PDF Charts

Documentation

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Web site: http://www.fytek.com

FyTek's PDF Charts

Trademarks

FyTek Disclaimer

Acknowledgments

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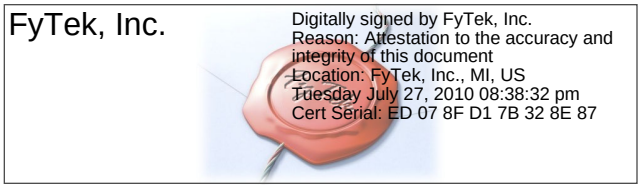

Introduction

PDF Charts is a program for creating a variety of charts in PDF (Portable Document Format). Formats include bar charts, line, pie, area and scatter - some in both 2D and 3D format. This document describes the commands available and how to go about arranging them to produce a PDF. The input is a set of commands, either in a plain ASCII file or passed in through methods when using the Windows DLL version. The commands are tag based, similar to HTML commands. The output is a PDF with the text and charts rendered. You can create PDFs with just text though the intent of the product is mainly for creating charts.

Many of the charting features are available for export to the Flash file format. This allows you to use the same PDF Charts syntax to generate charts in Flash as stand alone files or for display on a web page.

Getting Started

Different methods of building a PDF are used depending on the version of PDF Charts you are working with. The executable version (for DOS or Linux) takes as input a plain text or ASCII file and produces a PDF. The input file must contain valid PDF Charts commands as defined later in this document. Alternatively, you may pass the commands in via the environment variable PDFCMD. This can be useful in Linux so you don't have to create an input file when creating PDFs for viewing on the web.

The DLL version can similarly take a plain text file from disk or read commands into memory as passed in from another (such as Visual Basic or ASP) application. The method SetPDFCmd is used to pass in one or multiple commands. Once all the commands are passed in and any other settings are made (such as SetOpen) the buildReport method takes care of creating the PDF. The PDF can be created as a file on disk or as a character stream for display in a browser. Both the executable and DLL versions of the program use the same set of commands.

Sample input files are included with the software so you can see how to design your input. These files have a .fch extension and start with the word "sample".

Reports

A report as defined by this document is a collection of pages in a single PDF file. Each report page may have up to three sections - a header, body and footer. The header and footer are repeated on each page for as many pages that the body of the report takes. Multiple charts may be displayed in the body of the report. The layout when using headers, footers and a body is to issue the PAGE command followed by the HEADER and/or FOOTER then the BODY. The header and footer must appear before the body in order to determine how much space the body has. Remember to include the BODY tag when using a header or footer or you'll likely end up with body text overlaying your header or footer.

The following sections describe the options available for the Windows/Linux versions then the methods and properties for the Windows DLL. All versions have the same functionality (with the exception of some Windows API specific functions missing from Linux) with regards to PDF Charts command language. The Executable Examples section for information on calling the executable from languages such as Perl or PHP. See the Linux Executable section for information on Linux.

Using the Executable

The program pdfcharts.exe (or pdfcharts on Linux/Unix) is used to create a PDF from commands stored in a file. You may create the file using a text editor or use another application to populate it with the desired commands. Using the latter approach you can create reports dynamically from any application that can create a file. Execute the program once the file is created by running:

pdfcharts.exe *filein.fch fileout.pdf*

where "filein.fch" is the name of your input file and "fileout.pdf" is the PDF output. The file "filein.fch" will contain a set of tags or commands that describe the format of the resulting PDF. You must make sure your tags are opened and closed appropriately or you probably won't get a valid PDF. For example, for each <TEXT> tag you should have a closing </TEXT>. All of the tags and their options and requirements are described in the Commands section of this document. If you get an error it will most likely be that a tag is misplaced or missing. In that case check your report file carefully and make whatever adjustments are necessary.

A file type extension of .fch is set up when the product is installed. This will allow you to launch PDF Charts on a .fch type file from Explorer or by simply typing in the name of the file on the command line. Running pdfcharts.exe with no parameters will bring up a file open dialog box and allow you select an input file.

You may use a single dash '-' as the input file to specify input is from standard input (typically the keyboard). You can use this feature to pipe in data from a file or other source. For some situations (such as passing data from an environment variable) you may want to bypass entering an input file but still use 'stdout' as the output. Use -none as the input file name in that case. This option must be the first one passed in as is required for the input file name. Use 'stdout' as the output file name to send the output to standard output (typically the console) rather than a file. This allows you to pipe the output elsewhere or use the executable in a web environment when you don't want an output file created.

All options may be passed in any order except for the input and output files. Those must be the first and second parameters when used. You may run something like "pdfcharts.exe sample.fch -open" however and the program

will understand you want to open the output PDF, not call it "-open". The output file will automatically be named sample.pdf in this case.

-ini *inifile*	Configuration file containing parameters to pass in. The commands may be all on one line or on multiple lines. Any of the options in this section may be used. You can also set an environment variable called RWCFG (the name is case sensitive) and have it point to an initialization file.
-force *text*	Turns off the dialog box prompting to overwrite the output file if it exists.
-e *logfile*	Used to produce an error log file. Use this option during development and debugging. No error checking is done if this is not used. The error file is not created if no errors are found while parsing the commands. If any errors are found, they are placed in this file and the PDF file is not created. See the error page for a list of errors that are checked for.
-debug *debugfile*	Used to produce a flat file of commands being passed to the program for debugging. Full path and name of the output log file. Useful for debugging XML data merges.
-statfile *statfile*	Used to specify a status file to create once the PDF is built. This file will contain the word OK followed by a line feed if the PDF finished building. It will contain CANCEL followed by a line feed if the PDF build was cancelled. It will contain ERROR followed by a line feed if the -e option was used and errors were found causing the build of the PDF to stop. Any other error that occurs, like not being able to open the output file for the PDF, will be placed in this file. Use this feature if you need to monitor the progress of the PDF build from another program.
-b	Run the program in background mode so no dialog boxes are displayed for errors. Use the -statfile option to capture results if necessary.
-clean	Automatically deletes the input file when finished building the PDF.
-open	Automatically opens Acrobat and loads the newly created PDF.

-openscr *file*	For Unix/Linux systems where -open is not available. Specify a script that will receive as a parameter the output PDF file name. Create a script for your operating system that will be used to open PDFs.
-print	Automatically prints the newly created PDF to the default printer. Must have Acrobat or Acrobat Reader installed.
-printdlg	Brings up the Acrobat print dialog box and allows printer selection. This only works when the user has Acrobat or Acrobat Reader associated with PDFs on their machine. Otherwise the user's viewer is opened with the document and they will need to print from there.
-printer *printer device* port	Used to print the PDF to the specified printer. There is no print dialog box in this case. This option takes three parameters: printer, device and port. You may pass in just the printer and leave device and port blank to use the default settings for the printer. For example: -printer "Accounting Printer" "HP LaserJet 5" "lpt1:" or -printer "Shipping Printer" You may also use the printer port as the first parameter and leave the last two off if you are using a network priner or don't know the printer name. For example: -printer "\\server\printer"
-copies *number*	Number of copies to print when using the -print or -printer commands. Default is 1.
-printscr *file*	For Unix/Linux systems where -print is not available. Specify a script that will receive as a parameter the output PDF file name. Create a script for your operating system that will be used to print PDFs.
-mail	Opens the user's email program to a composition window with the newly created PDF attached. May not work with all email programs.
-mailscr *file*	For Unix/Linux systems where -mail is not available. Specify a script that will receive as a parameter the output PDF file name. Create a script for your operating system that will be used to bring up an email window with an attached PDF.

-nopdf	Skips creating a PDF. Useful if you are only generating some other output, like CSV, HTML or EXCEL. Do not use when generating RTF however.
-o *password*	Sets the owner password for the PDF. If not specified but the user password is, this is set to the user password. Also, when not specified, the owner has only the rights granted when the document was created. So for example, if -noprint was specified, then it is impossible for the owner to print the document.
-u *password*	Sets the user password for the PDF. The following four options can be used to turn off various features for the user.
-noprint	Disables printing of the document. To create a PDF with both printing and copying disabled for the user you would run something similar to: `pdfcharts.exe filein.fch fileout.pdf -o abc123 -u xyz -noprint -nocopy` The file could only be opened by someone who knows one of the two passwords (abc123 or xyz). Using a password of abc123 gives full access while using the password of xyz does not allow printing or copying of text.
-nochange	Disables changes to the document.
-nocopy	Disables copying of text and/or graphics from the document.
-noannote	Disables add/change of form fields or annotations.
-e128	Sets 128-bit encryption method. Files encrypted with 128-bit encryption can only be opened with Acrobat or Acrobat Reader 5.0 or above. The default encrytion is 40-bit which works with Acrobat and Acrobat Reader 4.0 and above.
-lowpriority	Sets the priority of the program lower allowing other applications to run faster.

-pause *value[,seconds]*	Used to prevent the program from taking up 100% of the CPU. Use this option if you're running several instances of the program or other programs at the same time. The value should be set somewhere between 1 and 20 with lower numbers giving better CPU utilization but longer PDF build times. You may optionally set the number of seconds to pause with the default (and minimum value) being .001 seconds. Do not place a space before or after the comma when setting the number of seconds.
-data *filename.dat*	Sets the data file to use with the input (layout) file. May be a file on the system or web address of a file. See the XML Data Merge section for information on merging a layout file with a data file.
-dataout *filename.dat*	Standard XML data files are converted to data files used by PDF Charts. This option exports the converted XML file so you can determine if any changes are needed. See the XML Data Merge section for information on merging a layout file with a data file.
-datakeyattr *text*	A comma separated list of attributes to break out from standard XML files. See the XML Data Merge section for information on merging a layout file with a data file.
-np	Turn off the box that shows how far along the program is in building the pdf.
-cancelonly	Displays only the "Cancel" button in the progress box.
-pbt *title*	Sets the title of the progress dialog box.
-pbm *message*	Sets the message of the progress dialog box.
-nospin	Turns off the spinner or animation in the dialog box.
-animation *number* or *file*	Sets the animation. Pass 1 (default) or 2 for built-in animations or pass the file name of your own .avi file to use.
-b1 *text*	Sets the text for button 1 (default is "Cancel").
-b2 *text*	Sets the text for button 2 (default is "Break on next page").
-b3 *text*	Sets the text for button 3 (default is "Pause").
-b4 *text*	Sets the text for button 4 (default is "Resume").

-s	Include subdirectories when batch converting. When doing a batch conversion, do not specify an in or out file. Just specify the base directory instead. For example, `pdfcharts.exe c:\myfiles\ -s -t fch` will convert all files with a .fch extension in c:\myfiles and all of its subdirectories.
-t *type*	File extensions to look for when batch converting. Enter "fch" to convert all files whose extension is .fch.
-pdfver	The version number to assign the PDF. The default is 1.4 (Acrobat 5.x).

Executable Examples

The executable is designed to run from a command prompt. The server version of the executable can run without any user interaction in a batch/script file or on a web site. The program is pdfcharts.exe on Windows systems and pdfcharts on Linux/Unix.

Run "pdfcharts sample.fch" to create sample.pdf from the sample input file. The program defaults the output file name to the same as the input name when the output name is left off.

You may also send input to the program from standard input (STDIN). Use a dash as the file name in this case. For example:
"pdfcharts - myfile.pdf"
Then type in PDF Charts commands and end with a single dot or ctrl-D (ctrl-Z on DOS). Using this approach you can also pipe a file into the program like this:
"cat sample.fch | pdfcharts - myfile.pdf -force"

You may also call the program from a web site and stream the PDF back to your program or browser. Store your commands in the environment variable PDFCMD (case sensitive). Your system may impose limits on how much data can be stored in an environmental variable or the total for all environmental variables. You may use a new line character (ASCII 10) to break up the commands. Next, execute the pdfcharts program from your application. The contents of the PDF will be printed to the standard output (STDOUT). You may capture the output or simply let it print.

Here's an example of a Perl program running on a web server streaming the PDF to the browser. The output is first stored in the $pdf variable.

Introduction

```
#!/usr/bin/perl

$ENV{'PDFCMD'} = "<PDF>\n";
$ENV{'PDFCMD'} .= "<PAGE>\n";
$ENV{'PDFCMD'} .= "<TEXT ALIGN=C SIZE=20>\n";
$ENV{'PDFCMD'} .= "PDF Charts Test\n";
$ENV{'PDFCMD'} .= "</TEXT>\n";

open(PDF, "./pdfcharts -o passwd -noprint |");
binmode(PDF);
undef $/;
my $pdf = <PDF>;
$/ = "\n";
close(PDF);
print "Content-type: application/pdf\n\n";
print $pdf;
```

Here's another example that simply calls the program without capturing the output. The output is still streamed to the browser.

```
#!/usr/bin/perl

$ENV{'PDFCMD'} = "<PDF>\n";
$ENV{'PDFCMD'} .= "<PAGE>\n";
$ENV{'PDFCMD'} .= "<TEXT ALIGN=C SIZE=20>\n";
$ENV{'PDFCMD'} .= "PDF Charts Test\n";
$ENV{'PDFCMD'} .= "</TEXT>\n";

print "Content-type: application/pdf\n\n";
exec("./pdfcharts -o passwd -noprint");
```

Here's a PHP function to call PDF Charts and have the results show in the browser. No output file is created in this case (since 'stdout' is used as the output file name) but you will need to create and pass in the input file (the $filein parameter).

```
<?php
function pdfcharts($filein, $options = "")
{
  header("Content-Type: application/pdf");
  flush();
  passthru("/path-to-rw/pdfcharts \"$filein\" stdout $options");
}
pdfcharts("/path-to-input/filein.fch","-o pwd");
?>
```

Here's another PHP function to store the report commands in the PDFCMD environment variable as input. Note that -none must be the first parameter to tell the program there is no input file. Again, no output file is created.

Introduction

```
<?php
function pdfcharts2($options = "")
{
  header("Content-Type: application/pdf");
  flush();
  passthru("/path-to-rw/pdfcharts -none stdout $options");
}
$evar = "<PDF>\n";
$evar .= "<PAGE>\n";
$evar .= "<TEXT ALIGN=C SIZE=20>\n";
$evar .= "PDF Charts Test\n";
$evar .= "</TEXT>\n";
putenv("PDFCMD=$evar");
pdfcharts2();
?>
```

Using the Linux Executable

The Linux version contains the same command set as the Windows version. The difference is the options that relate to the Windows API (such as auto open, print, Excel features) are not available. Instead, there are other options (-openscr, -printscr and -mailscr) that you can use to specify a script. PDF Charts will pass the output PDF path and file name to the script you specify via those options. You may then perform whatever processing you want for these functions on your system.

Running the program from the command line works the same as the Windows executable. The executable program is pdfcharts. Be sure you have it marked as executable using the chmod command if necessary. For example, "chmod 775 pdfcharts" from the command prompt.

Using the DLL (Dynamic Link Library)

Log into Windows NT/2000/XP with administrator rights when installing. The file pdfcharts.dll is the dynamic link library. This file should reside in your Windows or Winnt directory under the system32 sub-directory. You first must register the DLL on your system (note this step happens automatically when you run the setup program). Do this by running

regsvr32 pdfcharts.dll

You should see a message box that reads:

DllRegisterServer in pdfcharts.dll succeeded.

Click OK to continue. You are now ready to use the DLL.

The .NET version contains the same methods as the standard DLL. The .NET DLL is named pdfchartsdn.dll.

Note that the account running for the web server must have permission to access the DLL and have write permissions on the temp directory for that user. For ASP this is usually the IUSR_<machine_name> and/or IWAM_<machine_name> accounts. You can check permissions for the DLL by running the Windows program dcomcnfg.exe.

Be sure to call all the following methods before calling buildReport unless otherwise noted. The buildReport method will create the PDF then issue all other functions requested such as opening Reader with the newly created PDF.

The methods of build.Report are:

SetInFile(path-file)	Full path and name of the input file. You set the input file only if you want to read the commands from an existing file (as opposed to using SetPDFCmd).
SetOutFile(path-file)	Full path and name of the output file. You can leave the output blank and have the PDF stream returned to a variable in your program. Set a string variable equal to the output of buildReport in that case.

