACK

Set to YES if you wish the destination LOOPBACK to be started when the command 'PSTART DEV,ALL,TEI,..' is issued. The default is 'NO'. Valid settings are 'YES' or 'NO'.

PSTART_ALL_LPR

Set to YES if you wish the destination LPR to be started when the command 'PSTART DEV,ALL,TEI,..' is issued. The default is 'NO'. Valid settings are 'YES' or 'NO'.

PSTART_ALL_USER

Set to YES if you wish the destination USER to be started when the command 'PSTART DEV,ALL,TEI,..' is issued. The default is 'NO'. Valid settings are 'YES' or 'NO'.

SCRIPT_DEFAULT

Used when the first operand of the SCRIPT directive is not provided. The field size is 17 characters.

SCRIPT_MEMBER_TYPE

Used as the VSE Library member type when none is provided for SCRIPT members. The default is 'T'. The field size is 8 characters.

SETUP_DEFAULT

Used when the second operand of the SETUP directive is not provided. The field size is 17 characters.

SHUTDOWN_VERB

Use to add an additional shutdown verb to the system. The default value is 'SHUTDOWN'. Please note that setting this to spaces will result in VSE2PDF doing a shutdown if a null input is entered in response to a VSE console message prompt. The field size is 8 characters.

SMF_TYPE

The record type to be used when creating SMF records (see SYSOPT_SMF). This number must be in the range between 128 and 255. The default is 223.

SMTP_HOST

The IP address of the local SMTP host. The value must be in an IP address number format. An example would be 192.1.1.22. VSE2PDF can accept a value in named format (host.domain:port), but VSE2PDF will be unable to send mail if the TCP/IP stack partition is either not available or a valid DNS entry cannot be found when this command is processed.

SMTP_HOST_PORT

The SMTP port number on the SMTP host. Normally this would be allowed to default, but some SMTP hosts allow for alternate port usage to bypass the overhead of virus, size, and content checking. The default is '25'. The field size is 4 numeric positions.

SMTP_PASSWORD

The password used to log into the SMTP server specified in the SMTP_HOST setting. This option is used in conjunction with SMTP_USER option. See SMTP_USER for more details. The field size is 30 characters.

SMTP_USER

The user identification used to log into the SMTP server specified in the SMTP_HOST setting. This option is used in conjunction with the SMTP_PASSWORD option. If SMTP_USER is specified, all outgoing mail is routed via the SMTP server set by the SMTP_HOST setting. This forces the SYSOPT_FORCE_RELAY option to 'YES'. For the logon to occur, the SMTP server must allow "authentication" via the ESMTP command 'AUTH'. "Relaying Prohibited" messages may result when the server either rejects either the ESMTP hello command 'EHLO', rejects the authentication command 'AUTH LOGIN', or the login fails due to a userid or password failure. Even when a logon failure occurs, VSE2PDF will attempt to send the report as local emails are still accepted by SMTP servers without a login. The field size is 30 characters.

STOCKDEF

Used to pre-load STOCKDEFs to speed up processing. This option requires addition amounts of partition storage.

STOCKDEF_DEFAULT

Used when the STOCKDEF directive is not provided. The default is spaces (no STOCKDEF). The field size is 8 characters.

SUBJECT_DEFAULT

Used when the SUBJECT directive is not provided. The default is spaces. The field may contain spaces if incased in single quote marks. The field size is 60 characters.

SYSLST_CMD_LENGTH

The length of SYSLST_CMD_PREFIX . This number must be in the range between 1 and 8. The default is 6.

SYSLST_CMD_PREFIX

VSE2PDF directives can be within the body of the report. To be recognized, the print line must start with the contents of this setting. The default is '<TEI> ' (note the blank at the end). The actual compare length is determined by the SYSLST_CMD_LENGTH setting. The field size is 8 characters.

SYSLST_DJDE_LENGTH

The length of SYSLST_DJDE_PREFIX. This number must be in the range between 1 and 8. The default is 6.

SYSLST_DJDE_PREFIX

With the VSE2PDF/DJDE feature, Xerox style DJDE directives can be within the body of the report. To be recognized, the print line must start with the contents of this setting. The default is '$$DJDE ' (note the blank at the end). The actual compare length is determined by the SYSLST_DJDE_LENGTH setting. The field size is 8 characters. Conversion of Xerox style DJDE directives requires a license to use VSE2PDF/DJDE. If VSE2PDF/DJDE is not licensed, the DJDE statements will be printed as normal data.

SYSLST_START_LENGTH

The length of SYSLST_START_PREFIX. This number must be in the range between 1 and 8. The default is 6.

SYSLST_START_PREFIX

With the VSE2PDF/DJDE feature, Xerox style START directives can be within the body of the report. To be recognized, the print line must start with the contents of this setting. The default is '$$START ' (note the blank at the end). The actual compare length is determined by the SYSLST_START_LENGTH setting. The field size is 8 characters. Conversion of Xerox style START directives requires a license to use VSE2PDF/DJDE. If VSE2PDF/DJDE is not licensed, the START statements will be printed as normal data.

SYSOPT_ACCOUNTING

VSE2PDF can optionally create accounting records in the Power Job Accounting File. Normally off, this startup option will enable this function.

SYSOPT_AUTOLOAD_KEEP

When VSE2PDF processes a job that loads a STOCKDEF, PAGEDEF, FORMDEF, COLORDEF, FCB, or PDFFORM, the storage for the information retrieved is released once the current LST member being processed is closed. By setting this option to 'YES', the storage will NOT be released and the information will be used as needed on later LST queue entries. This will speed up processing but will require more storage. The default is 'NO'. Valid settings are 'YES' or 'NO'
CAUTION: This option will require a MUCH larger partition. If partition storage is exhausted, VSE2PDF will terminate. Also, with this option enabled, VSE2PDF will NOT see revised members without either 1) recycling VSE2PDF, or 2) setting this option off and processing at least one LST queue entry.

SYSOPT_BANNERS

When printing to LPR printers, instruct the printer to print a banner page. The printer, not VSE2PDF, determines the layout of the banner page. The "User" printed is a text string containing: Power Job Name (8 positions), Power Job Number (5), Power Job Segment Number (3), Power Job Date (ccyymmdd), Power Job Time (hhmmss). Due to the LPR length limit of 31 positions, the data is not formatted, but is a continuous group of characters.

SYSOPT_FCB_AS_IS

FCB phases generated for line-mode printers generally have the channel 01 set to several lines from the actual "top-of-form" to create a border above the print area. With VSE2PDF, this border is defined using PAGEDEF settings. To prevent "double borders", VSE2PDF will locate the channel 01 indicator within the FCB and will use that location as the start of the FCB. This will shift all channel commands up by the same number of lines to retain the same relative spacing between channel commands. If this processing is not wanted, then set this option to 'YES'. The default is 'NO'. Valid settings are 'YES' or 'NO'.

SYSOPT_FTP_PRESERVE

When doing an FTP transfer, preserve any old file with the same name until the new file transfer is successfully completed. See also FILENAME_TEMP. The default is 'NO'. Valid settings are 'YES' or 'NO'.

SYSOPT_FORCE_RELAY

If no login information for the SMTP server is available (see SMTP_USER and SMTP_PASSWORD) VSE2PDF will normally attempt to contact the domain of the user to receive the report. This helps avoid "Relaying Not Allowed" messages. (The local SMTP server is always used for ELIST E-mails.) This does increase the time needed to send the e-mail. If VSE2PDF cannot contact the remote SMTP server, it will then use the local SMTP server specified in the SMTP_HOST setting. By setting this option to "YES", VSE2PDF will only use the local SMTP server and will not attempt to contact the receivers SMTP host. This will make the transfers occur faster. The default is 'NO'. Valid settings are 'YES' or 'NO'.

SYSOPT_INVALIDTOFROM

This option instructs VSE2PDF on how to handle conditions where an email is rejected by the local SMTP server with a "501" (invalid email address) response. Without this option set, the transmission of the email is terminated and the report is left in the LST queue. With this option set, the email is created, but sent to the EMAIFROM (which defaults to the value of the startup option FAKE_FROM_ADDRESS) for manual handling.

SYSOPT_NO_AUTO_ELIST

This option instructs VSE2PDF to not attempt to find an ELIST member when the following conditions exist: 1) DEST=EMAIL and 2) The MAILTO= does not include a domain name. The default is 'NO'. Valid settings are 'YES' or 'NO'.

SYSOPT_NO_TAGLINE

This option causes VSE2PDF to not include the informational tag line in the EMAIL body. The tag line is normally "Output from job…." The default is 'NO'. Valid settings are 'YES' or 'NO'.

SYSOPT_POWER_FIRST

Normally, VSE2PDF will process any directives found in the Script member specified in the 'SCRIPT' POWER directive prior to processing any directives found on the POWER LST card. By setting this option to 'YES', VSE2PDF will process the POWER LST card directives first, then the directives found in the Script file specified by the 'SCRIPT' POWER directive.

SYSOPT_PSF_FNO

This option causes VSE2PDF to use the FNO option of the LST card in a method similar to the way PSF handles the FNO option. The value of FNO is prefixed with 'Z1' and the resulting name is used as the name of a VSE2PDF Script member. This special Script member will only be used if the job does not specify a SCRIPT directive. The default is 'NO'. Valid settings are 'YES' or 'NO'.

SYSOPT_PUN

This option causes VSE2PDF to process the Power PUN queue instead of the default LST queue. The default is 'NO'. Valid settings are 'YES' or 'NO'.

SYSOPT_RESTARTPROMPT

This option causes VSE2PDF to prompt for the restart page number for every LST queue entry processed. The default is 'NO'. Valid settings are 'YES' or 'NO'.

SYSOPT_SCRIPT_OPTION

This option causes VSE2PDF to ignore a "script not found" error when the script name defaulted to the value of SCRIPT_DEFAULT. The default is 'NO'. Valid settings are 'YES' or 'NO'.

SYSOPT_SEND_ERROR_GO

This option causes VSE2PDF to continue processing when a 'permanent' output error occurs. The current LST entry is placed back in the LST queue with DISP=Y and the next available entry is selected. The default is 'NO'. Valid settings are 'YES' or 'NO'.

SYSOPT_SEMICOLON

This option causes VSE2PDF to treat the semicolon character in a directive as if it was coded as a comma. This is required to specify the &PAGEDATA() variable in a Power LST card directive value.

SYSOPT_SMF

This option causes VSE2PDF to create SMF records. This option requires the option DMF_SID also be set. The default is 'NO'. Valid settings are 'YES' or 'NO'.

TCP_SYSID

This value must match the SYSID specified in the TCP/IP for VSE startup member. If TCP_SYSID is set to '??', VSE2PDF will select the TCP/IP partition with the lowest SYSID. The default value is '??'. The field size is 2 numeric characters.

TEXT_FONT

The default font for print characters. The default is "BF01". The field size is 8 characters

TEXT_FONTSIZE

System default font size of the print characters in points. The default is 9. Must be positive and may contain decimal points but has a field size limit equivalent to 9(4)V9(3).

TEXT_FORM_FEED

Set to YES if you wish to have form feeds between pages of a text attachment. The default is 'NO'. Valid settings are 'YES' or 'NO'.

TEXT_LINESIZE

System default line size of the print characters in points. The default is 9. Must be positive and may contain decimal points but has a field size limit equivalent to 9(4)V9(3).

TITLE_DEFAULT

Used when the TITLE directive is not provided. The default is 'Your Requested Report'. The field may contain spaces if incased in single quote marks. The field size is 60 characters.

TRANSLATE_MEMBER

The name of a translate member in a VSE library within the SOURCE search chain. The member type should not be included. VSE2PDF automatically loads IPXLATE.L at startup. IPXLATE.L is provided by TCP/IP for VSE. Specify only the member name. Do not include the member type in this option. This option can be specified multiple times and the table will be appended to any in-core tables already loaded. If a translate table name duplicates an existing table name, the last loaded will be used. The contents of the table member must be in the format compatible with TCP/IP for VSE. DBCS are not supported.

XEROXINDEX_DEFAULT

The default Xerox index to use when the XEROXINDEX byte found in print record is invalid. (An invalid condition exsist when a XEROXINDEX byte indicates the use of an undefined XEROXINDEX.) The value must be between 1 and 255. The default is '1'.

XEROXINDEX_MASK

This setting indicates the number of low order bits of the Xerox style index byte to be used for the index number. The value must be between the range of 1 and 8. The default is '4' (use the last 4 bits).

XLATE_DEFAULT

Default translation table to use for all reports that do not specify a XLATE= directive. The default is 'SYSTEM'. The field size is 16 characters.

@GOODEOJ_DEFAULT

Default console command to be issued once a report is processed completely with no errors. The default is spaces. The field size is 60 characters.

@BADEOJ_DEFAULT

Default console command to be issued once a report is processed incompletely due to no errors. The default is spaces. The field size is 60 characters.

Version 1 Compatibility Options

To provide for compatibility with Version 1 of VSE2PDF, the following options are available. These options are are still accepted, but can be removed at any time.

PSTART_ALL_PDF

Set to YES if you wish the destination PDF to be started when the command 'PSTART DEV,ALL,TEI,..' is issued. Valid settings are 'YES' or 'NO'.

TYPE_DEFAULT

The destination to be used when none is specified in the PDF directive and the destination is PDF. The field size is 8 characters.

V1_OVERLAY

Set to YES if you wish to use the OVERLAY= POWER JECL operand when no PAGEDEF directive is specified. Valid settings are 'YES' or 'NO'

V1_PDF_2

Set to YES if you wish to use the second operand of the PDF= POWER JECL operand as was defined in Version 1 of VSE2PDF and the corresponding Version 2 directive is not specified. Depending on the destination, this field will be used for MAILTO (EMAIL/ELIST) directive or the first parameter of the FILENAME (FTP) directive. Valid settings are 'YES' or 'NO'.

V1_PDF_3

Set to YES if you wish to use the third operand of the PDF= POWER JECL operand as was defined in Version 1 of VSE2PDF and the corresponding Version 2 directive (second parameter of the FILENAME directive) is not specified. Valid settings are 'YES' or 'NO'.

Version 2 Compatibility Options

To provide for compatibility with Version 2 of VSE2PDF, the following options are available. These options are still accepted, but can be removed at any time.

V2_EXTRA_TOP_LINE

Due to an error in earlier versions of VSE2PDF (Version 02.02.00 and earlier), generated PDF files had an extra blank line at the top of each page. Later versions corrected this but caused an incompatibility issue when using overlays. Shops using overlays need to adjust the MATRIX settings for all FORMDEF members. (The LINESIZE setting from the PAGEDEF member needs to be mathematically added to the last field of the MATRIX setting in the FORMDEF member.) This option was created to aid those shops using a multitude of form overlays where changing all the FORMDEF members was not practical. When set to YES, VSE2PDF will adjust the position of the first line to match the output from earlier versions. Valid settings are 'YES' or 'NO'.

Version 3 Compatibility Options

To provide for compatibility with Version 2 of VSE2PDF, the following options are available. These options are expected to be removed in the next full release (Version 5).

V3_DJDE_FORMS

In Version 3, when a DJDE FORMS= value was located in the printout, VSE2PDF used the form name as the overlay name. In Version 4, the form name references a STOCKDEF. Setting this option to YES will force VSE2PDF to use the Version 3 method.

V3_TITLE_AS_SUBJECT

In Version 3 and earlier, the “Subject:” of an E-Mail was filled using the value of the “TITLE=” directive. As of Version 4, the “Subject:” of an E-Mail is filled using the value of the “SUBJECT=” directive. Setting this option to YES will force VSE2PDF to use the Version 3 method.
Note: This only affects the value used for the email “Subject:” value. It does not affect other areas that use the SUBJECT= directive.

Console Commands

The following commands can be entered via the Console Interface.

CANCEL_DIRECT

May be used to force VSE2PDF to stop trying to send a printout to a DIRECT printer when an error exists that can not be corrected. Normally used after message TEIP1307W.

CANCEL_LPR

May be used to force VSE2PDF to stop trying to send a printout to a LPR printer when an error exists that can not be corrected. Normally used after message TEIP1207W.

KILL

Terminates the VSE2PDF partition without performing any cleanup. This command should only be used when all other attempts to shutdown the VSE2PDF partition fail.

SHUTDOWN

Terminates the VSE2PDF partition.

VERSION

Displays the current VSE2PDF version on the console and on SYSLST.

POWER Setup

POWER as delivered from IBM does not allow for any * $$ LST parameters that are large enough to contain E-Mail addresses that are longer than 16 characters. POWER does allow for site-defined parameters by using the 'DEFINE' statement in the POWER startup procedure. (Read the section "DEFINE: Specifying User-Defined Output Operands" in the "VSE/POWER Administration and Operation" manual before continuing.) In addition, IBM has defined cross platform keywords to be used when needed. These can be found in the IBM manual 'Network Job Entry, Formats and Protocols'. VSE2PDF adheres to those standards.VSE2PDF optionally uses several of these NJE keywords. See the POWER JECL section for more information on their use.

VSE2PDF suggested DEFINE statements can be found on the next page. Please add these to your Power startup. VSE2PDF can be used without these defined directives during initial testing by using auto-scripts, but it is recommended that these DEFINE statements be added as soon as possible.

To verify the POWER was started correctly, the actual values used by POWER during startup can be displayed issuing the following POWER command:

PDISPLAY AUSTMT

NOTE:
The setting for PAGEDEF is different from the published NJE standards. VSE2PDF can use up to 8 PAGEDEF sub-fields. All other NJE platforms (JES, RSCS, AS400) will ignore these additional sub-fields and only use the first sub-field. Other VSE software (like PSF) will also ignore the additional sub-fields. (The need for 8 PAGEDEFs was depreciated at VSE2PDF Version 4 due to the new capabilities to reference PAGEDEF names within the USEPAGE= directive. PAGEDEF names used on the USEPAGE= directive can now reference PAGEDEF members not listed in the PAGEDEF directive.)

To use all the capabilities of VSE2PDF, add the following statements to the POWER startup procedure:

```
DEFINE L,FORMDEF,001D,1,6,C
DEFINE L,PAGEDEF,001F,8,6,C
DEFINE L,TITLE,002A,1,60,*
DEFINE L,NOTIFY,002F,1,60,C
DEFINE L,PRTQUEUE,0038,1,127,C
DEFINE L,IPADDR,8005,1,124,*
DEFINE L,SCRIPT,FFDC,2,17,C
DEFINE L,SETUP,FFDB,2,17,C
DEFINE L,SUBJECT,FFDE,1,60,*
DEFINE L,FILENAME,FFDA,4,255,*
DEFINE L,XLATE,FFD9,1,16,*
DEFINE L,MAILTO,FFD8,2,60,*
DEFINE L,READTO,FFD7,1,60,*
DEFINE L,RECVTO,FFD6,1,60,*
DEFINE L,MAILFROM,FFD5,1,60,*
DEFINE L,IPSEC,FFD4,4,30,*
DEFINE L,IPSMTP,FFD3,5,60,*
DEFINE L,EMAILMSG,FFD2,2,17,C
DEFINE L,@GOODEOJ,FFD1,15,60,*
DEFINE L,@BADEOJ,FFD0,15,60,*
DEFINE L,PDFSEC,FFCF,2,32,*
DEFINE L,H2OMARK,FFCE,1,30,*
DEFINE L,AUTHOR,FFCD,1,60,*
DEFINE L,STOCKDEF,FFCC,1,8,C
DEFINE L,JSEPDEF,FFCB,1,8,C
DEFINE L,MAILCC4,FFC4,1,60,*
DEFINE L,MAILCC3,FFC3,1,60,*
DEFINE L,MAILCC2,FFC2,1,60,*
DEFINE L,MAILCC1,FFC1,1,60,*
DEFINE L,MAILBCC4,FFA4,1,60,*
DEFINE L,MAILBCC3,FFA3,1,60,*
DEFINE L,MAILBCC2,FFA2,1,60,*
DEFINE L,MAILBCC1,FFA1,1,60,*
DEFINE L,USER01,FFB1,1,60,*
DEFINE L,USER02,FFB2,1,60,*
DEFINE L,USER03,FFB3,1,60,*
DEFINE L,USER04,FFB4,1,60,*
DEFINE L,USER05,FFB5,1,60,*
DEFINE L,USER06,FFB6,1,60,*
DEFINE L,USER07,FFB7,1,60,*
DEFINE L,USER08,FFB8,1,60,*
DEFINE L,USER09,FFB9,1,60,*
DEFINE L,USER10,FFBA,1,60,*
DEFINE L,USER11,FFBB,1,60,*
DEFINE L,USER12,FFBC,1,60,*
DEFINE L,USER13,FFBD,1,60,*
DEFINE L,USER14,FFBE,1,60,*
DEFINE L,USER15,FFBF,1,60,*
DEFINE L,USER16,FFB0,1,60,*
```

For Version 1 of VSE2PDF compatibility, the following may also be added:

```
DEFINE L,PDF,FFDF,3,70,*      See V1 PDF 2 and V1 PDF 3
DEFINE L,OVERLAY,FFDD,1,8,*   See V1 OVERLAY
```

Cautions

The use of CA-Librarian LAM (Library Access Method) must be disabled for the VSE2PDF partition. CA-Librarian LAM returns values that are in conflict with IBM return code values.

Chapter 3

Operation

Overview

VSE2PDF is written using POWER's 'External Device Support' feature. This method of retrieving POWER output is more efficient than the 'check for output every xx minutes used by some POWER output retrieval products. While VSE2PDF is waiting for output, NO cycles are used by VSE2PDF. As such, VSE2PDF must follow the rules determined by POWER. VSE2PDF runs in a partition of it's own and each external device must be assigned a local destination value in the * $$ LST JECL statement. Although the value of the destination used in the JECL value is site chosen, the destination used in the PSTART command must match one of the internal VSE2PDF destinations. To state it differently, the only destinations allowed in the PSTART command are:

EMAIL
ELIST
FTP
LIBR
LPR
DIRECT
USER
PDF (For Version 1 compatibility)
LOOPBACK (For debugging, use at the direction of support)

Normally, these would match the 'DEST=' JECL operand but by using the VSE2PDF startup options DEST_EMAIL, DEST_ELIST, DEST_FTP, DEST_LIBR, DEST_LPR, DEST_DIRECT, DEST_USER, DEST_PDF, and DEST_LOOPBACK, the POWER 'DEST=' JECL operand could specify an alternative name to be used by VSE2PDF when accessing LST queue entries.

To allow for one partition to handle multiple destinations, the additional PSTART destination of 'ALL' is also available. When it is used, VSE2PDF will check against the startup options PSTART_ALL_EMAIL, PSTART_ALL_ELIST, PSTART_ALL_FTP, PSTART_ALL_LIBR, PSTART_ALL_LPR, PSTART_ALL_DIRECT, PSTART_ALL_USER, PSTART_ALL_PDF, PSTART_ALL_LOOPBACK and determine which destinations to be started. (Note that the default for all the PSTART_ALL_ options is 'NO'). If the PSTART_ALL_ options are left to default, then the 'ALL' destination is treated as an actual destination. Which means that VSE2PDF will only pick up listings that have a 'DEST=(,ALL)' setting.

There is sometimes the need to start multiple copies of VSE2PDF that will service the same destination. To allow for this, VSE2PDF will only look at the first significant letters of the PSTART destination. This will allow you to start device EMAIL1 and EMAIL2 in separate partitions, both of which will service the destination EMAIL. The suffix can be any characters. You could even use the partition ID if that would be helpful to the operators (EMAILF8).

When issuing the PSTART command up to 4 output queue classes can be chosen. VSE2PDF will use any classes given on the PSTART command. A value of 'A' is used by this manual in any examples.

POWER Commands

Starting the Device Driver

The operator notifies POWER of VSE2PDF's existence by using the 'PSTART DEV' command. The following command will connect POWER with VSE2PDF:

PSTART DEV,EMAIL,TEI,A

Stopping the Device Driver

The operator notifies POWER to stop sending output to VSE2PDF using the following PSTOP command:

PSTOP DEV,EMAIL

Or

PSTOP,DEV,EMAIL,FORCE

Or optionally:

PSTOP DEV,EMAIL,PARM='SHUTDOWN'

Which will notify VSE2PDF to go to 'end of job'.

