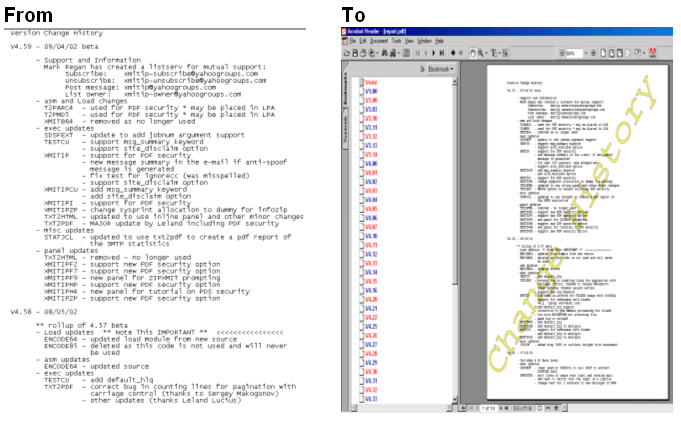
TXT2PDF User Reference Guide

Convert Text Files to Portable Document Format (PDF)

Version 09.107 Revised April 17, 2009



Leland Lucius

[pdf@homerow.net](file:///C:\share\tools\txt2pdf\pdf@homerow.net)

Lionel B. Dyck

[lbdyck@gmail.com](mailto:lbdyck@gmail.com)

Table of Contents

[Table of Contents 2](#_Toc227827904)

[Notices 4](#_Toc227827905)

[Acknowledgements 5](#_Toc227827906)

[Individuals 5](#_Toc227827907)

[Routines 5](#_Toc227827908)

[Contact Information 6](#_Toc227827909)

[Introduction 7](#_Toc227827910)

[TXT2PDF: The Command 8](#_Toc227827911)

[IN 9](#_Toc227827912)

[OUT 9](#_Toc227827913)

[ANNOT 9](#_Toc227827914)

[BG 10](#_Toc227827915)

[BM 11](#_Toc227827916)

[BROWSE 11](#_Toc227827917)

[CC 11](#_Toc227827918)

[COLOR 12](#_Toc227827919)

[COMPRESS 12](#_Toc227827920)

[CONFIG 12](#_Toc227827921)

[CONFIRM 13](#_Toc227827922)

[DEFCFG 13](#_Toc227827923)

[DELIM 13](#_Toc227827924)

[DINFO 13](#_Toc227827925)

[DRAW 14](#_Toc227827926)

[ENCODING 18](#_Toc227827927)

[ENCRYPT 18](#_Toc227827928)

[FONT 19](#_Toc227827929)

[HLQ 20](#_Toc227827930)

[IFEMPTY 20](#_Toc227827931)

[IMAGE 21](#_Toc227827932)

[LM 23](#_Toc227827933)

[LPI 23](#_Toc227827934)

[MAG 23](#_Toc227827935)

[MAXOSIZE 23](#_Toc227827936)

[MSGID 24](#_Toc227827937)

[MSGLVL 24](#_Toc227827938)

[OLOPT 24](#_Toc227827939)

[OLSORT 25](#_Toc227827940)

[OLTOK 25](#_Toc227827941)

[ORIENT 25](#_Toc227827942)

[OUTLINE 26](#_Toc227827943)

[OUTREC 27](#_Toc227827944)

[PAGE 28](#_Toc227827945)

[PAPER 29](#_Toc227827946)

[RM 29](#_Toc227827947)

[TEXT 30](#_Toc227827948)

[TM 31](#_Toc227827949)

[TRANS 31](#_Toc227827950)

[UNITS 32](#_Toc227827951)

[VIEWER 32](#_Toc227827952)

[VONLY 33](#_Toc227827953)

[XFONT 33](#_Toc227827954)

[XLATE 34](#_Toc227827955)

[TXT2PDF: The ISPF Dialog 35](#_Toc227827956)

[Primary ISPF Panel 35](#_Toc227827957)

[Annotation Panel 36](#_Toc227827958)

[Background Panel 36](#_Toc227827959)

[Color Panel 36](#_Toc227827960)

[Encryption Panel 37](#_Toc227827961)

[Font Panel 37](#_Toc227827962)

[Miscellaneous Panel 37](#_Toc227827963)

[Outline Panel 37](#_Toc227827964)

[Outline Options 38](#_Toc227827965)

[Page and Paper Panel 38](#_Toc227827966)

[Processing Selection 39](#_Toc227827967)

[Batch FTP Option 40](#_Toc227827968)

[Batch Mail Option 40](#_Toc227827969)

[Foreground Processing options 41](#_Toc227827970)

[Download Panel 41](#_Toc227827971)

[FTP Panel 41](#_Toc227827972)

[Mail Panel 42](#_Toc227827973)

[TXT2PDF: Examples 43](#_Toc227827974)

[Appendix A: Installation 46](#_Toc227827975)

[Setting TXT2PDF Defaults: All Platforms 46](#_Toc227827976)

[National Language Translation: All Platforms 46](#_Toc227827977)

[Linux and Cygwin 47](#_Toc227827978)

[Windows 47](#_Toc227827979)

[OS/390 and z/OS 47](#_Toc227827980)

[VM and z/VM 48](#_Toc227827981)

[Appendix B: GreenBar Stream Example 49](#_Toc227827982)

Notices

This software contains encryption source and object code that is regulated by the United States Bureau of Industry and Security. Since this is an “open-source” project, the required notice was submitted for License Exception TSU. This allows the software to be exported from the United States.

However, the software may not be exported to certain countries and their nationals as they are restricted by Section 734.2 of the EAR (Export Administration Regulations). These countries include, but are not limited to, Cuba, Iran, Iraq, Libya, North Korea, Syria, and Sudan. Please refer to the [Export Administration Regulations](http://www.bis.doc.gov/) website for more information.

Acknowledgements

## Individuals

We would like to acknowledge the following individuals. Through their suggestions, testing, and code contributions, TXT2PDF has become a much better product overall.

**Leland Lucius**: For the TXT2PDF REXX code and the T2PINIT, T2PARC4, T2PMD5, and T2PTERM assembler code.

**Lionel B. Dyck**: For creating XMITIP without which the original TXT2PDF code would have remained hidden in some other homegrown applications and never seen the light of day. (Not to mention his already established distribution channels. Lionel has also contributed the TXT2PDFI ISPF dialog and this document, for which you should be extremely thankful. I hate doing documentation

**Andy W. Robertson**: For fixing and enhancing the original escaping code and translation tables.

**A. Harry Williams**: For adding the original CMS and Regina support without which TXT2PDF would still be running on OS/390 only.

**Neal E. K. Gooch**: For fixing some environment handling issues, adding Object REXX compatibility, and contributing the initial multi-level indexing code.

**Felipe Cvitanich**: For contributing the PDFXLIB EXEC making it much easier to create the external translation table.

**Len Steele**: For major testing, feature suggestions, and making me think about other things “the right way.”

**Frank M. Ramaekers Jr.**: For giving all you VMers compression and encryption by doing a pretty darn good job of converting and generalizing the assembler routines.

**And many more**: See the EXEC for a list of all contributors and the list of changes for their contribution. (Gettin’ to be too many to list here. ;-))

## Routines

Several routines used by TXT2PDF were located on the Internet and we’d like to thank their authors for publishing them. Any and all rights to these routines remain with the original authors.

The Cos(), Pi(), Sin(), Sqrt() and QSort() routines were culled from the "Album of Algorithms and Techniques" by Vladimir Zabrodsky. If you use REXX, you HAVE to check this out:

[www.geocities.com/zabrodskyvlada/aat](http://www.geocities.com/zabrodskyvlada/aat/)

Peter Butler ([pbutler1@ix.netcom.com](mailto:pbutler1@ix.netcom.com)) posted the Atan() function to sci.math.num-analysis in 1995.

Contact Information

Feel free to contact either of us if you have suggestions or encounter problems with this documentation or the application.

Lionel B. Dyck

Email: [lbdyck@gmail.com](mailto:lionel.b.dyck@kp.org)

Web: [www.ldbsoftware.com](http://www.ldbsoftware.com/)

Leland Lucius

Email: [pdf@homerow.net](mailto:pdf@homerow.net)

Web: [www.homerow.net](http://www.homerow.net/)

Introduction

The TXT2PDF utility is used to convert a text file into a Portable Document Format (PDF) file. It has many options to control the conversion, output appearance, and final presentation. Some of the features include:

* Annotations
* Outline Generation
* Color Control
* Several Background Options
* Viewer Control

The following features are only available on OS/390, z/OS, and z/VM platforms:

* Encryption (will come to other platforms in the future)
* Compression

The following feature is only available on OS/390 and z/OS:

* ISPF Dialog

The ISPF Dialog features of interest are:

* Prompted creation of the TXT2PDF options
* Foreground and Batch processing options
* Easy modeling for production batch JCL
* Support for FTP and E-Mail of the generated report
* Creation of Configuration file

While the original design was simply to convert OS/390 reports to PDF prior to emailing, TXT2PDF has been generalized and adapted to other platforms including Linux, VM, and Windows. All that is required is a REXX interpreter or compiler on the target platform.

Not sure about the load modules within the z/VM environment – awaiting word from someone who knows z/VM.

TXT2PDF: The Command

TXT2PDF is a standard command line utility and must be executed from a standard command line interface on the appropriate platform. For OS/390 and z/OS it is a standard TSO command and must therefore be executed while logged in or in batch using the batch terminal monitor program (TMP). See the Examples section for examples of the JCL which can be used.

The complete syntax is:

**TXT2PDF IN <input filespec>**

**OUT <output filespec>**

**ANNOT <type> / <type spec>**

**BG <type> / <type spec>**

**BM <bottom margin>**

**BROWSE <browse messages>**

**CC <carriage control>**

**COLOR <fore> / <back >**

**COMPRESS <level>**

**CONFIG <config filespec>**

**CONFIRM <level>**

**DELIM <character>**

**DINFO <document info filespec>**

**DRAW <type> / <specs>**

**ENCODING <func> / <specs>**

**ENCRYPT <type> / <opts>**

**FONT <size> / <name> / <zoom>**

**HLQ <hlq>**

**IFEMPTY <option>**

**IMAGE <func> / <name> / <specs>**

**LM <left margin>**

**LPI <line per inch>**

**MAG <level>**

**MAXOSIZE <max output size|0>**

**MSGID <prefix messages>**

**MSGLVL <msgnum> / <msglvl>**

**OLOPT <option/...>**

**OLSORT <direction>**

**OLTOK <token>**

**ORIENT <orientation>**

**OUTLINE <type> / <args>**

**OUTREC <len>**

**PAGE <mode> / <layout>**

**PAPER <size> / <type> / <style>**

**RM <right margin>**

**TM <top margin>**

**TRANS <style> / <dur> / <opts/...>**

**UNITS <unit of measure>**

**VIEWER <flags/...>**

**VONLY <opt>**

**XFONT <type> / <opts>**

The command syntax is keyword followed by an option with no intervening equal sign. If the option contains embedded blanks then the entire option must be enclosed in quotes.