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SetIniFile(path-file)	Configuration file containing parameters to pass in. The format is that of the command line options. For example, place `-open -xls 1` in the file to open the PDF data in Excel and open Acrobat with the PDF. Options are set in this file once the call to buildReport is made so if you use a method that takes a value and it's in the initialization file, the one from the file takes precedence. You can also set an environment variable called RWCFG (the name is case sensitive) and have it point to an initialization file.
SetErrFile(path-file)	Used to produce an error log file. Use this option during development and debugging. Full path and name of the error log file. No error checking is done if this is not used. The error file is not created if no errors are found while parsing the commands. If any errors are found, they are placed in this file and the PDF file is not created. See the error page for a list of errors that are checked for.
SetDebugFile(path-file)	Used to produce a flat file of commands being passed to the program for debugging. Full path and name of the output log file. Contains the sequence of commands set via SetPDFCmd. Also useful for debugging XML data merges.
SetClean	Automatically deletes the input file when finished building the PDF.
SetOpen	Automatically opens Acrobat and loads the newly created PDF. Be sure to call this method before buildReport.
SetPrint	Automatically prints the newly created PDF to the default printer. Must have Acrobat or Acrobat Reader installed. Be sure to call this method before buildReport.
SetPrintDlg	Brings up the Acrobat print dialog box and allows printer selection. This only works when the user has Acrobat or Acrobat Reader associated with PDFs on their machine. Otherwise the user's viewer is opened with the document and they will need to print from there.

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SetPrinter printer [, device, port]	Used to print the PDF to the specified printer. There is no print dialog box in this case. This option takes three parameters: printer, device and port. You may pass in just the printer and leave off device and port to use the default settings for the printer. For example: SetPrinter "Accounting Printer", "HP LaserJet 5", "lpt1:" or SetPrinter "Shipping Printer" You may also use the printer port as the first parameter and leave the last two off if you are using a network priner or don't know the printer name. For example: SetPrinter "\\server\printer"
SetCopies(number)	Number of copies to print when using the SetPrint or SetPrinter methods. Default is 1.
SetMail	Opens the user's email program to a composition window with the newly created PDF attached. May not work with all email programs.
SetNoPDF	Skips creating a PDF. Useful if you are only generating some other output, like CSV, HTML or EXCEL. Do not use when generating RTF however.
SetOwner(password)	Sets the owner password for the PDF. If not specified but the user password is, this is set to the user password. Also, when not specified, the owner has only the rights granted when the document was created. So for example, if SetNoPrint was specified, then it is impossible for the owner to print the document.
SetUser(password)	Sets the user password for the PDF. The following four options can be used to turn off various features for the user.
SetNoPrint	Disables printing of the document.
SetNoChange	Disables changes to the document.
SetNoCopy	Disables copying of text and/or graphics from the document.
SetNoAnnote	Disables add/change of form fields or annotations.

SetEncrypt128	Sets 128-bit encryption method. Files encrypted with 128-bit encryption can only be opened with Acrobat or Acrobat Reader 5.0 or above. The default encrytion is 40-bit that works with Acrobat and Acrobat Reader 4.0 and above.
SetLowPriority	Sets the priority of the program lower allowing other applications to run faster.
SetPause value [, seconds]	Used to prevent the program from taking up 100% of the CPU. Use this option if you're running several instances of the program or other programs at the same time. The value should be set somewhere between 1 and 20 with lower numbers giving better CPU utilization but longer PDF build times. You may optionally set the number of seconds to pause with the default (and minimum value) being .001 seconds.
SetDataFile(path-file)	Sets the data file to use with the input (layout) file. May be a file on the system or web address of a file. See the XML Data Merge section for information on merging a layout file with a data file.
SetDataFileOut(path-file)	Standard XML data files are converted to data files used by PDF Charts. This option exports the converted XML file so you can determine if any changes are needed. See the XML Data Merge section for information on merging a layout file with a data file.
SetDataFileKeyAttr(text)	A comma separated list of attributes to break out from standard XML files. See the XML Data Merge section for information on merging a layout file with a data file.
SetDataCmd(text)	Sets the data commands to use with the input (layout) file. Use this method if want to pass the data directly from your program rather than use a file with the SetDataFile method.

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SetPDFCmd(text)	Commands to execute (when not using an input file). Call this method for each command you wish to execute. You could store your commands in an array then loop through it calling this method for each element. You may also string a bunch of commands together separated by a carriage-return and line-feed (CHR(13) & CHR(10) for VB users). Leave the input file blank and send commands to SetPDFCmd if you are creating them on the fly and just want to pass them to the program.
SetPDFVersion(text)	The version number to assign the PDF. The default is 1.4 (Acrobat 5.x).
buildReport	Call this method to build the PDF. This returns the name of the output file, if set, otherwise returns the PDF stream. Be sure to remove any default header, if applicable, and send out Content-type: application/pdf followed by two line feeds if you are sending the output to a browser over the web. You don't need to do that if you are building the PDF on disk and then redirecting to that file.
GetPageRange(text)	This method returns a string of page numbers from the FROMPG and THRUPG tags. Pass a blank string to return all of the names and page ranges or pass in a name id (as set in the FROMPG/THRUPG tag) to return the page range for that id. For example, if you have <FROMPG NAME="abc"> and <FROMPG NAME="xyz"> in your input (along with cooresponding THRUPG tags) you would get a string back formatted like this: abc,1,5,xyz,6,15 Which means section abc starts on page 1 and goes to page 5. Section xyz goes runs from pages 6 to 15. The name ranges are case sensitive. If you passed "xyz" into GetPageRange you'd get back just 6,15. This method must be called after buildReport.

GetFlashChart(id)	This method returns the Flash chart specified by the ID passed. You must use both the FLASH and ID options with the chart to generate a Flash version for retreival. See the PARAMS tag in the charting section for details.

Introduction

The properties of build.Report are:

stsMsg	*(Character - Readonly)* Message line for current build status.
stsTitle	*(Character - Readonly)* Progress box title.
stsBar	*(Integer - Readonly)* Current percent complete.
numPages	*(Integer - Readonly)* Total number of pages in the PDF. Cannot be used with the quick build or temp file options.
cancelBuild	*(Integer - Read/Write)* Set to a 1 to cancel the build process.
breakBuild	*(Integer - Read/Write)* Set to a 1 to stop the build process at the next page. This differs from cancelBuild in that a PDF is created in this case but does not contain all the pages that would normally be there.
pauseBuild	*(Integer - Read/Write)* Set to a 1 to pause or resume the build process.

Introduction

Example #1

Here is an example of calling the DLL using Visual Basic.

```
Dim outPdf As String
Set PDF = CreateObject("build.Report")
PDF.SetOutFile "c:\temp\hello.pdf"
PDF.SetPDFCmd ("<PDF>")
PDF.SetPDFCmd ("<PAGE>")
PDF.SetPDFCmd ("<TEXT ALIGN=C>")
PDF.SetPDFCmd ("Hello, world")
PDF.SetPDFCmd ("</TEXT>")
PDF.buildReport
set PDF = Nothing
```

Example #2

Here is an example of calling the DLL using PowerBuilder.

```
OLEObject PDF
PDF = CREATE OLEObject
li_rc = PDF.ConnectToNewObject("build.Report")
ls_outfile = "c:\temp\hello.pdf"
PDF.SetOutFile(ls_outfile)
PDF.SetPDFCmd ("<PDF>")
PDF.SetPDFCmd ("<PAGE>")
PDF.SetPDFCmd ("<TEXT ALIGN=C>")
PDF.SetPDFCmd ("Hello, world")
PDF.SetPDFCmd ("</TEXT>")
PDF.buildReport
```

Example #3

Here is an example of calling the DLL using Progress.

```
DEFINE VARIABLE RWhandle AS COM-HANDLE.
DEFINE VARIABLE RWres    AS CHARACTER.
/* Creates the COM-HANDLE link */
CREATE "build.Report" RWhandle.
/* Defines the name of the PDF */
RWhandle:SetOutFile ("c:\temp\text.pdf").
/* set the command for the PDF */
RWhandle:SetPDFCmd ("<PDF>").
RWhandle:SetPDFCmd ("<PAGE>").
RWhandle:SetPDFCmd ("<TEXT ALIGN=C>").
RWhandle:SetPDFCmd ("Hello, world").
RWhandle:SetPDFCmd ("</TEXT>").
/* Open the PDF once built */
RWhandle:SetOpen ().
/* Tells the DLL to build the PDF */
assign RWRes = RWhandle:buildReport.
RELEASE OBJECT RWhandle.
```

The following two examples show how to use with ASP. You may need to set permissions on the DLL for IUSR_<machine_name> and/or IWAM_<machine_name>. These are the user ID's that typically run when using ASP. Also make sure these users have write permission to their temp directories. The DLL will need to unpack some internal files and store them in the temp area. If you don't set the proper permissions you'll get errors back such as "unspecified error" or "access denied" on the Server.CreateObject line.

Example #4

Here is an ASP example sending the output directly to the browser. Note the use of the fytek.unicode object. The VBScript will treat the returned PDF stream as Unicode (2-byte characters) which will not work with Response.binaryWrite. The method StrToByte will convert the Unicode string into a single byte string which can be streamed to the browser. This method is in the file fytek.dll included with the installation.

```
<%
Dim PDF
Dim binaryData
Set obj = Server.CreateObject("fytek.unicode")
Set PDF = Server.CreateObject("build.Report")
PDF.SetPDFCmd ("<PDF>")
PDF.SetPDFCmd ("<PAGE>")
PDF.SetPDFCmd ("<TEXT ALIGN=C>")
PDF.SetPDFCmd ("Hello, world")
PDF.SetPDFCmd ("</TEXT>")
pdfOut = PDF.buildReport
binaryData = obj.StrToByte(pdfOut)
Response.ContentType = "application/pdf"
Response.binaryWrite binaryData
set PDF = nothing
set pdfOut = nothing
set obj = nothing
set binaryData = nothing
%>
```

Example #5

Here is an ASP example creating the output file then redirecting the browser. This method works well with both Netscape and Internet Explorer. Make sure you have the web user set up with permission to write to whatever output directory you're using.

```
<%
Dim PDF, RndFile
Set PDF = Server.CreateObject("build.Report")
Randomize
RndFile = "output\" & Int(10000000 * Rnd + 1) & ".pdf"
PDF.SetOutFile (RndFile)
PDF.SetPDFCmd ("<PDF>")
PDF.SetPDFCmd ("<PAGE>")
PDF.SetPDFCmd ("<TEXT ALIGN=C>")
PDF.SetPDFCmd ("Hello, world")
PDF.SetPDFCmd ("</TEXT>")
pdfOut = PDF.buildReport
Response.redirect(RndFile)
set pdfOut = nothing
%>
```

Example #6

Here is an example of calling the DLL using ColdFusion.

```
<cfobject type="com" ACTION="create" name="PDF" CLASS="build.Report">
<CFSET PDF_InFile = "input_path\filename.fch">
<CFSET PDF_OutFile = "output_path\filename.pdf">
<cfscript>
PDF.SetInFile = PDF_InFile;
PDF.SetOutFile = PDF_OutFile;
PDF.buildReport;
PDF = "Nothing";
</cfscript>
<CFLOCATION URL="output_path\filename.pdf">
```

Example #7

Here is an example calling the DLL using PHP. This loads the output in the browser without creating an output file.

```
<?php
$pdf = new COM("build.Report");
  or die("Unable to instanciate FyTek PDF Charts");
$pdf->SetPDFCmd ("<PDF>");
$pdf->SetPDFCmd ("<PAGE>");
$pdf->SetPDFCmd ("<TEXT ALIGN=C>");
$pdf->SetPDFCmd ("Hello, world");
$pdf->SetPDFCmd ("</TEXT>");
$pdf->SetOutFile ("stdout");
header("Content-Type: application/pdf");
flush();
$pdf->buildReport();
?>
```

Example #8

Here is an example calling the DLL using PHP with an output file. The browser is redirected to the output file once it's built.

```
<?php
srand((double)microtime()*1000000);
$pdf = new COM("build.Report")
  or die("Unable to instanciate FyTek PDF Charts");
$number = rand(1,10000000);
$fileout = "output\\" . $number . ".pdf";
$pdf->SetOutFile ($fileout);
$pdf->SetPDFCmd ("<PDF>");
$pdf->SetPDFCmd ("<PAGE>");
$pdf->SetPDFCmd ("<TEXT ALIGN=C>");
$pdf->SetPDFCmd ("Hello, world");
$pdf->SetPDFCmd ("</TEXT>");
$pdfOut = $pdf->buildReport();
header("Location: " . $fileout);
die();
?>
```

Example #9

Here is an example using C.

```
#include <iostream.h>

// The import directive reads the typelib information from the DLL
// and creates pdfcharts.tlh and pdfcharts.tli, which are included.
// These define wrappers for each of the pdfcharts object methods.

#import <pdfcharts.dll>

// Using VC++ 5.0 Smart Pointers makes this much easier.
// The parameter string for a method is converted to Unicode, allocated
// and passed as a variant. The wrappers call IDispatch::Invoke
// This is all compatible with MFC (use AfxOleInit insead of CoInitialize, etc.).
int main(int argc, char* argv[])
{
  HRESULT      hr;

using namespace ReportWriter_TypeLib;

  hr = CoInitialize (NULL);    // Initialize COM
  if (SUCCEEDED(hr))
  {
    try    // Each of the following lines can throw exceptions
    {
      // Create the instance and get a pointer to the interface
      IReportWriterPtr pPDF(__uuidof(PDFReportWriter));

      pPDF->SetOutFile (_bstr_t(L"c:\\TestPDF\\new.pdf")); // Set the output file
      pPDF->SetPDFCmd (_bstr_t(L"<PDF>")); // Could do a setInFile instead
      pPDF->SetPDFCmd (_bstr_t(L"<PAGE>"));
      pPDF->SetPDFCmd (_bstr_t(L"<TEXT ALIGN=C>"));
      pPDF->SetPDFCmd (_bstr_t(L"Hello, world"));
      pPDF->SetPDFCmd (_bstr_t(L"</TEXT>"));

      _variant_t outval = pPDF->buildReport (); // Build the PDF file
    }
    catch (_com_error e)
    {
      cout << e.ErrorMessage() << endl;
    }
  }
  else
    cout << "CoInitialize Failed" << endl;

  CoUninitialize();        // Uninitialize COM

  return 0;
}
```

Runtime

Runtime Version

FyTek sells licenses for PDF Charts which allow you to distribute the exe or DLL to an end user at a fraction of the cost of a developer license. The runtime versions require a combination of a key code and key name be passed to the software in order for it to work.

Exe version
The following command line options are used with the runtime version:

-kn keyname
-kc keycode

These values will be provided to you by FyTek, Inc.

For example, to create a report you would run something similar to the following:

```
pdfchartsr.exe sample.fch sample.pdf -kn mycompany -kc
ABC123ABC123ABC123
```

Note that neither the key name or key code should be made visible to the end user (via a .bat file for instance).

DLL version
The following methods are used with the runtime version:

SetKeyName (keyname)
SetKeyCode (keycode)

These values will be provided to you by FyTek, Inc.

For example, to create a report you would run something similar to the following:

```
Dim outPdf As String
Set pdfCr = CreateObject("build.Report")
pdfCr.SetOutFile "c:\temp\hello.pdf"
pdfCr.SetKeyName ("mycompany")
pdfCr.SetKeyCode ("ABC123ABC123ABC123")
pdfCr.SetPDFCmd ("<PDF>")
pdfCr.SetPDFCmd ("<PAGE>")
pdfCr.SetPDFCmd ("<TEXT ALIGN=C>")
pdfCr.SetPDFCmd ("Hello, world")
pdfCr.SetPDFCmd ("</TEXT>")
pdfCr.buildReport
```

Runtime

Note that neither the key name or key code should be made visible to the end user.

The DLL for the runtime version is pdfchartsr.dll (pdfchartsdnr.dll for the .NET DLL). While it is named different from the developer file (pdfcharts.dll) it still has the same function names internally. For this reason, if you have both installed on the same machine (for development and testing) you'll need to run regsvr32 on the one you want to work with. For instance, to work with the development version run:

regsvr32 pdfcharts.dll

The file should reside in your windows or winnt system32 sub-directory. Passing the extra parameters for key name and key code will simply be ignored by the developer version. To work with the runtime version, run:

regsvr32 pdfchartsr.dll

This will register the runtime DLL with your system and your application will then reference that program.