Restarting failed output

In the unusual case that a multi-segment (multiple emails) LST queue entry fails after some emails have already been sent, VSE2PDF provides a method to restart processing the LST queue entry by VSE2PDF. The VSE2PDF option 'SYSOPT_RESTARTPROMPT' should be temporary changed to 'YES'. VSE2PDF will then request the restart page number via the operator's console for every LSG queue entry processed. After the remaining emails are sent, the restart prompt option can be turned off without recycling VSE2PDF.

VSE AR MSG Commands

AR Message Format

All startup parameters can be entered via the VSE AR MSG interface at any time. VSE2PDF allows for the extended version of the VSE AR MSG command:

MSG xx,DATA=yyyyyy

If the DATA= parameter is not specified, VSE2PDF will prompt for commands.

Shutting down VSE2PDF

The VSE2PDF partition can be stopped by using the VSE AR MSG routine:

MSG xx,DATA=SHUTDOWN

VSE2PDF will automatically issue a PSTOP command and will wait until the current output job finishes before going to EOJ. If it is necessary to stop VSE2PDF immediately, the following VSE AR MSG command can be issued:

MSG xx,DATA=KILL

Controlling Output

VSE2PDF uses directives to control the handling of output. These directives can be in the POWER JECL * $$ LST statement, Script files, Setup files, or imbedded within the report. In addition, the site user exit TEIUSER1 can modify the directives prior to the report being generated or at each page break.

Directives within the JECL must follow POWER coding requirements and are limited to only 60 characters. (Note that POWER automatically "uppercases" all JECL information, but some fields (IPSEC, PDFSEC & IPSMTP) have special options for LST card directives to modify the case of individual character postitions of the value.) Directives within the report and Script files are coded one directive per line with the directive syntax being the same as POWER. Script member lines must contain the destination for which the directive applies followed by one or more spaces then the directive. The special destinations of 'ALL' or '*' can be used to indicate that the directive is for all destinations. (Use a space before the '*' in LIBR Script members to prevent the line from being considered a comment line.) For VSE2PDF to recognize an imbedded directive, the first six positions of the print line must match the value for the startup option SYSLST_CMD_PREFIX. The rest of the line must be formatted in the same way as a Script member line. The full directive must be contained within a single line. Script members are parsed by word, not position, so additional spaces may be used to aid readability. The following are sample directives:

JECL Format

```
* $$ LST MAILTO=WILE_E_COYOTE@ACME.COM
```

Script Format

`ALL MAILTO=WILE_E_COYOTE@ACME.COM`	All destinations
`  *  MAILTO=WILE_E_COYOTE@ACME.COM`	All destinations
`EMAIL MAILTO=WILE_E_COYOTE@ACME.COM`	E-mail destinations only

Imbedded format

`<TEI> ALL MAILTO=WILE_E_COYOTE@ACME.COM`	All destinations
`<TEI> * MAILTO=WILE_E_COYOTE@ACME.COM`	All destinations
`<TEI> EMAIL MAILTO=WILE_E_COYOTE@ACME.COM`	E-mail destinations only

Directive Syntax Rules

VSE Power does not allow a LST card directive to be continued. The LST card must be continued just prior to a directive name. Power syntax rules limit Power directives to 60 positions. Since continuation of directives is not allowed, VSE2PDF has included 16 user definable variables that can be used to 'piece together' longer directives.

Script Processing

VSE2PDF processes the following scripts (if found) for every POWER job processed

1. Any Script file referenced by a 'SCRIPT' POWER Directive.
2. Any Script file with a name equal to the POWER job name and a VSE Library type equal to the VSE2PDF startup option 'SCRIPT_MEMBER_TYPE'.
3. Any Script file with a name equal to the POWER job name and a VSE Library type equal to the POWER job number (5 digits, must include leading zeroes).
4. Any Setup file referenced by a 'SETUP' POWER Directive

By creating VSE Librarian Script members with the same name as the POWER job name (with or with out the job number), output processing for existing POWER queue entries can be modified after the job output has been created. When multiple scripts are executed for a single job, any conditional directive tests found in a previously processed script will be dropped prior to processing the new script.

Sample Script Member

```
   CATALOG MYSCRIPT.T     REPLACE=YES
ALL   TITLE=(Use this title for all destinations)
EMAIL TITLE=(Use this title for any e-mails)
ALL   FILENAME=(,YearEnd2000.PDF)
ALL   MAILTO=(WILE_E_COYOTE@ACME.COM)
 *    FORMDEF=MYFORM
* This is a comment line (position 1 equal to '*')
/+
```

Order Of Precedence

When duplicate directives are found for a single output job, the latter directives override any previous directives. Directives apply in the following order:

1. VSE2PDF startup defaults.
2. Script member designated on the POWER LST card using the SCRIPT= directive.
3. Directives found on the POWER LST card.
4. Script member whose name is derived from the POWER Job Name.
5. Script member whose name and type are derived from the POWER Job Name and Number.
6. Setup member designated on the POWER LST card using the SETUP= directive.
7. Inline Directives in the order they are found.
8. Conditional Script Directives, in the order they are found, but re-tested for each output page.

The following directives contain more than one operand. To facilitate changing only one of the operands, a special operand value of '=' may be used to indicate when an operand should not be changed.

SCRIPT=
SETUP=
FILENAME=
PAGEDEF=
IPSMTP=
IPSEC=
EMAILMSG=

An example:

FILENAME=(,JAN_REPORT.PDF),DEST=FTP on the POWER LST card.
FILENAME=(/AR/BRANCH1,=) on an inline directive
The file will be FTPed as "/AR/BRANCH1,JAN_REPORT.PDF"
FILENAME=(/AR/BRANCH2,=) on an inline directive
The file will be split and the new file will be FTPed as "/AR/BRANCH2/JAN_REPORT.PDF"

Order of Directives

Some directives will nullify the actions of other directives. This happens based on the order they are found within scripts. (When on the LST card, they are processed in an order so as to treat the 'nullified' values as overrides of the 'nullifier' directive.) Please enter any nullified directives after any occurrence of a 'nullifier' directive.

STOCKDEF	Nullifies PAGEDEF, USEPAGE, FORMDEF, USEOVER
FORMDEF	Nullifies USEOVER
PAGEDEF	Nullifies USEPAGE
FILEDEF	Nullifies STOCKDEF, PAGEDEF, USEPAGE, FORMDEF, USEOVER, But only if the file type (PDF, TXT, PostScript) changes.

Directives

Unless otherwise stated, directives can be found in any of the following locations:

On the * $$ LST statement
Inline Directives (I.E. Within the report body)
Within scripts (SCRIPT= or SETUP=) (including conditional scripts)

ABORTJOB

ABORTJOB

There are no parameters for ABORTJOB. If this directive is found as an inline directive, the current output process is canceled and the LST queue entry is left in the LST queue with a DISP=Y setting.
Restriction: Can not be used within a * $$ LST JECL statement.

AFTERx

AFTER1=(a,b,c,d,e,f,g,h)
AFTER2=(a,b,c,d,e,f,g,h)
AFTER3=(a,b,c,d,e,f,g,h)
AFTER4=(a,b,c,d,e,f,g,h)
AFTER5=(a,b,c,d,e,f,g,h)
AFTER6=(a,b,c,d,e,f,g,h)
AFTER7=(a,b,c,d,e,f,g,h)
AFTER8=(a,b,c,d,e,f,g,h)

Indicates which overlay(s) within the FORMDEF member to be used as inserted pages after the current page is printed. There are actually 8 different pages that can be inserted (indicated by the last position of the AFTERx label). The eight fields within the directive are single hex digits in the range of 0 to F. Although VSE2PDF supports 16 overlays, only 8 overlays can be used on a single page. These flags are reset to "off" once the page is inserted and no additional pages will be inserted until another AFTERx is processed.
Restriction: Can not be used within a * $$ LST JECL statement.

AUTHOR

AUTHOR=(aaaa)

The author text used within PDF formatted output. The field size is 60 characters. When used as an inline or conditional directive, AUTHOR will force the creation of a new output file, but not necessarily a new e-mail.

BEFOREx

BEFORE1=(a,b,c,d,e,f,g,h)
BEFORE2=(a,b,c,d,e,f,g,h)
BEFORE3=(a,b,c,d,e,f,g,h)
BEFORE4=(a,b,c,d,e,f,g,h)
BEFORE5=(a,b,c,d,e,f,g,h)
BEFORE6=(a,b,c,d,e,f,g,h)
BEFORE7=(a,b,c,d,e,f,g,h)
BEFORE8=(a,b,c,d,e,f,g,h)

Indicates which overlay(s) within the FORMDEF member to used as inserted pages BEFORE the current page is printed. There are actually 8 different pages that can be inserted (indicated by the last position of the BEFOREx label). The eight fields within the directive are single hex digits in the range of 0 to F. Although VSE2PDF supports 16 overlays, only 8 overlays can be used on a single page. These flags are reset to "off" once the page is inserted and no additional pages will be inserted until another BEFOREx is processed.
Restriction: Can not be used within a * $$ LST JECL statement.

BREAK

BREAK

There are no parameters for BREAK. When used as an inline or conditional directive, BREAK will force the creation of a new output file, but not necessarily a new e-mail. The current page becomes the first page of a new report.

Restriction: Can not be used within a * $$ LST JECL statement.

BOOKMARKx

BOOKMARK1=(line,position,length,strip_option,options)
BOOKMARK2=(line,position,length,strip_option,options)
BOOKMARK3=(line,position,length,strip_option,options)
BOOKMARK4=(line,position,length,strip_option,options)
BOOKMARK5=(line,position,length,strip_option,options)
BOOKMARK6=(line,position,length,strip_option,options)
BOOKMARK7=(line,position,length,strip_option,options)
BOOKMARK8=(line,position,length,strip_option,options)

There are actually 8 different bookmark levels. Level 1 is the top most level. Level 8 is the bottom level. The values for "line", "position", and "length" must be numeric and cannot exceed 3 positions. The maximum length for a bookmark is 40 characters. Strip_option is optional and may be one of the following:

"L" will strip off leading spaces and low-values
"T" will strip off trailing spaces and low-values
"B" will strip off both leading and trailing spaces and low-values
(see also Additional Stripping Options later in this chapter under "Directive Variables")

The options value may contain several option letters (in any order). Normally the bookmark is only displayed in the index if the data has changed. By including the "A" option letter (i.e. always), then the data will be displayed in the index once for every page even if the value of the bookmark has not changed. Normally, all bookmark indexes are shown "expanded" in tree format. By including the "C" option letter (i.e. closed), then this bookmark (and all lower levels) will be shown "closed".

There is one special setting where "line" field is actually the letters "OFF". This turns off the indicated bookmark level.

Restriction: Can not be used within a * $$ LST JECL statement.

Note: This directive originally had an underscore in the name (BOOKMARK_x). For compatibility, that format is still supported.

DISCARD

DISCARD

There are no parameters for DISCARD. If this directive is found as an inline directive, the current output process is canceled and the LST queue entry is closed. This is treated as a normal or good ending to the job. The @GOODEOJ (if applicable) is processed and the LST queue entry is closed normally with the DISP= being adjusted by Power in a non-aborted job manner. (Jobs with DISP=K becomes DISP=L and if DISP=D was specified, then the job is deleted from the LST queue).

Restriction: Can not be used within a * $$ LST JECL statement.

DROPPAGE

DROPPAGE

There are no parameters for DROPPAGE. If this directive is found as an inline directive, the page is dropped for the output file. See also DROPPAGE under Conditional Directives.

Restriction: Can not be used within a * $$ LST JECL statement. When used within a Conditional Directives set, additional restrictions apply.

EMAILMSG

EMAILMSG=(aaaa,bbbb)
First parameter: The VSE Library and sublibrary containing the message file. Must be formatted as 'library.sublibrary' (for example: 'PRD2.CONFIG'). The field size is 17 characters.
Second parameter: The VSE Library member name and type for the message file. Must be formatted as 'member.type' (for example: 'MYMSG.L'). If no type is specified, the value of the VSE2PDF startup parameter LIBR_MEMBER_TYPE is used. The field size is 17 characters.

DIRECT: Not applicable.
EMAIL: The member contents are used as the body of the email message.
ELIST: The member contents are used as the body of the email message.
FTP: Not applicable.
LIBR: Not applicable.
LPR: Not applicable.

FILENAME

FILENAME=(aaaa,bbbb)
First parameter: The directory into which to store the output. The field size is 255 characters but only the first 17 characters are used for a VSE Library destination.

DIRECT: Not applicable.
EMAIL: Not applicable.
ELIST: Not applicable.
FTP: Must be formatted as needed by the receiving systems FTP CWD command.
LIBR: Must be formatted as 'library.sublibrary' (for example: 'PRD2.CONFIG').
LPR: Not applicable.

Second parameter: The file name of the output file. The group of characters after the last period is used to determine the format of the output file. Current allowable values are: HTM, HTML, PDF, PS, TXT, TEXT. HTM and HTML create HTML formatted output. PDF generates PDF formatted output. PS generates PostScript formatted output. TXT and TEXT generates standard text output. (Additionally, the values XLS and CSV are treated as TEXT format. NOTE: No conversion is performed by VSE2PDF for these file types.) As a special condition, if a report with a destination of EMAIL or ELIST has this parameter set to '.TXT' or '.TEXT' without a full filename, the text version of the report is sent in the body of the e-mail and not as an attachment. If the file format is not valid, the file type '.PDF' is appended to the name. The field size is 255 characters but only the first 17 characters are used for a VSE Library destination.

DIRECT: The file type is used to control the output format.
EMAIL: Attachment name.
ELIST: Attachment name.
FTP: Must be formatted as needed by the receiving systems FTP STOR command.
LIBR: Must be formatted as 'member.type' (for example: 'MYFILE.PDF').
LPR: The file type is used to control the output format.

When used as an inline or conditional directive, FILENAME will force the creation of a new output file, but not necessarily a new e-mail.
Notes: If used on a POWER LST card, POWER will automatically uppercase the value. To allow for lower case characters, a special format for the FILENAME directive is available for use only on the LST card: FILENAME=(aaaa,bbbb,cccc,dddd). The last two fields contain a string made up of the characters 'U' and 'L'. When any position of the string 'cccc' contains the character 'L', the corresponding character in the first parameter 'aaaa' is converted to lower-case. Likewise, the string 'dddd' is used to convert the second parameter 'bbbb'. A special value of 'LOWER' can be used for strings 'cccc' and 'dddd' to indicate that all positions are to be converted to lower-case.

FINALx

FINAL1=(a,b,c,d,e,f,g,h)
FINAL2=(a,b,c,d,e,f,g,h)
FINAL3=(a,b,c,d,e,f,g,h)
FINAL4=(a,b,c,d,e,f,g,h)
FINAL5=(a,b,c,d,e,f,g,h)
FINAL6=(a,b,c,d,e,f,g,h)
FINAL7=(a,b,c,d,e,f,g,h)
FINAL8=(a,b,c,d,e,f,g,h)
Indicates which overlay(s) within the FORMDEF member to used as inserted pages after all pages are printed. There are actually 8 different pages that can be inserted (indicated by the last position of the BEFOREx label). The eight fields within the directive are single hex digits in the range of 0 to F. Only 8 overlays can be used on a single page.
Restriction: Can not be used within a * $$ LST JECL statement.

FORMDEF

FORMDEF=aaaa
The library member name that contains the information necessary to generate any images or graphics on the page prior to applying the actual print data. Think of this as 'which pre-printed form to use'. The contents of this member will contain the form overlay name and location on the page. Following IBM PSF standards, a two character prefix is added to this name based on the output format. Currently, only PDF formatted documents utilize this information. If no type is specified, the value of the VSE2PDF startup parameter LIBR_MEMBER_TYPE is used. The field size is 6 characters.

HTML:	Prefix is 'FH'. Currently read, but not used.
PDF:	Prefix is 'FP'.
PS:	Prefix is 'FS'.
TEXT:	Prefix is 'FT'. Currently read, but not used.

H2OMARK

H2OMARK=(xxxx)
Defines the text to be used as a watermark on the report. The field size is 30 characters.

INITIALx

INITIAL1=(a,b,c,d,e,f,g,h)
INITIAL2=(a,b,c,d,e,f,g,h)
INITIAL3=(a,b,c,d,e,f,g,h)
INITIAL4=(a,b,c,d,e,f,g,h)
INITIAL5=(a,b,c,d,e,f,g,h)
INITIAL6=(a,b,c,d,e,f,g,h)
INITIAL7=(a,b,c,d,e,f,g,h)
INITIAL8=(a,b,c,d,e,f,g,h)
Indicates which overlay(s) within the FORMDEF member to used as inserted pages BEFORE pages are printed. There are actually 8 different pages that can be inserted (indicated by the last position of the BEFOREx label). The eight fields within the directive are single hex digits in the range of 0 to F. Only 8 overlays can be used on a single page.
Restriction: Can not be used within a * $$ LST JECL statement.

INSERT

INSERT=(aaaa,bbbb,cccc,dddd)
The INSERT directive controls the insertion of printer control information either at the front of the print job or at the end.
First parameter: The first parameter indicates where the data is to be inserted:

"START"	Data is to be inserted at the start of the print job/file.
"END"	Data is to be inserted at the end of the print job/file.

Second parameter: The second parameter indicated the format of the data to be inserted:

"CHAR"	The data is in EBCDIC character format.
"VAR"	The data is in EBCDIC character format and contains VSE2PDF variables.
"HEX"	The data is in EBCDIC hex format, i.e. "C1C2F1F2" for "AB12".
"ASCII"	The data is in ASCII hex format, i.e. "41423132" for "AB12".
"CLEAR"	Clears or resets the "START" or "END" insert data to nulls.

Third parameter: The third parameter is the data to be sent. Must be enclosed in quotes if it contains non-character data or spaces.
Fourth parameter: The optional fourth parameter is used to indicate that additional commands are to be inserted after the third parameter:

"CR"	Insert a carriage return.
"LF"	Insert a line feed.
"CRLF"	Insert a carriage return/line feed pair.
"FF"	Insert a form feed.

INSERT directives are cumulative for a single Power LST entry, unless a "CLEAR" is processed. No carriage returns or line feeds are inserted unless they are either specified in a hex string or the fourth option is used.
Restriction: Can not be used within a * $$ LST JECL statement.

IPADDR

IPADDR=x
The destination IP address. The expected format of this field will be: 1) a DNS resolvable name, or 2) an IP 4 point address. If not specified, the VSE2PDF applicable startup option will be used. See FTP_ADDR_DEFAULT, LPR_ADDR_DEFAULT, or DIRECT_ADDR_DEFAULT. The field size is 124 characters.

DIRECT:	IP address of the printer.
EMAIL:	Not applicable.
ELIST:	Not applicable.
FTP:	IP address of the FTP server.
LIBR:	Not applicable.
LPR:	IP address of the printer.

When used as an inline or conditional directive, IPADDR will force the creation of a new e-mail.

IPSEC

IPSEC=(aaaa,bbbb)
The security information used when connecting to the FTP server designated by the IPADDR directive. The first parameter is the user id and the second parameter is the password. The field sizes are 30 characters. When used as an inline or conditional directive, IPSEC will not force the creation of a new output file. When a new FTP is started within a single Power LST entry, the last IPSEC value found will be used.
Notes: If used on a POWER LST card, POWER will automatically uppercase the value. To allow for lower case characters, a special format for the IPSEC directive is available for use only on the LST card: IPSEC=(aaaa,bbbb,cccc,dddd). The last two fields contain a string made up of the characters 'U' and 'L'. When any position of the string 'cccc' contains the character 'L', the corresponding character in the first parameter 'aaaa' is converted to lower-case. Likewise, the string 'dddd' is used to convert the second parameter 'bbbb'. A special value of 'LOWER' can be used for strings 'cccc' and 'dddd' to indicate that all positions are to be converted to lower-case.

IPSMTP

IPSMTP=(aaaa,bbbb,cccc)
The IP address, userid, and password of the SMTP server to be used to email the report. The SYSOPT_FORCE_RELAY startup option controls how VSE2PDF handles emails when IPSMTP is not specified.
First parameter: The IP address of the SMTP server to be used to email the report. The expected format of this field will be: 1) a DNS resolvable name, or 2) an IP 4 point address. The field size is 124 characters.
Second parameter: The userid for use with the SMTP server to be used to email the report. The field size is 30 characters.
Third parameter: The password for use with the SMTP server to be used to email the report. The field size is 30 characters.
When used as an inline or conditional directive, IPSMTP will force the creation of a new e-mail.
Also see the information found under the SMTP_USER startup option.
Notes: If used on a POWER LST card, POWER will automatically uppercase the value. To allow for lower case characters, a special format for the IPSMTP directive is available for use only on the LST card: IPSMTP=(aaaa,bbbb,cccc,dddd,eeee). The last two fields contain a string made up of the characters 'U' and 'L'. When any position of the string 'dddd' contains the character 'L', the corresponding character in the first parameter 'bbbb' is converted to lower-case. Likewise, the string 'eeee' is used to convert the second parameter 'cccc'. A special value of 'LOWER' can be used for strings 'dddd' and 'eeee' to indicate that all positions are to be converted to lower-case.

JSEPDEF

JSEPDEF=aaaaaaaa
The library member name that contains the information to define any job separator pages. The field size is 8 characters.

LINE_HEADERS

LINE_HEADERS=(aaaa,bbbb,cccc,dddd,eeee,ffff,gggg,,hhhh)
Indicates that positions at the front of each print line contains one or more program determined attribute bytes. The order the attribute bytes exist on the line are preset and not related to the order within this directive. The order in the directive does not matter. The order they must occur on the line is the order they are listed below. More information on how each field can be used may be found under the same pagedef keyword in this section. These values affect the current line only and will not affect any following lines.

XEROXINDEX	One byte hex value associated with a fontdef index (see XEROXINDEX below). (May be abbreviated as "XIDX".)
FONTDEF	FONTDEF name – X(8) (see FONTDEF startup option). (May be abbreviated as "FDEF".)
PDFFONT	Font name – X(8) (see PDFFONT startup option). (May be abbreviated as "FONT".)
FONTSIZE	Font size expressed a 4 byte packed number – S9(4)V9(3). (May be abbreviated as "SIZE".)
RENDER	One byte character render code – X(1) (display format: i.e. "0" = x"F0") (May be abbreviated as "REN".)
COLORDEF	COLORDEF name – X(8) (see COLORDEF startup option). (May be abbreviated as "CDEF".)
MOVETO	X,Y location expresses as two 5 byte packed numbers – S9(6)V9(3). (May be abbreviated as "XY".)
H_SCALE	Horizontal Scaling factor expressed as a 4 byte packed number – S9(4)V9(3). (May be abbreviated as "H%".)
CHAR_SPACE	Character space value expressed as a 4 byte packed number – S9(4)V9(3). (May be abbreviated as "CSP".)
WORD_SPACE	Word space value expressed as a 4 byte packed number – S9(4)V9(3). (May be abbreviated as "WSP".)
ROTATE	Rotation angle expressed as a 2 byte packed number – S9(3). (May be abbreviated as "ROT".)
SKEW	Skew angles α and β expressed as two 2 byte packed numbers – S9(3). (May be abbreviated as "SK".)

Note: Inline directives still start in position 1 and must not be prefixed by a line header attributes.
Note: Although there are more than 8 options, only 8 may be specified for any one statement. To use more than 8, use additional LINE_HEADER directives. The settings will accumulate unless the keyword "NONE" is read. "NONE" will clear all LINE_HEADER settings for the current job.
Note: If any line of a print file has line headers, then all lines of the print file must have line headers.
Caution: Printers do not normally understand this information. An attempt to print such an input file on a real VSE driven printer may produce unpredictable results.
Restriction: If using overprint (write without advancing), only the header information from the last line of an overprint set will be used.
WARNING: This is a low-level program interface. No validation is performed on the contents of these header positions. Abends or unusable files may result if invalid data is supplied.

LINE_HEADERS_OFFSET

LINE_HEADERS_OFFSET=n
The offset of the LINE_HEADERS from the start of the print line. The default is '0', i.e., the first position of the line. If the offset is greater than zero, it is assumed that the LINE_HEADER fields are at the END of the print line and any print line data is truncated at the offset where the LINE_HEADERS are expected.