Under TSO, and ISPF, all data set names are processed using the standard TSO and ISPF conventions. This means that if a TSO PREFIX is different from the Userid then that PREFIX will be used when accessing data set names that are not fully qualified and enclosed within quotes.

## IN

The IN keyword defines the input file that will be converted to PDF format. Any valid file specification for the platform is allowed.

On platforms that have “standard” input and output files, you may omit this parameter and the input text will be read from “standard” input. This includes the CMS environment when TXT2PDF is run as a PIPELINE stage.

**Syntax**: IN file-specification

Examples: z/OS: IN ‘userid.report.text’

IN DD:ddname

IN report.text

z/VM: IN report.text.a

Others: IN report.txt

## OUT

The OUT keyword defines the file that will be created from the conversion of the input file. The file specification is any valid file specification for the platform.

On platforms that have “standard” input and output files, you may omit this parameter and the output PDF file will be written to “standard” output. This includes the CMS environment when TXT2PDF is run as a PIPELINE stage.

**Syntax**: OUT file-specification

Examples: z/OS: OUT ‘userid.report.text’

OUT DD:ddname

OUT report.text

z/VM: OUT report.text.a

Others: OUT report.txt

## ANNOT

Annotations are similar to yellow post-it notes that are placed within a document.

**Syntax**: ANNOT TEXT/page/row/col/state/text

page On what page should the note be placed:

First F On first page only

Last L On the last page only

All A On all pages

Default: ALL

row the row, or line, on the page where the note will be placed

Default: 1

col the column where the note will be placed. This is only approximate as TXT2PDF does not have the font metrics for an exact placement.

Default: 1

state the initial display state of the note specified as:

Open O causes the note to be open

Closed C causes the note to be closed

Default: 1

text the text for the sticky note

Examples: ANNOT Text/1/1/1/O/sample-text

ANNOT “T/1/1/1/C/Sample Text” Quotes are needed to include the blanks

## BG

The background will be drawn before the text of the document and this allows you to specify as many backgrounds as you like. They will be placed in the order you specify.

The STREAM background allows you to include valid PDF stream content from an external file, while the TEXTMARK and TMARK types produce an effect similar to a watermark.

**Syntax**: BG STREAM/file-specification

BG TEXTMARK/style/text-color/fill-color/opacity/text

BG TMARK/style/text-color/fill-color/opacity/font-size/text

BG TMARK/style/text-color/fill-color/opacity/font-name/font-size/text

Supported types are:

Stream PDF stream content

Textmark Simulated watermark

Tmark Enhanced watermark

**STREAM:**

file-specification Contains the PDF control statements that define stream content. See Appendix B for an example.

**TEXTMARK and TMARK:**

style The direction in which to draw the text:

TopDown TD upper left to bottom right

BottomUp BU bottom left to upper right

Default: BottomUp

text-color Color of the text

Default: none

fill-color If not specified the text will appear hollow, otherwise the color used to fill the letters.

Default: Gray

opacity Percent of solidness of the text.

Default: 100

font-name (TMARK) Name of the font.

Default: Courier

font-size (TMARK) Size of the font in points.

Default: 100

text Text to draw

Default: none

Examples:

BG Stream/’userid.stream.data set’

BG Textmark/bottomup//gray/100/TXT2PDF

BG Textmark/td/yellow/black/80/TXT2PDF

BG Tmark/td/yellow/black/80/12/TXT2PDF

BG Tmark/td/yellow/black/80/Vera/12/TXT2PDF

## BM

The bottom margin is the offset in inches from the bottom of the page.

**Syntax**: BM offset

Default: 0.5 inches

Example: BM 0.8

Note: See UNITS

## BROWSE

Defines whether messages generated by TXT2PDF will be displayed. If under ISPF the messages will be displayed in an ISPF Browse display otherwise the message will appear on the active window.

**Syntax**: Browse option

option Specify one of the following:

Yes Y

No N

Default: No

Example: BROWSE No

## CC

Specifies if the input data set contains carriage control characters in column 1 of the data. Both ASA and Machine carriage control characters are supported.

**Syntax**: CC option

option Specify one of the following:

Yes Y First column contains machine or ASA

CC characters

No N No (or ignore) CC characters

Ascii A File contains ASCII CC characters

Default: No (or based upon the DCB of data set)

Example: CC Yes

## COLOR

Defines the color of the Text as well as the Background color of the page.

**Syntax**: COLOR foreground/background

Where foreground defines the color of the text on the page and background is the color of the page.

All colors can be specified using either the following names or by specifying the exact RGB values by using 6 hexadecimal digits formatted as RRGGBB.

Aqua A Black Bla Blue Blu Fuchsia F

Gray Gra Green Gre Lime L Maroon M

Navy N Olive O Purple P Red R

Silver S Teal T White W Yellow Y

Though intended for use with the barred paper style, the following colors may also be used:

BlueBar GrayBar GreenBar

OrangeBar WhiteBar YellowBar

Examples: COLOR Black/White the default

COLOR Y/N for Yellow text and Navy background

COLOR 00FF00 green

## COMPRESS

Defines a level of compression from level 0 (none) to level 9 (maximum).

**Syntax:** COMPRESS level

Default: 0

Example: COMPRESS 2

## CONFIG

The CONFIG keyword defines a file containing additional parameters. Everything in this file will be processed as if it had been included as arguments to the TXT2PDF command. Any arguments on the TXT2PDF command will override parameters in the Config file. Nested Config files are also supported. Comments are statements with an \* in column 1. Continuation is by either a blank dash “ –“ combination or a plus “+” at the end of a record.

**Syntax**: CONFIG file-specification

Default: none

Examples: CONFIG ‘userid.txt2pdf.config’

CONFIG DD:ddname

CONFIG txt2pdf.config.a

CONFIG c:\winnt\pdfconfig.txt

CONFIG ~/.txt2pdf

Sample CONFIG File:

\* sample configuration file

Rm .2 lm .2 tm .3 bm .3

Msgid yes color yellow/black

Config ‘userid.nested.config’

## CONFIRM

Defines the level of messages displayed during the TXT2PDF conversion process.

**Syntax**: CONFIRM level

Level Specify one of the following:

Yes Y for standard messages

No N for quiet mode (no messages)

Verbose V for extensive messages

Default: Yes

Examples: CONFIRM Yes

CONFIRM V

## DEFCFG

Defines the name of the default config file as used by the CONFIG parameter. This does not actually cause inclusion. The specified file will be included only if there are no command line parameters.

You would normally use this in your TXT2PDFD EXEC.

**Syntax:** DEFCFG file-specification

Default: none

Examples: DEFCFG ‘userid.txt2pdf.config’

DEFCFG DD:ddname

DEFCFG txt2pdf.config.a

DEFCFG c:\winnt\pdfconfig.txt

DEFCFG ~/.txt2pdf

## DELIM

The DELIM parameter allows you to change the character used to delimiter between arguments. Any parameter following this one must use the new specification.

**Syntax:** DEFLIM character

Default: /

Examples: DELIM ,

## DINFO

Document Information, or DINFO, references a file which contains a name followed by a description that will be added to the Document Information dictionary within the PDF file.

**Syntax**: DINFO file-specification

Default: none

Examples: DINFO ‘userid.pdfdinfo.text’

DINFO dinfo.txt.a

DINFO c:\pdf\dinfo.txt

Syntax for the DINFO file:

Title The title of this document

Subject A subject line for the document

Author Name of the author(s)

Keywords any associated keywords (you create the keyword)

Sample DINFO File:

Title TXT2PDF User’s Guide

Subject Getting Started with TXT2PDF

Author Prefers to remain unknown

Bogus – you created this keyword so you must know what it means

## DRAW

The DRAW parameter allows you to draw different objects on the page. At this time, you may draw lines, unfilled rectangles, filled rectangles, static text, and dynamic strings.

To provide the most flexibility, coordinates and sizes are specified in PDF user space units. Each unit is 1/72 of an inch and the origin is the bottom left of the page. In addition, margins are ignored.

**Syntax**: DRAW Line/x/y/endx/endy/opacity/fore/thickness/style/doton/dotoff

DRAW Rect/x/y/width/height/opacity/fore/back/thickness/style/doton/dotoff

DRAW Text/x/y/font/size/opacity/fore/back/thickness/style/rotation/zoom/text

DRAW String/x/y/font/size/opacity/fore/back/thickness/style/rotation/zoom/text

Supported types are:

Line Draws a line

Rect Draws a rectangle

Text Draws text

String Draws dynamic text

**LINE and RECT:**

x The lower left x-axis coordinate.  
Default: none

y The lower left y-axis coordinate.  
Default: none

endx (LINE only) The upper right x-axis coordinate.  
Default: none

endy (LINE only) The upper right y-axis coordinate.  
Default: none

width (RECT only) The width of the rectangle.   
Default: none

height (RECT only) The height of the rectangle.  
Default: none

opacity A value specifying the percentage of opacity the image will have. A value of 100 will produce a solid image and anything less will produce transparent images.  
Default: 100%

fore (LINES) Color of the line

(RECT) Color of the outline around the rectangle. Omitting it will produce a rectangle without a bounding box.  
Default: Black

back (RECT) Specifies the background or fill color.  
Default: none

thickness The thickness of the line or bounding box.  
Default: 0

style (LINE) The type of encaps that will be placed at the beginning and end of the line. The ROUND and SQUARE caps project past the line end points so you will need to account for it when positioning.

Possible values are:

Butt Square ends with no projection

Round Round ends with projection

Square Square ends with projection

Default: Butt

(RECT) The shape used for the corners of the rectangle.

Possible values are:

Miter Pointed (like a picture frame)

Round Rounded

Bevel Like miter, but the points are chopped.

Default: Miter

doton/dotoff These 2 values work together to create lines and bounding boxes with different dash patterns. Line thickness and cap style affect the dashes, so it will take a bit of trial and error to get exactly what you want.

The “doton” value specifies the number of units dashes will have within the pattern. If you do not specify this, then a value of 0 will be used.

The “dotoff” value specifies the number of units the gaps will have between dashes. If you do not specify a “dotoff” value, it will default to the “doton” value and the result will be same sized dashes and gaps.

Default: none (solid line)

**TEXT and STRING:**

x The lower left x-axis coordinate.  
Default: none

y The lower left y-axis coordinate.  
Default: none

font The name of the font to use.  
Default: Courier

size The size in points  
Default: 9

opacity A value specifying the percentage of opacity the text will have. A value of 100 will produce solid text and anything less will produce transparent text.  
Default: 100%

fore Specifies the color of the outline around the characters.  
Default: none

back Specifies the fill color of the characters.  
Default: none

thickness The thickness of the line or bounding box.  
Default: 0

style The shape used for the corners of the glyphs.

Possible values are:

Miter Pointed (like a picture frame)

Round Rounded

Bevel Like miter, but the points are chopped.

Default: Miter

rotation A value specified in degrees which controls the rotation of the text. Negative numbers rotate clockwise.   
Default: 0

zoom Zoom is a percentage factor used to increase or decrease the font size.  
Default: 100%

text The text to draw.