Structure

A document may contain one or more reports. Each report is made up of a header, footer, subheader, subfooter and a body section. You can also create a report without any of the above sections but a typical report will probably have at least a header and body section. A page layout showing all of the possible sections is shown in the following table.

HEADER
SUBHEADER
BODY
SUBFOOTER
FOOTER

You may place as many reports as you wish in each document. Each report may have different layouts, different header/footer, etc. The set of commands below would consist of one report.

<HEADER>...</HEADER>
<FOOTER>...</FOOTER>
<BODY>
<SUBHEADER>..</SUBHEADER>
<SUBFOOTER>..</SUBFOOTER>
...Text and charts... (will autobreak across pages)
<PAGE> (only if want to force a page break and/or redefine subheader/subfooter)
<SUBHEADER>..</SUBHEADER> (only if you want to redefine the subheading at this point)
<SUBFOOTER>..</SUBFOOTER> (only if you want to redefine the subfooter at this point)
...Text and charts... (will autobreak across pages)
</BODY>

Commands

All commands must be enclosed in angle brackets. Commands may be entered in upper or lowercase.

Any text between tags (unless part of an opening/closing tag) is ignored.

Tags may not span lines. You may place as many tags as you wish on a single line but the closing ">" for any tag must appear in the same line as the opening "<".

Use single or double quotes when entering a text value with spaces as a parameter. For example, <TAG DESCR="My Test Description">.

Do not leave a space between a parameter name, the = sign and its value.

Correct	<PAGE WIDTH=8.5 HEIGHT=11>
Incorrect	<PAGE WIDTH = 8.5 HEIGHT= 11>

Any text not inside of a TEXT block is treated as a comment. You may also place comments inside of TEXT blocks but they must be enclosed in a tag which starts with <! and ends with >.

Use a slash in front of the " or ' character in the situation where it's part of the string. For example, to use the string 'Mike's "Slightly Used" Cars' as a string parameter to an input statement, write it using one of the following methods:

```
<INPUT NAME="compname" TYPE="text" VALUE="Mike's \"Slightly Used\" Cars">
<INPUT NAME="compname" TYPE="text" VALUE='Mike\'s "Slightly Used" Cars'>
```

Note that either the " or ' character can be used to enclose a string. You must use the corresponding character to close the string that you used to open it with however.

You may also use quotes around numeric values and use a /> to close a tag. This is for compatibility with an XML syntax approach. Any of the following are acceptable tags for PDF Charts and all work the same:

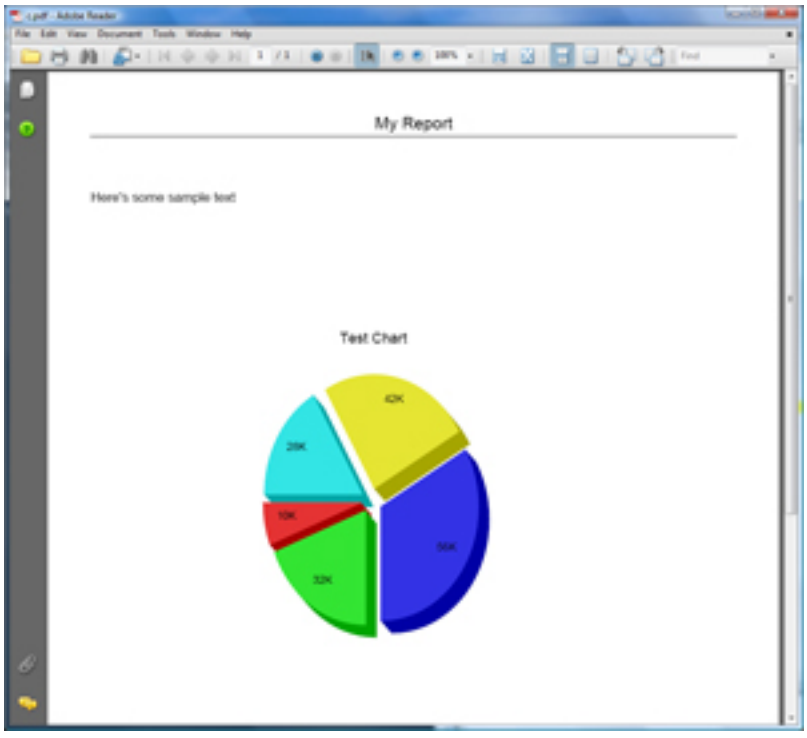
<page height=11 width=8.5>
<page height="11" width="8.5"/>
<page height="11" width="8.5" />

Commands

Here is a sample set of instructions to give you an idea of how the commands look:

```
<PDF>
<PAGE>
<GRID X=.5 Y=.5 WIDTH=7.5 HEIGHT=10 XUNITS=80 YUNITS=80>
<FONT FACE=2 SIZE=11>
<HEADER MARGIN=5>
<TEXT ALIGN=C SIZE=14>
My Report
</TEXT>
<LINE X1=0 X2=80>
</HEADER>
<BODY>
<TEXT>
Here's some sample text
</TEXT>
<CHART X1=20 Y1=20 HEIGHT=30 WIDTH=30>
<PARAMS TYPE="PIE">
<PARAMS TITLE="Test Chart" TITLESIZE=12>
<PARAMS 3D=5>
<PARAMS BARDATA=10,32,56,42,28>
<PARAMS DATALAB="10K|32K|56K|42K|28K">
<PARAMS PIEOFFSET=5>
<PARAMS FONT=2 SIZE=9>
</BODY>
```

Which creates the following output:



Document Level Commands

Document level commands are used to apply certain settings or properties to the document. The title of the document or the zoom factor to use when opened, for example. All the commands in this section are optional except for the opening <PDF> tag. This must be the first command for PDF Charts to treat the input as a set of PDF Charts mark-up commands.

Document Level Commands

<PDF>

This is the opening tag to any report. You must issue this command and it must be the first command. You may optionally include a closing </PDF> tag at the end of your report.

Document Level Commands

<META
CONTENT=text
NO_ORPHAN
NO_WIDOW>

Used to denote document level settings such as UTF-8 encoding.

Parameter	Description
CONTENT=text	The phrase "charset=utf-8" must appear somewhere in the string to specify the document contains text that is UTF-8 encoded. This is for use with added fonts containing the UTF-8 characters (see the ADDFONT tag for more information). Note that you must add a font and use it for display of any UTF-8 text - you cannot use one of the built-in fonts.
NO_ORPHAN	Used to apply the NO_ORPHAN setting to all TEXT blocks in the document.
NO_WIDOW	Used to apply the NO_WIDOW setting to all TEXT blocks in the document.

Document Level Commands

<LINK
REL=STYLESHEET
HREF="text">

Used to supply an external style sheet for the document. The style sheet syntax is similar to cascading style sheets used in HTML. They provide a method of visually changing the appearance of your document without changing the base document. You may use multiple LINK statements in your document.

The file may be setup with any PDF Charts tag (such as TEXT) along with a group (or declaration block) of properties to apply. These properties are named the same as the options available for each tag. For example, using TEXT, you can supply items such as BORDER, FCOLOR, FACE, SIZE, etc for the options.

You may also give the group an arbitrary name and use the option CLASS with any PDF Charts tag to pull in those properties. The group names (called selectors) are case insensitive.

Parameter	Description
REL=STYLESHEET	REL must be supplied and set to the string STYLESHEET.
HREF="text"	The path and file name of the style sheet. Place quotes around this value. You may also use a web address that starts with http:// to pull a style sheet from a web site.

The style sheet file contains the style name (either a single name or a comma separated list) followed by the properties enclosed in braces. The properties are named the same as the tag options. A semicolon separates each of the options and a colon is used between the property and its value. For example, assume the following is in a file called mystyle.css:

```
/*
  Style Sheet Example
*/
text {face:3; size:10; fcolor:red; border:1}
small {size:8}
large {size:15}
```

In your input you'd include a LINK tag with a reference to this file. Something like: <LINK REL=stylesheet HREF="c:\css\mystyle.css">

All text blocks will use font 3 (Times Roman), have a font size of 10, text color red and a border size of 1. Nothing special needs to be added to the

TEXT tags in the document. They will simply inherit these settings since the property group is named the same as the tag.

The groups "small" and "large" will need to be set for tags you want them used in by specifying the CLASS option. For example, to use the style "small" in a block of text you'd write <TEXT CLASS="small">. All of the properties for the default text settings (like Times Roman and color red) will be applied first. Then the specific settings for small (font size of 8) will be applied so the final text will be Time Roman, red, point size 8.

Document Level Commands

<STYLE>
</STYLE>

Used to place style sheet information in the document. The style sheet data goes between the opening and closing STYLE tag. It's usually better to keep the style sheet in a separate file and refer to it using the LINK tag though. That way the style information is kept separate from the PDF commands and can be modified without changes to the process that creates the PDF Charts commands.

See the LINK tag for more information on setting up a style sheet for use with PDF Charts.

Document Level Commands

<CREATOR
LANGUAGE=text
COUNTRY=text>
</CREATOR>

Sets the text for creator of the document. Place the text between the opening and closing tags.

Parameter	Description
LANGUAGE=text	Text is assumed to be Unicode (2-character format) when this is used. A 2-character ISO 639 language code—for example, EN for English or JA for Japanese. The complete list of codes are available through http://www.iso.ch.
COUNTRY=text	Optional, used with the LANGUAGE option above. A 2-character ISO 3166 country code—for example, US for the United States or JP for Japan.

Document Level Commands

<SUBJECT
LANGUAGE=text
COUNTRY=text>
</SUBJECT>

Sets the text for subject of the document. Place the text between the opening and closing tags.

Parameter	Description
LANGUAGE=text	Text is assumed to be Unicode (2-character format) when this is used. A 2-character ISO 639 language code—for example, EN for English or JA for Japanese. The complete list of codes are available through http://www.iso.ch.
COUNTRY=text	Optional, used with the LANGUAGE option above. A 2-character ISO 3166 country code—for example, US for the United States or JP for Japan.

Document Level Commands

<AUTHOR
LANGUAGE=text
COUNTRY=text>
</AUTHOR>

Sets the text for author of the document. Place the text between the opening and closing tags.

Parameter	Description
LANGUAGE=text	Text is assumed to be Unicode (2-character format) when this is used. A 2-character ISO 639 language code—for example, EN for English or JA for Japanese. The complete list of codes are available through http://www.iso.ch.
COUNTRY=text	Optional, used with the LANGUAGE option above. A 2-character ISO 3166 country code—for example, US for the United States or JP for Japan.

Document Level Commands

<TITLE
VIEWERTITLE
LANGUAGE=text
COUNTRY=text>
</TITLE>

Sets the text for title of the document. Place the text between the opening and closing tags.

Parameter	Description
VIEWERTITLE	Use the document title in the title bar of the viewer. The file name of the PDF is used if this is not set. *(Acrobat 5.0 or above)*
LANGUAGE=text	Text is assumed to be Unicode (2-character format) when this is used. A 2-character ISO 639 language code—for example, EN for English or JA for Japanese. The complete list of codes are available through http://www.iso.ch.
COUNTRY=text	Optional, used with the LANGUAGE option above. A 2-character ISO 3166 country code—for example, US for the United States or JP for Japan.

Document Level Commands

<KEYWORDS
LANGUAGE=text
COUNTRY=text>
</KEYWORDS>

Sets the text for the document keywords. Place the text between the opening and closing tags.

Parameter	Description
LANGUAGE=text	Text is assumed to be Unicode (2-character format) when this is used. A 2-character ISO 639 language code—for example, EN for English or JA for Japanese. The complete list of codes are available through http://www.iso.ch.
COUNTRY=text	Optional, used with the LANGUAGE option above. A 2-character ISO 3166 country code—for example, US for the United States or JP for Japan.

Document Level Commands

<ADDFONT
NAME=text
SRC=text
ID=text
ENCODING=text
CODEPAGE=number
NOEMBED
DEFAULT>

Add font command - adds (embeds by default) a TrueType or Type 1 font in the document. You may specify just the name attribute on Windows based systems and the software will locate the font from the registry. For example, `<ADDFONT NAME="verdana">`. For other operating systems (optionally on Windows) you must use the SRC option to specify the location of the font file on disk.

Parameter	Description
NAME=text	The name of the font (such as "Times New Roman"). This is also the name displayed in Acrobat Reader when Document Info|Fonts is selected from the menu. Specify the name of the font (such as Verdana or Tahoma) on Windows based systems and PDF Charts will locate the font in the registry so you don't have to specify the SRC value.
SRC=text	Optional on Windows based systems if the NAME attribute specifies an installed font. Required on all other platforms. For TrueType fonts, the font file (ex. "c:\windows\fonts\myfont.ttf"). For Type 1 fonts, the file name without the extension (ex. "c:\windows\fonts\myfont"). Type 1 fonts have several different files associated with them and the software will handle locating the individual files.
ID=text	Enter a name for the font to refer to it by in your report. The default for this option, if it's not specified, is the NAME option. You can use spaces in the name, just be sure to put quotes around it. This is the value you would use for the FACE parameter in the FONT command.
ENCODING=text	The encoding to use. WinAnsiEncoding is used if not specified. This value is inserted directly into the PDF as typed so case is important. If you are not sure what value to use, leave this option out. The default should be fine for most cases. Possible values are WinAnsiEncoding, StandardEncoding, MacRomanEncoding or PDFDocEncoding.

Document Level Commands

Parameter	Description
CODEPAGE=number	The codepage to use (1252 Windows Latin-1 is used by default). This option is valid only when adding your own TrueType font. Must be a codepage that is included in the TrueType font. Currently, the other codepages supported by PDF Charts are: 1250 (Central European) 1251 (Cyrillic) 1253 (Greek) 1254 (Turkish) 1255 (Hebrew) 1256 (Arabic) See the META tag to specify UTF-8 encoding for your text. The codepage does not need to be specified for UTF-8 text. The font must contain the desired characters, however.
NOEMBED	Specifies the font is not to be embedded into the PDF. The resulting PDF will be smaller but the end user of the PDF must have the font installed on their system in order to properly view the PDF. The NAME option is used to determine the corresponding system font. NAME is case sensitive when using NOEMBED (unless you're using Windows and the font information is being read from the registry). This option is only recommended when you need to save space and you have some control over the target audience (such as for your own personal use or in-house use).
DEFAULT	Specifies this font is the default to use. Only one ADDFONT tag should have this option set. The DEFAULT used will be the last font added with this option if multiples are found.

PDF Charts has 14 built-in fonts. When you add fonts, they are numbered starting at 15. The first ADDFONT command sets that font to number 15. The next ADDFONT command sets that font to number 16 and so on. You then use these numbers, or the ID value described above, as the FACE parameter for the FONT tag.

Example:

```
<PDF>
<ADDFONT SRC="c:\winnt\fonts\myfont.ttf" ID="my font">
<ADDFONT SRC="c:\winnt\fonts\myfont">
<ADDFONT NAME="tahoma">
<ADDFONT NAME="Lucida Handwriting" NOEMBED>
<PAGE>
<TEXT FACE=15 SIZE=12>
```

Document Level Commands

```
Here is the truetype font embedded in the document.
<FONT FACE=16>
Here is the type 1 font embedded in the document.
<FONT FACE="my font">
Here is the truetype font again using the ID instead of the number.
<FONT FACE="tahoma">
This truetype font was added by locating its source in the Windows
registry.
<FONT FACE="Lucida Handwriting">
This truetype font was not embedded - end users must have this font
installed.
</TEXT>
```

<SOFTHYPHEN VALUE=text>

Sets the character to use as the soft hyphen. The default is ASCII code 173. This should only be used when the default does not work with any added fonts.

Parameter	Description
VALUE=text	A single character to use as the soft hyphen. Typically you'll want to use the dash or minus sign character.

Document Level Commands

<EMBED
SRC=text
MIME=text
FILENAME=text
SUBJECT=text

Embeds an external file into the PDF at the document level. Similar to the EMBED option with the A tag except there is no visual indicator on any page for this embedded document.