MAILFROM

MAILFROM=aaaa

The e-mail address to be used as the sender of the message. This e-mail address will receive any "undeliverable", "receive receipt", or "read receipt" messages that might be generated by the delivery or delivery failure of the e-mail. The format must conform to standard Internet practices (example: Wile_E_Coyote@ACME.COM). If no domain is included (i.e., the '@' character is not found within the address), then the value of the VSE2PDF startup parameter DOMAIN_DEFAULT is appended to create a valid address. The field size is 124 characters, but some SMTP hosts may truncate to a smaller size. The special value of "YES" indicates that VSE2PDF should use the VSE2PDF startup "FAKE_FROM_ADDRESS" value for the READTO destination.

DIRECT: Not applicable.
EMAIL: The Internet address for "From:".
ELIST: The Internet address for "From:".
FTP: Not applicable.
LIBR: Not applicable.
LPR: Not applicable.

When used as an inline or conditional directive, MAILFROM will force the creation of a new e-mail.

MAILBCCx

MAILBCC1=aaaa
MAILBCC2=aaaa
MAILBCC3=aaaa
MAILBCC4=aaaa

The e-mail address of the recipient of blind copies of the report. The format must conform to standard Internet practices (example: Wile_E_Coyote@ACME.COM). If no domain is included (i.e., the '@' character is not found within the address), then the value of the VSE2PDF startup parameter DOMAIN_DEFAULT is appended to create a valid address. The field size is 124 characters, but some SMTP hosts may truncate to a smaller size.

DIRECT: Not applicable.
EMAIL: The Internet address.
ELIST: Not applicable.
FTP: Not applicable.
LIBR: Not applicable.
LPR: Not applicable.

When used as an inline or conditional directive, MAILBCCx will force the creation of a new e-mail.

MAILCCx

MAILCC1=aaaa
MAILCC2=aaaa
MAILCC3=aaaa
MAILCC4=aaaa

The e-mail address of the recipient of copies of the report. The format must conform to standard Internet practices (example: Wile_E_Coyote@ACME.COM). If no domain is included (i.e., the '@' character is not found within the address), then the value of the VSE2PDF startup parameter DOMAIN_DEFAULT is appended to create a valid address. The field size is 124 characters, but some SMTP hosts may truncate to a smaller size.

DIRECT: Not applicable.
EMAIL: The Internet address.
ELIST: Not applicable.
FTP: Not applicable.
LIBR: Not applicable.
LPR: Not applicable.

When used as an inline or conditional directive, MAILCCx will force the creation of a new e-mail.

MAILTO

MAILTO=(aaaa,bbbb)
The e-mail address of the recipient of the report. The format must conform to standard Internet practices (example: Wile_E_Coyote@ACME.COM). If no domain is included (i.e., the '@' character is not found within the address), then the value of the VSE2PDF startup parameter DOMAIN_DEFAULT is appended to create a valid address. The field size of the first operand is 124 characters, but some SMTP hosts may truncate to a smaller size. The second operand 'bbbb' may contain the special keyword 'ONLY' which indicates that all MAILCCx settings are to be cleared. The 'ONLY' keyword is only valid when using MAILTO as in inline or conditional directive.

DIRECT: Not applicable.
EMAIL: The Internet address.
ELIST: Used as the name of the VSE Library member containing the address list.
FTP: Not applicable.
LIBR: Not applicable.
LPR: Not applicable.

When used as an inline or conditional directive, MAILTO will force the creation of a new e-mail.

MOVETO

MOVETO=(x,y)
The next line of print is to be located on the printed page using the specified x,y coordinate location. All following lines will be based on these new values. The following lines will start at the same x location. The following lines y location will be based on adding the value of LINESIZE to the value of y. A description of how x and y are used in the PDF coordinate system can be found under MATRIX in the PAGEDEF section of this manual.
Restriction: Can only be used as an inline directive.
CAUTIONS: The attributes (LINESIZE, FONTSIZE, MATRIX) of ALL following lines will be based on the value on the current line. This effectively negates any information from the PAGEDEF.

MSGPAGE

MSGPAGE
NO_MSGPAGE
There are no parameters for MSGPAGE or NO_MSGPAGE. If the MSGPAGE directive is found as an inline directive, the information on the page is used as message text within the body of the e-mail and/or notification e-mail. Please note that the page will also be included in the output file unless the DROPPAGE inline directive is also used. The use of MSGPAGE will force the segmentation of the output listing and the creation of a new e-mail.
NO_MSGPAGE clears any MSGPAGE data. It will not force segmentation or a new e-mail.
Restriction: Can not be used within a * $$ LST JECL statement.

NO_BOOKMARKS

NO_BOOKMARKS
There are no parameters for NO_BOOKMARKS. If this directive is found as an inline directive, no bookmarks are generated for the page in the output file. See also NO_BOOKMARKS under Conditional Directives.
Restriction: Can not be used within a * $$ LST JECL statement. When used within a Conditional Directives set, additional restrictions apply.

NOTIFY

NOTIFY=aaaa

The e-mail address that will receive a notification that the report has been fully processed by VSE2PDF. The format must conform to standard Internet practices (example: Wile_E_Coyote@ACME.COM). If no domain is included (i.e., the '@' character is not found within the address), then the value of the VSE2PDF startup parameter DOMAIN_DEFAULT is appended to create a valid address. The field size is 60 characters.

DIRECT: Not applicable.
EMAIL: If the NOTIFY address is the same as the MAILTO address, no notification is sent.
ELIST: Always used.
FTP: Not applicable.
LIBR: Not applicable.
LPR: Not applicable.

When used as an inline or conditional directive, NOTIFY will not force the creation of a new output file.

PAGE_COPIES

PAGE_COPIES=n

The number of additional copies of each page to generate.

PAGEDEF

PAGEDEF=(aaaaaa,bbbbbb,cccccc,dddddd,eeeeee,ffffff,gggggg,hhhhhh)

The library member name(s) that contains the information necessary to format the actual print data on the page. The contents of each member will contain the number of lines per page and other information. The first pagedef member name will be used for all pages unless a USEPAGE inline directive is processed. Following IBM PSF standards, a two character prefix is added to this name based on the output format. If no type is specified, the value of the VSE2PDF startup parameter LIBR_MEMBER_TYPE is used. The field size is 6 characters.

HTML: Prefix is 'PH'. Currently read, but not used.
PDF: Prefix is 'PP'.
PS: Prefix is 'PS'.
TEXT: Prefix is 'PT'. Currently read, but not used.

PDFSEC

PDFSEC=(aaaaaa)

The read password for the generated PDF output file. If no value is specified, the value of the VSE2PDF startup parameter PDFSEC_DEFAULT will be used. The field size is 32 characters.
If used on a POWER LST card, POWER will automatically uppercase the value. If lower case is required, then PDFSEC will have to be specified using either an inline directive or from within a Script member. The field sizes are 32 characters. When used as an inline or conditional directive, PDFSEC will not force the creation of a new output file. When a new PDF is started within a single Power LST entry, the last IPSEC value found will be used. Use of encryption requires a license to use VSE2PDF/Secure. This directive is ignored if VSE2PDF/Secure is not licensed.
Note: The special value "NONE" is available to turn of PDF security.
Notes: If used on a POWER LST card, POWER will automatically uppercase the value. To allow for lower case characters, a special format for the PDFSEC directive is available for use only on the LST card: PDFSEC=(aaaaaa,bbbbbb). The last field contain a string made up of the characters 'U' and 'L'. When any position of the string 'bbbbbb' contains the character 'L', the corresponding character in the first parameter 'aaaaaa' is converted to lower-case. A special value of 'LOWER' can be used for the string 'bbbbbb' to indicate that all positions are to be converted to lower-case.

PRTQUEUE

PRTQUEUE=aaaa

The queue name for the remote printer when an LPR destination is used. . If no value is specified, the value of the VSE2PDF startup parameter PRTQUEUE_DEFAULT is used. The field size is 127 characters. Note: As Power will upper case all * $$ LST directive values, but queue names on most printers are lower case, VSE2PDF will convert any queue name found in a LST card to lower case. Values found as inline directives or within scripts will not be converted.

READTO

READTO=aaaa

The e-mail address to receive any "Read Receipts". The format must conform to standard Internet practices (example: Wile_E_Coyote@ACME.COM). If no domain is included (i.e., the '@' character is not found within the address), then the value of the VSE2PDF startup parameter DOMAIN_DEFAULT is appended to create a valid address. The field size is 124 characters, but some SMTP hosts may truncate to a smaller size. The special value of "YES" indicates that VSE2PDF should use the "MAILFROM" address value.

DIRECT: Not applicable.
EMAIL: The Internet address for "Read Receipts".
ELIST: The Internet address for "Read Receipts".
FTP: Not applicable.
LIBR: Not applicable.
LPR: Not applicable.

When used as an inline or conditional directive, READTO will force the creation of a new e-mail.
Note: Most e-mail clients ignore the address specified and always send it to the "From:" address. The "From:" address is always set to the "FAKE_FROM_ADDRESS" startup value. The RFCs require the use of the "From:" address (ignoring the "Readto:" address) unless the e-mail client makes provision to prompt the e-mail user as to whether or not to obey the "Readto:" address or to use the "From:" address. Currently, there are no known e-mail clients that will respond to any address except the "From:" address.

RECVTO

RECVTO=aaaa

The e-mail address to receive any "Receive Receipts". The format must conform to standard Internet practices (example: Wile_E_Coyote@ACME.COM). If no domain is included (i.e., the '@' character is not found within the address), then the value of the VSE2PDF startup parameter DOMAIN_DEFAULT is appended to create a valid address. The field size is 124 characters, but some SMTP hosts may truncate to a smaller size. The special value of "YES" indicates that VSE2PDF should use the "MAILFROM" address value.

DIRECT: Not applicable.
EMAIL: The Internet address for "Receive Receipts".
ELIST: The Internet address for "Receive Receipts".
FTP: Not applicable.
LIBR: Not applicable.
LPR: Not applicable.

When used as an inline or conditional directive, RECVTO will force the creation of a new e-mail.
Note: Most e-mail clients ignore the address specified and always send it to the "From:" address. The "From:" address is always set to the "FAKE_FROM_ADDRESS" startup value. The RFCs require the use of the "From:" address (ignoring the "Readto:" address) unless the e-mail client makes provision to prompt the e-mail user as to whether or not to obey the "Readto:" address or to use the "From:" address. Currently, there are no known e-mail clients that will respond to any address except the "From:" address.

SCRIPT

SCRIPT=(aaaa,bbbb)
First parameter: The VSE Library and sublibrary containing the Script file. Must be formatted as 'library.sublibrary' (for example: 'PRD2.CONFIG'). The field size is 17 characters.
Second parameter: The VSE Library member name and type for the Script file. Must be formatted as 'member.type' (for example: 'MYSCRIPT.L'). If no type is specified, the value of the VSE2PDF startup parameter SCRIPT_MEMBER_TYPE is used. The field size is 17 characters.
Restriction: Can not be used within a Script or Setup member except within conditional directive sets.

SETUP

SETUP=(aaaa,bbbb)
First parameter: The VSE Library and sublibrary containing the Setup file. Must be formatted as 'library.sublibrary' (for example: 'PRD2.CONFIG'). The field size is 17 characters.
Second parameter: The VSE Library member name and type for the Setup file. Must be formatted as 'member.type' (for example: 'MYSCRIPT.L'). If no type is specified, the value of the VSE2PDF startup parameter SCRIPT_MEMBER_TYPE is used. The field size is 17 characters.
Restriction: Can not be used within a Script or Setup member except within conditional directive sets.

SIDE

SIDE=aaaa
Forces how the current page is to be printed with regard to "front of sheet" or "back of sheet". Normally this is only used when using duplex printers. Can also be used to force a page break without the need for a "skip to channel 01" command.

BACK	Print current page on the next "back of sheet". I.e., next even page.
FRONT	Print current page on the next "front of sheet". I.e., next odd page.
NEWBACK	Print current page on the next "back of sheet" after a clean "front of sheet".
NEXT	Print current page "now" and start next page. Do not wait for "skip channel 01".

Restriction: Can only be used as an inline directive.

STOCKDEF

STOCKDEF=aaaaaaaa
The library member name that contains the information to define the 'stock' of printout. A STOCKDEF equates a single name to both a FORMDEF and a PAGEDEF and can optionally indicate the USEOVER values for the current output processing. The field size is 8 characters.

SUBJECT

SUBJECT=(aaaa)
The subject text used within PDF formatted output. The field size is 60 characters. When used as an inline or conditional directive, SUBJECT will force the creation of a new output file, but not necessarily a new e-mail.

TITLE

TITLE=(aaaa)
The title used within the e-mail headers and within the PDF formatted output. The field size is 60 characters. When used as an inline or conditional directive, TITLE will force the creation of a new output file, but not necessarily a new e-mail.

USEOVER

USEOVER=(aaaaaaaa,bbbbbbbb,cccccccc,dddddddd,eeeeeeee,ffffffff,gggggggg,hhhhhhhh)
Indicates which overlay(s) within the FORMDEF member to use on the current page and all following pages until another USEOVER is encountered. The individual overlays can be referenced by either their full 8 character name or a single character. If a single character is used, then the Formdef MUST include the ID= keyword. Although VSE2PDF supports multiple overlays, only 8 overlays can be used on a single page.
Restriction: Can not be used within a * $$ LST JECL statement.

USEPAGE

USEPAGE=aaaaaaaa
Indicates which PAGEDEF to use on the current page and all following pages until another USEPAGE is encountered. The value can be either the PAGEDEF name or a single digit in the range of 1 to 8 that references the position of the Pagedef name in the PAGEDEF= * $$ LST JECL statement..
Restriction: Can not be used within a * $$ LST JECL statement.

USERxx

USERxx=(aaaa)
Sets one of 16 internal, user variables to the string specified. The 16 variables are named USER01 – USER16. The field size is 60 characters.

XEROXINDEX

XEROXINDEX=(aaa,bbbbbbbb,cccccccc,ddddddd,eeeeeee)
Equates a FONTDEF definition, a COLORDEF definition, a FONTSIZE and a LINESIZE to an index value that may be used as an attribute byte on every print line. See LINE_HEADERS above. The first value is the index number and must be in the range of 1 to 255. The second value is the name of a FONTDEF as defined using the VSE2PDF startup option FONTDEF. The third value is the name of a COLORDEF as defined using the VSE2PDF startup option COLORDEF. The forth and fifth values are the override values for both FONTSIZE and LINESIZE. See FONTSIZE and LINESIZE definitions under PAGEDEF Processing for more information. If FONTSIZE is given and LINESIZE is omitted, the FONTSIZE is also used as the LINESIZE. If both FONTSIZE and LINESIZE are omitted, the sizes specified in the FONTDEF will be used. When the special value of "-0" is used for either FONTSIZE or LINESIZE, the sizes specified in the PAGEDEF will be used.
Note: If an invalid font index is used on a print line, the line is printed as though it had a font index value equal to the value of the VSE2PDF system option XEROXINDEX_DEFAULT (normally x'01').

XEROXINDEX_MASK

XEROXINDEX_MASK=n
This setting indicates the number of low order bits of the font index byte to be used for the font number. The value must be between the range of 1 and 8. The default is to use all 8 bits.

XLATE

XLATE=aaaa
The name of the translation table to be used when creating the report. The name must exist within one of the members loaded during VSE2PDF startup using TRANSLATE_MEMBER parameter. The special translate table 'NULL' is available. The NULL table will add CR/LF as needed, but leave the data in EBCDIC. The field size is 16 characters. When used as an inline or conditional directive, XLATE will force the creation of a new output file, but not necessarily a new e-mail.

@GOODEOJ

@GOODEOJ=aaaa
Any console command to be issued once the report is fully processed with no errors. The field size is 80 characters, but after all variable substitution is performed, the command is limited to 72 characters.

@BADEOJ

@BADEOJ=aaaa
Any console command to be issued once the report is incompletely processed due to errors. The field size is 80 characters, but after all variable substitution is performed, the command is limited to 72 characters.

Conditional Directives

Conditional directives can be found in Script members. They create “conditional directive sets”. Each compare is tested prior to formatting each page of a report. When multiple sets exist within a single Script member, they are processed in order until all sets are processed unless a “true” conditional set includes the “EXIT” conditional directive. Other “standard” directives can be coded within each conditional directive set. Any directives within a Script file that are outside of a WHILE/ENDWHILE set are executed only at the start of the job even if found at the end of the script. The directives within a WHILE/ENDWHILE are only processed one time for any true condition sequence, i.e., they will be processed on the first page that is true, but will not be processed for any additional pages that are true unless a non-true condition is found. (This can be overridden by using the FORGET_TRUE conditional directive.)

ENDWHILE / ENDWHEN

ENDWHILE
An ENDWHILE indicates the end of a conditional directive set. ‘ENDWHEN’ can also be used as a synonym to ‘ENDWHILE’.

DROPPAGE

DROPPAGE
The DROPPAGE directive indicates that the page is to be dropped from the final output. When DROPPAGE is found within a WHILE/ENDWHILE set without any conditional destination (i.e. no EMAIL , ALL, *, etc. prefix) it applies to all pages matching the WHILE condition. If the DROPPAGE has a conditional destination, then only the first page of a matching group of pages will be dropped (unless the FORGET_TRUE is also used within the conditional set).

EXIT

EXIT
An EXIT within a conditional directive set indicates that no additional conditional directives are to be processed

FORGET

FORGET
Forget that this conditional set exists. The conditional directive will never again be found to be “true”.

FORGET_TRUE

FORGET_TRUE
When this conditional directive is found within a WHILE/ENDWHILE set, the default logic to not process the directives within the WHILE/ENDWHILE set except for the first page with the true condition will be overwritten, i.e., it does not matter if the condition was true on the previous page, all directives in the WHILE/ENDWHILE set will be processed as though the condition was false on the previous page.

IGNORE_PAGE

IGNORE_PAGE
When this conditional directive is found within a WHILE/ENDWHILE set, the rest of the script is bypassed. This is different from the EXIT conditional directive as EXIT will still flag following conditional statements that are no longer true as ‘false last test’. IGNORE_PAGE should be used when an identifiable page does not conform to the report ‘standards’ used to develop the WHILE conditions. An example would be a total page that does not have a branch number.

NO_BOOKMARKS

NO_BOOKMARKS

The NO_BOOKMARKS directive indicates that no bookmarks should be corrected in the final output. When NO_BOOKMARKS is found within a WHILE/ENDWHILE set without any conditional destination (i.e. no EMAIL , ALL, *, etc. prefix) it applies to all pages matching the WHILE condition. If the NO_BOOKMARKS has a conditional destination, then only the first page of a matching group of pages will not generate bookmarks (unless the FORGET_TRUE is also used within the conditional set).

REPLACE/RREPLACE

REPLACE xxxx yyyy zzzz
RREPLACE xxxx yyyy zzzz

A REPLACE and RREPLACE directives indicate that the contents of the first parameter are to be replaced with the contents of the second parameter. RREPLACE indicates that the move should 'reverse' the order of the characters for languages such as Hebrew.

First Parameter: Operand 1 of the condition. The following are valid:

PAGEDATA=(line,position,length)
&aaaa ('&aaaa' indicates any VSE2PDF variable. Example '&PAGESIDE')

Second Parameter: The comparison logic to be used. The following are valid:

WITH

Third Parameter: Operand 2 of the condition. The following are valid:

TEXT=string
SPACES
PAGEDATA=(line,position,length)
&aaaa ('&aaaa' indicates any VSE2PDF variable. Example '&PAGESIDE')

The values for "line", "position", and "length" must be numeric and cannot exceed 3 positions. The maximum length for a compare is 60 characters. To move 5 characters to line 2 starting in column 17 use "PAGEDATA=(2,17,5)". The value for "string" starts in the first position after the "=" sign of the "TEXT=" (leading blanks are significant). Its length is determined by "length". When "PAGEDATA" is used as the third parameter, the length attribute of the third parameter is ignored. When a VSE2PDF variable is used as the first parameter, it's full length is used for the move. Although allowed, the setting of a VSE2PDF variable with the value of another VSE2PDF variable can lead to unpredictable results IF the implicit length of the receiving field is longer than the implicit length of the sending field.

WHILE / WHEN

WHILE xxxx yyyy zzzz

A WHILE indicates the start of a conditional directive set. It allows directives to be conditional upon the contents of a page. WHILE directive sets are only processed when the data to be tested changes. 'WHEN' can also be used as a synonym to 'WHILE'.

First Parameter: Operand 1 of the condition. The following are valid:

PAGEDATA=(line,position,length)
&aaaa ('&aaaa' indicates a VSE2PDF variable. Example '&PAGESIDE')
FIRSTPAGE
ALWAYS

Second Parameter: The comparison logic to be used. The following are valid:

EQUAL
NOTEQUAL
CHANGED

Third Parameter: Operand 2 of the condition. The following are valid:

NULLS
PAGEDATA=(line,position)
&aaaa ('&aaaa' indicates a VSE2PDF variable. Example '&PAGESIDE')
SPACES
TEXT=string

The values for "line", "position", and "length" must be numeric and cannot exceed 3 positions. The maximum length for a compare is 60 characters. To compare 5 characters on line 2 starting in column 17 use "PAGEDATA=(2,17,5)". The value for "string" starts in the first position after the "=" sign of the "TEXT=" (leading blanks are significant). Its length is determined by "length". "FIRSTPAGE" is a special condition to be processed during the first page of any segment. Note that most directives will start a new report segment. When "PAGEDATA" is used as the third parameter, the length attribute is not valid and is ignored. When a VSE2PDF variable is used as the first parameter, it's full length is used for the compare. Although allowed, the comparing of two separate VSE2PDF variables in this manner can lead to unpredictable results IF the implicit length of the first field is longer than the implicit length of the second field.

There is a special format of PAGEDATA when used as the first parameter of the WHILE/WHEN directive that will allow a script to 'scanning' of the page for the comparison text:

PAGEDATA=(line,*,length)
PAGEDATA=(*,position,length)

The first example will scan a single line for the text, while the second example will can the same position on all lines of the page.

Sample Conditional Script Member

The indentation is not required, but can be used to aid readability.

```
   CATALOG MYSCRIPT.T     R=YES
ALL   TITLE=(Use this title for all destinations)
EMAIL TITLE=(Use this title for any e-mails)
ALL   FILENAME=(,YearEnd2000.PDF)
ALL   MAILTO=(WILE_E_COYOTE@ACME.COM)
 *    FORMDEF=MYFORM
* This is a comment line (position 1 equal to '*')
* Examine for any page 1 and force a new segment
WHILE PAGEDATA=(2,121,9) EQUAL TEXT=PAGE    1
 BREAK
ENDWHILE
* Examine page for the office branch name
WHILE PAGEDATA=(3,1,5) EQUAL TEXT=MAIN
 ALL FILENAME=(,MAIN.PDF)
 EXIT
ENDWHILE
WHILE PAGEDATA=(3,1,9) EQUAL TEXT=DOWNTOWN
 * FILENAME=(,DOWNTOWN.PDF)
 EXIT
ENDWHILE
* something to catch the unknown branches
WHEN PAGEDATA=(3,1,9) CHANGED
 * FILENAME=(,UNKNOWN.PDF)
 MAILTO=(Operations errors@acme.com)
ENDWHEN
* Look for last page with totals
WHILE PAGEDATA=(5,20,6) EQUAL TEXT=TOTALS
 ALL FILENAME=(,TOTALS.PDF)
 ALL MAILTO=(JohnTheVicePresident@acme.com)
 ALL NOTIFY=(JackThePresident@acme.com)
ENDWHILE
/+
```

Sample Setup Member

```
   CATALOG MYSETUP.T     R=YES
 * INSERT=(START,CHAR,'%XRXBEGIN: 001.0300',CRLF)
 * INSERT=(START,CHAR,'%XRXSENDERNAME: VSE EIS SYSTEM',CRLF)
 * INSERT=(START,CHAR,'%XRXDISPOSITION: PRINT',CRLF)
 * INSERT=(START,VAR,'%XRXTITLE: &TITLE',CRLF)
 * INSERT=(START,CHAR,'%XRXMESSAGE: SEE GREEN COVER PAGE FOR ')
 * INSERT=(START,CHAR,'DELIVERY INSTRUCTIONS',CRLF)
 * INSERT=(START,CHAR,'%XRXORIENTATION: LANDSCAPE',CRLF)
 * INSERT=(START,CHAR,'%XRXACCOUNT: 49999',CRLF)
 * INSERT=(START,CHAR,'%XRXCOVER-FRONT: OUTSIDEONLY 216 279 ')
 * INSERT=(START,CHAR,'GREEN OPAQUE PLAIN 0 0 75',CRLF)
 * INSERT=(START,CHAR,'%XRXFONTS: COURIER/9',CRLF)
 * INSERT=(START,CHAR,'%XRXCOPYCOUNT: 1',CRLF)
 * INSERT=(START,CHAR,'%XRXEND',CRLF)
/+
```

Bookmark (Index) Directives

VSE2PDF supports up to 8 bookmark levels. Bookmarks are created by extracting data off of each page. Normally a new bookmark is only created when the extracted data changes. A basic example of the bookmark section of a script file could be:

```
EMAIL  BOOKMARK_1=(1,30,8,T)
EMAIL  BOOKMARK_2=(2,33,17,T,C)
EMAIL  BOOKMARK_3=(7,1,17,B,A)
```

In this simple script, 3 levels of bookmarks will be created. The first would be based on the contents of line 1, using positions 30 through 37, and will strip all trailing spaces and low-value characters from the bookmark text. The second bookmark level will be based on the contents of line 2, positions 33 though 49, and will strip all the trailing spaces and low-value characters from the bookmark text. In addition, this bookmark level will be 'closed' meaning that the lower bookmarks will be created, but the user will have to open the additional levels by clicking on the plus '+' sign next to the bookmark. The third bookmark level will be generated using the contents of line 7, positions 1 though 17. Additionally, all leading and trailing spaces and low-value characters ("B" - Both) will be removed. And a bookmark will be created for every page, even if the contents of the bookmark value do not change.