The value may contain certain format sequences that get replaced with different values. These sequences fall into 2 categories, date/time and dynamic.

Date and time sequences can be used in both TEXT and STRING types. The date and time used is that at time of parsing.

The sequences start with a percent (%) and are followed by one of:

% - literal percent

a - abbreviated weekday name

A - full weekday name

b - abbreviated month name

B - full month name

c - format: Sun Oct 26 02:00:00 2003

d - 2 digit day of month (zero padded)

e - 2 digit day of month (space padded)

H - 2 digit (24) hour

I - 2 digit (12) hour

j - 3 digit day of year

m - 2 digit month of year

M - 2 digit minute

p - meridian

S - 2 digit second

w - 1 digit day of the week (0=Sunday)

x - date format: 10/26/03

X - time format: 02:00:00

y - 2 digit year

Y - 4 digit year

Dynamic sequences can only be used with the STRING type. The values for these sequences change during processing.

The sequences start with an at sign (@) and are followed by one of:

@ - literal at sign

p - PDF page number (1 based)\*

A zero pad and length may be specified for sequences marked with an “\*” like so:

@4p - blank pad page number to 4 bytes

@04p - zero pad page number to 4 bytes

Default: none

Examples: DRAW LINE/0/0/700/600/100/Red

DRAW line/100/300/400/300///4/Round/0/4

DRAW RECT/0/0/700/600/50/Red/Green

DRAW rect/50/50/400/90/Blue///Bevel

DRAW “text/10/600/Times/30/100/Blue/Red///-45/300/ Just Some Test Text ”

DRAW “text/10/600/Times/30/100/Blue/Red/////Date: %c”

DRAW “string/10/600//////////Date %m/%d/%Y – Time %H:%M:%S – Page @4p”

## ENCODING

The ENCODING parameter allows you to define Unicode character map which are used to map characters in the PDF file to their Unicode equivalents. This is mostly important when using languages to do not use a Latin character set, but may also be used instead of the translation table in TXT2PDFX or the one specified via the XLATE parameter.

The UCM files can be obtained from the [ICU Project source code repository](http://source.icu-project.org/repos/icu/data/trunk/charset/data/ucm/). Select the desired mapping and save it as a plain text file. If needed, upload it to either a PDS or sequential file as ASCII to allow conversion to EBCDIC.

**Syntax**: ENCODING DEFINE/name/file-specification

**DEFINE:**

name The name to assign to the encoding. Use this name to associate the encoding to a font via the XFONT parameter.

file-specification Specifies the file name or dataset name that contains the UCM format encoding.

Examples:

ENCODING DEFINE/ibm1047/’userid.stream.data set’

ENCODING DEFINE/1255/ibm-1255\_P100-1995.ucm

## ENCRYPT

Encryption enables the securing of the created PDF file. At present only the PDF Standard security is supported. Note: This option is only supported on OS/390, z/OS, and CMS at this time.

**Syntax**: ENCRYPT ST/owner/user/key-length/parms

The currently defined encryption types are:

ST Uses PDF standard encryption

**ST:**

owner A password granting full access to the document. Only the first 32 characters are used. The rest are ignored.

Default: none

user A password giving the user access to the document based on the selected parms (see below). It is limited to 32 characters as well.

Default: none

key-length Specifies the length of the encryption key. Valid values are:

40 40-bit key (all Acrobat versions)

128 128-bit key (Acrobat 5 or above)

Default: 40

parms Controls what the user can do with the document. Specify any of the following, separated by a “/”:

NOPRINT NP No printing

NOEDIT NE No editing

NOCOPY NC No copying

NOEDITNOTES NEN No editing notes/forms

NOSAVEAS NSA Don't allow Save As

NOFILLANDSIGN NFS No fill/sign forms

NOTACCESSIBLE NAC Not accessible

(Not Recommended!)

NOASSEMBLY NAS No insert/rotate/

NOHIRESPRINT NHP No Hires printing

NONE N No permissions

Default: (all permissions)

Examples: ENCRYPT ST/Owner//128/np/ne/nc

ENCRYPT ST/Owner/User/40/ne

ENCRYPT “ST/owner password with blanks//nc”

## FONT

Defines the font to be used.

**Syntax**: FONT size/name/zoom

size Size of the font in points (1/72 of an inch)

Default: 9

name Name of the font defined via the XFONT parameter or one of the following predefined PDF Type 1 font names:

Times T

TimesBold TB

TimesItalic TI

TimesBoldItalic TBI

Helvetica H

HelveticaBold HB

HelveticaItalic HI

HelveticaBoldItalic HBI

Courier C

CourierBold CB

CourierItalic CI

CourierBoldItalic CBI

Symbol S

ZapfDingbats Z

Default: Courier

zoom Zoom factor in percent of original font size. Specifying a percentage less than 100 will cause the font to shrink and a percentage greater than 100 will cause the font to enlarge.

Default: 100

Examples: FONT 9/Courier/100

FONT 12/TB/50

## HLQ

High level qualifier for OS/390+ data set names. It will be prepended to any DSN not beginning with a single quote (') or the special "DD:" syntax.

Under TSO, the default value will be the prefix from the current profile. If one is not assigned, the current userid will be used. If the current prefix and userid are both assigned AND they aren't the same, both will be used, separated by a period.

Under IRXJCL, the default value will be the current userid, if available.

For all other environments, the default will be null.

**Syntax**: HLQ high-level-qualifer

Default: (see above)

Examples: HLQ SYS1

HLQ Z891001

## IFEMPTY

Alters the behavior when an empty input file is detected.

Syntax: IFEMPTY option

Option Specify one of the following:

ERROR – causes an error message to be generated

BLANK – produces a warning message and a blank PDF file

Anything else will cause a warning message to be produced and a PDF file will be created with the text you specify here.

Default: ERROR.

Examples: IFEMPTY ERROR

IFEMPTY “The input file was empty”

IFEMPTY BLANK

## IMAGE

The IMAGE parameter allows you to draw images on the page. Currently, this only includes JPEG and BMP files but more are planned.

You use the LOAD function to load the image from a file and assign it a name. Then you use the DRAW or TILE functions to draw the image on the page using the name you assigned.

An advantage of separating the LOAD and DRAW/TILE functions is that you may LOAD several images in the default configuration file (TXT2PDFD) and they will always be available. Just DRAW it by name when you need it.

To provide the most flexibility, coordinates are specified in PDF user space units. Each unit is 1/72 of an inch and the origin is the bottom left of the page. In addition, margins are ignored.

**Syntax**: IMAGE Load/name/file-specification

IMAGE Draw/name/x/y/opacity/rotation/scalex/scaley/skewx/skewy

IMAGE Tile/name/x/y/w/h/opacity

Supported functions are:

Load Loads specified file and associates it with “name”

Draw Draws “name” using given parameters

Tile Tiles “name” within given constraints

**LOAD:**

name The name to assign the image

Default: none

file-specification The name of the file containing the image

Default: none

**DRAW:**

name The name of the image to draw

Default: none

x The position on the horizontal axis where the image will be placed. This is relative to the left edge of the page.  
Default: none

y The position on the vertical axis where the image will be placed. This is relative to the bottom edge of the page.  
Default: none

opacity A value specifying the percentage of opacity the image will have. A value of 100 will produce a solid image and anything less will produce transparent images.  
Default: 100%

rotation A value specified in degrees which controls the rotation of the image. Negative numbers rotate clockwise.   
Default: 0

scalex The relative horizontal size of the image specified as a percentage of the original.  
Default: 100%

scaley The relative vertical size of the image specified as a percentage of the original.  
Default: 100%

skewx The amount of horizontal skew (or slant) specified in degrees the image will have.  
Default: 0

skewy The amount of vertical skew (or slant) specified in degrees the image will have.  
Default: 0

start Specifies the first page number on which the image will be drawn.   
Default: 1

interval Specified the interval at which successive images will be drawn. Use a value of “0” to draw the image on the first page only.  
Default: 1

**TILE:**

name The name of the image to tile

Default: none

x The position on the horizontal axis where the image will be placed. This is relative to the left edge of the page.  
Default: none

y The position on the vertical axis where the image will be placed. This is relative to the bottom edge of the page.  
Default: none

w The width of the constraining box.   
Default: none

h The height of the constraining box.   
Default: none

opacity A value specifying the percentage of opacity the image will have. A value of 100 will produce a solid image and anything less will produce transparent images.  
Default: 100%

Examples: IMAGE LOAD/Logo/company.logo.jpg

IMAGE LOAD/Pic/image.jpeg.a

IMAGE DRAW/Pic/100/100

IMAGE DRAW/Logo/100/100/70//200/200

IMAGE TILE/Pic/100/100/300//300

## LM

The offset in inches from the left side of the page where the text will start.

Syntax: LM offset

Default: 0.5 inches

Examples: LM 0.5

LM 2

LM -.5

Note: See UNITS

## LPI

Defines the number of Lines-Per-Inch for the text to be placed on the page.

**Syntax**: LPI n

Default: 8

Examples: LPI 8

LPI 6

Note: LPI is not affected by the Inch vs. Centimeter installation configuration option. It is always in lines per inch.

## MAG

Allows you to specify the initial magnification level upon opening the document.

**Syntax**: MAG level

level A numeric value specified as a percent of the original or one of the following:

FitInWindow FI - show whole page

FitWidth FW – show entire width of page

FitVisible FV – show contents of page

Default: none

Examples: MAG 150

MAG fitwidth

## MAXOSIZE

Allows you to place limits on the size of the PDF file produced and, if exceeded, will an error message will be produced.

**Syntax**: MAXOSIZE size

Default: 0 (disabled)

Examples: MAXOSIZE 10000

MAXOSIZE 200000

## MSGID

Enables/disables prefixing of all messages with the program name.

**Syntax**: MSGID option

option Display message ID or not

Yes Y Prefix each message

No N Don't prefix the messages

Default: Yes

Examples: MSGID Y

MSGID No

## MSGLVL

Provides a way to override the default level of any message produced by TXT2PDF.

**Syntax**: MSGLVL msgnum / level

msgnum Number of message

Default: none

level New message level (see CONFIRM)

Default: none

Example: MSGLVL 131/info

## OLOPT

Allows setting of options that relate to all outlining types.

**Syntax**: OLOPT opt/…

Specify any of the following options, separated with the "/" character:

Color C - Primary outline text color

AltColor A - Alternate text color

Italic I - Italicized text

Bold B - Boldfaced text

Expand E - Expanded all levels

Full F - Display full lineage at each level of hierarchy

Dups D - Allow duplicate indexes

Show S - Includes the token as part of the index

Default: none

Examples: OLOPT Color/Black/Altcolor/Black

OLOPT Italic/Show/Expand

## OLSORT

Allows sorting of the document outline.

**Syntax**: OLSORT direction

direction Specify the direction as follows:

A - Ascending sequence

D - Descending sequence

Default: unsorted

Examples: OLSORT A

OLSORT d

## OLTOK

Specifying an outline token allows you to generate a multi-level outline. The token is one or more characters that will be used to split the outline text into multiple segments. Each segment will become a new outline level.