Parameter	Description
SRC=text	Required. The path and name of the file to embed. You may also specify a file from the web in the form http://www.mysite.com/include.fch.
MIME=text	The mime type for the file. This is determined for some files automatically by the file name extension. The files currently configured are .avi, .wmv, .mpeg, .mov, .swf, .wav, and .mp3. Other types must supply the value (unless it exists in the Windows system registry at build time). For example, video/x-msvideo or audio/x-midi. Windows based versions of PDF Charts will attempt to locate the correct mime type from the system registry when the PDF is built.
FILENAME=text	The file name to use for the embedded file. This is not the source file name on disk - it is the filename to refer to the embedded file by once it's in the PDF. The default is the name used in the SRC entry.
SUBJECT=text	The subject the end user will see for the embedded file.

Document Level Commands

<BREAKON
VALUE="text">

Used to specify a list of characters in addition to the space character to line break on. For example, set VALUE="-" to include the dash as a valid character to break on. You may string together any combination of characters but don't place any separator in the list (comma or space).

Parameter	Description
VALUE="text"	The set of characters line breaks may occur on in addition to the space character.

Document Level Commands

<DATASET
ID=text>
</DATASET>

Sets the area in the layout where data will be placed. Also used in the data file to set a data block. See the XML Data Merge section for more information.

Parameter	Description
ID=text	The ID of the data block.

Document Level Commands

<TEXTABS>

Sets the ABS parameter throughout the document on all TEXT commands. This affects where text is placed when centered or right aligned. See the TEXT command for more information.

Document Level Commands

<COLOR
NAME=text
VALUE=color>

Used to name a color. You can make up a name for a color then refer to that color by name throughout your document. You just change the color value in one place if you decide to change color schemes later.

Parameter	Description
NAME=text	The name for the color. Place the name in quotes if you use spaces in the name.
VALUE=color	Any valid color code.

Document Level Commands

<INCLUDE
SRC=text>

Used to include commands from an external file. The file should contain PDF Charts commands and/or text. The contents of the file will be placed in the postion this command appears in the main input file. You may use as many INCLUDE commands as you wish in your input file.

Parameter	Description
SRC=text	The path and name of the input file. You may also specify a file from the web in the form http://www.mysite.com/include.fch. The file will be downloaded locally then included.

Document Level Commands

<OUTLINE
LEVEL=number
DESCR=text
CLOSED
COLOR=color
ITALICS
BOLD
LANGUAGE=text
COUNTRY=text
URL=text
PRINT[=text]
RANGE=name
SUB_DESCR=text
SUB_CLOSED
SUB_COLOR=color
SUB_ITALICS
SUB_BOLD
SUB_URL=text
SUB_PRINT[=text]
SUB_RANGE=name>

Used to set up an outline (bookmarks) for the document. Can also be used as a link to a web URL or to print the document.

Parameter	Description
LEVEL=number	The level of the outline. 1 is the top level, 2 would be a sub-level to 1, etc.
DESCR=text	The description that appears in the bookmarks pane.
CLOSED	Adding this option will cause the initial display of the bookmark to be closed.
COLOR=color	The color to use for the outline entry (must be an RGB color). *(Acrobat 5.0 or above)*
ITALICS	Italics outline entry *(Acrobat 5.0 or above)*
BOLD	Boldface outline entry *(Acrobat 5.0 or above)*
LANGUAGE=text	Text is assumed to be Unicode (2-character format) when this is used. A 2-character ISO 639 language code—for example, EN for English or JA for Japanese. The complete list of codes are available through http://www.iso.ch.
COUNTRY=text	Optional, used with the LANGUAGE option above. A 2-character ISO 3166 country code—for example, US for the United States or JP for Japan.

Document Level Commands

Parameter	Description
URL=text	The URL for a web page to load rather than a link to a page in the current PDF document. You may also use "mailto:me@mysite.com" syntax to open an email window. Leave this option off for a standard outline entry.
PRINT[=text]	The outline entry will be used as a print function rather than a link to a page in the current PDF document. Use PRINT by itself to simply print to the default printer. Use PRINT=Dialog to bring up the printer dialog box. Leave this option off for a standard outline entry.
RANGE=name	Optional. Sets the name of the page range to use with the PRINT option. Using PRINT without this option prints all pages. See the FROMPG and THRUPG commands for setting up a page range. The outline entry will print the page range to the user's default printer when clicked. There is no user intervention for printer selection or other options. The value is case sensitive.
SUB_LEVEL=number	If you are creating a sub-level along with this upper-level outline, enter the sub-level number (usually set to LEVEL + 1).
SUB_DESCR=text	The description that appears in the bookmarks pane for the sub-level item.
SUB_CLOSED	Adding this option will cause the initial display of the sub-level bookmark to be closed.
SUB_COLOR=color	The color to use for the sub-level entry (must be an RGB color). *(Acrobat 5.0 or above)*
SUB_ITALICS	Italics outline entry *(Acrobat 5.0 or above)*
SUB_BOLD	Boldface outline entry *(Acrobat 5.0 or above)*
SUB_URL=text	The URL for a web page to load rather than a link to a page in the current PDF document. You may also use "mailto:me@mysite.com" syntax to open an email window. Leave this option off for a standard outline entry.
SUB_PRINT[=text]	The outline entry will be used as a print function rather than a link to a page in the current PDF document. Use SUB_PRINT by itself to simply print to the default printer. Use SUB_PRINT=Dialog to bring up the printer dialog box. Leave this option off for a standard outline entry.

Document Level Commands

Parameter	Description
SUB_RANGE=name	Optional. Sets the name of the page range to use with the SUB_PRINT option. Using PRINT without this option prints all pages. See the FROMPG and THRUPG commands for setting up a page range. The outline entry will print the page range to the user's default printer when clicked. There is no user intervention for printer selection or other options. The value is case sensitive.

You should issue the command just after the <PAGE> command. The outline for this document is created as:

```
<PAGE>
<OUTLINE LEVEL=1 DESCR="Commands" CLOSED>
. . .
<PAGE>
<OUTLINE LEVEL=2 DESCR="Document Level" CLOSED SUB_LEVEL=3 SUB_DESCR="PDF">
. . .
<PAGE>
<OUTLINE LEVEL=3 CLOSED DESCR="OUTLINE">
```

Document Level Commands

<SENDMAIL
SMTP=text
FROM=text
FAKEFROM=text
REPLY=text
TO=text
FAKETO=text
CC=text
FAKECC=text
BCC=text
PRIORITY=text
SUBJECT=text
BODY=text
EXCEL
CSV
LOG=text>

-- or --

<SENDMAIL
SMTP=text
FROM=text
FAKEFROM=text
REPLY=text
TO=text
FAKETO=text
CC=text
FAKECC=text
BCC=text
PRIORITY=text
SUBJECT=text
EXCEL
CSV
LOG=text>
...Multi-line Body Text...
</SENDMAIL>

Used to email the newly created PDF to the mail recipients listed. Use the -mail exe option or SetMail DLL method if you want to bring up a composition window (in which case you probably don't want to use this command). SENDMAIL will send the PDF without user interaction. A connection to the internet will be necessary in order for this function to work. Include this command only once in the report. Only the last one will be used if multiple ones are found.

Document Level Commands

Parameter	Description
SMTP=text	The SMTP server to use for sending the mail. For example, mail.yourdomain.com.
FROM=text	The from address for the email. Must be an address in the form of somename@mycompany.com.
FAKEFROM=text	The from address to show for the email. The default is the FROM address.
REPLY=text	The reply to address for the email. Must be an address in the form of somename@mycompany.com. The default is the FROM address.
TO=text	The address(es) to send the email to. Must be an address in the form of name@somecompany.com. Separate multiple addresses with a comma.
FAKETO=text	The to address to show for the email. The default is the TO address(es).
CC=text	The address(es) to CC (carbon-copy) the email to. Must be an address in the form of name@somecompany.com. Separate multiple addresses with a comma.
FAKECC=text	The CC address to show for the email. The default is the CC address(es).
BCC=text	The address(es) to BCC (blind carbon-copy) the email to. Must an address in the form of name@somecompany.com. Separate multiple addresses with a comma.
PRIORITY=text	The message priority. Set to either HIGH or LOW. Leave this option off for normal priority.
SUBJECT=text	The subject of the email. Enclose in quotes.
BODY=text	The body text of the email. Enclose in quotes. This may also be a file name. If so, the contents of the file will be used as the body. Use a \n for a new line when the body is entered using this option. You may also leave out the BODY option and place the body text after the SENDMAIL tag. Use the closing </SENDMAIL> tag when using this approach. You may also send HTML formatted body text. You must use the method of placing the body text between the <SENDMAIL> and </SENDMAIL> tags. Put the <HTML> tag as the first line of the body text and it will be sent as HTML rather than plain text. Avoid using references to other local files in the HTML body, such as images, as they will not be sent with the message. You may use images with a web location as the source however.

Document Level Commands

Parameter	Description
EXCEL	Include the Excel file with the email. Must use the -xls option or SetExcelFile method. Include the EXCEL tag in the report as well.
CSV	Include the CSV file with the email. Must use the -csv option or SetCSVFile method. Include the EXCEL tag in the report as well.
LOG=text	The name of a log file to use for date/time emails were sent as well as any errors. This is optional.

Document Level Commands

<ENCRYPT
OWNER=text
USER=text
NOPRINT
NOCHANGE
NOCOPY
NOANNOTE
128>

Used to place encryption/password protection on the PDF. Command line options for encryption override this tag.

Parameter	Description
OWNER=text	Sets the owner password for the PDF. If not specified but the user password is, this is set to the user password. Also, when not specified, the owner has only the rights granted when the document was created. So for example, if NOPRINT is specified, then it is impossible for the owner to print the document.
USER=text	Sets the user password for the PDF. The following four options can be used to turn off various features for the user.
NOPRINT	Disables printing of the document.
NOCHANGE	Disables changes to the document.
NOCOPY	Disables copying of text and/or graphics from the document.
NOANNOTE	Disables add/change of form fields or annotations.
128	Sets 128-bit encryption method. Files encrypted with 128-bit encryption can only be opened with Acrobat or Acrobat Reader 5.0 or above. The default encrytion is 40-bit which works with Acrobat and Acrobat Reader 4.0 and above.

<METRIC
UNITS=text
VALUE=number>

Used to enter values in centimeters rather than inches. This affects the WIDTH and HEIGHT parameters of the PAGE command as well as the margin setting parameters of the GRID command.

Parameter	Description
UNITS=text	Optional. The default is centimeters when UNITS is not specified. Set to "mm" to use millimeters or "pt" for points (1 point = 1/72 of an inch).
VALUE=number	Optional. Set to your measurement unit when using something other than the above. The number entered is specified as units per inch. For example, to use decimeters you would set this value to 0.254. This value overrides any setting from the UNITS option.

Document Level Commands

<MONTHS VALUE=text>

Used to set the values you want to use for names of the months (see the date variable) Default is January, February, ..., December. For example, to use German you might set this to:

```
<MONTHS VALUE="Januar,Februar,März,April,Mai,Juni,Juli,August,September,Oktober,November,Dezember">
```

Parameter	Description
VALUE=text	A comma separated list of months to use.

Document Level Commands

<CLOCK
VALUE=number>

Used to set the clock to a 24-hour (military) format (see the time variable) Default is a 12-hour clock using am/pm.

Parameter	Description
VALUE=number	Set to 24 for a 24-hour clock format. Any other value sets a 12-hour clock format.

Document Level Commands

<SETPG
VALUE=number>

Used to set the page number (see the page variable). If you have a report with multiple sections and you want to set the page number to 1 at the beginning of each section, issue this command before the <PAGE> command.

Parameter	Description
VALUE=number	The new page number to start numbering with.

<FROMPG
NAME=text>

Used with the button input statement to specify the start page for printing. This tag is used in conjunction with the THRUPG tag to mark a page range for printing.

You may also use this tag to mark a range of pages for retreival with the GetPageRange DLL method or for use with the OUTLINE tag.

Parameter	Description
NAME=text	The name of this page range. Place this tag where you want to mark the point to start the range. There should exist a corresponding THRUPG tag somewhere in the document with the same value. Or, you may use a closing </FROMPG> tag instead if there is no overlap of page ranges. Name values are case sensitive.

<THRUPG
NAME=text>

Used with the button input statement to specify the end page for printing. This tag is used in conjunction with the FROMPG tag to mark a page range for printing. You may use a closing </FROMPG> tag instead of THRUPG if there is no overlap of page ranges.

You may also use this tag to mark a range of pages for retreival with the GetPageRange DLL method or for use with the OUTLINE tag.

Parameter	Description
NAME=text	The name of this page range. Place this tag where you want to mark the point to end the range. There should exist a corresponding FROMPG tag somewhere in the document with the same value. Name values are case sensitive.

Document Level Commands

<STARTPG
VALUE=number>

Used to set the page number to open the PDF to. Normally the first page is the initial page but this tag allows you to override.

Parameter	Description
VALUE	The page to open the document at.

Document Level Commands

<SHADING
NAME=text
COLOR1=color
COLOR2=color
COLOR3=color
COLOR4=color
COLOR5=color
COLORARY=text>

Used to define a gradient shading pattern. The shading pattern can then be used in charts. You may specify from two to five colors.

Parameter	Description
NAME=text	The name for the shading pattern. Must be unique within the document.
COLOR1=color	The starting color. Any valid color code.
COLOR2=color	Any valid color code.
COLOR3=color	Optional. Any valid color code.
COLOR4=color	Optional. Any valid color code.
COLOR5=color	Optional. Any valid color code.
COLORARY=text	A comma separated list of 4 or 6 numbers. The default is 0,0,1,0. These represent the X_0, Y_0, X_1, Y_1 matrix coordinates for the shading pattern. A matrix of 0,0,1,0 goes from left to right from COLOR1 to $COLOR_n$. A matrix of 0,0,0,1 goes from top to bottom. You may use decimals or negative numbers as well to offset where the middle of the gradient lies. Use 6 numbers [x0, y0, r0, x1, y1, r1] for a radial type shading, such as for a sphere. The numbers specify the centers and radii of the starting and ending circles, expressed in points. The radii r0 and r1 must both be greater than or equal to 0. If one radius is 0, the corresponding circle is treated as a point; if both are 0, nothing is painted.

Document Level Commands

<PAGELAYOUT
VALUE=text>

Used to set the initial layout of the document when opened.

Parameter	Description	
VALUE	One of following values:	
	SinglePage	Display one page at a time (default)
	OneColumn	Display the pages in one column
	TwoColumnLeft	Display the pages in two columns,with odd-numbered pages on the left
	TwoColumnRight	Display the pages in two columns,with odd-numbered pages on the right

Document Level Commands

<PAGEMODE
VALUE=text>

Used to set the initial display of the document when opened.

Parameter	Description	
VALUE	One of following values:	
	UseNone	Neither document outline nor thumbnail images visible (default when not using an outline)
	UseOutlines	Document outline visible (default when using an outline)
	UseThumbs	Thumbnail images visible
	FullScreen	Full-screen mode with no menu bar, window controls or any other window visible

<ZOOM
VALUE=number|FITPAGE|FITWIDTH>

Used to set the initial zoom factor. Default is dependant on user settings.

Parameter	Description
VALUE	The zoom factor to open the document at. Enter 100 for 100 percent. FITPAGE = open the document sized so the entire page fits in the window. FITWIDTH = open the document sized so the width of the page fits in the window.

Page Level

Page level commands are used to start a page or assign certain settings such as headers or footers. A valid PDF Charts input stream or file must have at least one <PAGE> command. All other commands in this section are optional.

Page Level Commands

<PAGE
HEIGHT=inches
WIDTH=inches
TYPE=text
ORIENT=landscape|portrait
NEWFORM=text
PGNOSTYLE=text
PGNOPREFIX=text
PGNOSTART=number
BGCOLOR=color
BORDER=number
BORDERCOLOR=color
BORDERMARGIN=number
TRANS=text
SECS=number
TDIR=H|V
MDIR=I|O
JSOPEN=text
JSCLOSE=text
NOBREAK=number
CLEARFORMS
YPOS=number
IFEVEN
IFODD
ROTATE=number
TRANSPARENCY=number
TRANSPMODE=text
SCALE=number
SCALEX=number
SCALEY=number
EVENRIGHT=number
ODDRIGHT=number
EVENUP=number
ODDUP=number
SHRINKPAGE
SHRINKROUND=number
SHRINKVALIGN=text
ENDX|ENDLINE|ENDSTR=text
ENDFACE=number
ENDSIZE=number
ENDFCOLOR=color
ENDSCOLOR=color
ENDPAGE>

Starts a new page. All of the parameters are optional. If you are doing a page break and you are changing the width or height, be sure to close out

any open BODY tags and reissue new HEADER and/or FOOTER commands.