As some reports have the data located in different locations on different type pages, the bookmark settings can be set using conditional script logic. An example of this would be a LIBR LISTDIR output. When creating bookmarks for such a report, if a bookmark is turned off, the last value for this bookmark is retained. This is also useful if a branch name is only located on a header page. The next page shows an example of a LIBR job and script that use these features. Both are supplied in the VSE2PDF distribution.

```
// JOB     XMARKS
// OPTION  NOLOG
* cataloged as XMARKS.Z in the VSE2PDF library
* $$ LST DISP=K,CLASS=Y,DEST=(,EMAIL),
* $$       FILENAME=(,MARKS.PDF),
* $$       TITLE=(LIBR EXAMPLE WITH BOOKMARKS),
* $$       MAILTO=(WILE_E_COYOTE@ACME.COM)
* $$       SCRIPT=(,XMARKS.SCRIPT)
// EXEC LIBR,SIZE=256K
   LD L=IJSYSRS
   LD L=PRD1
   LD L=PRD2
/*
/&
```

```
CATALOG XMARKS.SCRIPT R=YES
WHILE PAGEDATA=(1,1,8) EQUAL TEXT=   LD L=
   *     BOOKMARK_1=(1,9,8,T)
   *     BOOKMARK_2=OFF
   *     BOOKMARK_3=OFF
   EXIT
ENDWHILE
WHILE PAGEDATA=(1,1,15) EQUAL TEXT=STATUS  DISPLAY
   *     BOOKMARK_1=(1,30,8,T)
   *     BOOKMARK_2=(1,1,6,T)
   *     BOOKMARK_3=OFF
   EXIT
ENDWHILE
WHILE PAGEDATA=(1,1,17) EQUAL TEXT=DIRECTORY DISPLAY
   *     BOOKMARK_1=OFF
   *     BOOKMARK_2=(1,33,17,T,C)
   *     BOOKMARK_3=(7,1,17,T)
   EXIT
ENDWHILE
WHILE PAGEDATA=(1,1,17) NOTEQUAL TEXT=DIRECTORY DISPLAY
   *     BOOKMARK_1=OFF
   *     BOOKMARK_2=(1,1,5,T,C)
   *     BOOKMARK_3=OFF
   EXIT
ENDWHILE
/+
```

Note: The above example is VSE version dependent. IBM has changed the data locations locations and format between different versions of LIBR.

Directive Variables

VSE2PDF allows for some job based variables within the directive values. For a variable to be used, the POWER startup SET statement use a '*' as the data type and not a 'C'. Once the data type is changed to '*', less validation is done by POWER and this can result in additional errors. Currently the following directives are examined for variables:

SETUP
TITLE
SUBJECT
AUTHOR
NOTIFY
IPADDR
MAILFROM
MAILTO
PDFSEC
READTO
RECVTO
IPSMTP
FILENAME
EMAILMSG
PRTQUEUE
@GOODEOJ
@BADEOJ

The following directives are examined for variables, but can only use values derived from standard LST card directives, not from OPTB values. Also, the variables referenced must be "self defining", i.e., the variable value can not contain a reference to another variable by name.

SCRIPT
PAGEDEF
FORMDEF

Additionally, variables found within a message page (see MSGPAGE and EMAILMSG) are resolved.

Variables follow the syntax of VSE JCL SETPARM variables. A variable name starts with the character '&' and the name can contain only the characters:

Special characters: @ # $
Uppercase characters: A-Z
Numbers: 0-9

When the variable name is followed by a period ".", then the period is considered a part of the variable and is replaced. The period is used to indicate the end of a variable when the adjacent text contains characters that can be used in a variable name:

MAILTO=(&JNAME.@ACME.COM)

If the next position of the directive is a period, then two periods must be used as the first one will be treated as part of the variable name:

FILENAME=(&JNAME..PDF)

VSE2PDF Variables

The following variables are currently available:

Variables based on VSE2PDF system level information:

&HOSTIP	The IP address for this host
&HOSTNAME	The IP name for this machine
&PARTID	Partition ID of the VSE2PDF partition
&VERSION	VSE2PDF Version

Variables based on POWER queue entry:

&JNAME	length is variable based on contents, but never greater than 8
&JNBR	NNNNN
&JSUFFIX	NNN
&PPAGES	NNNNN
&PLINES	NNNNN

Variables based on the POWER job execution date and time:

&JDATE	CCYYMMDD
&JEDATE	CCYYDDMM
&JDATEE	MM-DD-CCYY
&JEDATEE	DD-MM-CCYY
&JMM	MM
&JDD	DD
&JYY	YY
&JCCYY	CCYY
&JTIME	HHMMSS
&JTIMEE	HH-MM-SS
&JTIMEE2	HH:MM:SS

Variables based on the POWER print processing date and time:

&PDATE	CCYYMMDD
&PEDATE	CCYYDDMM
&PDATEE	MM-DD-CCYY
&PEDATEE	DD-MM-CCYY
&PMM	MM
&PDD	DD
&PYY	YY
&PCCYY	CCYY
&PTIME	HHMMSS
&PTIMEE	HH-MM-SS
&PTIMEE2	HH:MM:SS

(List continued on next page.)

[1] The date format depends on the options used during the VSE STDOPT DATE= setting.

Variables based on POWER standard operands:

&BLDG	length is variable based on contents, but never greater than 8
&DEPT	length is variable based on contents, but never greater than 8
&DEST2 - &DEST3	length is variable based on contents, but never greater than 8
&DIST	length is variable based on contents, but never greater than 8
&FLASH	length is variable based on contents, but never greater than 8
&FNO	length is variable based on contents, but never greater than 8[2]
&PROGR	length is variable based on contents, but never greater than 20
&ROOM	length is variable based on contents, but never greater than 8
&UINF	length is variable based on contents, but never greater than 16

Variables based on POWER queue entry OPTB values:

&AUTHOR	length is variable based on contents, but never greater than 60
&FNAME1	length is variable based on contents, but never greater than 255[3]
&FNAME2	length is variable based on contents, but never greater than 255[3]
&IPADDR	length is variable based on contents, but never greater than 124
&MAILTO	length is variable based on contents, but never greater than 124
&SUBJECT	length is variable based on contents, but never greater than 60
&TITLE	length is variable based on contents, but never greater than 60
&USER01 - &USER16	length is variable based on contents, but never greater than 60

Variables based on the contents of the page:

&PAGEDATA(line,column,length,strip_option)

(&PAGEDATA can be abbreviated as &PD.)

line, column, and length must be numeric.
Strip_option can be one of the following (it is optional):
"L" will strip off leading spaces
"T" will strip off trailing spaces
"B" will strip off both leading and trailing spaces
"S" same as "B" plus all embedded spaces changed to "_"
(see also Additional Stripping Options on the next page)

&PAGENOW(line,column,length,strip_option)

Works the same as &PAGEDATA but can be used to extract data from a DROPPAGE page where as &PAGEDATA always uses the actual first page of the report segment.

Miscellaneous changing variables:

&CURPAGE	Current page number.
&CURSEG	Current segment number.
&PAGESIDE	Set to either 'FRONT' or 'BACK'.
&JSEPLOC	Set to the value of one of the startups options JSEPLOC_START or JSEPLOC_END depending on the status of the current printing job. This variable is intended to be used in the contents of a JSEPDEF.

Note: These Miscellaneous changing variables have different values depending on when they are referenced. Since all variables are populated with their value when first used, these variables will appear to have a non-changing value if they are not again used in a directive. If you use one of these variables, you will need to respecify the directive using the variable anytime you wish to pick up an updated value.

---

[2] Power only allows for a 4 characters when using FNO=, but actually stores it in an 8 character field. The full 8 characters are used for data being transferred from another NJE system, like VM/RSCS. Normal Power printer processing ignores the last 4 characters.

[3] When Power directives contain more than one value, the variable name is suffixed with the position number within the parameter.

The following variables may be abbreviated as shown:

&AUTHOR	&AUT
&BLDG	&BLD
&CLASS	&CLA
&DEPT	&DEP
&DISP	&DIS
&DEST2	&DE2
&DEST3	&DE3
&FLASH	&FLA
&FNAME1	&FN1
&FNAME2	&FN2
&IPADDR	&IPA
&JNAME	&JNA
&JNBR	&JNB
&JSUFFIX	&JSU
&MAILTO	&MTO
&PAGEDATA	&PD
&PARTID	&PAR
&PROG	&PRO
&ROOM	&ROO
&SUBJECT	&SUB
&TITLE	&TIT
&UINF	&UIN

.

VSE2PDF Variable Examples

```
TITLE=(Stats for &PAGEDATA(2,11,6))
@GOODEOJ=(A LST,&JNAME,&JNBR,USER=(,EMAIL),DISP=K)
FILENAME=(\PDFS\MTHLY,=)
FILENAME=(=,STATS_&JDATE..PDF)
```

```
TITLE=(Stats for &PAGEDATA(2,11,6))
@GOODEOJ=(A LST,&JNAME,&JNBR,USER=(,EMAIL),DISP=K)
FILENAME=(\PDFS\MTHLY,=)
FILENAME=(=,STATS_&JDATE..PDF)
```

```
USER01 = (&PAGEDATA(2,11,6))
USER02 = (&PAGEDATA(1,10,50,'B'))
USER03 = (A/R Stats for &USER01 on &USER02)
TITLE=(&USER03)
FILENAME=(\PDF\NEWSTATS\MTHLY,=)
FILENAME=(=,&USER03)
```

Additional Stripping Options

Both the &PAGEDATA variable and the BOOKMARK directive both contain options that strip off space and low-value characters. Sometimes, additional characters must be stripped off. Additional characters can be stripped by defining a translate table with the reserved name of 'STRIP'. All text extracted by either these functions will be translated using this table prior to the actual stripping function being performed. The contents of this translate table should contain all valid character being translated to their current value and all invalid characters translated to x'40'. A sample translate table for this function is provided in the VSE2PDF library under the name 'STRIP.L'. In the sample, all normal uppercase, lowercase, and numeric character are retained. Also, some special characters are retained. All other characters are converted to spaces. This table, or a modification of it, can be loaded during the VSE2PDF startup using the TRANSLATE_MEMBER startup option.

ELIST Processing

When using the ELIST destination, VSE2PDF expects the MAILTO directive to point to a VSE Library member containing a list of e-mail addresses. If the MAILTO directive is blank, then VSE2PDF will use the VSE2PDF startup parameter ELIST_MEMBER_DEFAULT. VSE2PDF will read the member and will use the first 200 addresses for the e-mail TO field. Each address must be on a line by itself and must contain a valid domain. The DOMAIN_DEFAULT value is not applied to addresses within an ELIST member.

There is one special 'receipiant' allowed in an ELIST member. When VSE2PDF encounters the email address "**<BCC>**", any following addresses will be treated as 'blind copies'.

Sample ELIST Member

```
   CATALOG TLIST.ELIST REPLACE=Y
WILE_E_COYOTE@ACME.COM
TONY@VSE2PDF.COM
/+

* $$ LST MAILTO=TLIST
```

Sample ELIST Member with <BCC>

```
   CATALOG TLIST.ELIST REPLACE=Y
WILE_E_COYOTE@ACME.COM
<BCC>
TONY@VSE2PDF.COM
/+

* $$ LST MAILTO=TLIST
```

MSGPAGE Processing

One method of using the MSGPAGE option is to create an additional report page using a utility program just prior to the report-producing program. In the following example, TEIREPRO is a supplied utility program and ARB101 is the current report-producing program.

Original Job

```
* $$ LST …
// EXEC ARB101
/*
* $$ LST
```

Job Using MSGPAGE and DROPPAGE

```
* $$ LST …
// EXEC TEIREPRO,SIZE=TEIREPRO
<TEI> * MSGPAGE
<TEI> * DROPPAGE
Attached you will find your report. It is in Adobe PDF format.
If you do not have the Adobe PDF Reader, you may download it
from:
    HTTP://www.adobe.com
/*
// EXEC ARB101              << local print program
/*
* $$ LST
```

STOCKDEF Processing

Stockdefs are used to define a specific 'printer stock' by combining Formdefs and Pagedefs. Stockdefs can also be considered 'shortcuts' to allow a site to specify only one directive to define the full layout of each page.

FORMDEF

FORMDEF=aaaaaaaa
The name of the FORMDEF member to be used when this Stockdef is requested.

PAGEDEF

PAGEDEF=aaaaaaaa
The name of the PAGEDEF member to be used when this Stockdef is requested.

USEOVER

USEOVER=(aaaaaaaa,bbbbbbbb,cccccccc,dddddddd,eeeeeeee,ffffffff,gggggggg,hhhhhhhh)
Indicates which overlay(s) within the FORMDEF member to use on each page. The individual overlays are referenced by their full 8 character name or a single character. Although VSE2PDF supports multiple overlays, only 8 overlays can be used on a single page.

FORMDEF Processing

Formdefs are used to define the contents of the page prior to applying any print lines. It can be thought of as replacing the old 'Preprinted Forms' specified by the POWER FORM= operand. The method of naming the formdef member was standardize by IBM across platforms in support of the PSF product. As such, the actual member read is composed of a pre-defined two character prefix followed by the 6 characters specified in the FORMDEF directive. The use of the prefix allows the processing to be changed based on how the print is being handled. PSF uses a prefix of 'F1' for all formdef members. As VSE2PDF handles different output methods, it used three distinct prefixes 'FP', 'FH', 'FT' (PDF, HTML, and TEXT) for the member name.

Note: The format of the FORMDEF statements changed with VSE2PDF version 03.01.00. Although the original format is now obsolete, it is still supported but only supports overlays 1 though 8. The original, obsolete FORMDEF keyword (MATRIXx and OVERLAYx) are described as a group following the descriptions of the current keywords.

Although the order of FORMDEF statements within an ovelray group is not important, some FORMDEF options are cumulative and as such, the order they are processed within VSE2PDF is critical. When determining the PDF transformation matrix, the processing order is MATRIX, SKEW, ROTATE, then SCALE.

ID

ID=a
The ID statement indicates the overlay number that the following additional statements apply to. The ID value is only used when using the old form of the USEOVER= directive where a one position character was used. The value MUST be only one position.

MATRIX

MATRIX=(a,b,c,d,x,y)
The values for MATRIX control the placement of the overlay on the page in relation to the print data. It is more of an 'adjustment' factor. The first four parameters adjust rotation, scale and skew. Normally they should be set to '(1,0,0,1,x,y)'. The last two parameters adjust the x-axis and y-axis and are specified in point units where there are 72 points per inch. The first four parameters can be either positive or negative and may contain decimal points, but they have field size limits equivalent to S9(3)V9(6). The last two parameters can be either positive or negative and may contain decimal points but they have field size limits equivalent to S9(6)V9(3). For the x-axis and y-axis values, positive numbers indicate up or to the right while negative numbers indicate down or to the left. The default is '(1,0,0,1,0,0)' which results in no adjustment. If no adjustment is needed, then the MATRIX statement can be left out of the FORMDEF member.
Note: The use of MATRIX has been superseded with the combined use of PLACE, ROTATE, SCALE and SKEW.

NAME=

NAME=aaaaaaaa
A name that can be used to reference this overlay group. If not specified, the value for PDFFORM= is used.

OVERLAY

OVERLAY=a
The OVERLAY statement indicates the overlay number that the following additional statements apply to. If missing, the first overlay (OVERLAY=1) is assumed. There are 16 overlays allowed within any one job. They are numbered, in hex, from '0' (zero) to 'F'. The value MUST be only one position. A value with more than one position specified will be treated as if the statement is using the obsolete format where the value is the name of the overlay and not as the number of the overlay. All overlays found are used on each page until a USEOVER directive is encountered.

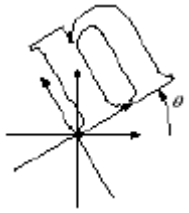
PDFFORM

PDFFORM=aaaaaaaa
The name of the VSE Library member containing the raw overlay data. The member type should not be included. VSE2PDF will use PDFFORM as the member type. The raw overlay data is created using the PC program PREPHOST.EXE. For compatibility with earlier releases, the setting for NAME= will be used to read the VSE Library member when SOURCE= is not specified.

PLACE

PLACE=(x,y)
The values for PLACE control the placement of the overlay on the page. It adjusts the x-axis and y-axis of the lower left corner of the overlay. The default for overlays is '(0,0)'. The two parameters can be either positive or negative and may contain decimal points but they have field size limits equivalent to S9(6)V9(3).

ROTATE



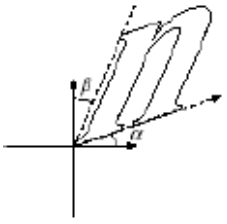
ROTATE=*θ*
Text rotation in degrees counter-clockwise from the x-axis. Must be in the range of 0 to 360. It can not contain decimal points. It has a field size limit equivalent to 9(3). Default setting is zero.

Note: Using a ROTATE value can rotate a full-page overlay out of the display area. To move the overlay back onto the page, the rotation point needs to be moved from (0,0) to one of the other corners of the page using the PLACE= setting. As a starting point, for ROTATE=90, try PLACE=(792,0); for ROTATE=180, try PLACE=(792,612,); for ROTATE=270, try PLACE=(0,612). Fine tuning will be required as these numbers are based on commonly used PAGEDEF values and may not exactly match your PAGEDEFs.

SCALE

SCALE=(x′,y′)
Since some overlays are not the exact size that is needed on the final output, the size of the overlay can be adjusted using the SCALE settings. The first value is the horizontal scaling. The second value is the vertical scaling. A scale value of '1' indicates that the overlay size should not be adjusted. A number larger than '1' will increase the size of the overlay while a number smaller than '1' will decrease the size of the overlay. The numbers should be positive and may contain decimal points but they have field size limits equivalent to S9(4)V9(3).
Note: If y′ is omitted, the y′ is set to the value of x′.

SKEW



SKEW=(*α*,*β*)
Each character is defined based on a rectangular area where the horizontal base is parallel to the x-axis and the vertical side is parallel to the y-axis. The first value of SKEW is the angle between the base and the x-axis. The second value of SKEW is the angle between the side and the y-axis. Must be in the range of 0 to 84. It has a field size limit equivalent to 9(2). Default settings are both zero.

Obsolete FORMDEF keyword formats:

OVERLAYx

OVERLAY1=aaaa
OVERLAY2=aaaa
OVERLAY3=aaaa
OVERLAY4=aaaa
OVERLAY5=aaaa
OVERLAY6=aaaa
OVERLAY7=aaaa
OVERLAY8=aaaa

The name of the VSE Library member containing the raw overlay data. The member type should not be included. VSE2PDF will use PDFFORM as the member type. The raw overlay data is created using the PC program PREPHOST.EXE. Up to 8 overlays can be used. They are numbered OVERLAY1 though OVERLAY8. For compatibility with earlier releases, OVERLAY= (without the number) is treated as OVERLAY1. All overlays found are used on each page until a USEOVER directive is encountered.

MATRIXx

MATRIX1=(a,b,c,d,x,y)
MATRIX2=(a,b,c,d,x,y)
MATRIX3=(a,b,c,d,x,y)
MATRIX4=(a,b,c,d,x,y)
MATRIX5=(a,b,c,d,x,y)
MATRIX6=(a,b,c,d,x,y)
MATRIX7=(a,b,c,d,x,y)
MATRIX8=(a,b,c,d,x,y)

The values for MATRIX control the placement of the overlay on the page in relation to the print data. It is more of an 'adjustment' factor. The first four parameters adjust rotation, scale and skew. Normally they should be set to '(1,0,0,1,x,y)'. The last two parameters adjust the x-axis and y-axis and are specified in point units where there are 72 points per inch. The first four parameters can be either positive or negative and may contain decimal points, but they have field size limits equivalent to S9(3)V9(6). The last two parameters can be either positive or negative and may contain decimal points but they have field size limits equivalent to S9(6)V9(3). For the x-axis and y-axis values, positive numbers indicate up or to the right while negative numbers indicate down or to the left. The default is '(1,0,0,1,0,0)' which results in no adjustment. If no adjustment is needed, then the MATRIX statement can be left out of the FORMDEF member. Up to 8 Matrixes can be used. They are numbered MATRIX1 though MATRIX8 and each adjust the location of the Overlay with the same number suffix. For compatibility with earlier releases, MATRIX= (without the number) is treated as MATRIX1.

Sample FORMDEF Setup

```
Overlay is uploaded as IRSW2.PDFFORM

Formdef is cataloged as FPW2FORM.T
CATALOG FPW2FORM.T
PDFFORM=IRSW2
ID=1
PLACE=(0,0)       < optional
/+

LST card:
* $$ LST FILENAME=(,W2FORM.PDF),FORMDEF=W2FORMSupplied Sample
Form Definitions
```

VSE2PDF provides the following sample form definitions:

FPW2FORM uses the supplied sample overlay IRSW2 (an IRS W2 form)
FPGRELAN uses the supplied sample overlay GREELAND (a sample green bar form)

Supplied Sample Overlays

VSE2PDF provides the following sample overlays. To use these overlays, they must be FTPed to a VSE library found in the source search LIBDEF for the VSE2PDF partition.

IRSW2.PDFFORM was built from a PDF downloaded from the IRS web site. Only the PDFFORM file is provided, not the original source used as input to PrepHost.

GREELAND.PDFFORM was built using Excel and Adobe Acrobat as a sample of how easy the creation of overlays can be. The sample Excel spreadsheet is also provided as GREELAND.XLS. The PDF file originally generated by Acrobat is also provided as GREELAND.PDF.

PAGEDEF Processing

Pagedefs are used to define the information on how to apply the print lines to the page. It can be thought of as replacing the old 'Forms Control Buffer' specified by the POWER FCB= operand. The method of naming the pagedef member was standardize by IBM across platforms in support of the PSF product. As such, the actual member read is composed of a pre-defined two character prefix followed by the 6 characters specified in the PAGEDEF directive. The use of the prefix allows the processing to be changed based on how the print is being handled. PSF uses a prefix of 'P1' for all formdef members. As VSE2PDF handles different output methods, it uses four distinct prefixes 'PP', 'PH', 'PT', 'PS' (PDF, HTML, TEXT, and PostScript) for the member name. Whenever the term 'points' is used, it refers to standard type-setting rules where there are 72 points per inch. Whenever x-axis or y-axis is used, it refers to the number of points from the bottom left (origin) of the page. X-axis numbers increase as you move to the right of the page. Y-axis numbers increase as you move up from the bottom of the page.

Although the order of PAGEDEF statements within a group is not important, some PAGEDEF options are cumulative and as such, the order they are processed within VSE2PDF is critical. When determining the PDF transformation matrix, the processing order is MATRIX, SKEW, then ROTATE.

CHANNEL

CHANNEL=aa
Marks the current line with the specified FCB channel number. Must be an integer between 1 and 12.
Note: Use of the same channel number multiple times without an intervening channel 1 will lead to unpredictable results.
Restriction: Can only be used within a line level override group.