For instance, if the OUTLINE keyword selected “2003/10/27” as an outline and you specified a token of “/”, then you would get a 3 level outline. The first level would be 2003, the second would be 10, and the third would be 27.

**Syntax**: OLTOK token

Default: none (single level outline)

Examples: OLTOK /

OLTOK “it can be a phrase”

OLTOK “ “

## ORIENT

Orientation of the image on the paper.

**Syntax**: ORIENT orientation

orientation Specify one of the following:

Landscape Land L

Portrait Port P

Default: Portrait

Examples: ORIENT P

ORIENT Landscape

ORIENT Land

## OUTLINE

Outlining allows you to select text from the document you're converting and use it to build an outline. Viewer apps display the outline as a multi-level tree. Selecting the leaf nodes will reposition the display to the location where the index was found in the document.

**Syntax**: OUTLINE Rowcol/row/col/len

OUTLINE Scanrow/row/data-col/data-len/text

OUTLINE Scancol/col/data-col/data-len/text

OUTLINE Scan/data-col/data-len/text

Supported scan types are:

RowCol RC Text at a specific row/column

ScanRow SR Scan a row for specified text

ScanCol SC Scan a column for specified text

Scan S Scan entire page for specified text

**ROWCOL:**

row The row where the text is located or 0 to select all non-blank rows on the page.

Default: none

col The column where the text starts.

Default: none

len The length of the text.

Default: none

**SCANROW:**

row The row that will be scanned for a match to the "text" argument.

Default: none

data col The column where the data starts. This may be a specified as an absolute column within the selected row or it may be relative to the start of the located text. You specify a relative location by prefixing the "data col" argument with a plus (+) or minus (-) sign.

Default: none

data len The length of the data.

Default: none

text The text for which to search.

Default: none

**SCANCOL**:

col The column that will be scanned for a match to the "text" argument.

Default: none

data col The column where the data starts. While this may be a relative column location as described under ScanRow, it doesn't make much sense because the scan column is known ahead of time. This should really be a "data row" argument, but the scanning routine does not have access to all rows at once.

Default: none

data len The length of the data.

Default: none

text The text for which to search.

Default: none

**SCAN**:

data col The column where the data starts. This may be a specified as an absolute column within the selected row or it may be relative to the start of the located text. You specify a relative location by prefixing the "data col" argument with a plus (+) or minus (-) sign.

Default: none

data len The length of the data.

Default: none

text The text for which to search. Every row will be scanned for this text.

Default: none

Examples: OUTLINE Rowcol/1/1/20

OUTLINE rc/0/6/10

OUTLINE RC/9/120/1

OUTLINE sr/4/2/1/This\_one\_has\_absolute\_position

OUTLINE “sr/4/-10/5/Scan row for me…Index precedes by 10”

OUTLINE “S/-10/5/Scan row for me…Index precedes by 10”

OUTLINE scan/2/1/This\_one\_has\_absolute\_position

## OUTREC

Forces truncation of output records to the given length.

**Syntax**: OUTREC length

Default: 999999

Example: OUTREC 500

## PAGE

Specifies the recommended display mode.

**Syntax**: PAGE mode/layout

mode Sets the recommended display mode. This is only a recommendation as the viewer application may choose otherwise.

Currently defined values are:

None N Don't display thumbnails or outline

Outline O Display the document outline

Thumbs T Display the document thumbnails

Full F Full screen mode

The default setting is to allow the viewer app to decide the mode. This is different than the "None" option since the "None" option could override what the user currently has selected. However, if you are creating an outline then the default will be "Outline". If that isn't desired, use this option to override it.

Default: let viewer app decide

layout Set the recommended display layout.

Currently defined values are:

SinglePage SP One page at a time

OneColumn OC Pages in one column

TwoColumnLeft TCL Pages in two columns, odd

page on left

TwoColumnRight TCR Pages in two columns, odd

page on right

Default: (let viewer app decide)

Examples: PAGE Thumbs/SinglePage

PAGE Full

PAGE /OneColumn

## PAPER

Defines the geometry of the logical paper size.

**Syntax**: PAPER size/type/style

size Size of the paper to use.

You may specify the exact width and height in inches, e.g., 8.5" x 11" or one of the following values:

Letter Let for 8.5" x 11" page

Legal Leg for 8.5" x 14" page

A4 for 8.27" x 11" page

Default: 8.5" x 11"

type Type or design of paper.

Valid values are:

Bluebar Graybar Greenbar

Orangebar Whitebar Yellowbar

Default: none

style Attributes specific to the <type>.

Valid values are:

Holed Simulated holes will be drawn at the left and right edges of the paper.

Default: none

Examples: PAPER 8.5x11

PAPER A4/BlueBar

PAPER Letter//Holed

Note: See UNITS

## RM

Defines the offset in inches from the right side of page where the text will end.

**Syntax**: RM offset

Default: 0.5

Example: RM 0.5

Note: See UNITS

## TEXT

The TEXT parameter allows you to perform various actions on the input text. Currently, the only action is to allow attribute changes of the text. This allows you to do things like selective bolding or colorizing.

**Syntax**: TEXT Attr/fontname/fontsize/forecolor/RowCol/row/col/len

TEXT Attr/fontname/fontsize/forecolor/Scan/text

Supported text types are:

Attr A Change output text attributes

**ATTR:**

font name The name of the font to apply to the text. See the FONT parameter for allowable values.

Default: none – uses page level font

font size The size of the font.

Default: none – uses page level font size

foreground color The foreground colorspec. See the COLOR parameter for allowable values.

Default: none – uses page level text color

scan type The method used to select the text to which the attributes will be applied.

Supported scan types are:

RowCol RC Text at a specific row/column

Scan S Scan entire page for specified text

Default: none

**ROWCOL:**

row The row where the text is located or 0 to select all non-blank rows on the page.

Default: none

col The column where the text starts.

Default: none

len The length of the text.

Default: none

**SCAN:**

text The text to scan for. The entire page will be scanned and, if the text is found, the specified attributes will be applied

Default: none

Examples: TEXT ATTR/Courier/18/Red/SCAN/Debit

TEXT ATTR///green/SCAN/Go

TEXT ATTR/Vera/12//RowCol/3/5/32

TEXT ATTR/BarCode/8//RowCol/64/100/10

## TM

Defines the offset in inches from the top of page where the text will start.

**Syntax**: TM offset

Default: 0.5

Example: TM 0.5

Note: See UNITS

## TRANS

Define transition effects when moving from one page to the next when displaying a document in full screen or slide show modes.

**Syntax**: TRANS style/duration/options

style The transition styles that may be used are:

Blinds BL

Box BO

Dissolve D

Glitter G

Replace R

Split S

Wipe W

Default: none

dur The duration of the effect in seconds.

Default: 1

opts/... Allows you to modify the behavior of the effect. The options are different for each effect, but they aren't described individually. You will need to experiment.

Specify as many of the following flags as is appropriate for the transition style:

Horizontal H Split / Blinds

Vertical V Split / Blinds

Inward I Split / Box

Outward O Split / Box

L2R 0 Wipe / Glitter (Left to right)

B2T 90 Wipe (Bottom to top)

R2L 180 Wipe (Right to left)

T2B 270 Wipe / Glitter (Top to

bottom)

TL2BR 315 Glitter (Top left to bottom

right)

Default: none

Examples: TRANS Blinds/1

TRANS split//Vertical/Inward

TRANS G/.1/270

## UNITS

Allows you to specify certain parameters using centimeters or inches. The values affected by this are the paper size and margins.

**Syntax**: UNITS option

option Desired unit of measure, specified as:

Inches I

Centimeters C

Default: Inches

Example: UNITS Centimeters

UNITS I

UNITS C

## VIEWER

Allows you to specify how the viewer should behave when displaying the file. Again, these are only recommendations and the viewer may simply ignore them.

**Syntax**: VIEWER opt/…

opt/… Specify as many of the following flags as you like, separated with the "/" character:

CenterWindow CW Center window on screen

DisplayDocTitle DD Document title in title bar

instead of filename

FitWindow FW Resize window to first page

size

HideMenuBar HM Hide the menu bar

HideToolBar HT Hide the title bar

HideWindowUI HW Hide all UI elements

NonFullScreen NF Page mode after exiting full

screen.

Next option must be one of:

None N

Outlines O

Thumbs T

Default: none

Examples: VIEWER Fitwindow

VIEWER FitWindow/HideMenuBar/HideToolBar

VIEWER NF/Outlines

## VONLY

Allows validation of parameters without performing any conversion processing. If specified, the VONLY parameter should precede all others.

**Syntax**: VONLY option

option Specify one of the following:

Yes Y Validation Only

No N Do the work – not just validation.

Default: No

Example: VONLY Yes

## XFONT

Allows the use of fonts other than the standard 14 Adobe fonts.

**Syntax**: XFONT Internal/name/encoding/font

XFONT TrueType/name/encoding/flag/file-specification

Supported extended font types are:

Internal I Define font based on builtin font

TrueType TT Define font from truetype font

**INTERNAL:**

name Name to assign to the font.

This name is used wherever a font name would be specified.

Default: none

encoding Name given to an encoding via the ENCODING parameter.

Default: none

font name Name of one of the following builtin PDF font names:

Times T

TimesBold TB

TimesItalic TI

TimesBoldItalic TBI

Helvetica H

HelveticaBold HB

HelveticaItalic HI

HelveticaBoldItalic HBI

Courier C

CourierBold CB

CourierItalic CI

CourierBoldItalic CBI

Symbol S

ZapfDingbats Z

Default: none

**TRUETYPE:**

name Name to assign to the font.

This name is used wherever a font name would be specified.

Default: none

encoding Name given to an encoding via the ENCODING parameter.

Default: WinAnsi

flag Controls how a TrueType font should be handled.

Nosubset NS Do not subset the TrueType font

The entire TrueType font will be embedded, not just the glyphs whose characters were used in the input data.

Noembed NE Do not embed the TrueType font

The TrueType font will be used only to gather the required metrics and will not be included in the PDF. To display properly, the font must be installed wherever the PDF will be viewed.

Default: none (font will be embedded and subsetted)

file-specification Name of the file that contains the TrueType font.

Default: none

Examples: XFONT internal/latin5-courier/latin5/courier

XFONT internal/courieralias//courier

XFONT truetype/veramono/ibm1047//font.pds(veramono)

XFONT truetype/verabold//noembed/DD:VERABOLD

XFONT truetype/veramono/win1252/nosubset/veramon.ttf

## XLATE

Allows you to specify the name of a translation table EXEC other than the default TXT2PDFX. This allows you to override the default at runtime.

The <execname> parameter specifies a standard Rexx EXEC that you can model after TXT2PDFX or one of the XLATEnnn samples.

**Syntax**: XLATE execname

Default: none

Example: XLATE customcp

TXT2PDF: The ISPF Dialog

The ISPF dialog is very easy to use and greatly simplifies the coding of the TXT2PDF command, as the dialog actually reports on the complete syntax of the generated TXT2PDF command. The Batch Execution Mode option can be used to generate a data set with the TXT2PDF generated command as well as the necessary JCL. This data set can then be submitted for batch execution or to be copied into a production job’s JCL.