Parameter	Description
WIDTH=inches	Sets width of page in inches. Default is 8.5. If the METRIC command is used, enter the number of centimeters instead.
HEIGHT=inches	Sets height of page in inches. Default is 11.
TYPE=text	The page size to use if not using Width or Height options. See the following table for a list of page types.
ORIENT=landscape|portrait	Landscape sets page size to 11 by 8.5 if you leave out height and width. Portrait sets page size to 8.5 by 11. If height and width have been set differently by a previous page command, setting ORIENT to landscape will set the width to the larger of width and height while portrait will set the width to the smaller of the two.
NEWFORM=text	To use this page as a background for other pages, enter a value for NEWFORM. This page will not print but may be included on other pages with the USEFORM tag.
PGNOSTYLE=text	This option allows you to specify a numbering style for a set of pages. Note this is for the viewer application only and does not affect the &page variable. A single letter code (case-sensitive). Default is D. Values are: D = Decimal arabic numerals R = Uppercase roman numerals r = Lowercase roman numerals A = Uppercase letters a = Lowercase letters

Page Level Commands

Parameter	Description
PGNOPREFIX=text	An optional prefix (ex. A-) to use in front of the page number. This option is only for the viewer application. Setting to A- will cause the pages to be numbered A-1, A-2, etc.
PGNOSTART=number	The starting page number for display. This option is only for the viewer application. For example, if you have 3 pages in the front of the document numbered in roman numerals and you want to start arabic numbering on page 4 (but have page 4 show as 1, 5 as 2, etc.), you'd set this value to 1.
BGCOLOR=color	Sets the color of the page background. Default is white. Use BGCOLOR="" to set the background back to white.
BORDER=number	Sets the border width for the page. Default is 0, or no border. The value is the thickness of the border in points (1/72 of an inch).
BORDERCOLOR=color	Sets the color for the page border. Default is black.
BORDERMARGIN=number	Margin for the page border in points (1/72 of an inch). By default the border is flush against the edge of the page. This option moves the border in - away from all edges.

Page Level Commands

Parameter	Description
TRANS=text	One of the following transition types: Split Blinds Box Wipe Dissolve Glitter The default page transition is to just replace the current page with the new page. The effects listed above can be used for presentation purposes.
SECS=number	The length of time in seconds to spend on the page transition. Default is 1 if a transition type is used.
TDIR=H|V	The direction of the transition, horizontal or vertical. Valid only for Split and Blinds transition types.
MDIR=I|O	The direction of motion for the transition effect, inward or outward from the center of the page. Valid only for Split and Box transition types.
JSOPEN=text	JavaScript to execute when the page is opened.
JSCLOSE=text	JavaScript to execute when the page is closed.

Page Level Commands

Parameter	Description
NOBREAK=number	Page breaks will occur by default when a block of text hits the bottom of the current page. Set NOBREAK to a value of 1 or 2 to prevent this behavior. A value of 0 means turns off the NOBREAK option (if you're in the BODY of a document and you specified a NOBREAK prior to this page). A value of 1 means continue printing text beyond the page margin or even off the page. A value of 2 means cut the text at the margin.
CLEARFORMS	Clear any USEFORM statements that had been issued. The contents of a USEFORM background are used for all subsequent pages which are in the BODY of the document. This option clears out any USEFORM statements so the background no long prints. This allows you to remove the background or specify a new one.
YPOS=number	Conditionally page break based upon the current Y position. For example, if the current GRID settings are 100 in the Y direction and you set YPOS=70, the PAGE command will be ignored if the current Y position is less than 70. You may also enter the value followed by a % sign (i.e. YPOS=65%) to denote a percentage of the current GRID.
IFEVEN	Page break only if the current page is an even numbered page. Page numbering starts at 1 for the first page in the document. If the current page is an odd numbered page, the PAGE command is ignored.

Page Level Commands

Parameter	Description
IFODD	Page break only if the current page is an odd numbered page. Page numbering starts at 1 for the first page in the document. If the current page is an even numbered page, the PAGE command is ignored.
ROTATE=number	Rotation angle to set the page at when viewing. Valid values are 90, 180 or 270.
TRANSPARENCY=number	The opacity for the page when using a background (see the PDFPAGE command). Set to a value between 1 and 100. The default is 100 where the page contents are opaque - that is, nothing from the background shows through in areas where there are text or graphics in the top level. Transparency is used in Acrobat and Acrobat Reader 5.0 and higher.
TRANSPMODE=text	The mode for the transparency. Each provides a different effect for the overlay. The valid values are: Normal (Default) Multiply Screen Overlay Darken Lighten ColorDodge ColorBurn HardLight SoftLight Difference Exclusion Hue Saturation Color Luminosity

Page Level Commands

Parameter	Description
SCALE=number	Percentage to scale the page contents by (both horizontally and vertically). The physical page size remains the same, only the contents are scaled. For example, use 80 for 80%.
SCALEX=number	Percentage to scale the page contents by horizontally. For example, use 80 for 80%. Setting the SCALE parameter overrides this setting.
SCALEY=number	Percentage to scale the page contents by vertically. For example, use 80 for 80%. Setting the SCALE parameter overrides this setting.
EVENRIGHT=number	Value in points (1/72 of an inch) to move even numbered page contents to the right. May be a positive or negative value. Negative values move contents to the left. Page numbering starts at 1 for the first page in the document.
ODDRIGHT=number	Value in points (1/72 of an inch) to move odd numbered page contents to the right. May be a positive or negative value. Negative values move contents to the left. Page numbering starts at 1 for the first page in the document.
EVENUP=number	Value in points (1/72 of an inch) to move even numbered page contents up. May be a positive or negative value. Negative values move contents down. Page numbering starts at 1 for the first page in the document.

Page Level Commands

Parameter	Description
ODDUP=number	Value in points (1/72 of an inch) to move odd numbered page contents up. May be a positive or negative value. Negative values move contents down. Page numbering starts at 1 for the first page in the document.
SHRINKPAGE[=number]	Makes the height of the page equal to the last Y position where a text command ended. The bottom margin specified by the GRID command is included when the page is shortened. Do not use this option within a BODY section of a report. Optionally set to the number of points (1/72 of an inch) additional to drop down.
SHRINKROUND=number	Optional - for use with SHRINKPAGE. The number of units to round up to when resizing the page. The value is in inches (centimeters when METRIC is used). Setting to a value of 2, for example, rounds the page size up to the nearest even number of inches.
SHRINKVALIGN=text	Optional - for use with SHRINKPAGE and SHRINKROUND. Vertically aligns the page contents when using SHRINKROUND. Set to "M" or "Middle" for middle of page or "B" or "Bottom" for bottom. Default is the top of page.

Page Level Commands

Parameter	Description
ENDX|ENDLINE|ENDSTR=text	These options are to provide some security against changes to a document by filling in white space with characters or lines. Use ENDLINE to draw a line from the upper left to the lower right corner of any remaining white space on the page. Use ENDX to draw another line from the upper right to the lower left corner, forming an X. Use ENDSTR=text to set a character or string to fill in the remaining white space.
ENDFACE=number	A font number to use for ENDSTR=text option.
ENDSIZE=number	The font size to use for the ENDSTR=text option.
ENDFCOLOR=color	The fill color to use to for the text.
ENDSCOLOR=color	The stroke color to use for the line or text.
ENDPAGE	Use the end page width and length rather than the margins.

There is no closing tag for <PAGE>. Simply issue another PAGE tag to start another page. Each report must include at least one page tag.

The following table lists the various built-in page sizes available for the TYPE option.

Type	Description
Standard	Standard, 8 1/2 x 11 in.
Legal	Legal, 8 1/2 x 14 in.
Letter	Letter, 8 1/2 x 11 in.
LetterSmall	Letter Small, 8 1/2 x 11 in.
Tabloid	Tabloid, 11 x 17 in.
Ledger	Ledger, 17 x 11 in.
Statement	Statement, 5 1/2 x 8 1/2 in.
Executive	Executive, 7 1/2 x 10 1/2 in.
A3	A3, 297 x 420 mm
A4	A4, 210 x 297 mm
A4Small	A4 Small, 210 x 297 mm

Page Level Commands

Type	Description
A5	A5, 148 x 210 mm
B4	B4, 250 x 354 mm
B5	B5, 182 x 257 mm
Folio	Folio, 8 1/2 x 13 in.
Quarto	Quarto, 215 x 275 mm
10x14	10 x 14 in.
11x17	11 x 17 in.
Note	Note, 8 1/2 x 11 in.
Env9	Envelope #9, 3 7/8 x 8 7/8 in.
Env10	Envelope #10, 4 1/8 x 9 1/2 in.
Env11	Envelope #11, 4 1/2 x 10 3/8 in.
Env12	Envelope #12, 4 1/2 x 11 in.
Env14	Envelope #14, 5 x 11 1/2 in.
EnvDL	Envelope DL, 110 x 220 mm
EnvC3	Envelope C3, 324 x 458 mm
EnvC4	Envelope C4, 229 x 324 mm
EnvC5	Envelope C5, 162 x 229 mm
EnvC6	Envelope C6, 114 x 162 mm
EnvC65	Envelope C65, 114 x 229 mm
EnvB4	Envelope B4, 250 x 353 mm
EnvB5	Envelope B5, 176 x 250 mm
EnvB6	Envelope B6, 176 x 125 mm
EnvItaly	Envelope, 110 x 230 mm
EnvMonarch	Envelope Monarch, 3 7/8 x 7 1/2 in.
EnvPersonal	Envelope, 3 5/8 x 6 1/2 in.
FanfoldUS	U.S. Standard Fanfold, 14 7/8 x 11 in.
FanfoldStdGerman	German Standard Fanfold, 8 1/2 x 12 in.
FanfoldLglGerman	German Legal Fanfold, 8 1/2 x 13 in.

Page Level Commands

<USEFORM
VALUE=text
VALUE2=text>

Uses a page defined with the NEWFORM parameter as a background page. You may use multiple USEFORM tags to include more than one background.

See the CLEARFORMS option on the PAGE command for information on clearing out forms in the body of a document.

Parameter	Description
VALUE=text	The code used on the NEWFORM parameter of the page you want to use as the background.
VALUE2=text	The background code to use after a page break while in the body of a document. This allows you to switch to a different form once a page break occurs. This must be set to a valid NEWFORM code. Setting it to anything else will have the effect of removing the background after a page break.

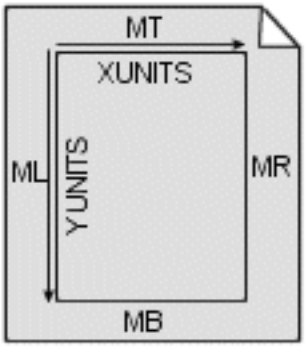
Page Level Commands

<GRID
ML=inches
MR=inches
MT=inches
MB=inches
XUNITS=number
YUNITS=number>

Sets the margins and virtual grid for each page. The default margins are 1/2 inch all around if you do use a grid command. All commands that use X and Y coordinate values are based on the grid values for XUNITS and YUNITS. For instance, with any size page using equal margins left/right and top/bottom and with GRID settings of XUNITS=50 and YUNITS=100, the middle of the page is at X=25 and Y=50.

Note you may not change the grid layout once inside a HEADER, FOOTER or BODY section of the report. You should ideally set the GRID once before issuing your first page command and use that setting throughout the report.

Parameter	Description
ML=inches MR=inches MT=inches MB=inches	Sets the various margins for a page of any size. If the METRIC command is used, enter the number of centimeters instead. ML = Margin Left MR = Margin Right MT = Margin Top MB = Margin Bottom
XUNITS=number	User defined - number of columns to divide the printable area (page width - left/right margin) into.
YUNITS=number	User defined - number of rows to divide the printable area (page height - top/bottom margin) into.



The YUNITS value is not as important as the XUNITS value since the program will take care of content flow. If you are drawing a rectangle on the page then the YUNITS may be important as the corners of the box will be specified in XUNITS and YUNITS.

The Y coordinate is always 0 for the top line when inside of a TEXT block. This will allow you to move to the top of the text block without having to know where the text block is positioned on the page. For example, the footer of this document contains some text left justified and the page number right justified. This was done by first printing the left portion, then specifing a value of 0 for Y position, setting a right alignment, then printing the page number.

The XUNITS is a little more important as you will use these corrdinates to set your left and right margins for text blocks. The TEXT commands will simply use a value of 0 for the left margin and the value entered for XUNITS for the right margin if none are supplied.

Page Level Commands

<HEADER
MARGIN=units
IFEVEN
IFODD
PAGE2>
</HEADER>

Encloses the header information.

Parameter	Description
MARGIN=units	Sets the margin of space in user defined units based on the GRID command.
IFEVEN	Specifies that this header is for even numbered pages.
IFODD	Specifies that this header is for odd numbered pages.
PAGE2	Specifies that this header replaces the current header after the first page. This allows you to specify one header for the first page and a different header for the rest of the pages. In this case you would have two HEADER blocks and have this option set on one of them.

Between the <HEADER> and </HEADER> tags you place content such as text. The size needed for the header will be determined by the program. When you place information in the BODY section the program will automatically place that information under the header.

Page Level Commands

<SUBHEADER
MARGIN=units
IFEVEN
IFODD
CONTINUE=text>
</SUBHEADER>

Encloses the sub header information.

Parameter	Description
MARGIN=units	Sets the margin of space in user defined units based on the GRID command.
IFEVEN	Specifies that this subheader is for even numbered pages.
IFODD	Specifies that this subheader is for odd numbered pages.
CONTINUE=text	Set the text you want to print after the first page break. You reference this with the value &continue somewhere in the text that falls between the opening and closing SUBHEADER tags. Enclose the text in quotes.

Subheadings may be changed throughout the body section of a document. The first subheading should come just after the BODY tag. The information will repeat across page breaks until a new subheading is issued. Issue subheader tags only after a PAGE command from then on. The new subheading will replace the previous one without affecting your HEADER data. Send a <SUBHEADER> followed by </SUBHEADER> to clear out a subheading.

Page Level Commands

<FOOTER
MARGIN=units
IFEVEN
IFODD
PAGE2>
</FOOTER>

Encloses the footer information.

Parameter	Description
MARGIN=units	Sets the margin of space in user defined units based on the GRID command.
IFEVEN	Specifies that this footer is for even numbered pages.
IFODD	Specifies that this footer is for odd numbered pages.
PAGE2	Specifies that this footer replaces the current footer after the first page. This allows you to specify one footer for the first page and a different footer for the rest of the pages. In this case you would have two FOOTER blocks and have this option set on one of them.

Between the <FOOTER> and </FOOTER> tags you place content such as text. The size needed for the footer will be determined by the program. When you place information in the BODY section the program will automatically place that information above the footer.

Page Level Commands

<SUBFOOTER
MARGIN=units
IFEVEN
IFODD
CONTINUE=text>
</SUBFOOTER>

Encloses the subfooter information.

Parameter	Description
MARGIN=units	Sets the margin of space in user defined units based on the GRID command.
IFEVEN	Specifies that this subfooter is for even numbered pages.
IFODD	Specifies that this subfooter is for odd numbered pages.
CONTINUE=text	Set the text you want to print after the first page break. You reference this with the value &continue somewhere in the text that falls between the opening and closing SUBFOOTER tags. Enclose the text in quotes.

Subfooters may be changed throughout the body section of a document. The first subfooter should come just after the BODY tag. The information will repeat across page breaks until a new subfooter is issued. Issue subfooter tags only after a PAGE command from then on. The new subfooter will replace the previous one without affecting your FOOTER data. Send a <SUBFOOTER> followed by </SUBFOOTER> to clear out a subfooter.

Page Level Commands

<SUBFOOTERCONT
MARGIN=units
IFEVEN
IFODD
CLEAR>
</SUBFOOTERCONT>

Encloses the continued subfooter information.

Parameter	Description
MARGIN=units	Sets the margin of space in user defined units based on the GRID command.
IFEVEN	Specifies that this continued subfooter is for even numbered pages.
IFODD	Specifies that this continued subfooter is for odd numbered pages.
CLEAR	Use after the text to remove the continued message. You do not have to use a closing SUBFOOTERCONT tag in this case.