CHAR_SPACE

CHAR_SPACE=n
An adjustment factor to the normal width of the space character expressed in point units. Whenever a space is printed, the width the character is adjusted by this number. This expands the gap between each character. Can be positive or negative and may contain decimal points but has a field size limit equivalent to S9(4)V9(3). Default is zero.

COLORDEF

COLORDEF=
The color of each print line. The field size is 8 positions.

COPY_LINES

COPY_LINES=(a,b,n,x,y)
Copy the format of each line starting at line a to a new location b for n lines with line b being located at x,y (x-axis, y-axis). The first parameter is the starting 'from' line. The second parameter is the starting 'new location' line. The third parameter is the number of lines to copy (defaults to "1"). The fourth and fifth parameters equate to a new starting position on the page (see PLACE below). If either of the forth or fifth parameters are not specified, they are extracted from the existing value for the 'to' line.

COPY_TO_EOP

COPY_TO_EOP
COPY_TO_EOP is only available when processing a line level override group. When found, the following is extracted from the current line and replicated to all following lines until then end of the page: FONT, FONTSIZE, LINESIZE, MATRIX. (The line location in the MATRIX setting is adjusted by the new LINESIZE.) Later PAGEDEF commands can then be used to override the new settings.
Restriction: Can not be used unless a "LINE=" script directive has been processed. It can not be used if the current line location has been set to "LINE=H2OMARK".

DROPLINE

DROPLINE
DROPLINE is only available as a line level override group and indicates that the current line is not to be printed.
Restriction: Can only be used within a line level override group.

DUP_LINE

DUP_LINE=n
DUP_LINE is only available when processing a line level override group. When found, the following is extracted from the current line and replicated to nnn following lines or until then end of the page: FONT, FONTSIZE, LINESIZE, MATRIX. (The line location in the MATRIX setting is adjusted by the new LINESIZE.) Later PAGEDEF commands can then be used to override the new settings.
Restriction: Can not be used unless a "LINE=" script directive has been processed. It can not be used if the current line location has been set to "LINE=H2OMARK".

FCB

FCB=xxxxxxxx
The FCB to be used for this report. This overrides the FCB specified on the LST card (or defaulted to by Power). The field size is 8 characters. If the FCB specified is either 'NULL' or 'NONE', an empty FCB will be created with channel 01 on line 1.
Restriction: Can not be used within a line level override group.

FONT

FONT=xxxxxxxx
The default font for the report print data. Using the PDFFONT= startup option, additional fonts may be defined to VSE2PDF. The following built-in font codes are always available:

BF01	COURIER
BF02	COURIER_BOLD
BF03	COURIER_OBLIQUE
BF04	COURIER_BOLDOBLIQUE
BF05	HELVETICA
BF06	HELVETICA_BOLD
BF07	HELVETICA_OBLIQUE
BF08	HELVETICA_BOLDOBLIQUE
BF09	TIMES_ROMAN
BF10	TIMES_BOLD
BF11	TIMES_ITALIC
BF12	TIMES_BOLDITALIC

NOTE: Only the Courier built-in fonts are fixed pitch. All other fonts are proportional and should not be used for columnar type printouts.

FONTSIZE

FONTSIZE=n
The font size of the print characters in points. The default is 9, which corresponds to 8 characters per inch. Must be positive and may contain decimal points but has a field size limit equivalent to 9(4)V9(3).

H_SCALE

H_SCALE=n
The font horizontal scaling factor as a percentage of the normal character width. The default is 100 (100%). Should normally be positive and may contain decimal points but has a field size limit equivalent to S9(4)V9(3).

LINE

LINE=n
The line number to which the following line level overrides apply. The LINE= option switches the PAGEDEF processing from page level to line level. All remaining commands within the PAGEDEF member will be treated as line specific overrides. The special option 'LINE=H2OMARK' can be used to modify the default watermark location and attributes.
Restriction: 'LINE=H2OMARK' is not allowed when using the special educational copy of VSE2PDF.

LINES

LINES=n
The number of lines per page. The default is 80. The current maximum number of lines per page is 255, but may increase in future updates. A number over 255 will be accepted, but internally will be converted to 255. This limit was chosen for compatibility with FCBs, which are restricted to 255 lines.

LINESIZE

LINESIZE=n
The height of each print line in points. The default is 9, which corresponds to 8 lines per inch. Should be positive and may contain decimal points but has a field size limit equivalent to S9(4)V9(3).

MATRIX

MATRIX=(a,b,c,d,x,y)
The values for MATRIX control the placement of the overlay on the page in relation to the print data. It is more of an 'adjustment' factor. The first four parameters adjust rotation, scale and skew. Normally they should be set to '(1,0,0,1,x,y)'. The last two parameters adjust the x-axis and y-axis and are specified in point units where there are 72 points per inch. The first four parameters can be either positive or negative and may contain decimal points, but they have field size limits equivalent to S9(3)V9(6). The last two parameters can be either positive or negative and may contain decimal points but they have field size limits equivalent to S9(6)V9(3). For the x-axis and y-axis values, positive numbers indicate up or to the right while negative numbers indicate down or to the left. The default is '(1,0,0,1,36,594)' which corresponds to a page that is 11 x 8.5 inches printing 80 lines.
Note: The use of MATRIX has been superseded with the combined use of PLACE, ROTATE, and SKEW.

MEDIA

MEDIA=(x,y,x′,y′)
The value for MEDIA defines the printable area of the page within a PDF file. The first pair of parameters defines the lower left corner of the page (x-axis, y-axis). The second pair defines the upper right corner of the page (x-axis, y-axis). The default is '(0,0,792,612)' which corresponds to a page that is 11 x 8.5 inches. All parameters should be positive integers. The MEDIA information is only used when creating PDF files. For PostScript files, use the ORIENTATION directive.
Restriction: Can not be used within a line level override group.

ORIENTATION

ORIENTATION=x
The ORIENTATION defines the page orientation within a PostScript file. The possible values are "P" for PORTRAIT and "L" for LANDSCAPE. The ORIENTATION information is only used when creating PostScript files. For PDF files, use the MEDIA directive.
Restriction: Can not be used within a line level override group.

PLACE

PLACE=(x,y)

The values for PLACE control the placement of the print data on the page. It adjusts the x-axis and y-axis of the upper left corner of the page. At the line override level, it locates the leftmost print position of the line. The default is '(36,594)' which corresponds to a page that is 11 x 8.5 inches printing 80 lines. The two parameters can be either positive or negative and may contain decimal points but they have field size limits equivalent to S9(6)V9(3).

PRIMITIVE

PRIMITIVE=x

The normal PDF generation process creates sophisticated PDFs that some extract utilities can not process. When PRIMITIVE=YES is specified, the PDF is generated using simplified internals. These simplified internals do not support all of the advanced features of VSE2PDF so the generated PDF may not look the same as it would using PRIMITIVE=NO. The default setting is "NO"

RENDER

RENDER=x

The rendering mode for the characters. The default is '0', which corresponds to normal print characters. It must have a value from zero to three.

- "0" Filled text. This is normal type face. Default.
  Character appears in the fill color.
- "1" Stroked text. Each character is drawn with an outline. The center is transparent.
  Character outline appears in the stroke color. The outline is larger than a standard fill-only (RENDER=0) character.
- "2" Stroke, then fill.
  Character appears in the fill color outlined by the stroke color. Note that for smaller font size characters, around FONTSIZE=20, only the outline will be viewable yielding a character that appears to be drawn in the stroke color only.
- "3" Neither filled or stroked. Yields invisible characters.

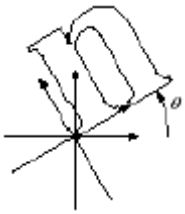
Restriction: Render '1' and '2' will be ignored by VSE2PS when used in conjunction with either WORD_SPACE or CHAR_SPACE.

MODE	EXAMPLE	DESCRIPTION
0		Fill text.
1		Stroke text.
2		Fill, then stroke, text.
3		Neither fill nor stroke text (invisible).

ROTATE

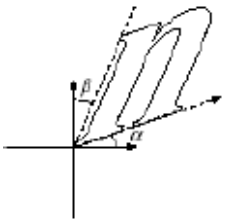
ROTATE=*θ*

Text rotation in degrees counter-clockwise from the x-axis. Must be in the range of 0 to 360. It can not contain decimal points. It has a field size limit equivalent to 9(3). Default setting is zero.



SKEW

SKEW=(*α*,*β*)



Each character is defined based on a rectangular area where the horizontal base is parallel to the x-axis and the vertical side is parallel to the y-axis. The first value of SKEW is the angle between the base and the x-axis. The second value of SKEW is the angle between the side and the y-axis. Must be in the range of 0 to 84. It has a field size limit equivalent to 9(2). Default settings are both zero.

WORD_SPACE

WORD_SPACE=n

An adjustment factor to the normal width of the space character expressed in point units. Whenever a space is printed, the width of the character is adjusted by this number. This expands the gap between each word. Can be positive or negative and may contain decimal points but has a field size limit equivalent to S9(4)V9(3). Default setting is zero.

Sample PAGEDEF Setup with Line level override groups

```
Pagedef is cataloged as PPPAGE1.T
CATALOG PPPAGE1.T
* 8.5 X 11   62 LINES  80 CHARACTERS
FONT=BF01
FONTSIZE=12
LINES=62
LINESIZE=12
PLACE=(18,774)
MEDIA=(0,0,612,792)
LINE=1                      Change line 1
PLACE=(18,600)                    move it around
ROTATE=90                         rotate it 90°
LINE=6                      Change line 6
FONT=BF02                         change font
FONTSIZE=20                       make font larger
LINESIZE=20                       make line taller
PLACE=(-20,690)                   move it around

LST card:
* $$ LST PAGEDEF=PAGE1
```

Supplied Sample Page Definitions

VSE2PDF provides the following sample page definitions for PDF output. Similar members are provided for PostScript output.

PPFULL Courier, 11 x 8.5; 80 lines; 132 characters
PPLAND Courier, 11 x 8.5; 63 lines; 132 characters
PPPORT Courier, 8.5 x 11; 62 lines; 80 characters
PPSMAL Courier, 8.5 x 11; 68 lines; 88 characters
PPHOLE Courier, 8.5 x 11; 62 lines; 80 characters, left margin offset for 'hole' paper
PPSLIM Courier, 8.5 x 11; 62 lines; 100 characters, left margin offset for 'hole' paper

These should be changed or added to as required because different end-user printers behave differently.

Watermarks

Watermarks can be used to create large shadow text behind the normal report text.

The base watermark settings default to:

```
PAGEFONT settings
LINE=H2OMARK
FONT=BF01
FONTSIZE=180
RENDER=2
ROTATE=45
SKEW=(0,35)
PLACE=(108,108)             Start near bottom left

COLORDEF settings
TYPE=D-GRAY
STROKE=(.9)
FILL=(.95)
```

The educational copy watermark settings are always:

```
PAGEFONT settings
FONT=BF01
FONTSIZE=60
RENDER=2
ROTATE=45
SKEW=(0,35)
PLACE=(30,30)               Start near bottom left

COLORDEF settings
TYPE=D-GRAY
STROKE=(.9)
FILL=(.95)
```

Job Separator Processing

Job separators can be produced using a combination of a JSEPDEF directive, a JSEPDEF definition, and a job separator PAGEDEF. In the absence of a JSEPDEF directive or a JSEPDEF_DEFAULT startup option, no job separators will be generated. The definition of the job separator is cataloged in the same manner as a PAGEDEF, but the format of the lines in the member is special. All lines that do NOT begin with one of the valid keywords are treated as raw print line data. Up to 30 print lines may be included. VSE2PDF variables may be used on the print line. Only the first 72 characters of each line are used.

PAGEDEF

PAGEDEF=xxxxxxxx
The name of the pagedef to be used for the job separator page.

xxxxxx

xxxxxx
Print data lines are specified without any keyword. The field size is 72 characters. Blank lines may be included to simplify the pagedef settings. Only the first 30 lines of data are used.

Sample JSEPDEF and matching PAGEDEF

```
Jsepdef is cataloged as TEIJSEP.T
CATALOG TEIJSEP.T
PAGEDEF=JSEP
  &JSEPLOC
&JNAME
   &JNBR
 MAILTO=&MAILTO
  TITLE=&TITLE
SUBJECT=&SUBJECT









  PROGR=&PROGR
   BLDG=&BLDG
   ROOM=&ROOM
   DEPT=&DEPT
/+

LST card:
* $$ LST JSEPDEF=TEIJSEP
```

```
Pagedef is cataloged as PPJSEP.T
   CATALOG PPJSEP.T
FONT=BF01
FONTSIZE=30
LINES=30
LINESIZE=30
PLACE=(36,580)
MEDIA=(0,0,792,612)
LINE=1
FONTSIZE=60
PLACE=(200,360)
LINE=2
FONTSIZE=120
PLACE=(105,270)
LINE=3
FONTSIZE=60
PLACE=(200,220)
LINE=4
PLACE=(36,580)
COPY_TO_EOP
/+
```

COLORDEF Processing

COLORDEFs are used to a "color" to the actual internal color scale definitions used internally by VSE2PDF. A COLORDEF name can be used within a PAGEDEF directly or indirectly via the FONTINDEX setting.

COLORDEFs are defined to VSE2PDF at the VSE2PDF system level by using the COLORDEF startup option. They are defined using an 8 character name. COLORDEFs are created by processing LIBR members. Each LIBR member can contain one or more COLORDEFs. If while processing a COLORDEF LIBR member, a duplicate COLORDEF name is encountered, the new information modifies the existing definition. This allows site to override the settings for the predefined COLORDEFs.

The following keywords are available to be used within COLORDEFs.

NAME

NAME=aaaaaaaa
Defines the name of the COLOR which will be defined by the following keywords. The field size is 8 characters. There are two predefined system COLORDEFs. These can be modified by customer supplied COLORDEF definitions. The predefined COLORDEFs are:

SYS_BASE	Used for all characters that do not otherwise have a COLORDEF attribute Defined as: TYPE=D-GRAY STROKE=(0) FILL=(0)
SYS_H2O	Used for creating any watermarks. Defined as: TYPE=D-GRAY STROKE=(.9) FILL=(.95)

TYPE

TYPE=aaaaaaa
Defines the color model used to interpret the STROKE and FILL values.

D-GRAY	Device Gray scale model. Only uses the first value for STROKE and FILL.
D-RGB	Device RGB model. Uses the first three values for STROKE and FILL.
D-CMYK	Device CMYK model. Uses the first four values for STROKE and FILL.

STROKE

STROKE=(a,b,c,d)
Defines the color details for the outline of each character. Normally the STROKE color is not used. It can be turned on using the RENDER PAGEDEF directive. Each value is between 0 and 1. Must be zero or positive and may contain decimal points but has a field size limit equivalent to S9(1)V9(4). Default for each value all color models is zero.

FILL

FILL=(a,b,c,d)
Defines the color details for the body of each character. It can be turned off using the RENDER PAGEDEF directive. Each value is between 0 and 1. Must be zero or positive and may contain decimal points but has a field size limit equivalent to S9(1)V9(4). Default for each value all color models is zero.

Color Models

Color models are defined using the following formats as defined in "PDF Reference; fourth edition; Adobe Portable Document Format, Version 1.5;" © 1985–2003 Adobe Systems Incorporated.

Device Gray Scale Model

"Black, white, and intermediate shades of gray are special cases of full color. A grayscale value is represented by a single number in the range 0.0 to 1.0, where 0.0 corresponds to black, 1.0 to white, and intermediate values to different gray levels."

Device RGB Model

A color value is represented "according to the additive RGB (red-green-blue) color model, in which color values are defined by three components representing the intensities of the additive primary colorants red, green, and blue. Each component is specified by a number in the range 0.0 to 1.0, where 0.0 denotes the complete absence of a primary component and 1.0 denotes maximum intensity. If all three components have equal intensity, the perceived result theoretically is a pure gray on the scale from black to white. If the intensities are not all equal, the result is some color other than a pure gray."

Device CMYK Model

A color value is represented "according to the subtractive CMYK (cyan-magenta-yellow-black) model typical of printers and other paper-based output devices. In theory, each of the three standard process colorants used in printing (cyan, magenta, and yellow) absorbs one of the additive primary colors (red, green, and blue, respectively). Black, a fourth standard process colorant, absorbs all of the additive primaries in equal amounts. The four components in a DeviceCMYK color value represent the concentrations of these process colorants. Each component is specified by a number in the range 0.0 to 1.0, where 0.0 denotes the complete absence of a process colorant (that is, absorbs none of the corresponding additive primary) and 1.0 denotes maximum concentration (absorbs as much as possible of the additive primary). Note that the sense of these numbers is opposite to that of RGB color components."

Sample COLORDEF

```
Colordef is cataloged as MYCOLORS.T
CATALOG TEICOLOR.T
NAME=HALFGRAY
TYPE=D-GRAY
STROKE=(.5)
FILL=(.5)
NAME=RED
TYPE=D-RGB
STROKE=(1,0,0)
FILL=(1,0,0)
NAME=GREEN
TYPE=D-RGB
STROKE=(0,1,0)
FILL=(0,1,0)
NAME=BLUE
TYPE=D-RGB
STROKE=(0,0,1)
FILL=(0,0,1)
/+

VSE2PDF startup option:
COLORDEF=(,MYCOLORS.T)
```

FONTDEF Processing

Fontdefs are used to equate several printing attributes into one "set" that can be referenced by placing a FONTDEF index number in the first position of the print line. This allows the programmer the flexibility of defining the printing attributes for a line. As the index number is equated to the "set" of attributes within the PAGEDEF, it becomes possible to adjust the look of the final output without making source code changes to the program generating the output. The FONTDEF index byte also allows those programs written to work with Xerox printers to also work with VSE2PDF.

FONTDEFs are defined to VSE2PDF at the VSE2PDF system level by using the FONTDEF startup option. They are defined using an 8 character name. FONTDEFs are created by processing LIBR members. Each LIBR member can contain one or more FONTDEFs. If while processing a FONTDEF LIBR member, a duplicate FONTDEF name is encountered, the new information modifies the existing definition.

The following keywords are available to be used within FONTDEFs but are processed in the same manner as if found in a PAGEDEF. Refer to the descriptions of each in the PAGDEF section above.

CHAR_SPACE
FONT
FONTSIZE
H_SCALE
LINESIZE
RENDER
WORD_SPACE

Additional FONTDEF specific keywords:

NAME

NAME=aaaaaaaa
Defines the name of the FONTDEF which will be defined by the following keywords. The field size is 8 characters.

Sample FONTDEF

```
Fontdef is cataloged as TEIFONTS.T
CATALOG TEIFONTS.T
NAME=BF011212
FONT=BF01
FONTSIZE=12
LINESIZE=12
NAME=BF011010
FONT=BF01
FONTSIZE=10
LINESIZE=10
NAME=BF011012
FONT=BF01
FONTSIZE=10
LINESIZE=12
/+

VSE2PDF startup option:
FONTDEF=(,TEIFONTS.T)
```

User Defined Fonts

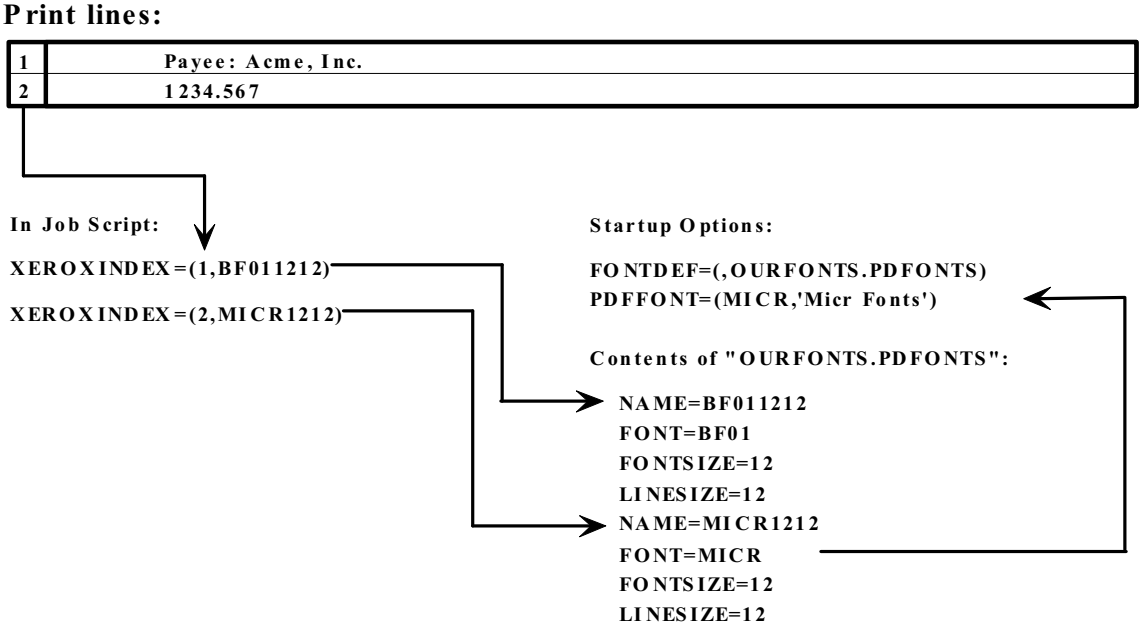
VSE2PDF allows user fonts. User font members are created by using the PREPHOST program and selecting the option to extract fonts. Caution must be exercised as PDF files only contain definitions for characters actually used within the file. Therefore, when creating a PDF file to be used as the source for a PDFFONT member, make sure that all characters are in the source file.

1. Create a Word (or other format) document with all possible characters.
2. Convert the document to a PDF file using Adobe Acrobat.
3. Rename the output file to have a file suffix of PDFFONT.
4. Upload the file in binary to a VSE Library within the SOURCE search chain for VSE2PDF.

Several sample user font files are provided within the VSE2PDF installation package. These are supplied in MS Word format, the PDF version of the document, and the extracted PDFFONT file ready for upload to VSE. These are considered samples only and may need modification for additional special characters.

XEROXINDEX Processing

Although the XEROXINDEX option was designed as an interface for the VSE2PDF/DJDE optional feature of VSE2PDF, it can be used directly without the VSE2PDF/DJDE feature, but it does require several setup items. The following diagrams the use of a locally defined font



VSE2PDF/DJDE

The VSE2PDF/DJDE feature (when licensed) will convert a limited subset of Xerox style DJDE cards to a format known to VSE2PDF. Currently, the following DJDE keywords are processed. Other DJDE keywords are ignored. Xerox abbreviations are also supported.

$$START
$$START statements are ignored

$$DJDE BEGIN=
Fully supported.

$$DJDE BFORM=
Fully supported. Form names must match name of a STOCKDEF member.

$$DJDE C
Restricted support with special VSE2PDF usage. The DJDE "comment" keyword has different syntax rules than other DJDE keywords. There is a space instead of an "=" after the keyword "C". Everything after the "C<space>" is treated as a comment until the first comma at which point a new DJDE keyword is expected. If a comma is in the comment, it must be enclosed in quotes. Because of these special syntax rules, VSE2PDF has the following restrictions on the way the comment keyword must be used.
Restriction: If another VSE2PDF supported DJDE keyword occurs on the same line and follows the comment text, the comment text MUST NOT contain spaces UNLESS it is enclosed in either quotes or parentheses.
Special VSE2PDF support: The DJDE comment text can be used to pass VSE2PDF directives. The directive text MUST be enclosed in quotes or parentheses. The VSE2PDF directive must be formatted the same as an inline directive. This includes it being preceded by both the system SYSLST_CMD_PREFIX value and a destination. A few examples follow:

```
$$DJDE C (<TEI> FTP FILENAME=((MY DIRECTORY),(MY FILE NAME)));
$$DJDE C (<TEI> FTP FILENAME=((MY DIRECTORY),(MY FILE NAME))),TOF=1;
$$DJDE C (<TEI> ALL MAILTO= Wile_E_Coyote@ACME.COM);
```

$$DJDE DUPLEX=
Minimal support. Although VSE2PDF tracks the duplex setting, there is no method to pass this into a PDF formatted file at this time.

$$DJDE END
Fully supported.

$$DJDE FONTINDEX=
Fully supported.

$$DJDE FONTS=
Fully supported. Fonts must be defined to VSE2PDF using the FONTDEF= startup option.

$$DJDE FORM=
Fully supported. Form names must match name of a STOCKDEF member.

$$DJDE SIDE=
Partially supported. The first value is fully supported. The second value (stacker option) is ignored.