Access the ISPF Dialog in one of the following ways:

1. The TXT2PDF command, when entered with no parameters and under ISPF, will invoke the ISPF dialog.
2. The TXT2PDFI command will directly invoke the ISPF dialog.

**Note**: the ISPF Dialog interface does not support the following TXT2PDF options: CONFIG, DINFO, OUTREC, TRANS, UNITS, or VIEWER..

## Primary ISPF Panel

----------------------------- Text-to-PDF 1.7 -------------------------

Command ===>

Input data set ===>

Output data set ===>

must be new data set or new member

Optional information: (select to display prompting panel)

\_ Annot \_ Background

\_ Color \_ Miscellaneous options

\_ Encryption \_ Outline Options

\_ Font Specification \_ Page Specification

\_ Validation Only

This panel requires the entry of the input and output data set names. The output data set must not currently exist, if it does an ISPF popup will appear asking the user if they wish to proceed, by entering Yes, or to re-specify the output data set, by pressing PF3.

The optional selections will bring up additional panels that allow the specification of more detailed conversion options.

The Validation Only option will cause the generated TXT2PDF command syntax to be validated without performing any processing.

If the TXT2PDFI exec is executed with the option of CONFIG then the following panel will be displayed and the Processing prompt panel will be bypassed.

----------------------------- Text-to-PDF 1.8 --------------------------

Command ===>

Configuration File ===>

(a sequential Data Set or member of a PDS - will be allocated new

if it doesn't already exist)

Optional information: (select to display prompting panel)

\_ Annot \_ Background

\_ Color \_ Miscellaneous options

\_ Encryption \_ Outline Options

\_ Font Specification \_ Page Specification

\_ Validation Only

## Annotation Panel

-------------------------- Text-to-PDF - Annotation ------------------------

Command ===>

Page: First, Last, All

Row: Row placement from top of page

Column: Column placement from left

State: Open or Closed

Text: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ <

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ <

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ <

This panel will prompt the user to enter the information to create a single yellow sticky note.

## Background Panel

-------------------------- Text-to-PDF - Background ------------------------

Command ===>

Style : TopDown (TD) or BottomUp (BU)

Text Color : see below

Fill Color : see below

Opacity : 100 for solid to 0 for transparent

Text :

Valid Color specifications are:

Color Abbrev Color Abbrev Color Abbrev Color Abbrev

Aqua A Gray Gra Navy N Silver S

Black Bla Green Gre Olive O Teal T

Blue Blu Lime L Purple P White W

Fuchsia F Maroon M Red R Yellow Y

The Background panel prompts for the entry of the information used to generate the BG keyword. This information is used to define a watermark for each page of the generated report.

## Color Panel

---------------------------- Text-to-PDF - Color ---------------------------

Command ===>

Foreground color:

Background color:

Valid Color specifications are:

Color Abbrev Color Abbrev Color Abbrev Color Abbrev

Aqua A Gray Gra Navy N Silver S

Black Bla Green Gre Olive O Teal T

Blue Blu Lime L Purple P White W

Fuchsia F Maroon M Red R Yellow Y

Additional Background colors include:

BlueBar GrayBar GreenBar OrangeBar WhiteBar YellowBar

The Color panel prompts for the color of the characters on the page (foreground) and the color of the background. Special background colors are available which generate a bar-like paper color.

## Encryption Panel

-------------------------- Text-to-PDF - Encryption -------------------

Command ===>

Owner Password :

User Password :

Encryption Length: 40 or 128 bit encryption

Optional Protections

\_ No Print \_ No Edit \_ No Copy \_ No Edit Notes

\_ No Save As \_ No Fill/Sign \_ No Insert/Rot \_ No HiRes Print

Note: 128-bit encryption will only work with Adobe Acrobat 5.0 and newer

The Encryption panel prompts for security information for the generated report. Note that the 128-bit encryption is not supported by Adobe Acrobat 4.0 and older

## Font Panel

----------------------------- Text-to-PDF - Font --------------------------

Command ===>

Font Size: Font size in points (72 = 1 inch)

Font Name: See below

Font Zoom: Increase (>100) or Decrease (<100)

Valid Font Names:

Font Abbrev Font Abbrev Font Abbrev

Times T TimeBold TB TimeBoldItalic TBI

Helvetica H HelveticaBold HB HelveticaBoldItalic HBI

Courier C CourierBold CB CourierBoldItalic CBI

Symbol S ZapfDingbats Z

The Font panel prompts for the size and name of the font to be used for the characters printed on the report. The zoom option allows you to take an existing font size and scale it up or down.

## Miscellaneous Panel

------------------------ Text-to-PDF - Miscellaneous -----------------------

Command ===>

Carriage Control : Yes or No (or blank to use DCB RECFM)

Compression Level : 0 (none) to 9 (max)

Message Level : Yes (Normal) No (Quiet) Verbose (Lots)

Maximum Output Size : Maximum output size (bytes) 0 = nolimit

The Miscellaneous panel is a catch all panel for options that didn’t neatly fit with the other organized panels.

## Outline Panel

--------------------------- Text-to-PDF - Outline --------------------------

Command ===>

Select Outline Scan Type: 1 (RowCol) 2 (ScanRow) 3 (ScanCol) 4 (Scan)

Specify the scanning criteria: Applies to:

Row : RowCol and ScanRow

Column : All

Length : All

Text : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ScanRow, ScanCol and Scan

The Outline panel prompts for basic outlining information. An outline is how the table of contents is created to display on the left of the report in the Adobe Acrobat Reader.

## Outline Options

----------------------- Text-to-PDF - Outline Options ---------------------

Command ===>

Outline Options: (select one or more)

Color :

AltColor:

Sort : A:Ascending D:Descending

Token :

\_ Bold \_ Full Hierarchy

\_ Dups (Allow Duplicates) \_ Italic

\_ Expand \_ Show (Includes the token in the index)

Valid Color specifications are:

Color Abbrev Color Abbrev Color Abbrev Color Abbrev

Aqua A Gray Gra Navy N Silver S

Black Bla Green Gre Olive O Teal T

Blue Blu Lime L Purple P White W

Fuchsia F Maroon M Red R Yellow Y

The Outline Options panel prompts for additional formatting options for the outline

## Page and Paper Panel

-------------------------- Text-to-PDF - Page/Paper -------------------------

Command ===>

Lines Per Inch: Number of Lines of Text per Inch

Margins: Top: \_\_\_\_\_\_ Bottom \_\_\_\_\_\_ Left \_\_\_\_\_\_ Right \_\_\_\_\_\_

Paper Orientation: Landscape or Portrait

Page Mode : Full(F), None(N), Outline(O), Thumbs(T)

Page Layout: SinglePage(SP), OneColumn(OC),

TwoColumnLeft(TCL), TwoColumnRight(TCR)

Paper Size : Letter (Let), Legal (Leg), A4, or widthXheight (4x6)

Paper Type : BlueBar, Graybar, GreenBar, OrangeBar, WhiteBar,

YellowBar

Paper Style: Holed

Note: Margins and Paper size in units of:

The Page and Paper panel prompt for information about the layout of the logical page for the report. The Margin and Paper size displayed will be based on the installation defaults and will be either Inches or Centimeters.

## Processing Selection

Once all the options have been selected the following process selection panel will be displayed:

------------------------- TXT2PDF Execution Selection ---------------

Select Processing Option: ===>

B - Browse the generated job

C - Copy to a data set

E - Edit the generated job

J - Change the JOB Statements

S - Submit the generated job

SC- Save statements in TXT2PDF Configuration File

Config DSN:

X - eXecute the Command under TSO

F - Generate Batch JCL for FTP

M - Generate Batch JCL for E-Mail

data set containing the generated job is:

DSN='SYSLBD.TXT2PDF.jcl'

During Edit the Job Statements and the TXT2PDF Command may be

changed.

This allows the user to review the generated TXT2PDF command with the following options:

|  |  |
| --- | --- |
| B | Browse the generated JCL and TXT2PDF control statements. |
| C | Copy the generated JCL and TXT2PDF control statements to another data set. You could use this to copy this into a JCL library where you could further tailor it and then insert it into a regularly scheduled production job. |
| E | Edit the generated JCL and TXT2PDF control statements. This allows you to change the JCL statements and the TXT2PDF control statements prior to submitting the JCL for batch execution. |
| J | Use this option to modify the predefined JOB statements that are inserted into the generated JCL. |
| S | Submit the generated JOB for batch execution. |
| SC | Save the configuration options in a sequential Configuration data set, or member of a Configuration data set. |
| X | Execute the TXT2PDF conversion in the foreground under ISPF. |
| F | Add the necessary JCL step and FTP control statements to the JOB to FTP the generated PDF to another system. |
| M | Add the necessary JCL step and statements to e-mail the generated PDF to an e-mail address using XMITIP. |

The following is an example of the generated JCL and control statements. The first four statements are the JOB statements. These statements may be modified while using the J or the E (Edit) options. The data set name on the SYSEXEC DD statement is dynamically determined based upon the location of where the TXT2PDF REXX is currently being executed from.

//jobname JOB account,’sample',CLASS=L,NOTIFY=&SYSUID,

// MSGLEVEL=(1,1),MSGCLASS=X

//HOLD OUTPUT JESDS=ALL,DEFAULT=Y,OUTDISP=(HOLD,HOLD)

//\*

//\*----------------------------------------------\*

//\* TXT2PDF JCL generated: September 03, 2002 \*

//\* Statements 1-4 are reserved for the JOB Card \*

//\* Verify all dsnames in the command if not \*

//\* running under the generating userid. \*

//\* \*

//\* TXT2PDF Version 0.4 \*

//\*----------------------------------------------\*

//TXT2PDF EXEC PGM=IKJEFT1B,DYNAMNBR=50

//SYSEXEC DD DISP=SHR,DSN=hlq.rexx.exec

//SYSPRINT DD SYSOUT=\*

//SYSTSPRT DD SYSOUT=\*

//SYSTSIN DD \*

%txt2pdf IN TXT2PDF.PDS($DOC) OUT TXT2PDF.TEST.PDF +

TM .5 BM .5 LM .5 RM .5 +

ORIENT Portrait +

PAGE None/SinglePage +

PAPER let//

/\*

## Batch FTP Option

----------------------------- TXT2PDF FTP Prompt -----------------

Command ===>

PDF Data Set: *output-data-set*

Target File :

Target Host :

Target Userid :

Target Password: Confirm Password:

This panel will prompt for information needed to build the JCL and control statements to FTP the generated report to another platform.

## Batch Mail Option

--------------------------- TXT2PDF E-Mail Prompt -------------------------

Command ===>

To Address :

From Address :

Subject :

Attach Name :

Short Message:

It is important the you specify your real e-mail address in the from field

in case the to address is incorrect causing the mail to bounce or the

recipient tries to reply to this e-mail.

This panel will prompt for the information necessary to build the JCL and XMITIP command to e-mail the generated report to an e-mail address.