This tag is used to print a continued message on each page except the last of a report or section of a report. Place this tag after the SUBFOOTER tag (if using one - it's not necessary to have a SUBFOOTER tag along with this tag) and before any text. The contents of this section are printed on the first page (assuming the first page isn't the last page). The contents continue to print until a <SUBFOOTERCONT CLEAR> tag is encountered. The CLEAR option removes the text from the current page and stops the text from printing on any future pages. The option can be started up again by issuing a new SUBFOOTERCONT tag after a PAGE command (and SUBFOOTER if one is used).

Note that the <SUBFOOTERCONT CLEAR> can be placed anywhere in the report. It does not have to follow a PAGE command.

Page Level Commands

<BODY
LINK=color>
</BODY>

Encloses the body text. Remember to include this tag when placing content on a page if you have headers and/or footers. If you leave it out your text might overlay your header/footer.

While inside of the BODY tag, the amount of space for YUNITS as defined by the GRID is adjusted to be the area within the BODY rather than the page. For instance, say you are using an 8.5 x 11 piece of paper and have it divided into 100 units from top to bottom. You really have 8 inches along the Y axis rather than 11 if the header takes an inch and the footer takes two inches. Since the YUNITS are adjusted, then a value of 0 means 1 inch down and value of 100 is 9 inches from the top (or 8 inches from the bottom of the header).

Let's say you are also drawing a box around the body - from Y position 0 to 100. Now it doesn't matter if you decide to add another line in the header or footer, the box will still ecompass the body within the header and footer.

Parameter	Description
LINK=color	Optional - sets the text color for links.

Text Commands

Text

Text commands are used to place a block of text (which may contain images as well) on the page or apply some setting to the text. Text is drawn on the page using a TEXT block. The tags in this section can be used to control how the text appears in terms of font, size and color.

Text Commands

<TEXT
X=number
Y=number
X2=number
Y2=number
ALIGN=L|R|C|J
ABS
BORDER=number
BORDERCOLOR=color
BORDERDASH=number
[,number,...]
PADDING=number
CORNERSIZE=number
CORNERSTYLE=text
BGCOLOR=color
PATTERN=number
PATTERNCOLOR=color
3D
SIDES=text
COLNUM=number
COLSPACE=number
COLBAR=number
NOBREAK
FORCE
FACE=font number
SIZE=point size
NO_ORPHAN
NO_WIDOW
EXCEL=text
EXCEL_SEQ=number
LINESPACE=number
BREAKON="text"
FCOLOR=color
SCOLOR=color
ROTATE=number
COMP=number
VALUE=text>
</TEXT>

Used to print a block of text. All of the parameters are optional. Place your text to print between the opening and closing text blocks.

Parameter	Description
X=number	Sets the value of the left margin in units based on the GRID command. Default is 0.

Text Commands

Parameter	Description
Y=number	Sets the value for the top of the text based on the GRID command. Default is the current Y value. Generally you don't need to set the Y value. Only set this value when you're trying to place the text in a given spot. Text will simply start at the current position and, upon a page break, will continue on the next page at the top of the report body.
X2=number	Sets the value of the right margin in units based on the GRID command. Default is value of XUNITS from the GRID command.
Y2=number	Sets the value for the bottom of the text based on the GRID command. Generally you don't need to set the Y2 value. Only set this value when you're trying force some text to fit into a box on the page and you don't want the text to run outside of that area. Any text that doesn't fit is not printed.
ABS	Normally, when using center or right alignment, text is centered or right aligned within the left and right edges of a TEXT block. The left and right edges of a TEXT block span from GRID position 0 to the current XUNITS value unless overridden with the X or X2 parameters described above. The ABS (absolute positioning) option will ignore the edges and center or right align text around the point specified by the X parameter. There is no word wrapping when using the ABS option (it sets the FORCE option) since the X and X2 parameters are no longer used for the left and right edges of the TEXT block. For example, using <TEXT ALIGN=C> will center text in the middle of the page. Using <TEXT ALIGN=C X=25 ABS> will center text at GRID position 25. You could achieve the same result without ABS by using <TEXT ALIGN=C X=0 X2=50 FORCE>.

Text Commands

Parameter	Description
ALIGN=L|R|C|J	Sets the initial alignment to Left, Right, Center or Justify. Default is Left.
BORDER=number	Sets the border size. A value of 1 is a line with a width of 1/72 of an inch.
BORDERCOLOR=color	Sets the border color (when the 3D option is not used).
BORDERDASH=number [,number,...]	A number or comma separated list of numbers to specify the ON/OFF length of the border.
PADDING=number	Use to provide extra padding between text and border. Specify the value in points (1/72 of an inch).
CORNERSIZE=number	The size of the optional CORNERSTYLE in inches (centimeters if METRIC is used). Consider using PADDING when setting this to a relatively large value so the text remains within the confines of the border.
CORNERSTYLE=text	The optional type of corners to use for the border. The default border is a simple rectangle. Valid values are: Round Bevel Scoop Stair In addition, you may specify a different style for any given corner. Pass a comma separated string containing a code for each corner followed by a colon then the type. The codes for each corner is: TL - Top left TR - Top right BR - Bottom right BL - Bottom left For example, set to "TL:round,TR:scoop,BR:round" to give the top left and bottom right corners a round edge and the top right a scoop edge. The bottom left edge, since it wasn't specified, will have a standard right-angled corner.

Text Commands

Parameter	Description
BGCOLOR=color	Sets the background color of the text block.
PATTERN=number	A pattern number to use for the background. See the RECT command and its PATTERN option for a sample of each pattern's appearance.
PATTERNCOLOR=color	Color for the pattern.
3D	Sets the border style as 3D which is lighter on top and left and darker on bottom and right. The base color used is the BGCOLOR or BORDERCOLOR if BGCOLOR is not specified.
SIDES=text	Sets what sides to draw the border on. Default is all sides. Values are L (Left), R (Right), T (Top) and B (Bottom). For example, use SIDES=T,B to specify the border should be drawn on top and bottom only.
COLNUM=number	Sets the number of columns to divide the text into. Setting to two, for example, will fill up the left half of the page then move to top right half of the page and continue. A new page is started automatically once all columns are filled.
COLSPACE=number	Sets the amount of space in units based on the GRID command between each column.
COLBAR=number	Draws a vertical bar between multiple columns of text. Set this parameter to the line width.
NOBREAK	Set this to prevent the text block from breaking across a page. You should only use this option for a small amount of text that will fit between the header and footer. If the text cannot fit between the header and footer then it will only print the portion that fits.

Text Commands

Parameter	Description
FORCE	Set this to prevent the text from wrapping or flowing to the next page. You should only use this option to force some text to print where it would normally try to wrap or flow to the next page.
FACE=font number	Sets the font.
SIZE=point size	Sets the point size for the font.
NO_ORPHAN	Helps prevent orphan lines. An orphan is the first line of a paragraph printed by itself at the bottom of the page. You may also specify this for all text blocks by using the META tag.
NO_WIDOW	Helps prevent widow lines. A widow is the last line of a paragraph printed by itself at the top of the page. You may also specify this for all text blocks by using the META tag.
LINESPACE=number	Sets the text line spacing. Each unit is 1/72 of an inch. Default is 2.
BREAKON="text"	Set of characters a line break may occur on in addition to the space character. This overrides any global setting made with the BREAKON tag.
FCOLOR=color	Sets the fill color. This is also the font color.
SCOLOR=color	Sets the stroke color.
ROTATE=number	The number of degrees to rotate the text. Text is rotated around the lower left point of the first character on the line.
COMP=number	A percentage to compress the text by. A value less than 100 compresses text while a value greater than 100 expands text.

Text Commands

Parameter	Description
VALUE=text	Shortcut used to place a small amount of text on the page. Normally, you would place text between the opening and closing text tags and not use this option. There is no need to use the closing </TEXT> command when using this option. You may not use any tags in your text string with this option and no checks will be done for page breaks. This should only be used when you have some small text strings to place at specific X/Y locations on the current page.

The following commands in this section detail the various attributes you may apply to text.

Text Commands

These are the variables you may use in your document. To insert the text rather than the value of the variable, use a slash in front of the &. For example, \&date to display &date in your text rather than the current date.

Variable	Sample	Description
&page	98	The current page number. This may be reset by using the SETPG command.
&runpage	98	The running page number. Always reflects the current physical page in the document.
&totpage	250	The total number of pages in the document.
&getpage("ANCHOR")	102	The page number the anchor is on. Use this feature to refer to a page elsewhere in the document. Set an anchor with the NAME parameter filled in on the page you want to refer to. Use the function &getpage("anchor name") on the page where you want to print the page number of the referenced page. The value used for the getpage function is the same value you used for the NAME parameter in the anchor. Include RUNPAGE as an option on the anchor tag to return the running (&runpage) page number. The default is the page (&page) number which can be changed with the SETPG function.
&date	Jul 27, 2010	The current system date when the document was created. See the DATE tag for formatting options.
&time	8:38 pm	The current system time when the document was created.

Text Commands

Variable	Sample	Description
&reg	®	Registered trademark symbol
&trad	™	Trademark symbol
&copy	©	Copyright symbol
&emdash	—	emdash
&lt	<	Less-than symbol
&gt	>	Greater-than symbol
&plusmn	±	Plus/Minus
&cent	¢	Cent
&pound	£	Pound
&euro	€	Euro
&yen	¥	Yen
&deg	°	Degree
&shy	-	Soft hyphen (same as using the SHY tag)
&sup2	²	Superscript 2
&sup3	³	Superscript 3
&mu	µ	Mu
&glt	«	Guillemet (left)
&ggt	»	Guillemet (right)
&Oslash	Ø	O with slash
&oslash	ø	o with slash

Text Commands

<BR
VALUE=number>

Used to insert a line break. You may optionally specify a value which is the number of inches (or centimeters if METRIC is used) to drop down from the current position.

Parameter	Description
VALUE=number	Number of inches (or centimeters if METRIC is used) to drop down. May use a decimal value.

Text Commands

<P>

Used for a new paragraph. This tag is equivalent to using

.

Text Commands

<A
NAME=text|HREF=text|POPUP=text|EMBED=text
EMBED
MIME=text
ICON=text
FILENAME=text
SUBJECT=text
LINKLINE=number
LINKCOLOR=color
ANNOT=text
TITLE=text
COLOR=color
LANGUAGE=text
COUNTRY=text>
</A>

Used to add a web link, anchor or annotation. See the LINKLINE and LINKCOLOR commands as well. Use the NAME to insert an anchor in the current document to link to. When you use the A tag this way you do not need a closing </A> tag. You may then reference that page by inserting an anchor using HREF and placing a # in front of the name.

Parameter	Description
NAME=text|HREF=text| POPUP=text|EMBED=text	Use one of the above in the anchor or link. NAME is used to name an anchor or POPUP. HREF is used to specify the location a link points to or for a highlighted popup note. POPUP is used to store the name of the annotation. EMBED is used to store an external file in the PDF. This can be any type of file such as a Word, Excel, CAD, movie or other file. The end user may open the attachment for viewing in the target application or save it to disk.
MIME=text	Optional. For use when EMBED is specified. The mime type associated with the embedded file. For example, application/vnd.ms-excel for Excel. Windows based versions of PDF Charts will attempt to locate the correct mime type from the system registry when the PDF is built.

Text Commands

Parameter	Description
ICON=text	Optional. For use when EMBED is specified. The icon to use for an embedded file. The values are: Graph Paperclip Attachment Tag The paperclip is the default.
FILENAME=text	Optional. For use when EMBED is specified. The file name to use for the attachment. This is not the source file name on disk - it is the filename to refer to the embedded file by once it's in the PDF. The default is the name used in the EMBED entry.
SUBJECT=text	Optional. For use when EMBED is specified. The subject for the attachment.
LINKLINE=number	The width of the line to draw for the link. Used a value of 0 to turn off the line.
LINKCOLOR=color	The color of the text and line to draw for the link.
ANNOT=text	The text to place in an annotation. This is specified in the link using the NAME option. Display the annotation by using another A tag with POPUP set to the value used in NAME.
TITLE=text	The text to place in an annotation title. This is specified in the link using the NAME option. Display the annotation by using another A tag with POPUP set to the value used in NAME.
COLOR=color	An RGB color to use when using the POPUP or EMBED option. The default is yellow for POPUP and blue for EMBED.
LANGUAGE=text	Text is assumed to be Unicode (2-character format) when this is used. A 2-character ISO 639 language code—for example, EN for English or JA for Japanese. The complete list of codes are available through http://www.iso.ch.

Text Commands

Parameter	Description
COUNTRY=text	Optional, used with the LANGUAGE option above. A 2-character ISO 3166 country code—for example, US for the United States or JP for Japan.

For example:

```
.
.
<TEXT>
<A NAME="linkhere">Here is some text I want to link back to.
</TEXT>
<PAGE>
.
.
Click <A HREF="#linkhere">here</A> to jump to the page with the anchor.
```

To insert a web link or email simply enter the destination and remember to close the tag.

For example:

```
<TEXT>
Click <A HREF="http://www.mysite.com">right here</A> to visit our site.
Click <A HREF="mailto:me@mysite.com">here</A> to send me an email.
</TEXT>
```

To insert an annotation use the NAME and ANNOT parameters to enter the text of the annotation.
Then link to the annotation by specifying the name in the POPUP parameter like this:

```
<TEXT>
<A NAME="myannot" ANNOT="Here is some text to pop-up in the document.">
Click this icon to read annotation ---> <A POPUP="myannot">.
</TEXT>
```

Click this icon to read annotation ---> .

You may also have an annotation linked to a word or phrase. The user can double-click on the link to display the popup. The link uses the LINKCOLOR for the text but is not underlined. Acrobat 4 and 5 differ slightly on how this is displayed. Acrobat 4 will paint the background (default is yellow) behind the text. Acrobat 5 does not do this. You may want to use the BGCOLOR to provide more of a visual clue to the user to double-click the link and give a consistent look between different versions of Acrobat. For example:

Text Commands

```
<TEXT>
<A NAME="p5" ANNOT="This could be an explanation of the highlight."
TITLE="Test Title">
Double-click on <A COLOR=lime HREF="popup:p5"><BGCOLOR VALUE=lime>this text
<BGCOLOR VALUE=white></A> to read the pop-up.
</TEXT>
```

Double-click on this text to read the pop-up.

```
<TEXT>
Double-click this tag -> <A EMBED="c:\files\myexcel.xls"
FILENAME="CorpEarnings.xls" COLOR=aqua ICON=tag
MIME="application/vnd.ms-excel" SUBJECT="Earnings for current year"> to
open Excel file or right click to open or save.
</TEXT>
```

Double-click this tag -> to open Excel file or right click to open or save.

Text Commands

<EXT
HREF=text>
</EXT>

Used to add a link to an external file or application. Specify a document (like a Word, Excel, CAD, movie or other file) to be opened when the link is clicked. The file is not embedded in the PDF.

See the A tag and the EMBED option if you want to embed the external file in the PDF. That way, the file is included as part of the PDF for the end user to open or save separately if they choose.

Parameter	Description
HREF=text	Name of an external file or application to launch.

Text Commands

<MOV
HREF=text>
</MOV>

Used to add a link to an external movie file. Specify a movie file to be opened when the link is clicked. Works similar to the A tag. The movie file must be available as a separate file on the machine viewing the PDF.

Use the MEDIA tag for embedding movies or audio (such as MP3 files) in the PDF.

Parameter	Description
HREF	Name of an external movie file to launch.

Text Commands

<MEDIA
HREF=text
X=number
Y=number
HEIGHT=number
WIDTH=number
MIME=text
FILENAME=text
REPEAT[=number]
BORDER=color
PAGEOPEN
PAGEVISIBLE
MOUSEOVER
CONTROLS=text
ALTTEXT=text>
</MEDIA>

Used to embed an audio or video file in the PDF. Requires Acrobat or Reader 6.0 or higher to view the multimedia file. Works similar to the A tag. Place text or an image between the opening and closing MEDIA tags. You may issue this command from within a text block or outside of it. You do not need to use the closing /MEDIA tag when outside of a block of text. The X/Y and HEIGHT/WIDTH values will need to be specified when outside of a block of text.