DJDE Conversion Issues

Xerox uses the term “line spacing” which is defined in “lines per inch”. PDFs (and VSE2PDF) define line spacing and fonts in “points per inch”. There are 72 points per inch. To caluclate the font size for VSE2PDF, take the lines per inch number and divide by 72. I.e., 10 lines per inch would equate to a line size of 7.2 points. (72/10=7.2).

The Xerox term “line spacing” relates to the VSE2PDF term LINESIZE.

The Xerox term “FONT”

Restriction: If using overprint (write without advancing), only the index byte from the last line of an overprint set will be used.

VSE2PDF/Secure

The VSE2PDF/Secure feature (when licensed) will enable the ability to encrypt files with 128 bit encryption. A PDF document is automatically encrypted if the PDFSEC directive is set to any value. By setting the VSE2PDF startup option SYSOPT_ENCRYPT_PDF=YES, files without a PDFSEC directive will also be encrypted. Encrypted files that do not have a PDFSEC value will not be modifiable, but will be readable by anyone.

NOTE: VSE2PDF/Secure is intended to help the health care industry comply with HIPAA (Health Insurance Portability and Accountability Act) requirements and for general protection of data by other non-health care users. As with any encryption method, it might be possible to determine the secure key using “brute force” methodologies. As the encryption method was designed and is publicly documented by Adobe, neither Thigpen Enterprises, Inc. or it’s sales agents can be held liable for any consequences that might arise from unauthorized access to PDF files created using the VSE2PDF/Secure feature of VSE2PDF.

PREPHOST

PREPHOST is licensed to Thigpen Enterprises, Inc. for use with VSE2PDF by LaBayne & Associates, Inc., the developer of JES2MAIL. JES2MAIL is a product similar to VSE2PDF for use on the MVS and OS/390 platforms. If you are interested in JES2MAIL, please contact the VSE2PDF support staff and we will provide contact information. VSE2PDF has chosen to use the same overlay format as JES2MAIL to give our clients using multiple platforms a compatible method to create forms overlays and font files.

PrepHost.exe will 'extract' a page from a PDF document file, and convert it to a VSE2PDF ready overlay file that is then uploaded to the host. Due to TCP/IP for VSE requirements, the file will have to be renamed prior to upload.

Creating a PDF of the overlay information is as simple as using your standard Windows based drawing software (or even Excel and Word) and converting the file to PDF using Adobe Acrobat or any other software package that will create PDF files from Windows applications. The open source project PDFCREATOR (http://sourceforge.net/projects/pdfcreator/) has been suggested by some customers as a free alternative to Adobe Acrobat. Although we mention Windows, only the PREPHOST program has to run on a Windows box. The actual PDF that is input to PREPHOST can also be created on a Mac or Linux platform.
The following is an example where a W2 form has been downloaded from the IRS web site and we want to use it as an overlay on VSE2PDF.

The file is downloaded from the IRS site as 'IRSForm.PDF'. It is a PDF document with ten pages. As several of the pages are documentation; the only page to be extracted is page four for use as our overlay. Invoke the PrepHost program from a DOS prompt, or invoke it by double clicking on it. Here is the dialog that will occur:

> JES2MAIL PDF Form preparation program.
> Release…
> Copyright….
> Copyright….
> Enter source PDF filename:

Enter the filename of the PDF document. In our case it was 'IRSForm.PDF'

The program responds with:

> File contains 10 pages.
> Enter 'O' for overlay Extract, 'F' for font Extract, 'x' to exit.

Enter 'O'

> Enter Page number to extract:

Enter '4'

The program responds with:

> Enter new Overlay Name (Max 8 chars):

Enter 'IRSW2'

The program performs the extraction and preparation and responds with:

```
Total Chars generated in PDF form: 17781
Generating for upload, file: IRSW2.BIN
Overlay file is ready to upload.
Remember to upload as Binary.
```

The generated overlay file, IRSW2.BIN is almost ready for uploading to the host. Due to TCP/IP for VSE translation table entries, it must be renamed to IRSW2.PDFFORM prior to uploading. Using FTP, transfer this member to a VSE Library within the SOURCE search chain for VSE2PDF.

General Examples

```
* $$ LST CLASS=Z,DISP=D,DEST=(,EMAIL),
* $$            MAILTO=(WILE_E_COYOTE@ACME.COM),
* $$            FILENAME=(,AR001.PDF),
* $$            TITLE=(ACCOUNTS RECEIVABLE EDIT)
```

```
* $$ LST CLASS=Z,DISP=D,DEST=(,ELIST),MAILTO=(ARUSERS),
* $$            FILENAME=(,AR001.PDF),
* $$            TITLE=(ACCOUNTS RECEIVABLE EDIT)
```

```
* $$ LST CLASS=Z,DISP=D,DEST=(,FTP),IPADDR=(FTP.ACME.COM),
* $$            FILENAME=(ARJOBS/EDITS,AR001.PDF),
* $$            TITLE=(ACCOUNTS RECEIVABLE EDIT)
```

```
* $$ LST CLASS=Z,DISP=D,DEST=(,LIBR),
* $$            FILENAME=(PDFLIB.AR,AR001.PDF),
* $$            TITLE=(ACCOUNTS RECEIVABLE EDIT)
```

NOTE: The continuation character in column 72 is not shown, but is required by POWER when continuing JECL lines.

Chapter 4

Optional Setup Items

TCP/IP Setup

If using the output option 'LIBR', then the following entry must be added to the EXTTYPES.L member supplied with TCP/IP:

```
PDF         BIN     application/octet-stream
```

If using overlays, then the following entry must be added to the EXTTYPES.L member supplied with TCP/IP:

```
PDFFORM     BIN     application/octet-stream
PDFFONT     BIN     application/octet-stream
```

Please reference the TCP/IP documentation under 'Special File Handling'.

VSE2PDF now performs DNS lookups. You will need to either include the correct DNS1 specification or add any addresses used by VSE2PDF jobs to TCP/IP for local name resolution. (DEFINE NAME,NAME= when using CSI TCP/IP.)

Recommended POWER PTFs

DY45176

The application of APAR DY45176 (POWER 6.3) is recommended. Although NOT required, it enhances VSE2PDF processing in the following areas:

1. VSE2PDF will shutdown automatically during PEND processing.
2. The General Information area in the PDF file will contain the original POWER output creation date and time. Prior to this PTF, VSE2PDF did not have access to this information.
3. The Directive Variables based on POWER job execution time are not available without this APAR.

The APAR for different POWER releases are:

5.2 DY45106 (or level set DY45244, PTF UD51185 only)
6.1 DY45104 (or level set DY45245, PTF UD51186 UD51187)
6.3 DY45176 (or level set DY45236, PTF UD51173 UD51174)
6.4 DY45105 (or level set DY45251, PTF UD51188 UD51189)

Later releases of Power already contains this PTF.

User Exit

TEIUSER1

The user exit 'TEIUSER1' is provided to allow the following:

1. Overriding output parameters.
2. Forcing 'segmentation' of the report where each segment may have different destinations.
3. Creating a unique file name when a segment occurs due to the MAX_PAGES setting.
4. Pre-processing of every print line allowing modification or dropping of individual lines.

TEIUSER2

The user exit 'TEIUSER2' is provided to allow for a site to handle the file IO of the resulting member. This exit is used whenever the destination is 'USER'.

User Exit Documentation

Refer to the documentation within 'TEIUSER1.A' and 'TEIUSER2.A' for additional information. Additional support may be received by e-mailing Support@VSE2PDF.com.

User Exits must be reassembled whenever upgrading VSE2PDF to a later version, release, or modification.

Chapter 5

PDF Files

Overview

The Adobe PDF specification was originally designed around the Postscript language. As Postscript is designed for use on PC platforms, the conversion of print data from a mainframe platform to the PDF specification is not always a straight forward conversion.

Channel Processing

A command to 'skip to channel xx' where the xx channel is not found in the FCB, will be treated as 'space 1 line'. Currently the FCB 'end of form' control is ignored. Please review the startup option SYSOPT_FCB_AS_IS and how it affects FCB processing within VSE2PDF.

PDF Print Area

PDF format rules state that any lines that actually print outside of the boundaries of the page are not displayed or printed. To prevent this, reduce the LINES directive.

PDF Display vs. PDF Print

When setting up the page definitions if the font size is too large for the actual LPI specification, the PDF Display will appear correct, but printing or performing a 'Cut and Paste' function will produce output without a line feed at the end of each print line. This can be eliminated by reducing the FONTSIZE or increasing the LINESIZE directives.

PDF 'Cut and Paste'

When using the Adobe viewer, 'Cut and Paste' does not 'Cut' any intervening spaces when they are over one space wide. This is due to the way the viewer handles the data. VSE2PDF does not remove the spaces. Use the text output option to send data that can be cut and pasted.

Sample MATRIX settings

NOTE: Within PAGEDEFs and FORMDEFs, the use of MATRIX has been superseded with the combined use of PLACE, ROTATE, SCALE and SKEW.

The following are samples of MATRIX settings that rotate the print in a Counterclockwise fashion:

90°	(print bottom to top)	MATRIX=(0,1,-1,0,x,y)
180°	(upside down right to left)	MATRIX=(-1,0,0,-1,x,y)
270°	(print top to bottom)	MATRIX=(0,-1,1,0,x,y)

Please note that the x and y coordinates indicate the location of the bottom left corner of the letter when the letter is viewed in it's normal format (0° rotation). So, an upside-down character will start lower on the page than it normally would have. For the mathematicians, the MATRIX is normally represented as MATRIX=(cos θ,sin θ,-sin θ,cosθ,x,y) where θ is the angle counterclockwise from the x-axis.

PDF Capable Printers

There are now several PDF capable printers on the market. Using such a printer, VSE2PDF can send the PDF report directly to the printer using LPR, Direct, or FTP protocols. At the time of this writing, the following printers have been used in this manner:

Xerox DP75
Xerox Docucentre 432
HP Color LaserJet 4730mfp Series
HP LaserJet P4515 Printers
HP printers with the following add-on: JetCaps PDF_Direct
(see: http://h40041.www4.hp.com/uk/solutions/pdf_direct.html)

Other printers (including IBM) have documentation indicating they have this ability but we have no known experience with driving them using VSE2PDF.

If a PDF capable printer is not available, there is a software product that can reside on a Windows box and perform the conversion. The FTP protocol is used to transfer the PDF output to a specific directory. Based on the directory, the file is converted and printed on the corresponding printer. One such product is Batch-Print from Addendum Software - http://www.addendum.de/ and is currently less than $100us for a single user license.

Printing From CICS

The following customer provided code shows one method of passing VSE2PDF directives on an EXEC CICS SPOOLOPEN.

```
    WORKING-STORAGE STORAGE.
       77  OLCARD-AREA           PIC X(8).
       01  OUTDES.
           05 FILLER             PIC X(35)   VALUE
              'FILENAME(,OLCH.PDF) PAGEDEF(OLB001)'.
       01  RESP                  PIC 9(8) COMP.
       01  RESP2                 PIC 9(8) COMP.
       01  TOKEN                 PIC X(8).
       01  OUTLEN                PIC S9(8) COMP VALUE +80.
       01  PARMSPTR          USAGE IS POINTER.
       01  PARMS-POINT REDEFINES PARMSPTR PIC S9(8) COMP.

    LINKAGE SECTION.
       01  DFHCOMMAREA            PIC X(139).
       01  PARMS-AREA.
           03  PARMSLEN           PIC S9(8) COMP.
           03  PARMSINF           PIC X(35).
           03  PARMADDR           PIC S9(8) COMP.

    PROCEDURE DIVISION.
           EXEC CICS GETMAIN SET(ADDRESS OF PARMS-AREA)
           LENGTH(80) END-EXEC.
           SET PARMSPTR TO ADDRESS OF PARMS-AREA.
           MOVE PARMS-POINT TO PARMADDR.
           SET PARMSPTR TO ADDRESS OF PARMADDR.
           MOVE 35 TO PARMSLEN.
           MOVE OUTDES TO PARMSINF.
           EXEC CICS
               SPOOLOPEN REPORT('OLCARD')
               TOKEN(OLCARD-AREA)
               ASA
               CLASS ('A')
               DESTINATION ('FTP')
               LINELENGTH (37)
               RESP(RESP) RESP2(RESP2)
               OUTDESCR (PARMSPTR)
           END-EXEC.
           EXEC CICS
               SPOOLWRITE REPORT('OLCARD')
               TOKEN(OLCARD-AREA)
               FROM (OLCARD-RECORD)
               FLENGTH (259)
          END-EXEC.
          EXEC CICS
               SPOOLCLOSE REPORT('OLCARD')
               TOKEN(OLCARD-AREA)
         END-EXEC.
         EXEC CICS FREEMAIN
              DATA(PARMS-AREA)
         END-EXEC.
```

VM PRINT

A lot of VSE shops also use VM. Although VSE2PDF does not run under VM, it is possible to send reports from VM to VSE to be processed by VSE2PDF without operator intervention. The process does require a working NJE link from RSCS to Power, but does not require RSCS or POWER exits if just basic functionality is required. Additional extended functionality would require the coding of a RSCS exit. The following information is included as a guide only, and not as a statement that VSE2PDF will support changes that may occur to VM in the future.

RSCS

RSCS can set some of the Power directives using RSCS extensions to the "CP TAG" command. The following REXX exec will generate a print file under CMS and send it to RSCS to be forwarded to a NJE connected VSE machine.

```
/* tagtest exec */
'CP SPOOL 00E RSCS CONT CLASS Z'
'CP TAG DEV 00E VSE251 EMAIL 66',
    'BLDG=TBLDG DEPT=TDEPT EXTWTR=TDEST2',
    'JOBNAME=TAGTEST PGRNAME=TPGRNAM',
    'ROOM=TROOM ()'
'PRINT TAGTEST EXEC A'
'CP SPOOL 00E CLOSE'
exit 0
```

This was tested under the following conditions:
The VM userid of RSCS is RSCS.
The VSE2PDF is processing CLASS=Z.
The VSE2PDF is processing DEST=(,EMAIL)

Note: The "66" after "EMAIL" in the "TAG" line is a priority. RSCS uses priorities from 1-99 with 1 being the highest priority. The "66" will generate a LST queue entry with PRI=3. The conversion rules can be found in NJE Formats and Protocols – SC23-0070-3; section 2.1.1.2: Job Header General Section; field NJHGPRIO. (This manual may be found on the VSE Documentation CD in the VSE V2Rx Bookshelf.) This is actually a double conversion with RSCS priority being converted to the NJE priority standard and then Power converting the NJE priority to Power priority. Any RSCS priority within the range of 60-71will yield a Power priority of 3.

Several of these fields can be used as variables by VSE2PDF:

VM	VSE2PDF
JOBNAME	&JNAME
PGRNAME	&PROGR
BLDG	&BLDG
DEPT	&DEPT
EXTWTR	&DEST3
ROOM	&ROOM

One way to use these variables is in the default settings for VSE2PDF. For example:

EMAIL_ADDR_DEFAULT = &BLDG

Please contact VSE2PDF support if additional help is needed with VM print. The output from the CMS command "HELP RSCS TAG" will also be helpful.

Running Multiple Copies of VSE2PDF

There are times when you would want to run multiple copies of VSE2PDF. You can run a second copy just to process more output, or you could run a second copy to test either a new copy of VSE2PDF or changes to other settings.

Second Production VSE2PDF Partition

The way VSE2PDF connects to Power provides for a method to "load balance", or feed multiple VSE2PDF systems on a "first free" basis. Setup the second VSE2PDF partition identically to the original VSE2PDF partition. To instruct Power to send output to both VSE2PDF partitions, the operator will need to issue a second PSTART command. As the destination (normally "ALL") in the PSTART command can not duplicate the original PSTART command for the original VSE2PDF partition, VSE2PDF allows you to append characters to the destination for uniqueness. These can be any characters, but a good appendix would be the partition ID. Now you would enter two PSTART commands:

```
PSTART DEV,ALL,TEI,X
PSTART DEV,ALLP2,TEI,X
```

You could also change the original PSTART to start "ALLP1" for consistency:

```
PSTART DEV,ALLP1,TEI,X
PSTART DEV,ALLP2,TEI,X
```

Second Test VSE2PDF Partition

The easiest way to create a test VSE2PDF partition is to utilize a different print class. You will need to make one change to the VSE2PDF startup, the addition of a SUBSYSTEM_ID statement. The system id chosen can be anything, but for this example, the setting "SUBSYSTEM_ID=TEITEST" is used. Class X print is the production print class while class Y is the test print class.
Now you would enter two PSTART commands:

```
PSTART DEV,ALL,TEI,X
PSTART DEV,ALLTEST,TEITEST,Y
```

The second, but more complex way to create a VSE2PDF partition does not require a different print class, but you will need new destinations. You will also need a different SUBSYSTEM_ID setting as described above. You will need to set all the "DEST_xxx" settings in the VSE2PDF startup:

```
SUBSYSTEM_ID = TEITEST
DEST_EMAIL  = EMAILTST
DEST_ELIST  = ELISTTST
DEST_FTP    = FTPTST
DEST_LPR    = LPRTST
DEST_DIRECT = DIRECTST
DEST_LIBR   = LIBRTST
DEST_USER   = USERTST
```

With this method, the following PSTART statements would be used:

```
PSTART DEV,ALL,TEI,X
PSTART DEV,ALLTEST,TEITEST,X
```

Power Job Accounting

When the startup option SYSOPT_ACCOUNTING is set to "YES", VSE2PDF inserts accounting information records into the Power Account File. The layout of the record may be found in the macro TEIY005.A supplied on the distribution tape.

The format of the record prefix is dictated by Power. Refer to the section "Layout of the Advanced Function Printing (AFP) Account Record" found in "Chapter 2: Job Accounting" in the "VSE/POWER Application Programming" manual. (Version 6, Release 4, had a document number of SC33-6736-00.) Because VSE2PDF is a Device Driver Subsystem, any account records created are flagged with a record ID of "A". This same record ID is used by PSF/VSE. To aid shops that run both VSE2PDF and PSF/VSE, the first few fields of the VSE2PDF format are designed so that specific fields are located in the same position as similar fields in the records created by PSF/VSE. This will allow programs written to process PSF/VSE accounting records to easily recognize VSE2PDF accounting records.

The following fields are at the same locations in both products:

- Job Suffix
- Job Class
- Printer

To determine if a record is generated by VSE2PDF or PSF/VSE, examine the "Printer" field. For VSE2PDF accounting records, the characters "`VSE2PDF `" will be found as the printer name. Once the program determines that the record was created by VSE2PDF, it should examine the field JA_RECORD_TYPE to determine if it is processing a job level ("J") or report level ("R") record. The job level record contains counts for the overall Power LST queue entry. The report level record contains information on each file created by VSE2PDF and has additional information on where the report was sent and in what format. Multiple report level records may exist due to report segmentation caused by script processing. A program is also responsible to check the record revision number found within the record. As additional fields are added, or field locations are changed, this revision number will be updated.

Please contact VSE2PDF support for additional aid in this use of the accounting records.

SMF Records

VSE2PDF can also generate SMF records which are recorded on VSE using the DMF system that is part of CICS/TS. CICS/TS is not required to use the DMF for logging VSE2PDF SMF records. The record format for the SMF records involves a standard SMF record header and is defined in the copybook TEIY006.A. The body of the SMF record contains the same data as the Power Accounting record defined by copybook TEIY005.A. Please review the documentation on Power Job Accounting found above.

VSE Power Hints

When a job fails and is placed back into the RDR queue with DISP=Y, the following command will alter the DISP back to the original value:

```
PALTER RDR,jobname,DISP=*
```

Chapter 6

Utility Programs

TEICOPY

PLEASE NOTE:
TEICOPY was originally provided prior to the availability of the jobname Script facility. Many customers have found that using the jobname Scripts to be easier and faster. REXX is not the fastest programming tool and reports above 1000 pages can take several minutes to process using TEICOPY. For this reason, TEICOPY is no longer being enhanced to include any new keyword directives used by VSE2PDF.

As POWER does not currently provide the capabilities to change the * $$ LST operands used by VSE2PDF, the REXX utility 'TEICOPY' is provided. TEICOPY will copy a LST queue report to a new LST queue entry with the modified operands. TEICOPY will copy one LST queue entry per execution. The following table describes the control cards for TEICOPY.

NAME	The source LST queue entry JNM= value.
CLASS	The source LST queue entry CLASS= value.
NEWNAME	The output LST queue entry JNM= value.
NEWCLASS	The output LST queue entry CLASS= value.
NEWDISP	The output LST queue entry DISP= value.
DEST	The output LST queue entry DEST= value.
SCRIPT	The output LST queue entry SCRIPT= value.
SETUP	The output LST queue entry SETUP= value.
XLATE	The output LST queue entry XLATE= value.
FORMDEF	The output LST queue entry FORMDEF= value.
PAGEDEF	The output LST queue entry PAGEDEF= value.
TITLE	The output LST queue entry TITLE= value.
NOTIFY	The output LST queue entry NOTIFY= value.
IPADDR	The output LST queue entry IPADDR= value.
MAILTO	The output LST queue entry MAILTO= value.
FILENAME	The output LST queue entry FILENAME= value.

Following any control cards, you may specify any valid VSE2PDF POWER directives. These will be applied to the new member.

The following is an example of JCL needed to run TEICOPY:

```
// EXEC REXX=TEICOPY
NAME=LIBR
CLASS=Y
NEWNAME=LIBR4PDF
NEWCLASS=Y
NEWDISP=K
MAILTO=(WILE_E_COYOTE@ACME.COM)
TITLE=(THIS WAS A COPIED REPORT)
PAGEDEF=PORT
/*
```

Before using TEICOPY, the REXX member TEICOPY.PROC must be modified. Review the beginning of the code for lines marked '/* <<<<< CHECK */'. The POWER master password MUST be changed. The other lines only need changing if the VSE2PDF supplied defaults are not used.

Instead of using TEICOPY, the following (using automatic scripts) would be a better option:

```
// JOB     MAKEPDF
// SETPARM JOB='VSE2PDF'
// SETPARM JNBR='11580'
// EXEC LIBR,SIZE=1024K,PARM='ACC S=DEVLIB.LOCAL;CAT &JOB..&JNBR R=Y'
 ALL MAILTO=(WILE_E_COYOTE@ACME.COM)
 ALL FILENAME=(,XXXXXXXXXX.PDF)
 ALL TITLE=(THIS WAS A COPIED REPORT)
 ALL PAGEDEF=PORT
/+
/*
// EXEC DTRIATTN,PARM='A LST,&JOB,&JNBR,CLASS=Y,DISP=K,USER=EMAIL'
/*
/&
```

TEIREPRO

TEIREPRO is a utility program that reads SYSIPT and prints the contents of columns 1-72 on SYSLST. The first print line has a "skip to channel 01" command. One use of this utility is to copy e-mail message data into the LST queue entry.

```
* $$ LST …
// EXEC TEIREPRO,SIZE=TEIREPRO
<TEI> * MSGPAGE
<TEI> * DROPPAGE
Attached you will find your report. It is in Adobe PDF format.
If you do not have the Adobe PDF Reader, you may download it
from:
    HTTP://www.adobe.com
/*
// EXEC ARB101              << local print program
/*
* $$ LST
```

INDEX.ASP

INDEX.ASP is a usable example of a web document to provide a nicer presentation of a list of PDF files found within an NT directory. Place INDEX.ASP into a directory containing PDF files. When a user points their browser to this ASP, the ASP will create a list of the PDF files found within the directory and present a list of clickable links. To help the presentation of the file names, any underscores are removed from the name and replaced with blanks. ("MY_AR_REPORTS.PDF" is displayed as "MY AR REPORTS".) INDEX.ASP is intended solely as an example and is NOT a supported program.

Appendix A

Error Messages

TEIP00xx

TEIP0000I VSE2PDF Version: xxxxxxxx

Meaning: Informational message.
Action: None.

TEIP0001I Enter PDF System Commands.

Meaning: Prompt message when communicating with VSE2PDF via the VSE console.
Action: Respond with either a valid or null command.

TEIP0002I Invalid value for Parameter: aaaaaaaaaaaaaaa

Meaning: Informational message.
Action: An invalid parameter value was entered via SYSIPT or the VSE console interface.

TEIP0003I Invalid Parameter: aaaaaaaa

Meaning: Informational message.
Action: An invalid parameter name was entered via SYSIPT or the VSE console interface.