## Foreground Processing options

If a foreground execution is selected the following process selection panel will be displayed:

-------------------------- TXT2PDF Post-Processing -------

Select Processing Option: ===>

D - Download to your PC

F - FTP the generated PDF File

M - E-Mail the geneated PDF File (via XMITIP)

From this panel the following options are available:

|  |  |
| --- | --- |
| D | Provides a prompting panel to facilitate downloading the generated PDF file using the file transfer option of the 3270 emulator. |
| F | Prompts and then executes the FTP process to put the generated PDF file to another system (a FTP Server must be active on the target system). |
| M | Sets up the environment and then invokes the XMITIP ISPF interface to facilitate e-mailing the generated PDF file. |

## Download Panel

------------------------------ TXT2PDF Download -----------------------------

Command ===>

File: *output-data-set-name*

You may now begin the file transfer using your emulator file transfer process

or you may use TCP/IP FTP (File Transfer Protocol) from a workstation

command prompt:

ftp *your-host-name*

- enter your userid and password when prompted

get *output-data-set-name* workstation.filename

quit

Note: When the file transfer is complete press Enter or PF3 to leave this

panel. At that point the above data set will be deleted.

This panel is used to prompt the user to download the generated report data set. Both IND$FILE and TCP/IP FTP are supported.

## FTP Panel

----------------------------- TXT2PDF FTP Prompt --------------

Command ===>

PDF Data Set: *output-data-set-name*

Target File :

Target Host :

Target Userid :

Target Password: Confirm Password:

This panel prompts for the necessary information to execute the TCP/IP FTP command under ISPF to transfer the generated report to the requested target host.

## Mail Panel

The Mail panel is the XMITIP ISPF dialog. For further information see the XMITIP Users Guide.

---------------------------- E-Mail Dialog 4.60 -------------------------

Command ===>

Recipient Address ===>

Message DSN or \* ===>

Edit Message DSN ===> Yes or No

Execution Mode ===> ISPF I-ISPF, B-Batch, P-Prompt or D-Debug

Subject ===>

Default Settings ===> Yes or No

CC Address ===>

BCC Address ===>

AddressFile ===>

Delivery Settings ===> Yes or No (for Import, Prior, Sens)

Attachment DSN or ? ===>

Attachment Name ===>

Format (?=prompt) ===>

Settings ===> Yes or No

Field level help available via PF1

TXT2PDF: Examples

These examples illustrate some of the capabilities of the TXT2PDF application. To experiment and learn more about the application use the ISPF front-end which has the ability to generate all of the TXT2PDF options along with the necessary batch JCL to execute it.

**Example 1**: This demonstrates creating a PDF document in Portrait orientation with Letter size paper, using the BlueBar scheme for the paper background. A watermark is created using the BG Textmark option. This generates text flowing from the bottom up to the top of the page diagonally in 30 point font size with the characters TXT2PDF. Margins are specified and carriage control is turned off.

//TEST JOB . . .

//BATCHTMP PROC

//TMP EXEC PGM=IKJEFT1B,DYNAMNBR=200

//STEPLIB DD DISP=SHR,DSN=hlq.load

//SYSEXEC DD DISP=SHR,DSN=rexx.lib

//SYSTSPRT DD SYSOUT=\*

//SYSTSIN DD DDNAME=SYSIN

// PEND

//IVPK EXEC BATCHTMP

//SYSIN DD \*

%txt2pdf IN 'install.pds(changes)' +

OUT 'hlq.temp.changes.pdf' +

ORIENT Port +

PAPER Letter/Bluebar +

BG Textmark/Bottomup/Black/Yellow/30/TXT2PDF +

FONT 9 +

LM .5 RM .5 TM .46 BM .5 +

CC No

/\*

In this example a generic inline PROC is used for the batch TSO terminal monitor program. The STEPLIB is required if the TXT2PDF load modules are not in either the LPA or a Linklist library.

Coding the TXT2PDF command to span records requires a continuation character. This character may be either a plus (+) or a minus (-) at the end of a statement as shown. The continuation is not required on the last statement.

**Example 2**: This example shows the JCL and control statements generated by the ISPF dialog. In this example the TXT2PDF processing is followed by an FTP step to transfer the generated report to a workstation and that is followed by a step to e-mail the report. This demonstrates the power of the ISPF dialog in generating JCL that can be copied into a production batch job after you have verified that the generated report is of the desired format.

//jobname JOB ‘sample’,NOTIFY=&SYSUID,

// MSGCLASS=A,MSGLEVEL=(1,1)

//HOLD OUTPUT JESDS=ALL,DEFAULT=Y,OUTDISP=(HOLD,HOLD)

//\*

//\*----------------------------------------------\*

//\* TXT2PDF JCL generated: September 06, 2002 \*

//\* Statements 1-4 are reserved for the JOB Card \*

//\* Verify all dsnames in the command if not \*

//\* running under the generating userid. \*

//\* \*

//\* TXT2PDF ISPF Interface Version 0.6 \*

//\*----------------------------------------------\*

//TXT2PDF EXEC PGM=IKJEFT1B,DYNAMNBR=50

//STEPLIB DD DISP=SHR,DSN=hlq.txt2pdf.LOAD

//SYSEXEC DD DISP=SHR,DSN=hlq.txt2pdf.EXEC

//SYSPRINT DD SYSOUT=\*

//SYSTSPRT DD SYSOUT=\*

//SYSTSIN DD \*

%txt2pdf IN XMITIP.PDS(CHANGES) OUT TEST.PDF +

BG "Textmark/BU/Navy/Yellow/75/XMITIP Changes" +

Color Black/White +

FONT 9/t/ +

OUTLINE RC/0/3/5 +

OLOPT Color/Navy/AltColor/Yellow +

LPI 8

/\*

//FTP EXEC PGM=FTP,PARM='test.host.com (EXIT'

//SYSPRINT DD SYSOUT=\*

//INPUT DD \*

userid p

binary

put TEST.PDF test.pdf

quit

/\*

//MAILSTEP EXEC PGM=IKJEFT1B,DYNAMNBR=50

//STEPLIB DD DISP=SHR,DSN=hlq.txt2pdf.LOAD

//SYSEXEC DD DISP=SHR,DSN=hlq.txt2pdf.EXEC

//SYSPRINT DD SYSOUT=\*

//SYSTSPRT DD SYSOUT=\*

//SYSTSIN DD \*

xmitip first.m.last@host.com +

From your.name@host.com +

Subject 'Sample' +

File TEST.PDF +

Filename sample.pdf +

MSGT 'short message for sample report'

/\*

**Example 3**: This is a very basic demonstration of usage in a Linux and Windows environment. Three methods of execution are given, but there may be more depending on your system setup. The created document will have landscape orientation on letter sized paper. All other parameters will take the installation defaults.

txt2pdf IN changes.txt OUT changes.pdf ORIENT land PAPER letter

or

txt2pdf.rex IN changes.txt OUT changes.pdf ORIENT land PAPER letter

or

rexx txt2pdf IN changes.txt OUT changes.pdf ORIENT land PAPER letter

Appendix A: Installation

Installation is simple and straightforward. However, since the supported platforms are so dissimilar, only general instructions will be given. You will need to understand the target system or request assistance from your support personnel.

Linux and Windows instructions are based on the use of the Regina interpreter. If you are using a different interpreter on these platforms, you will need to make the appropriate adjustments.

## Setting TXT2PDF Defaults: All Platforms

The TXT2PDFD EXEC provides the ability to override the static defaults contained within the main EXEC. The return value from TXT2PDFD is simply a list of valid keyword/value pairs just as you would specify them on the command line. All of the keywords are valid and may be specified in any order.

This EXEC is optional and need not be present.

Basically, the order of value assignment for any of the keywords is:

1. Use value from command line or from files sourced with CONFIG and DEFCFG
2. If not specified on command line, use value from TXT2PDFD
3. If not specified in TXT2PDFD (or TXT2PDFD not installed), use built in default

Once you’ve made the desired modifications, place the EXEC where your particular interpreter will find it. For Linux and Windows, this is usually somewhere in your PATH. On OS/390 and z/OS, place the EXEC somewhere in your SYSEXEC or SYSPROC DD concatenation. On VM place the exec on the same mini-disk as the TXT2PDF.

## National Language Translation: All Platforms

There are two methods of handling translation of input data to character sets that will display properly when viewing the PDF.

Translation tables as defined in the TXT2PDFX EXEC or via the XLATE parameter are used to convert each input byte from whatever code page it was created with to the WinAnsiEncoding that PDF uses.

The TXT2PDFX EXEC or EXEC specified via the XLATE parameter contains two translation tables that are used to convert the text of the input file and the EXECs internal data to other code pages. This was originally intended to convert EBCDIC data to ASCII, but has been externalized to allow you to convert from any character set to another in case you need to distribute the output file to other nationalities.

This EXEC is optional as there are default tables built into the main EXEC. Therefore, if you do not require specific translations, skip these instructions and continue with the appropriate platform instructions below.

If you want to use this EXEC you’ll need to carefully modify the tables contained within. Each table is 256 values in length and each 2 character hexadecimal value represents a character in the target code page. Each byte in the input file will be used as an offset into this table to get the value of the output byte. For instance, if you look at the default table, you’ll notice that at hex offset 40 a value of 20 is given. This will convert the “space” character from EBCDIC to ASCII.

Once you’ve made the desired modifications, place the EXEC where your particular interpreter will find it. For Linux and Windows, this is usually somewhere in your PATH. On OS/390 and z/OS, place the EXEC somewhere in your SYSEXEC or SYSPROC DD concatenation. On VM place the exec on the same mini-disk as the TXT2PDF.

An alternative approach is to use Unicode Character Map (UCM) files via the ENCODING parameter to define a mapping between each byte of the input data to their Unicode equivalent. An internal representation of this mapping is embedded within the PDF, so the input bytes aren’t actually converted to Unicode and the viewing application will use the mapping to display the input bytes using the mapped Unicode character. This method also provides proper cut and paste and text searching.

http://source.icu-project.org/repos/icu/data/trunk/charset/data/ucm/

## Linux and Cygwin

Nothing special needs to be done if you’ll be specifically invoking your interpreter to execute TXT2PDF. However, if you wish to invoke TXT2PDF by simply typing its name, then you must do the following:

1. Determine the location of the REXX interpreter.
2. Insert the following line at the top of TXT2PDF, replacing <path> with the location of the interpreter from step 1 above:  
     
   #!<full path to interpreter> Example: #!/usr/local/bin/rexx
3. Copy TXT2PDF to a directory in your PATH.
4. Ensure that the TXT2PDF has proper execution permissions.

## Windows

Nothing special needs to be done if you’ll be specifically invoking your interpreter to execute TXT2PDF. However, if you wish to invoke TXT2PDF by simply typing its name, then you must do the following:

1. Determine what extension has been defined to implicitly invoke the interpreter. For Regina, this is usually REX.
2. Rename TXT2PDF to TXT2PDF.<extension> replacing <extension> with the value you determined in step 1 above.
3. Copy the renamed EXEC to a directory in your PATH.

## OS/390 and z/OS

In addition to the TXT2PDF command line utility, this platform also includes Lionel’s ISPF dialog. The dialog makes it a LOT easier to create the necessary parameters and/or batch job to invoke the command line utility since there are so many values to remember.