Place an image or text between the opening/closing tags. Clicking the image or text starts playing the clip unless one of the page open/visible or mouseover options are used.

You may leave the closing /MEDIA tag off and specify a WIDTH and HEIGHT instead. The WIDTH and HEIGHT are based on the current grid units.

Parameter	Description
HREF=text	Name of an file to embed. This may be an audio, video or flash file.
X=number	The X position in points (1/72 of an inch) from the left page edge to place the image. If you are in a block of text you don't need to specify this. The media will appear in the line of text.
Y=number	The Y position in points (1/72 of an inch) from the bottom page edge to place the image. If you are in a block of text you don't need to specify this. The media will appear in the line of text.

Text Commands

Parameter	Description
HEIGHT=number	Only needed if not in a block of text or not using the closing /MEDIA tag. The HEIGHT of the media in grid units when in a block of text. The HEIGHT of the media in points (1/72 of an inch) when not in a block of text.
WIDTH=number	Only needed if not in a block of text or not using the closing /MEDIA tag. The WIDTH of the media in grid units when in a block of text. The WIDTH of the media in points (1/72 of an inch) when not in a block of text.
MIME=text	The mime type for the file. This is determined for some files automatically by the file name extension. The files currently configured are .avi, .wmv, .mpeg, .mov, .swf, .wav, and .mp3. Other types must supply the value (unless it exists in the Windows system registry at build time). For example, video/x-msvideo or audio/x-midi. Windows based versions of PDF Charts will attempt to locate the correct mime type from the system registry when the PDF is built.
FILENAME=text	The file name to use for the attachment. This is not the source file name on disk - it is the filename to refer to the embedded file by once it's in the PDF. The default is the name used in the HREF entry.
REPEAT[=number]	Use REPEAT by itself to continuously repeat the video or audio clip. The default is to play the clip once then stop. Set REPEAT to a value to repeat the clip that many times, such as REPEAT=3 to play 3 times.
BORDER=color	Set to a valid color. Draws a border around the area where the media is located.
PAGEOPEN	Play the file when the page is opened in the viewer.
PAGEVISIBLE	Play the file when the page is visible in the viewer.
MOUSEOVER	Play the file when the cursor or mouse pointer is on the active area of the media.
CONTROLS=text	Set to ON or OFF. Default is ON. The controls for the media file are not shown if set to OFF.

Text Commands

Parameter	Description
ALTTEXT=text	Alternate text to display if the media clip cannot be played.

Text Commands

Media examples - requires Acrobat or Reader 6.0 or higher to view:

```
<TEXT>
<MEDIA HREF="c:\my music\jazz.mp3">
Sample music file
</MEDIA>
</TEXT>
```

Sample music file

```
<TEXT>
<MEDIA HREF="c:\my games\pacman.swf" PAGEVISIBLE BORDER=blue WIDTH=38
HEIGHT=50 ALTTEXT="Flash not installed - Cannot open">
</TEXT>
```

Text Commands

<LINKLINE
VALUE=number>

Used to set the line width for links. Set to 0 to turn-off underlines in links altogether. Default is 1.

Parameter	Description
VALUE=number	Line width or 0 to turn-off link underlines.

Here is a link with LINKLINE set to 3: FyTek, Inc.

Here is a link with LINKLINE set to 0: FyTek, Inc.

Text Commands

<LINKCOLOR
VALUE=color>

Used to set the text and line color for links. Default is an RGB value of .2,.2,1.

Parameter	Description
VALUE=color	Sets the link color.

Here is a link with LINKCOLOR set to red: FyTek, Inc.

Text Commands

<COMP
VALUE=number>

Used to specify the compression percentage for text. Unlike the other tags in this section, this tag goes outside of the TEXT block. You may override the value on the TEXT command.

Parameter	Description
VALUE=number	A percentage to compress the text by. A value less than 100 compresses text while a value greater than 100 expands text.

This text has been expanded by 150 percent of it's original size. Text will remain at this percentage until another COMP tag is issued.

Text Commands

<BULLET
VALUE=text>

Used to display a bullet point. You may also use LI (List Item) in place of BULLET.

Parameter	Description
VALUE=text	The type of bullet - Round is the default.

Sample	Type
•	Round
■	Square
●	Large
★	Star
◆	Diamond
☛	Hand1
☞	Hand2
❄	Snow
✿	Flower1
❀	Flower2
➜	Arrow1
→	Arrow2
⟶	Arrow3
➢	Arrow4
➪	Arrow5
➳	Arrow6

Text Commands

<CHECK
VALUE=number>

Used to display a check mark.

Parameter	Description
VALUE=number	The type of check to print. There are six types numbered from 1 to 6.

Sample	Type
✓	1 (Default)
✔	2
✕	3
✖	4
✗	5
✘	6

Text Commands

<DATE
FORMAT=text>

Use to set the format for the date variable. This command just specifies how you want the date to be displayed. It does not actually display the date. You must issue it before using the &date variable however.

Parameter	Description	
FORMAT=text	A quoted text string formatted how you want the date to appear. Leaving this out defaults to Mon D, YYYY. You can use any of the following as variables:	
	Month	the full month (i.e. January)
	Mon	first 3 characters of the month (i.e. Jan)
	MM	the month number with a leading zero when needed
	M	the month number without a leading zero
	DD	the day with a leading zero when needed
	D	the day without a leading zero
	YYYY	the full four digit year
	YY	the last two digits of the year

Examples:

Format	Result
<DATE FORMAT="MM/DD/YY">	07/27/10
<DATE FORMAT="DD/MM/YY">	27/07/10
<DATE FORMAT="M-D-YYYY">	7-27-2010
<DATE FORMAT="Month, YYYY">	July, 2010
<DATE FORMAT="MM.DD.YY">	07.27.10
<DATE>	Jul 27, 2010

Text Commands

<TAB
VALUE=number>

Used to offset the current X position in a line of text. Affects the current line only. If you want to change the margins use the X tag instead. Setting the TAB value affects the current line so you should place a BR before a section of text using the TAB tag. You may unintentionally overlap text on the same line otherwise.

Parameter	Description
VALUE	The amount based on the current XUNITS setting from the GRID tag to offset the current X position by. May be positive or negative.

For example:

```
<TEXT X=15 X2=65>
Here is where a line normally starts.<BR>
<TAB VALUE=-5>This line is shifted to the left by 5 units.<BR>
<TAB VALUE=5>This line is shifetd to the right by 5 units.<BR>
This line is back to where text normally starts from.<BR>
</TEXT>
```

Here is where a line normally starts.
This line is shifted to the left by 5 units.
This line is shifetd to the right by 5 units.
This line is back to where text normally starts from.

Text Commands

<FONT
FACE=text
SIZE=number
COLOR=color
COMP=number
CURRLINE>

Used to set the current font and/or point size. Both parameters are optional however you must at least enter either FACE or SIZE. You may nest levels of FONT and use </FONT> to return to the previous setting.

Parameter	Description
FACE=text	The font name or number.
SIZE=number	The point size for the font.
COLOR=color	Enter a valid color.
COMP=number	A percentage to compress the text by. A value less than 100 compresses text while a value greater than 100 expands text.
CURRLINE	The font change should apply only to the current line. For example, in a news article where the first line of text is a larger sized font than the rest of the article.

There are 14 built-in fonts (plus 8 Japanese, 12 Chinese and 8 Korean fonts) and you may add your own TrueType or Type 1 fonts. Here are the built-in fonts and their values. Note that for fonts 1-14 you may specify either the number or the name for the FACE value.

Number	Name	Sample
1	Courier	ABCDEFG abcdefg 12345
2	Helvetica	ABCDEFG abcdefg 12345
3	Times	ABCDEFG abcdefg 12345
4	Courier-Bold	**ABCDEFG abcdefg 12345**
5	Helvetica-Bold	**ABCDEFG abcdefg 12345**
6	Times-Bold	**ABCDEFG abcdefg 12345**
7	Courier-Italic	*ABCDEFG abcdefg 12345*
8	Helvetica-Italic	*ABCDEFG abcdefg 12345*
9	Times-Italic	*ABCDEFG abcdefg 12345*
10	Courier-Bold-Italic	***ABCDEFG abcdefg 12345***

Text Commands

Number	Name	Sample
11	Helvetica-Bold-Italic	***ABCDEFG abcdefg 12345***
12	Times-Bold-Italics	***ABCDEFG abcdefg 12345***
13	Symbol	ΑΒΧΔΕΦΓ αβχδεφγ 12345
14	ZapfDingbats	✡✢✣✤✥✦✧ ❁✲✵✶✷✸✳ ✎✐✓✔✕
C1	STSong-Light (Chinese font) GBK-EUC-H encoding	
C1B	STSong-Light Bold (Chinese font)	
C1I	STSong-Light Italics (Chinese font)	
C1BI	STSong-Light Bold-Italics (Chinese font)	
C2	MSung-Light (Chinese font) ETen-B5-H encoding	
C2B	MSung-Light Bold (Chinese font)	
C2I	MSung-Light Italics (Chinese font)	
C2BI	MSung-Light Bold-Italics (Chinese font)	
C3	MSung-Light (Chinese font) ETen-B5-H encoding	
C3B	MHei-Medium Bold (Chinese font)	
C3I	MHei-Medium Italics (Chinese font)	
C3BI	MHei-Medium Bold-Italics (Chinese font)	
J1	HeiseiMin-W3 (Japanese font) 90ms-RKSJ-H encoding	
J1B	HeiseiMin-W3 Bold (Japanese font)	
J1I	HeiseiMin-W3 Italics (Japanese font)	
J1BI	HeiseiMin-W3 Bold-Italics (Japanese font)	
J2	HeiseiKakuGo-W5 (Japanese font) 90ms-RKSJ-H encoding	
J2B	HeiseiKakuGo-W5 Bold (Japanese font)	
J2I	HeiseiKakuGo-W5 Italics (Japanese font)	
J2BI	HeiseiKakuGo-W5 Bold-Italics (Japanese font)	
K1	HYGoThic-Medium (Korean font) KSC-EUC-H encoding	
K1B	HYGoThic-Medium Bold (Korean font)	

Text Commands

Number	Name	Sample
K1I	HYGoThic-Medium Italics (Korean font)	
K1BI	HYGoThic-Medium Bold-Italics (Korean font)	
K2	HYSMyeongJo-Medium (Korean font) KSC-EUC-H encoding	
K2B	HYSMyeongJo-Medium Bold (Korean font)	
K2I	HYSMyeongJo-Medium Italics (Korean font)	
K2BI	HYSMyeongJo-Medium Bold-Italics (Korean font)	

You'll need to install the Chinese, Japanese or Korean font packs from Adobe in order to view a PDF with these characters. The font packs are available (free of charge) at:
http://www.adobe.com/products/acrobat/acrrasianfontpack.html

Note that Chinese/Japanese/Korean characters are two-bytes in length.

You may also add your own fonts. See the ADDFONT command for more information.

Text Commands

<ALIGN VALUE=text>

Used to set the current alignment. Setting the ALIGN value affects the current line so you should place a BR before a long section of text using the ALIGN tag. You may unintentionally overlap text on the same line otherwise. You may not want to use BR tags prior for headings or other circumstances where you want some left and some right aligned text on the same line.

Parameter	Description
ALIGN=L|R|C|J	Sets the alignment to Left, Center, Right or Justified.

For example:

```
<TEXT X=15 X2=65>
Text on the left
<ALIGN VALUE=C>
Centered Text
<ALIGN VALUE=R>
Text on the right<BR>
</TEXT>
```

Text on the left Centered Text Text on the right

Text Commands

<LINESPACE
VALUE=number>

Used to specify the line spacing in 1/72 of an inch. You may override the value on the TEXT command.

Parameter	Description
VALUE=number	The amount of space between lines of text specified in units of 1/72 of an inch. Default is 2.

This text has a linespace value set at 12 which is one more than the current point size of 11. Notice how far each line drops down when the text wraps.

This is roughly double spaced text.

Text Commands

<MINLINES
VALUE=number>

Used to force a page break if the minimum number of lines specified cannot fit on the current page. Use this command to prevent orphan headings in text blocks.

Parameter	Description
VALUE	The minimum number of lines (approximate - based on the current font size) that must be able to fit on the current page. If the minimum number doesn't fit, a page break is performed. This feature can be used in TEXT blocks to prevent a heading from appearing at the bottom of a page while the text it goes with starts on the next page. In this case, set MINLINES to a value (somewhere between 3 and 10 perhaps) and place this command just before the heading.

Text Commands

<FCOLOR
VALUE=color>

Used to change the text color.

Parameter	Description
VALUE	Enter a valid color.

Here is a text line using several different colors.

Text Commands

<BGCOLOR
VALUE=color>

Used to set the background color for highlighting text.

Parameter	Description
VALUE=color	Enter a valid color.

Here is some text that has been highlighted using the BGCOLOR command.

Text Commands

<REND
VALUE=number>

Used to specify the text rendering mode.

Parameter	Description
VALUE=number	0 = Fill text (default) 1 = Stroke text (outline) 2 = Fill then stroke 3 = No fill or stroke (invisible)

This text is in mode 0

This text is in mode 1

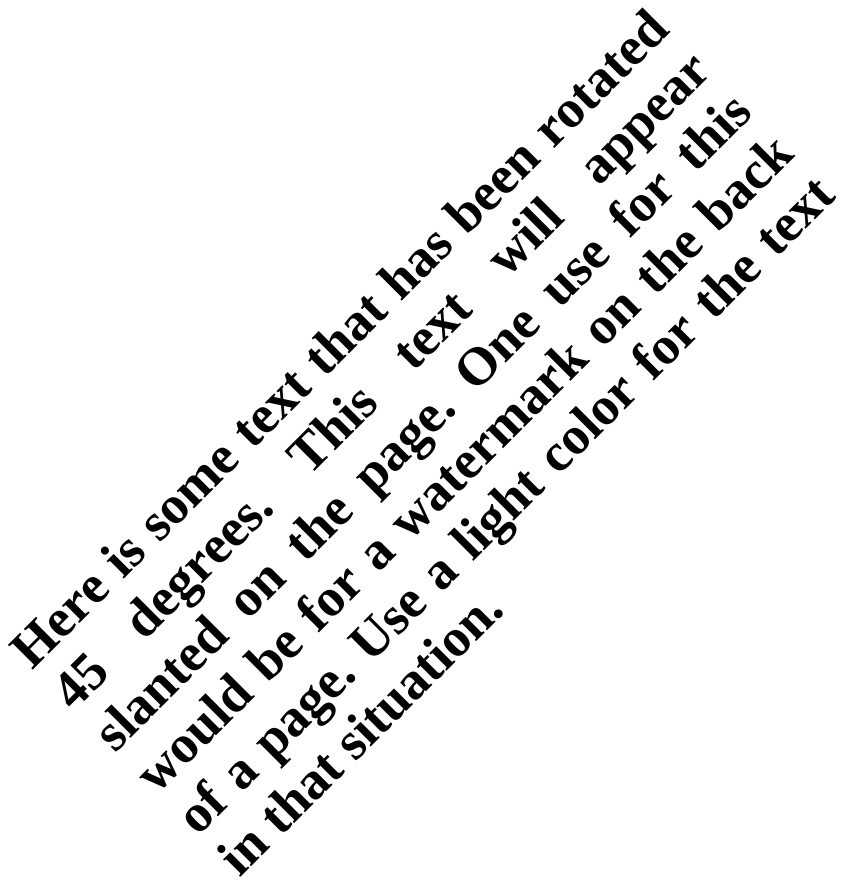
This text is in mode 2

Text Commands

<ROTATE
VALUE=number>

Used to rotate text.

Parameter	Description
VALUE=number	The number of degrees to rotate the text. Text is rotated around the lower left point of the first character on the line.



Text Commands

<SUB>
</SUB>

Used to turn subscripting on and off.

Here is a line using the _{subscripting} tag.

Text Commands

<SUP
VALUE=number>
</SUP>

Used to turn superscripting on and off.

Here is a line using the superscripting tag.

Parameter	Description
VALUE=number	Optional. Use this to control the height of the subscript. The amount in is units of 1/72 of an inch. The default is 5 if this parameter is left out.