TEIP0004I Unable to Verify SMTP host: aa.bb.cc.dd.

Meaning: Informational message. At startup VSE2PDF attempts to contact the SMTP host. The SMTP host is not required to be available until an e-mail request is processed.
Action: Verify the SMTP_HOST and SMTP_HOST_PORT startup parameters and correct if wrong.

TEIP0005E PDF System has expired.

Meaning: Informational message. VSE2PDF will shutdown.
Action: Contact VSE2PDF support for a correct system password.

TEIP0006E CDLOAD failed for phase: aaaaaaaa VSE-CODE=bb

Meaning: Informational message. VSE2PDF will shutdown
Action: Verify the library search chain. Contact VSE2PDF support if not resolved.

TEIP0007E Conflict between phase levels.

Meaning: Informational message. VSE2PDF will shutdown.
Action: Verify the installation and availability in the search chains for the correct version of all VSE2PDF phases.

TEIP0008I PDF system expires in aaaa days.

Meaning: Informational message.
Action: Contact VSE2PDF support for an updated system password.

TEIP0009E Incorrect CPU ID.

Meaning: Informational message. VSE2PDF will shutdown.
Action: Contact VSE2PDF support for a correct system password.

TEIP0010I TCP Hostname is aaaaaaaa.

Meaning: Informational message.
Action: None.

TEIP0010I TCP Hostname is unavailable.

Meaning: Informational message.
Action: Verify that there is a name defined within the local stack for the local stack IP address.

TEIP0012E Translate table not found: aaaaaaaaaaaaaaaa.

Meaning: The requested translate table was not found in any previously accessed translate members.
Action: Verify the name of the translate table. Verify that all needed translation tables were loaded.

TEIP0013E Required translate LIBR member not found.

Meaning: A required translate member was not found. VSE2PDF will shutdown.
Action: Verify the availability of the translate member name found in the previous message.

TEIP0014E Required translate table not found. aaaaaaaa

Meaning: A required translate table was not found. VSE2PDF will shutdown.
Action: Verify the availability of the translate member.

TEIP0015E Command not valid unless you PSTOP VSE2PDF.

Meaning: A command was entered from the console that is only valid if the VSE2PDF device is PSTOPed.
Action: PSTOP the VSE2PDF device and reissue the command.

TEIP0016W Can not find TCP/IP partition for TCP_SYSID aa.

Meaning: VSE2PDF can not find the requested TCP/IP partition.
Action: Verify the availability of the TCP/IP partition. Verify the setting for TCP_SYSID.

TEIP0017I TCP_SYSID=aa has been assigned.

Meaning: VSE2PDF has automatically assigned a TCP_SYSID.
Action: None.

TEIP0020I FREEVIS failure for aaaaaaaa area. R15=bb.

Meaning: An internal FREEVIS failed. VSE2PDF will shutdown.
Action: Contact VSE2PDF support.

TEIP0021I GETVIS failure for aaaaaaaa area. R15=bb.

Meaning: An internal GETVIS failed. VSE2PDF will shutdown.
Action: Add storage to the VSE2PDF partition. Contact VSE2PDF support if needed.

TEIP0022I Address resolved as: aa.bb.cc.dd.

Meaning: Informational message.
Action: None.

TEIP0023I DNS lookup failed: aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa

Meaning: VSE2PDF was unable to convert an Internet Domain Name to a valid IP address.
Action: Verify the DNS1 setting in TCP/IP. Verify the name being resolved.

TEIP0024I TCP_SYSID=aa is now being used.

Meaning: Informational message.
Action: None.

TEIP0026I PRODID macro aaaaaaaa failed. R15 = bb

Meaning: Informational message. Normally indicates that VSE2PDF was not shut down cleanly on a previous run.
Action: Contact VSE2PDF support if the message persists.

TEIP0027I PRODID macro aaaaaaaa failed. R15 = bb

Meaning: Informational message. Normally indicates that VSE2PDF was not shut down cleanly on a previous run.

Action: Contact VSE2PDF support if the message persists.

TEIP0030I Phase aaaaaaaa loaded at bbbbbbbb.

Meaning: Informational message.

Action: None.

TEIP0031I aaaaaaaa buffer allocated from bbbbbbbb to cccccccc.

Meaning: Informational message.

Action: None.

TEIP0032I aaaaaaaa buffer freed from bbbbbbbb to cccccccc.

Meaning: Informational message.

Action: None.

TEIP0040I POWER DEFINE: aaaaaaaa,bbbb,c,ddd (Name,Key,Occurances,Length).

Meaning: Informational message.

Action: None.

TEIP0050E Error loading system FCBs.

Meaning: A major error occurred while loading the system required FCBs. This is normally preceded by another message indicating the reason. Normally, this error will be caused by lack of partition GETVIS.

Action: Correct error based on preceding error messages. Contact VSE2PDF support if the message persists.

TEIP0051E Error loading system Fontdefs.

Meaning: A major error occurred while loading the system required Fontdefs. This is normally preceded by another message indicating the reason. Normally, this error will be caused by lack of partition GETVIS.

Action: Correct error based on preceding error messages. Contact VSE2PDF support if the message persists.

TEIP0052E Error loading system Colordefs.

Meaning: A major error occurred while loading the system required Colordefs. This is normally preceeded by another message indicating the reason. Normally, this error will be caused by lack of partition GETVIS.

Action: Correct error based on preceeding error messages. Contact VSE2PDF support if the message persists.

TEIP0053E Error loading system Pagedefs.

Meaning: A major error occurred while loading the system required Pagedefs. This is normally preceded by another message indicating the reason. Normally, this error will be caused by lack of partition GETVIS.

Action: Correct error based on preceding error messages. Contact VSE2PDF support if the message persists.

TEIP0054E Error loading system Jsepdefs.

Meaning: A major error occurred while loading the system required Jsepdefs. This is normally preceded by another message indicating the reason. Normally, this error will be caused by lack of partition GETVIS.

Action: Correct error based on preceding error messages. Contact VSE2PDF support if the message persists.

TEIP01xx

TEIP0100I Device TEI waiting for PSTART command.

Meaning: Informational message.

Action: Enter a PSTART command to start processing.

TEIP0101I Device aaaaaaaa waiting for work.

Meaning: Informational message.

Action: None.

TEIP0102I TEI Device process ending.

Meaning: Informational message.

Action: None.

TEIP0103E Processing error. Output aborted.

Meaning: A processing error has occurred. This message should follow a more detailed message.

Action: Correct error indicated by previous message.

TEIP0104I VSE/POWER is currently being shutdown.

Meaning: Informational message. VSE2PDF will shutdown.

Action: None.

TEIP0105I VSE2PDF Starting Class(s): xxxx

Meaning: Informational message. VSE2PDF has been instructed to start the listed classes.

Action: None.

TEIP0106I VSE2PDF Starting Destination(s): aa bb cc dd ee ff gg hh

Meaning: Informational message. VSE2PDF has been instructed to start the listed destinations.

Action: None.

TEIP0107I Job Accounting not available within supervisor.

Meaning: The supervisor does not support job accounting functions. Job accounting records will not include CPU times.

Action: Re-Generate the supervisor.

TEIP0108I Job Accounting area full. Information lost.

Meaning: The VSE2PDF internal Job Accounting area is full.

Action: Contact VSE2PDF support.

TEIP0109I Power Job Accounting not supported.

Meaning: Power does not support Job Accounting. VSE2PDF Job Accounting is suppressed.

Action: Re-Generate Power if Job Accounting is required.

TEIP0110I JNM=aaaaaaaa JNO=bbbbb left in queue with a DISP=Y setting.

Meaning: Informational message. VSE2PDF has encountered a problem with delivering a report. The report was left in the queue with a setting of DISP=Y.

Action: Review errors with the report delivery and correct. Alter the DISP to reprocess the listing.

TEIP0111I JNM=aaaaaaaa JNO=bbbbb flushed.

Meaning: Informational message. VSE2PDF has encountered a problem with delivering a report. The report was left in the queue with a setting of DISP=Y.

Action: Review errors with the report delivery and correct. Alter the DISP to reprocess the listing.

TEIP0112I JNM=aaaaaaaa JNO=bbbbb Processing complete.

Meaning: Informational message.

Action: None.

TEIP0113W JNM=aaaaaaaa JNO=bbbbb left in queue with a DISP=Y setting.

Meaning: Warning message. VSE2PDF has encountered a problem with delivering a report. The report was left in the queue with a setting of DISP=Y.

Action: Review errors with the report delivery and correct. Alter the DISP to reprocess the listing.

TEIP0114E Only aaaaaaaa good segments produced. Restart pages = bbbbbbbb.

Meaning: When a LST queue entry is not fully processed due to errors, this message contains information on how many emails or FTPs were successfully sent. It also contains the correct restart page number to be used to prevent sending duplicate emails upon restart processing.

Action: After the error that caused the original failure is corrected and VSE2PDF has been restarted, if a restart of the report is needed, see the section in this manual on 'RESTARTING FAILED OUTPUT'.

TEIP0120E DMF not available. SMF data lost.

Meaning: Warning message. The VSE2PDF startup option SYSOPT_SMF = YES was specified, but the DMF is not accepting data. The current SMF data was lost. Any additional SMF records will also be lost until communications with the DMF is re-established. At that time, message TEIP0125I will be issued.

Action: Correct the DMF error. If loss of SMF data is unacceptable, shutdown VSE2PDF until the problem is resolved.

TEIP0121E DMF write failure. SMF data lost. RC aa.

Meaning: Warning message. The DMF is not accepting data due to a write I-O error. The current SMF data was lost. Any additional SMF records will also be lost until the DMF starts accepting data. At that time, message TEIP0125I will be issued.

Action: Correct the DMF error. If loss of SMF data is unacceptable, shutdown VSE2PDF until the problem is resolved.

TEIP0122I DMF not logging aa type records.

Meaning: Informational message. The VSE2PDF startup option SYSOPT_SMF = YES was specified, but the DMF is not currently logging the SMF record type set using the startup option SMF_TYPE. (SMF type shown in the message is formatted in hex.) The current SMF data was lost. Any additional SMF records will also be lost until the DMF is restarted with the option to log VSE2PDF records. At that time, message TEIP0125I will be issued.

Action: Correct the DMF options if in error. If loss of SMF data is unacceptable, shutdown VSE2PDF until the problem is resolved.

TEIP0123E DMF logs full. SMF data lost.

Meaning: Warning message. The VSE2PDF startup option SYSOPT_SMF = YES was specified, but the DMF is not accepting data because it's logs are full. The current SMF data was lost. Any additional SMF records will also be lost until the condition is corrected. At that time, message TEIP0125I will be issued.

Action: Correct the DMF error. If loss of SMF data is unacceptable, shutdown VSE2PDF until the problem is resolved.

TEIP0124E OS390 EXEC card option required for SMF recording.

Meaning: Warning message. The VSE2PDF startup option SYSOPT_SMF = YES was specified, but the VSE2PDF startup JCL did not have the ",OS390" option. The current SMF data was lost.

Action: Correct the EXEC card or turn off the SYSOPT_SMF option.

TEIP0125I DMF communications re-established. Logging started.

Meaning: Informational message. VSE2PDF has resumed logging SMF records.

Action: None.

TEIP015xE General Failure. VSE RC aa/bb. POWER RC cc/dd.

Meaning: An internal error has occurred.

Action: Contact VSE2PDF support.

TEIP016xE General Failure. VSE RC aa/bb. POWER RC cc/dd

Meaning: An internal error has occurred.

Action: Contact VSE2PDF support.

TEIP017xE General Failure. VSE RC aa/bb. POWER RC cc/dd

Meaning: An internal error has occurred.

Action: Contact VSE2PDF support.

TEIP0190E XPCC SENDR Failure. VSE RC aa/bb. R15=cc

Meaning: An internal error has occurred.

Action: Contact VSE2PDF support.

TEIP0191E XPCC SENDR failure. VSE RC aa/bb

Meaning: An internal error has occurred.

Action: Contact VSE2PDF support.

TEIP06xx

TEIP0600I Fontdef Table Overflow has Occurred

Meaning: An internal error has occurred.

Action: Contact VSE2PDF support.

TEIP0601I aaaaaaaa member not found: bbbbbbbb

Meaning: The indicated PDFFORM or PDFFONT member could not be located.

Action: Verify the availability of the PDFFORM or PDFFONT phase.

TEIP0609I Invalid Keyword in FONTDEF. aaaaaaaa.

Meaning: The FONTDEF member contains a bad keyword.

Action: Correct the FONTDEF member.

TEIP0610I Invalid Keyword in COLORDEF. aaaaaaaa.

Meaning: The COLORDEF member contains a bad keyword.
Action: Correct the COLORDEF member.

TEIP0611E General Failure. LIBR aaaaaaaa RC aa/bb.

Meaning: An internal error has occurred.
Action: Contact VSE2PDF support.

TEIP0612I General Failure. LIBR aaaaaaaa RC bb/cc.

Meaning: There has been an unexpected error reading the VSE LIBR.
Action: Contact VSE2PDF support.

TEIP0616E FONTDEF line in error.

Meaning: A line within the FONTDEF member is incorrect.
Action: Look at message TEIP0617I and correct the FONTDEF member.

TEIP0617I FONTDEF LINE: aaaaaaaa

Meaning: See message TEIP0616E.
Action: Correct the FONTDEF member.

TEIP0618E COLORDEF line in error.

Meaning: A line within the COLORDEF member is incorrect.
Action: Look at message TEIP0619I and correct the COLORDEF member.

TEIP0619I COLORDEF LINE: aaaaaaaa

Meaning: See message TEIP0618E.
Action: Correct the COLORDEF member.

TEIP0620I FREEVIS failure for aaaaaaaa area. R15=bb.

Meaning: An internal FREEVIS failed. VSE2PDF will shutdown.
Action: Contact VSE2PDF support.

TEIP0621I GETVIS failure for aaaaaaaa area. R15=bb.

Meaning: An internal GETVIS failed. VSE2PDF will shutdown.
Action: Add storage to the VSE2PDF partition. Contact VSE2PDF support if needed.

TEIP0622I BUFFER_SIZE too small reading aaaaaaaa.bbbbbbb.ccccccc.ddddddd.

Meaning: An internal error has occurred.
Action: Contact VSE2PDF support.

TEIP0631I aaaaaaaa buffer allocated from bbbbbbbb to cccccccc.

Meaning: Informational message.
Action: None.

TEIP0632I aaaaaaaa buffer freed from bbbbbbbb to cccccccc.

Meaning: Informational message.
Action: None.

TEIP0641E BUFFER_SIZE too small reading aaaaaaaa.bbbbbbbb.cccccccc.dddddddd.

Meaning: The internal buffers are too small to read the indicated Library member.
Action: Increase the BUFFER_SIZE VSE2PDF startup option. Contact VSE2PDF support if needed.

TEIP10xx

TEIP1001E Unable to deliver listing. See SYSLST.
Meaning: Informational message. A message indicating the problem can be found on SYSLST.
Action: Correct error indicated.

TEIP1003E Formatting routine encountered an error aaaaaaaa.
Meaning: An internal error has occurred.
Action: Contact VSE2PDF support.

TEIP1004E Formatting routine encountered an error aaaaaaaa.
Meaning: An internal error has occurred.
Action: Contact VSE2PDF support.

TEIP1005E Formatting routine encountered an error aaaaaaaa.
Meaning: An internal error has occurred.
Action: Contact VSE2PDF support.

TEIP1006E Encoding routine encountered an open error.
Meaning: An internal error has occurred.
Action: Contact VSE2PDF support.

TEIP1007E Encoding routine encountered a close error.
Meaning: An internal error has occurred.
Action: Contact VSE2PDF support.

TEIP1008E Encoding routine encountered an IO error.
Meaning: An internal error has occurred.
Action: Contact VSE2PDF support.

TEIP1009E An ELIST member not found.
Meaning: An ELIST member was not found.
Action: Add the ELIST member. Correct the job parameters. Verify the source search chain.

TEIP1010I ELIST address is not valid: xxxx
Meaning: One of the addresses found within an ELIST member was invalid.
Action: Correct the ELIST member.

TEIP1011E All ELIST addresses are invalid. Report not sent.
Meaning: None of the ELIST member addresses were valid. The report was not sent.
Action: Correct the ELIST member.

TEIP1015I EMAIL address is not valid: aaaaaaaaaaaaaaa
Meaning: The EMAIL address was rejected by the SMT server. Followed by message TEIP1016I.
Action: Correct the email address.

TEIP1016I EMAIL sent for manual handling to: aaaaaaaaaaaaaaa
Meaning: Due to message TEIP1015I, the email was sent to the FAKE_FROM_ADDRESS to be manually handled.
Action: Forward the EMAIL to the correct address.

TEIP1023I DNS lookup failed: aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa
Meaning: VSE2PDF was unable to convert an Internet Domain Name to a valid IP address.
Action: Verify the DNS1 setting in TCP/IP. Verify the name being resolved.

TEIP1030I Processing job: JNM=aaaaaaaa JNUM=bbbbb JDATE=cccccccc JTIME=dddddd

Meaning: Informational message.
Action: None.

TEIP1031I Title=aaaaaaa

Meaning: Informational message.
Action: None.

TEIP1032I E-Mail to aaaaaaa

Meaning: Informational message.
Action: None.

TEIP1033I E-Mail CC aaaaaaa

Meaning: Informational message.
Action: None.

TEIP105xE Invalid response from SMTP host. See SYSLST.

Meaning: Informational message. A message indicating the problem can be found on SYSLST.
Action: Correct error indicated.

TEIP1080E Server out of resouces

Meaning: The E-Mail Server is unavailable.
Action: Contact your E-Mail Server Support Staff.

TEIP11xx

TEIP1101E Unable to deliver listing. See SYSLST.

Meaning: Informational message. A message indicating the problem can be found on SYSLST.
Action: Correct error indicated.

TEIP1103E Formatting routine encountered an error aaaaaaaa.

Meaning: An internal error has occurred.
Action: Contact VSE2PDF support.

TEIP1104E Formatting routine encountered an error aaaaaaaa.

Meaning: An internal error has occurred.
Action: Contact VSE2PDF support.

TEIP1105E Formatting routine encountered an error aaaaaaaa.

Meaning: An internal error has occurred.
Action: Contact VSE2PDF support.

TEIP1112E FTP sign on failed.

Meaning: The userid and/or password used for the FTP sign on process were incorrect.
Action: Correct the incorrect information.

TEIP1116I Invalid FTP directory aaaaaaaa

Meaning: The directory requested is not valid. See previous message in log for the message received from the FTP server.
Action: Correct the incorrect information.

TEIP1130I Processing job: JNM=aaaaaaaa JNUM=bbbbb JDATE=cccccccc JTIME=dddddd

Meaning: Informational message.
Action: None.

TEIP1131I Title=aaaaaaa

Meaning: Informational message.
Action: None.

TEIP1132I FTP to aaaaaaa

Meaning: Informational message.
Action: None.

TEIP1133I Directory=aaaaaaa

Meaning: Informational message.
Action: None

TEIP1134I File Name=aaaaaaa

Meaning: Informational message.
Action: None

TEIP115xE Invalid response from FTP host. See SYSLST.

Meaning: Informational message. A message indicating the problem can be found on SYSLST.
Action: Correct error indicated.

TEIP12xx

TEIP1201E Unable to connect to requested printer.

Meaning: The destination printer does not respond.
Action: Correct the job parameters.

TEIP1203E Formatting routine encountered an error aaaaaaaa.

Meaning: An internal error has occurred.
Action: Contact VSE2PDF support.

TEIP1204E Formatting routine encountered an error aaaaaaaa.

Meaning: An internal error has occurred.
Action: Contact VSE2PDF support.

TEIP1205E Formatting routine encountered an error aaaaaaaa.

Meaning: An internal error has occurred.
Action: Contact VSE2PDF support.

TEIP1206I Unable to get an LPR connection to aaaaaaaa.

Meaning: The printer is not available. Should be followed by message TEIP1307W.
Action: Ready the printer. The VSE2PDF operator command “CANCEL LPR” can be issued as required.

TEIP1207I Will retry in aaaa seconds.

Meaning: See message TEIP1206W.
Action: See message TEIP1206W.

TEIP126W Unable to get a direct connection to aaaaaaaa.

Meaning: The printer is not available. Should be followed by message TEIP1207W.
Action: Ready the printer.

TEIP1207I Will retry in aaa seconds.

Meaning: A connection retry will occur after the indicated time has expired. If the message continues, consider issuing the CANCEL_LPR command to the VSE2PDF partition.
Action: None.

TEIP1211E Unable to open the requested VSE sublibrary.
Meaning: The destination sublibrary does not exist.
Action: Correct the job parameters or create the sublibrary.

TEIP1215E Internal LIBR processing error.
Meaning: An internal error occurred accessing a LIBR member.
Action: Contact VSE2PDF support.

TEIP1216E Internal LIBR processing error.
Meaning: An internal error occurred accessing a LIBR member.
Action: Contact VSE2PDF support.

TEIP1217E Internal LIBR processing error.
Meaning: An internal error occurred accessing a LIBR member.
Action: Contact VSE2PDF support.

TEIP1218E Internal LIBR processing error.
Meaning: An internal error occurred accessing a LIBR member.
Action: Contact VSE2PDF support.

TEIP1220E Invalid response from LPD. Response=aa.
Meaning: The printer LPD returned an invalid response when sent the printer queue name. This normally indicates that the queue name is specified wrong. (Try making it lowercase.)
Action: Contact VSE2PDF support.

TEIP1221E Invalid response from LPD. Response=aa.
Meaning: The printer LPD returned an invalid response.
Action: Contact VSE2PDF support.

TEIP1222E Invalid response from LPD. Response=aa.
Meaning: The printer LPD returned an invalid response.
Action: Contact VSE2PDF support.

TEIP1223E Invalid response from LPD. Response=aa.
Meaning: The printer LPD returned an invalid response.
Action: Contact VSE2PDF support.

TEIP1224E Invalid response from LPD. Response=aa.
Meaning: The printer LPD returned an invalid response.
Action: Contact VSE2PDF support.

TEIP1230I Processing job: JNM=aaaaaaaa JNUM=bbbbb JDATE=cccccccc JTIME=dddddd
Meaning: Informational message.
Action: None.

TEIP1231I Title=aaaaaaa
Meaning: Informational message.
Action: None.

TEIP1232I Printed to queue aaaaaaaa on printer bbbbbbbb.
Meaning: Informational message.
Action: None.

TEIP13xx

TEIP1301E Unable to connect to requested printer.

Meaning: The destination printer does not respond.
Action: Correct the job parameters.

TEIP1303E Formatting routine encountered an error aaaaaaaa.

Meaning: An internal error has occurred.
Action: Contact VSE2PDF support.

TEIP1304E Formatting routine encountered an error aaaaaaaa.

Meaning: An internal error has occurred.
Action: Contact VSE2PDF support.

TEIP1305E Formatting routine encountered an error aaaaaaaa.

Meaning: An internal error has occurred.
Action: Contact VSE2PDF support.

TEIP1306W Unable to get a direct connection to aaaaaaaa.

Meaning: The printer is not available. Should be followed by message TEIP1307W.
Action: Ready the printer.

TEIP1307W Will retry in aaa seconds.

Meaning: A connection retry will occur after the indicated time has expired. If the message continues, consider issuing the CANCEL_DIRECT command to the VSE2PDF partition.
Action: None.

TEIP1330I Processing job: JNM=aaaaaaaa JNUM=bbbbb JDATE=cccccccc JTIME=dddddd

Meaning: Informational message.
Action: None.

TEIP1331I Title=aaaaaaa

Meaning: Informational message.
Action: None.

TEIP1332I Printed on printer aaaaaaaa.
Meaning: Informational message.
Action: None.

TEIP15xx

TEIP1501E Unable to open the requested VSE sublibrary.
Meaning: The destination sublibrary does not exist.
Action: Correct the job parameters or create the sublibrary.

TEIP1503E Formatting routine encountered an error aaaaaaaa.
Meaning: An internal error has occurred.
Action: Contact VSE2PDF support.

TEIP1504E Formatting routine encountered an error aaaaaaaa.
Meaning: An internal error has occurred.
Action: Contact VSE2PDF support.

TEIP1505E Formatting routine encountered an error aaaaaaaa.
Meaning: An internal error has occurred.
Action: Contact VSE2PDF support.