There are many choices when installing on this platform. If you are unfamiliar with the ISPF, REXX, and LOADLIB standards in your shop, please consult your systems support personnel for assistance.

The TXT2PDF.EXEC, TXT2PDF.PANELS, and TXT2PDF.LOAD data sets will need to be made available to your TSO logon PROC or the contents copied to the appropriate system data sets.

You may use TSO’s ALTLIB command for the EXEC data set and ISPF’s LIBDEF service for the PANEL and LOAD data sets, or the LOAD data set may be allocated to STEPLIB or JOBLIB DD statements. Another alternative would be to add the LOAD modules to a library in your LINKLIST or LPA.

## VM and z/VM

The REXX EXECs need to be installed on a shared mini-disk that is available to your users.

Appendix B: GreenBar Stream Example

This appendix includes a full example for the GreenBar Stream file that may be used with the TXT2PDF BG keyword. This file is included with the standard package distribution.

%

% Good old greenbar (green to my eyeball anyway .-))

%

% Created: 02/11/2002

% by: Leland Lucius

% pdf@homerow.net

%

% Form: 11.875x14

% Orientation: Landscape

% Requires: Font named "Courier"

%

%

% Setup

%

1 w % Line width

1.000 1.000 1.000 rg % Non-stroking color

0.780 0.860 0.780 RG % Stroking color

%

% Draw outside frame with rounded corners

%

31.500 720.000 m % Start at top/left

29.250 720.000 27.000 717.750 27.000 715.500 c % Draw corner

27.000 40.500 l % Line to bot/left

27.000 38.250 29.250 36.000 31.500 36.000 c % Draw corner

1039.500 36.000 l % Line to bot/right

1041.750 36.000 1044.000 38.250 1044.000 40.500 c % Draw corner

1044.000 715.500 l % Line to top/right

1044.000 717.750 1041.750 720.000 1039.500 720.000 c % Draw corner

31.500 720.000 l % Line to top/left

B % Fill and stroke

%

% Draw color bars

%

0.880 0.960 0.880 rg % Set color

36.000 684.000 999.000 36.000 re % Color Bar 1

36.000 612.000 999.000 36.000 re % Color Bar 2

36.000 540.000 999.000 36.000 re % Color Bar 3

36.000 468.000 999.000 36.000 re % Color Bar 4

36.000 396.000 999.000 36.000 re % Color Bar 5

36.000 324.000 999.000 36.000 re % Color Bar 6

36.000 252.000 999.000 36.000 re % Color Bar 7

36.000 180.000 999.000 36.000 re % Color Bar 8

36.000 108.000 999.000 36.000 re % Color Bar 9

36.000 36.000 999.000 36.000 re % Color Bar 10

%

% Draw inner verticals

%

36.000 720.000 m % Start at top

36.000 36.000 l % Line down to bot

1035.000 36.000 m % Start at bottom

1035.000 720.000 l % Line up to top

B % Fill and stroke

%

% Setup for text

%

BT % Begin text

0.780 0.860 0.780 rg % Text color

/FC 9 Tf % Select font & size

75 Tz % Reduce size a tad

%

% Draw the left side 6 LPI line numbers

%

1 0 0 1 29.5 723 Tm % Starting position

12 TL % Line spacing

(1)'(2)'(3)'(4)'(5)'(6)'(7)'(8)'(9)' % Write the first 9

1 0 0 1 27.5 615 Tm % Bump left a bit

(10)'(11)'(12)'(13)'(14)'(15)'(16)'(17)' % Write the rest

(18)'(19)'(20)'(21)'(22)'(23)'(24)'(25)' %

(26)'(27)'(28)'(29)'(30)'(31)'(32)'(33)' %

(34)'(35)'(36)'(37)'(38)'(39)'(40)'(41)' %

(42)'(43)'(44)'(45)'(46)'(47)'(48)'(49)' %

(50)'(51)'(52)'(53)'(54)'(55)'(56)'(57)' %

%

% Draw the right side 6 LPI line numbers

%

1 0 0 1 1037.5 722 Tm % Starting position

9 TL % Line spacing

(1)'(2)'(3)'(4)'(5)'(6)'(7)'(8)'(9)' % Write the first 9

1 0 0 1 1035.5 641 Tm % Bump left a bit

(10)'(11)'(12)'(13)'(14)'(15)'(16)'(17)' % Write the rest

(18)'(19)'(20)'(21)'(22)'(23)'(24)'(25)' %

(26)'(27)'(28)'(29)'(30)'(31)'(32)'(33)' %

(34)'(35)'(36)'(37)'(38)'(39)'(40)'(41)' %

(42)'(43)'(44)'(45)'(46)'(47)'(48)'(49)' %

(50)'(51)'(52)'(53)'(54)'(55)'(56)'(57)' %

(58)'(59)'(60)'(61)'(62)'(63)'(64)'(65)' %

(66)'(67)'(68)'(69)'(70)'(71)'(72)'(73)' %

(74)'(75)'(76)' %

ET % End text

%

% Draw the holes

%

0.95 0.95 0.95 rg % Hole color

0.85 0.85 0.85 RG % Hole border color

13.500 778.5 m % Left #1

11.250 778.5 9.000 776.25 9.000 774.00 c % Upper Left

9.000 771.75 11.250 769.5 13.500 769.5 c % Lower Left

15.750 769.5 18.000 771.75 18.000 774.00 c % Lower Right

18.000 776.25 15.750 778.5 13.500 778.5 c % Upper Right

1057.500 778.5 m % Right #1

1055.250 778.5 1053.000 776.25 1053.000 774.00 c % Upper Left

1053.000 771.75 1055.250 769.5 1057.500 769.5 c % Lower Left

1059.750 769.5 1062.000 771.75 1062.000 774.00 c % Lower Right

1062.000 776.25 1059.750 778.5 1057.500 778.5 c % Upper Right

13.500 742.5 m % Left #2

11.250 742.5 9.000 740.25 9.000 738.00 c % Upper Left

9.000 735.75 11.250 733.5 13.500 733.5 c % Lower Left

15.750 733.5 18.000 735.75 18.000 738.00 c % Lower Right

18.000 740.25 15.750 742.5 13.500 742.5 c % Upper Right

1057.500 742.5 m % Right #2

1055.250 742.5 1053.000 740.25 1053.000 738.00 c % Upper Left

1053.000 735.75 1055.250 733.5 1057.500 733.5 c % Lower Left

1059.750 733.5 1062.000 735.75 1062.000 738.00 c % Lower Right

1062.000 740.25 1059.750 742.5 1057.500 742.5 c % Upper Right

13.500 706.5 m % Left #3

11.250 706.5 9.000 704.25 9.000 702.00 c % Upper Left

9.000 699.75 11.250 697.5 13.500 697.5 c % Lower Left

15.750 697.5 18.000 699.75 18.000 702.00 c % Lower Right

18.000 704.25 15.750 706.5 13.500 706.5 c % Upper Right

1057.500 706.5 m % Right #3

1055.250 706.5 1053.000 704.25 1053.000 702.00 c % Upper Left

1053.000 699.75 1055.250 697.5 1057.500 697.5 c % Lower Left

1059.750 697.5 1062.000 699.75 1062.000 702.00 c % Lower Right

1062.000 704.25 1059.750 706.5 1057.500 706.5 c % Upper Right

13.500 670.5 m % Left #4

11.250 670.5 9.000 668.25 9.000 666.00 c % Upper Left

9.000 663.75 11.250 661.5 13.500 661.5 c % Lower Left

15.750 661.5 18.000 663.75 18.000 666.00 c % Lower Right

18.000 668.25 15.750 670.5 13.500 670.5 c % Upper Right

1057.500 670.5 m % Right #4

1055.250 670.5 1053.000 668.25 1053.000 666.00 c % Upper Left

1053.000 663.75 1055.250 661.5 1057.500 661.5 c % Lower Left

1059.750 661.5 1062.000 663.75 1062.000 666.00 c % Lower Right

1062.000 668.25 1059.750 670.5 1057.500 670.5 c % Upper Right

13.500 634.5 m % Left #5

11.250 634.5 9.000 632.25 9.000 630.00 c % Upper Left

9.000 627.75 11.250 625.5 13.500 625.5 c % Lower Left

15.750 625.5 18.000 627.75 18.000 630.00 c % Lower Right

18.000 632.25 15.750 634.5 13.500 634.5 c % Upper Right

1057.500 634.5 m % Right #5

1055.250 634.5 1053.000 632.25 1053.000 630.00 c % Upper Left

1053.000 627.75 1055.250 625.5 1057.500 625.5 c % Lower Left

1059.750 625.5 1062.000 627.75 1062.000 630.00 c % Lower Right

1062.000 632.25 1059.750 634.5 1057.500 634.5 c % Upper Right

13.500 598.5 m % Left #6

11.250 598.5 9.000 596.25 9.000 594.00 c % Upper Left

9.000 591.75 11.250 589.5 13.500 589.5 c % Lower Left

15.750 589.5 18.000 591.75 18.000 594.00 c % Lower Right

18.000 596.25 15.750 598.5 13.500 598.5 c % Upper Right

1057.500 598.5 m % Right #6

1055.250 598.5 1053.000 596.25 1053.000 594.00 c % Upper Left

1053.000 591.75 1055.250 589.5 1057.500 589.5 c % Lower Left

1059.750 589.5 1062.000 591.75 1062.000 594.00 c % Lower Right

1062.000 596.25 1059.750 598.5 1057.500 598.5 c % Upper Right

13.500 562.5 m % Left #7

11.250 562.5 9.000 560.25 9.000 558.00 c % Upper Left

9.000 555.75 11.250 553.5 13.500 553.5 c % Lower Left

15.750 553.5 18.000 555.75 18.000 558.00 c % Lower Right

18.000 560.25 15.750 562.5 13.500 562.5 c % Upper Right

1057.500 562.5 m % Right #7

1055.250 562.5 1053.000 560.25 1053.000 558.00 c % Upper Left

1053.000 555.75 1055.250 553.5 1057.500 553.5 c % Lower Left

1059.750 553.5 1062.000 555.75 1062.000 558.00 c % Lower Right

1062.000 560.25 1059.750 562.5 1057.500 562.5 c % Upper Right

13.500 526.5 m % Left #8

11.250 526.5 9.000 524.25 9.000 522.00 c % Upper Left

9.000 519.75 11.250 517.5 13.500 517.5 c % Lower Left

15.750 517.5 18.000 519.75 18.000 522.00 c % Lower Right

18.000 524.25 15.750 526.5 13.500 526.5 c % Upper Right

1057.500 526.5 m % Right #8

1055.250 526.5 1053.000 524.25 1053.000 522.00 c % Upper Left

1053.000 519.75 1055.250 517.5 1057.500 517.5 c % Lower Left

1059.750 517.5 1062.000 519.75 1062.000 522.00 c % Lower Right