TEIP1530I Processing job: JNM=aaaaaaaa JNUM=bbbbb JDATE=cccccccc JTIME=dddddd
Meaning: Informational message.
Action: None.

TEIP1531I Title=aaaaaaa
Meaning: Informational message.
Action: None.

TEIP1532I Stored as member aaaaaaaaaaaaaaaa in VSE sublibrary bbbbbbbbbbbbbbbb
Meaning: Informational message.
Action: None.

TEIP155xE Library access routine failed.
Meaning: An internal error has occurred.
Action: Contact VSE2PDF support.

TEIP16xx

TEIP1601E Loopback processor returned a non-zero return code.
Meaning: An internal error has occurred.
Action: Contact VSE2PDF support.

TEIP1603E Formatting routine encountered an error aaaaaaaa.
Meaning: An internal error has occurred.
Action: Contact VSE2PDF support.

TEIP1604E Formatting routine encountered an error aaaaaaaa.
Meaning: An internal error has occurred.
Action: Contact VSE2PDF support.

TEIP1605E Formatting routine encountered an error aaaaaaaa.
Meaning: An internal error has occurred.
Action: Contact VSE2PDF support.

TEIP1630I Processing job: JNM=aaaaaaaa JNUM=bbbbb JDATE=cccccccc JTIME=dddddd
Meaning: Informational message.
Action: None.

TEIP1631I Title=aaaaaaa
Meaning: Informational message.
Action: None.

TEIP1632I Printed to log using loopback driver.
Meaning: Informational message.
Action: None.

TEIP1633I Total bytes in file = aaaaaaaa.
Meaning: Informational message.
Action: None.

TEIP17xx

TEIP1701E Site user exit returned a non-zero return code.
Meaning: The site user exit returned a non-zero condition code.
Action: Review the site user exit to see why it returned the condition code.

TEIP1703E Formatting routine encountered an error aaaaaaaa.
Meaning: An internal error has occurred.
Action: Contact VSE2PDF support.

TEIP1704E Formatting routine encountered an error aaaaaaaa.
Meaning: An internal error has occurred.
Action: Contact VSE2PDF support.

TEIP1705E Formatting routine encountered an error aaaaaaaa.
Meaning: An internal error has occurred.
Action: Contact VSE2PDF support.

TEIP1730I Processing job: JNM=aaaaaaaa JNUM=bbbbb JDATE=cccccccc JTIME=dddddd
Meaning: Informational message.
Action: None.

TEIP1731I Title=aaaaaaa
Meaning: Informational message.
Action: None.

TEIP1732I Stored using site user exit.
Meaning: Informational message.
Action: None.

TEIP30xx

TEIP3000E SCRIPT member not found. aaaaaaaa.bbbbbbbb.cccccccc.dddddddd.

Meaning: The requested SCRIPT member was not found. If aaaaaaaa.bbbbbbbb is spaces, then the source search chain was used to find the member.

Action: Verify the existence of the SCRIPT member. Verify the source search chain. Correct the incorrect job parameter if needed.

TEIP3001E ELIST member not found. aaaaaaaa.bbbbbbbb.cccccccc.dddddddd.

Meaning: The requested ELIST member was not found. If aaaaaaaa.bbbbbbbb is spaces, then the source search chain was used to find the member.

Action: Verify the existence of the ELIST member. Verify the source search chain. Correct the incorrect job parameter if needed.

TEIP3003E ELIST member not specified.

Meaning: The ELIST destination was specified, but no ELIST member was given in the MAILTO job parameter.

Action: Add the ELIST member. Correct the job parameters. Verify the source search chain.

TEIP3004E Invalid directive or directive value requested. aaaaaaaa.

Meaning: A directive was issued from a SCRIPT file or as an inline directive but was not processed because it contained either an invalid directive name or a value that was invalid for the directive being requested. The first 80 positions of the directive command will be printed on SYSLST after this message.

Action: Correct the SCRIPT file or the inline directive.

TEIP3005E Unrecognized destination. aaaaaaaa.

Meaning: A PSTART was issued for VSE2PDF using a destination that VSE2PDF is unaware of.

Action: Add the destination to the VSE2PDF startup parameters. Correct the job parameter if needed.

TEIP3011I General Failure. LIBR aaaaaaaa RC bb/cc.

Meaning: There has been an unexpected error reading the VSE LIBR.

Action: Contact VSE2PDF support.

TEIP3012I General Failure. LIBR aaaaaaaa RC bb/cc.

Meaning: There has been an unexpected error reading the VSE LIBR.

Action: Contact VSE2PDF support.

TEIP3013I MAILTO is blank for EMAIL processing.

Meaning: There was no MAILTO specified and EMAIL_ADDR_DEFAULT is also blanks.

Action: Correct job or add the EMAIL_ADDR_DEFAULT startup option.

TEIP3014I MAILTO is blank for ELIST processing.

Meaning: There was no MAILTO specified and ELIST_MEMBER_DEFAULT is also blanks.
Action: Correct job or add the ELIST_MEMBER_DEFAULT startup option.

TEIP3015I FILENAME is blank for LIBR processing.

Meaning: There was no FILENAME specified and LIBR_DEFAULT is also blanks.
Action: Correct job or add the LIBR_DEFAULT startup option.

TEIP3017I EMAILMSG member not found. aaaaaaaa.bbbbbbbb.

Meaning: The requested EMAILMSG member was not found.
Action: Verify the existence of the EMAILMSG member. Verify the source search chain. Correct the incorrect job parameter if needed.

TEIP3019I aaaaaaaa Fontdef not found. bbbbbbbb Fontdef used.

Meaning: The requested Fontdef was not found.
Action: Verify that the Fontdef was loaded during startup. Correct startup JCL as required. Correct the incorrect job parameter if needed.

TEIP3020E Script Table full.

Meaning: The internal Script storage table is full.
Action: Contact VSE2PDF support.

TEIP3040E BUFFER_SIZE too small reading aaaaaaaa.bbbbbbbb.cccccccc.dddddddd.

Meaning: The internal buffers are too small to read the indicated Library member.
Action: Increase the BUFFER_SIZE VSE2PDF startup option. Contact VSE2PDF support if needed.

TEIP3041E BUFFER_SIZE too small reading aaaaaaaa.bbbbbbbb.cccccccc.dddddddd.

Meaning: The internal buffers are too small to read the indicated Library member.
Action: Increase the BUFFER_SIZE VSE2PDF startup option. Contact VSE2PDF support if needed.

TEIP3043E SETUP member not found. aaaaaaaa.bbbbbbbb.cccccccc.dddddddd.

Meaning: The requested SETUP member was not found. If aaaaaaaa.bbbbbbbb is spaces, then the source search chain was used to find the member.
Action: Verify the existence of the SETUP member. Verify the source search chain. Correct the incorrect job parameter if needed.

TEIP3058E Directive line in error.

Meaning: The format of a Directive line is invalid. Message TEIP3059I should follow showing the line in error.
Action: Correct the directive.

TEIP3059I Directive line:

Meaning: Informational message.
Action: None

TEIP31xx

TEIP3101I Unknown print line record type. Rectype=aa Reccode=bb

Meaning: An unexpected POWER record was encountered.
Action: Contact VSE2PDF support.

TEIP3102I Rectype=aa Reccode=bb Skipcodes=cc

Meaning: Informational message.
Action: None.

TEIP3103I Aaaaaaa

Meaning: Informational message.
Action: None.

TEIP3104E Page storage overflow.

Meaning: An internal error has occurred.
Action: Contact VSE2PDF support.

TEIP3105E Error in SPL processing.

Meaning: An internal error has occurred.
Action: Contact VSE2PDF support.

TEIP3106E Unrecognized Destination. aaaaaaaa.

Meaning: A PSTART was issued for VSE2PDF using a destination that VSE2PDF is unaware of.
Action: Add the destination to the VSE2PDF startup parameters. Correct the job parameter if needed.

TEIP3107I Autosegmentation occurred for JNM=aaaaaaaa JNUM=bbbbbbbb

Meaning: The number of pages for the report exceeds the system MAX_PAGES setting. The report is segmented.
Action: Ignore the error or increase the MAX_PAGES startup option

TEIP3108I ABORTJOB directive issued.

Meaning: An ABORTJOB directive was issued. The job output is canceled.
Action: Determine cause and rerun job if required.

TEIP3109I Page discarded.

Meaning: The previously logged page was dropped from the final output due to one of the following conditions: DROPPAGE directive issued, the page was marked for DROPPAGE processing by the user replaceable exit routine TEIUSER1, or the page was the very first page of an output file and the page was completely blank.
Action: Determine cause and rerun job if required.

TEIP3110E Error upon return from TEIUSER1. R15=aaaaaaaa

Meaning: The program TEIUSER1 returned a non-zero return code. Call type was “page_check”.
Action: Examine any local modifications to the TEIUSER1 program and correct any coding errors.

TEIP3111E Error upon return from TEIUSER1. R15=aaaaaaaa

Meaning: The program TEIUSER1 returned a non-zero return code. Call type was “autosegment”.
Action: Examine any local modifications to the TEIUSER1 program and correct any coding errors.

TEIP3112E Error upon return from TEIUSER1. R15=aaaaaaaa

Meaning: The program TEIUSER1 returned a non-zero return code. Call type was “open_spl”.
Action: Examine any local modifications to the TEIUSER1 program and correct any coding errors.

TEIP3114I	aaaaaaaa segments produced. Processed bbbbbbb pages (skips-C01).

Meaning: Informational messages indicating how many emails or FTPs were processed for this LST queue entry. Also included is the number of pages (based on "skip to channel one" commands) that were processed.

Action: None.

TEIP3115I	Too many virtual pages. New sheet may be forced.

Meaning: While processing a PAGEDEF, too many identical channel numbers were found.

Action: If the report attempts to use too many channels, VSE2PDF will generate a true page break, i.e. a sheet break, before writing the 'overflow' print lines. Correct the PAGEDEF as needed.

TEIP3116I	aaaaaaaa Font for Font Index not found. bbbbbbbb Font used.

Meaning: While processing a Font Index, the Font name aaaaaaaa specified in the Font Index was not available. Font bbbbbbbb was used instead.

Action: Correct the Font Index or load the Font.

TEIP3117I	DISCARD directive issued.

Meaning: A DISCARD directive was issued. The job output is discarded.

Action: None.

TEIP3118I	aaaaaaaa COLORDEF not found. bbbbbbbb COLORDEF used.

Meaning: A requested COLORDEF aaaaaaaa was not located. VSE2PDF used bbbbbbbb instead.

Action: Correct the COLORDEF statement or create the required COLORDEF.

TEIP3119I	aaaaaaaa FONTDEF not found. bbbbbbbb FONTDEF used.

Meaning: A requested FONTDEF aaaaaaaa was not located. VSE2PDF used bbbbbbbb instead.

Action: Correct the FONTDEF statement or create the required FONTDEF.

TEIP3120I	AFP Printlines skiped.

Meaning: Printlines containging AFP control characters were ingored.

Action: None

TEIP3190I	Enter restart value ('0' for beginning of report).

Meaning: VSE2PDF is running with SYSOPT_RESTARTPROMPT =YES. For every report processed, this message will be issued to request the number of pages to skip.

Action: Enter the correct restart value (see message TEIP0114) in response to the prompt. Enter a value of '0' to start at the beginning of the report. Turn off the SYSOPT_RESTARTPROMPT option to eliminate these messages.

TEIP3191I	Restart value is set to aaaaaaaa.

Meaning: Informational message displaying the value entered in response to message TEIP3190I.

Action: None.

TEIP3192I	Restart value can not be negative. Try again.

Meaning: Informational message indicating that the response to message TEIP3190 was invalid. It will be followed by a new TEIP3190 message.

Action: Enter a valid restart page number.

TEIP33xx

TEIP3300E Translate member not found. aaaaaaaaaaaaaaaa.

Meaning: The requested translate table was not found in any previously accessed translate members.
Action: Verify the name of the translate table. Verify that all needed translation tables were loaded.

TEIP3301E Translate table has invalid contents. aaaaaaaa bbbbbbbbbbbbbbbb

Meaning: The translate table bbbbbbbbbbbbbbbb in the translate member aaaaaaaa was not formatted correctly.
Action: Verify the translate member.

TE3302E Internal translate table full.

Meaning: An internal error has occurred.
Action: Contact VSE2PDF support.

TEIP3303E Translate table not found. aaaaaaaaaaaaaaaa

Meaning: The requested translate table was not found in any previously accessed translate members.
Action: Verify the name of the translate table. Verify that all needed translation tables were loaded.

TEIP3304E Translate table has invalid contents. aaaaaaa bbbbbbbbbbbbbbbb

Meaning: The translate table bbbbbbbbbbbbbbbb in the translate member aaaaaaaa was not formatted correctly.
Action: Verify the translate member.

TEIP3305E Send translate buffer full.

Meaning: An internal error has occurred.
Action: Contact VSE2PDF support.

TEIP3306E Receive translate buffer full.

Meaning: An internal error has occurred.
Action: Contact VSE2PDF support.

TEIP34xx

TEIP3401E Unable to deliver notification. See SYSLST.

Meaning: Informational message. A message indicating the problem can be found on SYSLST.
Action: Correct error indicated.

TEIP3423I DNS lookup failed: aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa

Meaning: VSE2PDF was unable to convert an Internet Domain Name to a valid IP address.
Action: Verify the DNS1 setting in TCP/IP. Verify the name being resolved.

TEIP3435E Notification sent to aaaaaaa

Meaning: Informational message.
Action: None.

TEIP3440E Password about to expire. Support Notified

Meaning: Informational message. Because the password is about to expire, VSE2PDF support was notified via e-mail. To ease concerns, ALL information sent is logged on SYSLST.
Action: None.

TEIP3441E Password invalid. Support Notified

Meaning: Informational message. Because the password is about to expire, VSE2PDF support was notified via e-mail. To ease concerns, ALL information sent is logged on SYSLST.
Action: None.

TEIP3442I Support Notified

Meaning: Informational message. VSE2PDF support was notified via e-mail that your site is using VSE2PDF. This occurs 4 times a year. To ease concerns, ALL information sent is logged on SYSLST.

Action: None.

TEIP345xE Invalid response from SMTP host. See SYSLST.

Meaning: Informational message. A message indicating the problem can be found on SYSLST.

Action: Correct error indicated.

TEIP35xx

TEIP3501E Send BASE64 buffer full.

Meaning: An internal error has occurred.

Action: Adjust the value for the VSE2PDF startup option BUFFER_SIZE. If this fails to resolve the problem, contact VSE2PDF support.

TEIP3502W Compression buffer full. Data sent uncompressed.

Meaning: The compression buffer was too small, so the data was sent uncompressed.

Action: Although this message can be ignored, it can be eliminated by adjustment of the value for the VSE2PDF startup option BUFFER_SIZE.

TEIP37xx

TEIP3701E aaaaaaaa member not found: bbbbbbbb

Meaning: The requested member was not found.

Action: Verify the existence of the member. Verify the source search chain. Correct the incorrect job parameter if needed.

TEIP3702W aaaaaaaa member not found..bbbbbbbb. System defaulted to: cccccccc.

Meaning: The requested member was not found. VSE2PDF defalted to member cccccccc.

Action: Verify the existence of the member. Verify the source search chain. Correct the incorrect job parameter if needed.

TEIP3703I Incomplete information found in aaaaaaa: bbbbbbbb

Meaning: The contents of the member is incomplete.

Action: Review the contents and add the missing information.

TEIP3704E Invalid contents found in aaaaaaaa: bbbbbbbb. RC cc.

Meaning: The member contains invalid information.

Action: Review the contents and correct as nessassary.

TEIP3707E Invalid contents found in aaaaaaaa: bbbbbbbb.

Meaning: The member contains invalid information.

Action: Review the contents and correct as nessassary.

TEIP3709E Invalid keyword in PAGEDEF. aaaaaaaa.

Meaning: The invalid keyword aaaaaaaa was found in the PAGEDEF file.

Action: Correct the PAGEDEF file.

TEIP3712I General Failure. LIBR aaaaaaaa RC bb/cc.
Meaning: There has been an unexpected error reading the VSE LIBR.
Action: Contact VSE2PDF support.

TEIP3713E General Failure. LIBR aaaaaaaa RC aa/bb.
Meaning: An internal error has occurred.
Action: Contact VSE2PDF support.

TEIP3720I FREEVIS failure for aaaaaaaa area. R15=bb.
Meaning: An internal FREEVIS failed. VSE2PDF will shutdown.
Action: Contact VSE2PDF support.

TEIP3721I GETVIS failure for aaaaaaaa area. R15=bb.
Meaning: An internal GETVIS failed. VSE2PDF will shutdown.
Action: Add storage to the VSE2PDF partition. Contact VSE2PDF support if needed.

TEIP3730I GETVIS failure for aaaaaaaa area. R15=bb.
Meaning: An internal GETVIS failed. VSE2PDF will shutdown.
Action: Add storage to the VSE2PDF partition. Contact VSE2PDF support if needed.

TEIP3731I aaaaaaaa buffer allocated from bbbbbbbb to cccccccc.
Meaning: Informational message.
Action: None.

TEIP3732I aaaaaaaa buffer freed from bbbbbbbb to cccccccc.
Meaning: Informational message.
Action: None.

TEIP3738E aaaaaaaa line in error.
Meaning: The format of the line is invalid. Message TEIP3039I should follow showing the line in error.
Action: Correct the member.

TEIP3739I aaaaaaaa line:
Meaning: Informational message.
Action: None.

TEIP3741E BUFFER_SIZE too small reading aaaaaaaa.bbbbbbbb.cccccccc.dddddddd.
Meaning: The internal buffers are too small to read the indicated Library member.
Action: Increase the BUFFER_SIZE VSE2PDF startup option. Contact VSE2PDF support if needed.

TEIP3742I BUFFER_SIZE too small reading aaaaaaaa.bbbbbbb.ccccccc.ddddddd.
Meaning: An internal error has occurred.
Action: Contact VSE2PDF support.

TEIP40xx

TEIP4000E Product Password does not allow creation of PDF.
Meaning: The product password used does not authorize the creation of PDF documents.
Action: If licensed for PDF file creation, contact VSE2PDF support to verify the product password.

TEIP4001E Unable to convert report. Too many pages.
Meaning: The report is too big. Job output is truncated.
Action: Segment the report.

TEIP4002E Output truncated.
Meaning: Informational message.
Action: None.

TEIP4003E Unable to convert report. Too many pages.
Meaning: The report is too big. Job output is truncated.
Action: Either adjust the startup option MAX_PAGES or segment the report.

TEIP4004E Too many indexes. Index will be incomplete.
Meaning: Informational message.
Action: Increase the startup option BUFFER_SIZE.

TEIP4005E Buffer overflow.
Meaning: An internal error has occurred.
Action: Adjust the value for the VSE2PDF startup option BUFFER_SIZE. If this fails to resolve the problem, contact VSE2PDF support.

TEIP4006E Invalid PDFFORM character 'a' offset x'bbbbbbbb'
Meaning: An internal error has occurred.
Action: Contact VSE2PDF support.

TEIP4007E Missing bookmark level 'aa'
Meaning: An error has occurred due to problems with the BOOKMARK settings. A bookmark was generated for a level for which no parent level exists. A parent level is the level just above the current level. An example would be where BOOKMARK_1 and BOOKMARK_3 are defined, but no BOOKMARK_2.
Action: Verify any scripts or in-line directives for errors in setting bookmarks. If the problem persists, contact VSE2PDF support.

TEIP4008E Maximum aaaaaaaa files for one PDF file exceeded.
Meaning: A design limit of VSE2PDF was exceeded.
Action: Contact VSE2PDF support.

TEIP41xx

TEIP4101E Buffer overflow.
Meaning: An internal error has occurred.
Action: Contact VSE2PDF support.

TEIP42xx

TEIP4201E Buffer overflow.
Meaning: An internal error has occurred.
Action: Contact VSE2PDF support.

TEIP43xx

TEIP4300E Product Password does not allow creation of PS.
Meaning: The product password used does not authorize the creation of PostScript documents.
Action: If licensed for PS file creation, contact VSE2PDF support to verify the product password.

TEIP4301E Buffer overflow.
Meaning: An internal error has occurred.
Action: Contact VSE2PDF support.

TEIP50xx

TEIP5016E DJDE line storage table full.

Meaning: An internal error has occurred.
Action: Contact VSE2PDF support.

TEIP5017I aaaaaaaa Fontdef not found. bbbbbbbb Fontdef used.

Meaning: The requested Fontdef was not found.
Action: Verify that the Fontdef was loaded during startup. Correct startup JCL as required. Correct the incorrect job parameter if needed.

TEIP5018I aaaaaaaa Colordef not found. bbbbbbbb Colordef used.

Meaning: The requested Colordef was not found.
Action: Verify that the Colordef was loaded during startup. Correct startup JCL as required. Correct the incorrect job parameter if needed.

TEIP5019I aaaaaaaa Fontdef not found. bbbbbbbb Fontdef used.

Meaning: The requested Fontdef was not found.
Action: Verify that the Fontdef was loaded during startup. Correct startup JCL as required. Correct the incorrect job parameter if needed.

TEIP5020I FREEVIS failure for aaaaaaaa area. R15=bb.

Meaning: An internal FREEVIS failed. VSE2PDF will shutdown.
Action: Contact VSE2PDF support.

TEIP5021I GETVIS failure for aaaaaaaa area. R15=bb.

Meaning: An internal GETVIS failed. VSE2PDF will shutdown.
Action: Add storage to the VSE2PDF partition. Contact VSE2PDF support if needed.

TEIP5030I GETVIS failure for aaaaaaaa area. R15=bb.

Meaning: An internal GETVIS failed. VSE2PDF will shutdown.
Action: Add storage to the VSE2PDF partition. Contact VSE2PDF support if needed.

TEIP5031I aaaaaaaa buffer allocated from bbbbbbbb to cccccccc.

Meaning: Informational message.
Action: None.

TEIP5032I aaaaaaaa buffer freed from bbbbbbbb to cccccccc.

Meaning: Informational message.
Action: None.

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TEIP70xx

TEIP7001E General failure. TCP aaaaaaaa RC bb/cc.

Meaning: An internal error has occurred.
Action: Contact VSE2PDF support.

TEIP7002E General failure. TCP aaaaaaaa RC bb/cc.

Meaning: An internal error has occurred.
Action: Contact VSE2PDF support.

TEIP7004E TCP/IP timeout communicating with host.

Meaning: VSE2PDF lost contact with the host.
Action: Verify the status of the TCP/IP partition. Verify the network connection. Verify that the host is available.

TEIP7005I TCP/IP cancelled by operator.

Meaning: The operator issued the CANCEL_TCP VSE2PDF operator command.
Action: None.

TEIP7006I Device aaa.bbb.ccc.ddd busy, will continue waiting.

Meaning: The device (LPR or DIRECT printer) is busy. Processing will continue when the busy is cleared.
Action: None. If the operator is unable to clear the condition, the CANCEL_TCP VSE2PDF operator command can be issued.

TEIP7007E Receive buffer too small.

Meaning: An internal error has occurred.
Action: Contact VSE2PDF support.

TEIP75xx

TEIP750xE General Failure. LIBR aaaaaaaa RC bb/cc.

Meaning: An internal error has occurred. If the RC is 10/20 when accessing a PDFFORM member, the PDFFORM member is stored as a text member, not as a binary member. Verify that the type PDFFORM has been added to the EXTTYPES.L TCP/IP member. After correcting the EXTTYPES.L member, retransfer the PDF overlay to VSE after deleting the current incorrect member from LIBR. See the section "Optional Setup Items" in this manual for additional information.
Action: Contact VSE2PDF support.

TEIP7510E Wrong Library Member Format. Member aaaaaaaa.bbbbbbbb Not Binary.

Meaning: VSE2PDF expected the Library Member to be a Binary (String) member, but found a Text member. If this library member is an overlay that was uploaded, it was not correctly uploaded as Binary.
Action: For overlay members, re-upload the overlay making sure to use the Binary option. Otherwise, contact VSE2PDF support.

TEIP7511E Library full.

Meaning: VSE2PDF encountered a library full condition as it attempted to write a library member.
Action: Enlarge the library or decrease the MAX_PAGES startup option.

TEIP77xx

TEIP7701I Job Accounting area full. Information lost.

Meaning: The VSE2PDF internal Job Accounting area is full.
Action: Contact VSE2PDF support.