1062.000 524.25 1059.750 526.5 1057.500 526.5 c % Upper Right

13.500 490.5 m % Left #9

11.250 490.5 9.000 488.25 9.000 486.00 c % Upper Left

9.000 483.75 11.250 481.5 13.500 481.5 c % Lower Left

15.750 481.5 18.000 483.75 18.000 486.00 c % Lower Right

18.000 488.25 15.750 490.5 13.500 490.5 c % Upper Right

1057.500 490.5 m % Right #9

1055.250 490.5 1053.000 488.25 1053.000 486.00 c % Upper Left

1053.000 483.75 1055.250 481.5 1057.500 481.5 c % Lower Left

1059.750 481.5 1062.000 483.75 1062.000 486.00 c % Lower Right

1062.000 488.25 1059.750 490.5 1057.500 490.5 c % Upper Right

13.500 454.5 m % Left #10

11.250 454.5 9.000 452.25 9.000 450.00 c % Upper Left

9.000 447.75 11.250 445.5 13.500 445.5 c % Lower Left

15.750 445.5 18.000 447.75 18.000 450.00 c % Lower Right

18.000 452.25 15.750 454.5 13.500 454.5 c % Upper Right

1057.500 454.5 m % Right #10

1055.250 454.5 1053.000 452.25 1053.000 450.00 c % Upper Left

1053.000 447.75 1055.250 445.5 1057.500 445.5 c % Lower Left

1059.750 445.5 1062.000 447.75 1062.000 450.00 c % Lower Right

1062.000 452.25 1059.750 454.5 1057.500 454.5 c % Upper Right

13.500 418.5 m % Left #11

11.250 418.5 9.000 416.25 9.000 414.00 c % Upper Left

9.000 411.75 11.250 409.5 13.500 409.5 c % Lower Left

15.750 409.5 18.000 411.75 18.000 414.00 c % Lower Right

18.000 416.25 15.750 418.5 13.500 418.5 c % Upper Right

1057.500 418.5 m % Right #11

1055.250 418.5 1053.000 416.25 1053.000 414.00 c % Upper Left

1053.000 411.75 1055.250 409.5 1057.500 409.5 c % Lower Left

1059.750 409.5 1062.000 411.75 1062.000 414.00 c % Lower Right

1062.000 416.25 1059.750 418.5 1057.500 418.5 c % Upper Right

13.500 382.5 m % Left #12

11.250 382.5 9.000 380.25 9.000 378.00 c % Upper Left

9.000 375.75 11.250 373.5 13.500 373.5 c % Lower Left

15.750 373.5 18.000 375.75 18.000 378.00 c % Lower Right

18.000 380.25 15.750 382.5 13.500 382.5 c % Upper Right

1057.500 382.5 m % Right #12

1055.250 382.5 1053.000 380.25 1053.000 378.00 c % Upper Left

1053.000 375.75 1055.250 373.5 1057.500 373.5 c % Lower Left

1059.750 373.5 1062.000 375.75 1062.000 378.00 c % Lower Right

1062.000 380.25 1059.750 382.5 1057.500 382.5 c % Upper Right

13.500 346.5 m % Left #13

11.250 346.5 9.000 344.25 9.000 342.00 c % Upper Left

9.000 339.75 11.250 337.5 13.500 337.5 c % Lower Left

15.750 337.5 18.000 339.75 18.000 342.00 c % Lower Right

18.000 344.25 15.750 346.5 13.500 346.5 c % Upper Right

1057.500 346.5 m % Right #13

1055.250 346.5 1053.000 344.25 1053.000 342.00 c % Upper Left

1053.000 339.75 1055.250 337.5 1057.500 337.5 c % Lower Left

1059.750 337.5 1062.000 339.75 1062.000 342.00 c % Lower Right

1062.000 344.25 1059.750 346.5 1057.500 346.5 c % Upper Right

13.500 310.5 m % Left #14

11.250 310.5 9.000 308.25 9.000 306.00 c % Upper Left

9.000 303.75 11.250 301.5 13.500 301.5 c % Lower Left

15.750 301.5 18.000 303.75 18.000 306.00 c % Lower Right

18.000 308.25 15.750 310.5 13.500 310.5 c % Upper Right

1057.500 310.5 m % Right #14

1055.250 310.5 1053.000 308.25 1053.000 306.00 c % Upper Left

1053.000 303.75 1055.250 301.5 1057.500 301.5 c % Lower Left

1059.750 301.5 1062.000 303.75 1062.000 306.00 c % Lower Right

1062.000 308.25 1059.750 310.5 1057.500 310.5 c % Upper Right

13.500 274.5 m % Left #15

11.250 274.5 9.000 272.25 9.000 270.00 c % Upper Left

9.000 267.75 11.250 265.5 13.500 265.5 c % Lower Left

15.750 265.5 18.000 267.75 18.000 270.00 c % Lower Right

18.000 272.25 15.750 274.5 13.500 274.5 c % Upper Right

1057.500 274.5 m % Right #15

1055.250 274.5 1053.000 272.25 1053.000 270.00 c % Upper Left

1053.000 267.75 1055.250 265.5 1057.500 265.5 c % Lower Left

1059.750 265.5 1062.000 267.75 1062.000 270.00 c % Lower Right

1062.000 272.25 1059.750 274.5 1057.500 274.5 c % Upper Right

13.500 238.5 m % Left #16

11.250 238.5 9.000 236.25 9.000 234.00 c % Upper Left

9.000 231.75 11.250 229.5 13.500 229.5 c % Lower Left

15.750 229.5 18.000 231.75 18.000 234.00 c % Lower Right

18.000 236.25 15.750 238.5 13.500 238.5 c % Upper Right

1057.500 238.5 m % Right #16

1055.250 238.5 1053.000 236.25 1053.000 234.00 c % Upper Left

1053.000 231.75 1055.250 229.5 1057.500 229.5 c % Lower Left

1059.750 229.5 1062.000 231.75 1062.000 234.00 c % Lower Right

1062.000 236.25 1059.750 238.5 1057.500 238.5 c % Upper Right

13.500 202.5 m % Left #17

11.250 202.5 9.000 200.25 9.000 198.00 c % Upper Left

9.000 195.75 11.250 193.5 13.500 193.5 c % Lower Left

15.750 193.5 18.000 195.75 18.000 198.00 c % Lower Right

18.000 200.25 15.750 202.5 13.500 202.5 c % Upper Right

1057.500 202.5 m % Right #17

1055.250 202.5 1053.000 200.25 1053.000 198.00 c % Upper Left

1053.000 195.75 1055.250 193.5 1057.500 193.5 c % Lower Left

1059.750 193.5 1062.000 195.75 1062.000 198.00 c % Lower Right

1062.000 200.25 1059.750 202.5 1057.500 202.5 c % Upper Right

13.500 166.5 m % Left #18

11.250 166.5 9.000 164.25 9.000 162.00 c % Upper Left

9.000 159.75 11.250 157.5 13.500 157.5 c % Lower Left

15.750 157.5 18.000 159.75 18.000 162.00 c % Lower Right

18.000 164.25 15.750 166.5 13.500 166.5 c % Upper Right

1057.500 166.5 m % Right #18

1055.250 166.5 1053.000 164.25 1053.000 162.00 c % Upper Left

1053.000 159.75 1055.250 157.5 1057.500 157.5 c % Lower Left

1059.750 157.5 1062.000 159.75 1062.000 162.00 c % Lower Right

1062.000 164.25 1059.750 166.5 1057.500 166.5 c % Upper Right

13.500 130.5 m % Left #19

11.250 130.5 9.000 128.25 9.000 126.00 c % Upper Left

9.000 123.75 11.250 121.5 13.500 121.5 c % Lower Left

15.750 121.5 18.000 123.75 18.000 126.00 c % Lower Right

18.000 128.25 15.750 130.5 13.500 130.5 c % Upper Right

1057.500 130.5 m % Right #19

1055.250 130.5 1053.000 128.25 1053.000 126.00 c % Upper Left

1053.000 123.75 1055.250 121.5 1057.500 121.5 c % Lower Left

1059.750 121.5 1062.000 123.75 1062.000 126.00 c % Lower Right

1062.000 128.25 1059.750 130.5 1057.500 130.5 c % Upper Right

13.500 94.5 m % Left #20

11.250 94.5 9.000 92.25 9.000 90.00 c % Upper Left

9.000 87.75 11.250 85.5 13.500 85.5 c % Lower Left

15.750 85.5 18.000 87.75 18.000 90.00 c % Lower Right

18.000 92.25 15.750 94.5 13.500 94.5 c % Upper Right

1057.500 94.5 m % Right #20

1055.250 94.5 1053.000 92.25 1053.000 90.00 c % Upper Left

1053.000 87.75 1055.250 85.5 1057.500 85.5 c % Lower Left

1059.750 85.5 1062.000 87.75 1062.000 90.00 c % Lower Right

1062.000 92.25 1059.750 94.5 1057.500 94.5 c % Upper Right

13.500 58.5 m % Left #21

11.250 58.5 9.000 56.25 9.000 54.00 c % Upper Left

9.000 51.75 11.250 49.5 13.500 49.5 c % Lower Left

15.750 49.5 18.000 51.75 18.000 54.00 c % Lower Right

18.000 56.25 15.750 58.5 13.500 58.5 c % Upper Right

1057.500 58.5 m % Right #21

1055.250 58.5 1053.000 56.25 1053.000 54.00 c % Upper Left

1053.000 51.75 1055.250 49.5 1057.500 49.5 c % Lower Left

1059.750 49.5 1062.000 51.75 1062.000 54.00 c % Lower Right

1062.000 56.25 1059.750 58.5 1057.500 58.5 c % Upper Right

13.500 22.5 m % Left #22

11.250 22.5 9.000 20.25 9.000 18.00 c % Upper Left

9.000 15.75 11.250 13.5 13.500 13.5 c % Lower Left

15.750 13.5 18.000 15.75 18.000 18.00 c % Lower Right

18.000 20.25 15.750 22.5 13.500 22.5 c % Upper Right

1057.500 22.5 m % Right #22

1055.250 22.5 1053.000 20.25 1053.000 18.00 c % Upper Left

1053.000 15.75 1055.250 13.5 1057.500 13.5 c % Lower Left

1059.750 13.5 1062.000 15.75 1062.000 18.00 c % Lower Right

1062.000 20.25 1059.750 22.5 1057.500 22.5 c % Upper Right

13.500 -13.5 m % Left #23

11.250 -13.5 9.000 -15.75 9.000 -18.00 c % Upper Left

9.000 -20.25 11.250 -22.5 13.500 -22.5 c % Lower Left

15.750 -22.5 18.000 -20.25 18.000 -18.00 c % Lower Right

18.000 -15.75 15.750 -13.5 13.500 -13.5 c % Upper Right

1057.500 -13.5 m % Right #23

1055.250 -13.5 1053.000 -15.75 1053.000 -18.00 c % Upper Left

1053.000 -20.25 1055.250 -22.5 1057.500 -22.5 c % Lower Left

1059.750 -22.5 1062.000 -20.25 1062.000 -18.00 c % Lower Right

1062.000 -15.75 1059.750 -13.5 1057.500 -13.5 c % Upper Right

B % Fill and stroke

%

% The end

%

**GreenBar Stream Example**.