Text Commands

<IMG
SRC="text"
ALIGN=text
X=number
Y=number
X2=number
Y2=number
SCALE=number
SCALEX=number
SCALEY=number
WIDTH=number
HEIGHT=number
PCTX=number
PCTY=number
KEEPRATIO
INTERPOLATE
HMARGIN=number
VMARGIN=number
TRANSPARENCY=number[,number]
BACKGROUND
DPI=number>

Used to insert an image. This can be a jpeg (at 72-DPI) or a 256-color non-interlaced GIF only. You may issue this command from within a text block or outside of it. Images are stored in the PDF at the same resolution (DPI) as provided.

Parameter	Description
SRC="text"	Only required option for the tag. The path and file name of the image you wish to include. The image itself will be embedded in the PDF. Place quotes around this value. You may also use a web address that starts with http:// to pull an image from a web site. Note that the image will be stored locally while the PDF is built. Also, downloading large images over a slow modem will take time.

Text Commands

Parameter	Description
ALIGN=text	Only applies in a block of text. You may set this value to Bottom (default), Middle or Top. For Bottom, the bottom of the image is aligned with the bottom of the current text line. For Middle, the middle of the image is aligned with the middle of the current text line. For Top, the top of the image is aligned with the top of the current text line.
X=number	The X grid position of the left side to place the image. If you are in a block of text you don't need to specify this. The image will appear in the line of text.
Y=number	The Y grid position for the bottom of the image. If you are in a block of text you don't need to specify this. The image will appear in the line of text.
X2=number	Optional. Only for images not inside of a block of text. The X2 grid position of the right side to place the image. The image will be stretched or compressed width wise to fit between the X and X2 values. Be sure to specify the Y2 setting as well. This option overrides the scale settings.
Y2=number	Optional. Only for images not inside of a block of text. The Y2 grid position for the top of the image. The image will be stretched or compressed height wise to fit between the Y and Y2 values. Be sure to specify the X2 setting as well. This option overrides the scale settings.

Text Commands

Parameter	Description
SCALE=number	The amount to compress or expand the image by in the X and Y direction. Values less than 100 will compress and values greater than 100 will expand. Setting this value overrides any values specified for SCALEX or SCALEY.
SCALEX=number	The amount to compress or expand the image by in the X direction. Values less that 100 will compress and values greater than 100 will expand.
SCALEY=number	The amount to compress or expand the image by in the Y direction. Values less that 100 will compress and values greater than 100 will expand.
WIDTH=number	Optional. The width to display the image at in points (1/72 of an inch). Overrides the SCALE settings.
HEIGHT=number	Optional. The height to display the image at in points (1/72 of an inch). Overrides the SCALE settings.

Text Commands

Parameter	Description
PCTX=number PCTY=number	Use these options to place an image at a particular X,Y position on the page without regards to the current GRID settings. The X and Y values in this case will represent inches (or centimeters if METRIC is used) from the top left corner of the physical page when using PCTX and/or PCTY rather than grid positions. The PCTX and PCTY values represent a percentage, 0 to 100, of the total width and height respectively from the top left corner of the image. The point determined by PCTX and PCTY is the point on the image which will be placed at position X,Y. The PCTX and PCTY options only work when the IMG tag is outside of any TEXT block.  For example, use X=8.5 Y=5.5 PCTX=100 PCTY=50 To place an image vertically in the middle at the right edge of a page which is 8.5 inches by 11 inches. With the above page size, X=0 Y=0 PCTX=0 PCTY=0 will place an image in the upper left corner. X=8.5 Y=11 PCTX=100 PCTY=100 will place the image in the lower right corner.
KEEPRATIO	Preserves the aspect ratio when shrinking the image to fit on a page.

Text Commands

Parameter	Description
INTERPOLATE	Applies an image interpolation algorithm during rendering. This helps to smooth out the transition between pixels when the resolution of the image is lower than that of the output device. At higher magnification levels images on the screen typically appear jagged. This option removes most of the jagged appearance. Here's an example (second image uses INTERPOLATE): 
HMARGIN=number	Used when spacing text around the image. Set a value based on the current GRID setting. Text will remain this distance from the left or right edge of the image. See the example.
VMARGIN=number	Used when spacing text around the image. Set a value based on the current GRID setting. Text will remain this distance from the bottom of the image. See the example.
TRANSPARENCY=number [,number]	Used to specify the transparency for GIF images. The transparency value, if any, is taken from the GIF file if this option is not included. This option overrides the value from the file. Specify the palette entry and, optionally, a thru value to make the entire range transparent.

Text Commands

Parameter	Description
BACKGROUND	Used to place the image behind any background created from a PDFPAGE or USEPAGE command. Otherwise, using this option places the image behind all other standard page content. This option is only for IMG tags outside of any text block.
DPI=number	Assigns the DPI (Dots Per Inch) for the image. Must be a value greater than 72. PDF Charts will typically read this value from the image. Use this option only if you want to override the computed value. The value is only used for scaling purposes - setting this value does not physically change the DPI of the image. Image heights and widths are scaled in the program by a factor of 72/DPI even when this option isn't used. For example, if your image is 600 DPI, it is scaled so when you zoom in on the PDF to 800% you see the image at approximately normal scale (100%).

Here is an image  set in this line of text.

Here is an example of using an image with a block of text. The text will automatically space over to leave room for the image when the HMARGIN and/or VMARGIN tags are used with the image. The image may only be placed at the left or right when using this option. Set the alignment to the right if you want the image right aligned. Right after the image, use the Y tag along with an ALIGN option for the text that follows.

Here is some text to place next to the image to demonstrate the HMARGIN and VMARGIN options. Note that the text will be moved to the right until it is passed the image. The text will then flow into its normal position after it has moved past the image. You must place a <Y ALIGN=text> tag after the IMG tag in order for this to work. In addition, the IMG tag must have the HMARGIN and/or VMARGIN set.

Here is some text to place next to the image, this time with the image on the right. Note that the text will be moved to the right until it is passed the image. The text will then flow into its normal position after it has moved past the image. You must place a <Y ALIGN=text> tag after the IMG tag in order for this to work. In addition, the IMG tag must have the HMARGIN and/or VMARGIN set.

The above is coded as:

```
<TEXT FACE=3 SIZE=11 ALIGN=J X=15 X2=65 COMP=100><BR>
<IMG SRC="star.tif" HMARGIN=2 VMARGIN=2><Y ALIGN=J>
Here is some text to place next to the image to demonstrate the HMARGIN and VMARGIN options.
Note that the text will be moved to the right until it is passed the image.
The text will then flow into its normal position after it has moved past the image.
You must place a &lt;Y ALIGN=text&gt; tag after the IMG tag in order for this to work.
In addition, the IMG tag must have the HMARGIN and/or VMARGIN set.<BR><BR>
<ALIGN VALUE=R><IMG SRC="star.tif" HMARGIN=2 VMARGIN=2><Y ALIGN=J>
Here is some text to place next to the image, this time with the image on the right.
Note that the text will be moved to the right until it is passed the image.
```

Text Commands

```
The text will then flow into its normal position after it has moved past the image.
You must place a &lt;Y ALIGN=text&gt; tag after the IMG tag in order for this to work.
In addition, the IMG tag must have the HMARGIN and/or VMARGIN set.
</TEXT>
```

Text Commands

<BIG>
</BIG>

Used to increase the current point size by 2 points. You may nest these tags. Use the /BIG tag to bring the current point size down by 2 points.

This text is getting bigger

Text Commands

<SMALL>
</SMALL>

Used to decrease the current point size by 2 points. You may nest these tags. Use the /SMALL tag to bring the current point size up by 2 points.

This text is getting smaller

Text Commands

<B>
</B>

Used to turn bold face font on and off. You may also use a <STRONG> tag in place of this. Only works with the built-in font faces - Courier, Helvetica and Times Roman and Asian fonts.

Here is some **bold** text.

<I>
</I>

Used to turn italics on and off. You may also use a <EM> tag (emphesis) in place of this. Only works with the built-in font faces - Courier, Helvetica and Times Roman and Asian fonts.

Here is some *italics* text.

Text Commands

<U>
</U>

Used to turn underlining on and off. You can use <U2> and </U2> for a double underline.

Here is a line with an underline and a double underline tag in it.

Text Commands

<SHY>

Used to insert a soft hyphen. Place the tag within a word, such as:
en<SHY>courag<SHY>ing

The soft hyphens will be converted to a - when the word doesn't quite fit at the end of a line of text but enough of it fits along with the hyphen. Any soft hyphens not used are ignored.

May also use the variable in place of this tag. Works the same way:
encouraging

Text Commands

<X
VALUE=number
X2=number>

Used to change the X and/or X2 values in a block of text. Affects all lines until another X tag is issued. You can also use this feature to do some column alignment in a block of text. Both parameters are optional however you must at least enter either VALUE or X2. Setting the X value affects the current line so you should place a BR before a section of text using the X tag. You may unintentionally overlap text on the same line otherwise.

Parameter	Description
VALUE	The left setting based on the current XUNITS setting from the GRID tag. Must be a positive value.
X2	The right setting based on the current XUNITS setting from the GRID tag. Must be a positive value.

For example:

```
<TEXT X=15 X2=65>
Here is where a line normally prints.<BR>
<X VALUE=20 X2=30>This text has been squeezed into a smaller area.<BR>
It will stay this way until another X command is issued.<BR>
</TEXT>
```

Here is where a line normally prints.
This text has been squeezed into a smaller area.
It will stay this way until another X command is issued.

Text Commands

<Y VALUE=number>

Used to change the Y position in a block of text. About the only time you'll need to modify the Y position is when you want to move back to the top of the text block for positioning some text (like a report header).

Parameter	Description
VALUE	The setting based on the current YUNITS setting from the GRID tag. Must be a positive value. The top of a block of text is always 0.

For example:

```
<TEXT X=15 X2=65>
Text on the left<BR>
Second line of text on the left<BR>
<Y VALUE=0><ALIGN VALUE=R>
Text on the right<BR>
Second line of text on the right<BR>
</TEXT>
```

Text on the left
Second line of text on the left

Text on the right
Second line of text on the right

Text Commands

<CAPTUREY>
NAME=text
VALUE=number
IFLESS
IFGREATER
CLEARALL>

Used to capture the current Y value. The RESTOREY command uses the last value captured with this command.

Parameter	Description
NAME=text	Optional name to use to store more than one instance. Default is blank.
VALUE=number	Used to force a value in for Y. Typically you'd leave this option off. This is mainly so you can set a min or max value for use with the MIN/MAX options in RESTOREY.
IFLESS	Only store the Y value if it's less than the currently stored value for the NAME provided.
IFGREATER	Only store the Y value if it's greater than the currently stored value for the NAME provided.
CLEARALL	Clears out (sets to 0) all the currently stored NAME values for Y positions.

Text Commands

<RESTOREY
NAME=text
MIN
MAX>

Used to restore the current Y value. The last Y position stored by the CAPTUREY command is used by this command to set the current Y position.

Parameter	Description
NAME=text	The name to restore (if a name was used in the CAPTUREY command).
MIN	Sets Y to the minimum value of all currently stored values from the CAPTUREY command.
MAX	Sets Y to the maximum value of all currently stored values from the CAPTUREY command.

Charts

Charts are used to graphically display numeric information. There are several types of charts including BAR/LINE, AREA, RIBBON, PIE, SCATTER and STOCK. The type of data you wish to display will determine which chart works best.

Charts are placed outside of any TEXT block. Leave extra padding around a chart as it's possible the chart may go beyond the boundary, depending on the chart legend or axis labels.

Charts

<CHART
WIDTH=number
HEIGHT=number
X1=number
Y1=number
X2=number
Y2=number>
</CHART>

Used to define a chart.

Parameter	Description
WIDTH=number	Sets the width of the chart in units based on the GRID command.
HEIGHT=number	Sets the height of the chart in units based on the GRID command.
X1=number	Sets the value of the left edge in units based on the GRID command. Default is 0.
Y1=number	Sets the value of the top edge of the chart in units based on the GRID command. Default is the current position.
X2=number	Sets the value of the right edge in units based on the GRID command. Default is the value of XUNITS from the GRID command.
Y2=number	Sets the value of the bottom edge in units based on the GRID command. Default is the value of YUNITS from the GRID command.

Within the <CHART> and </CHART> tags go the parameters described next. Once the </CHART> tag is processed the chart is rendered.

Charts

<PARAMS
TYPE=text
3D=number
3DBOX
3DTOP=number
3DSIDE=number
3DCOLORTOP=color
3DCOLORSIDE=color
3DLEFTCOLOR=color
3DLEFTSHADE=text
3DBOTTOMCOLOR=color
3DBOTTOMSHADE=text
3DBACKCOLOR=color
3DBACKSHADE=text
BORDEROPTS=text
ID=text
HORIZONTAL
LEFTDATALABEL=number
BGCOLOR=color
BARSTYLE=text
BARDATA=list
DATALAB=list
DATALABBGCOLOR=color
LABFONT=number
LABSIZE=number
LABCOLOR=color
LABCOMP=number
BARSPACE=number
BARMARGIN=number
BARMAX=number
PIEOFFSET=number
BARCOLOR=list
BARSHADING=list
BARSHADINGTOP
REVEFFECT
ALLBARCOLOR=number
ALLBARSHADING=text
BARPATTERN=list
IMAGE=text
IMAGETOP=text
IMAGETOPVALIGN=text
IMAGEBOT=text
IMAGETOPREV=text
IMAGEBOTREV=text
LINECOLOR=list
LINENODE
NODEWIDTH=number

Charts

LINELAB
LEGEND=list
LEGENDBGCOLOR=color
LEGENDSHADE=text
LEGENDOFFSET=number
LEGENDLABWIDTH=number
LEGENDCOLS=number
LEGENDPCT=number
NODESIZE=number
NODE=number
NODEFCOLOR=number
NODESCOLOR=number
BASEFCOLOR=color
BASESCOLOR=color
XGRID=number
YGRID=number
GRIDON=number
GRIDOFF=number
GRIDDASH=number,number[,number,number...]
GRIDFCOLOR=color
GRIDSCOLOR=color
SHOWXTICKS=On|Off
XSCALE=list
YSCALE=list
YSCALE2=list
YSCALEPFX=text
YSCALESFX=text
DATAMULT=number
DATAMLAB=list
BARCOLUMNS
LEGENDCOLOR=list
NOCOLORLEGEND
MULTCOLORLEGEND
OUTSIDELABELS
XSCALEFONT=number
XSCALESIZE=number
XSCALECOLOR=color
XSCALECOMP=number
YSCALEFONT=number
YSCALESIZE=number
YSCALECOLOR=color
YSCALECOMP=number
XAXISLABEL=text
XAXISFONT=number
XAXISSIZE=number
XAXISCOLOR=color
XAXISCOMP=number

Charts

XAXISOFFSET=number
YAXISLABEL=text
YAXISLABEL2=text
YAXISFONT=number
YAXISSIZE=number
YAXISCOLOR=color
YAXISCOMP=number
YAXISOFFSET=number
YAXISOFFSET2=number
XLABEL=list
XLABELFONT=number
XLABELSIZE=number
XLABELCOLOR=color
XLABELCOMP=number
YLABEL=list
YLABEL2=list
XLABELOFFSET=number
YLABELOFFSET=number
XLABELOFFSET2=number
YLABELOFFSET2=number
XLABELPOS=number
YLABELPOS=number
TOPLABELS
LABANGLE=number
FONT=number
SIZE=number
COLOR=color
COMP=number
TITLE=text
TITLEFONT=number
TITLESIZE=number
TITLECOLOR=color
TITLECOMP=number
TITLEOFFSET=number
FLASH=text
FLASHONLY
FLASHSIZE=number,number
FLASHBG=hex color
FLASHROUND=number
FLASHGRADIENT=text
FLASHGRADIENTFULL
FLASHGRADIENTXOFF=number
FLASHGRADIENTYOFF=number
FLASHJPG=text
FLASHJPGWIDTH=number
FLASHJPGHEIGHT=number
FLASHJPGALPHA=number

Charts

FLASHBARJPG=text
FLASHBARJPGTILE
FLASHSCALE=number
FLASHEFFECT=text
FLASHBARFADE=number
FLASHHEX
FLASHFRAMES=number>

Used to define parameters for the chart. You may issue multiple PARAMS tags within the CHART tag so you don't need to stuff all of the parameters into one long PARAMS tag.

You may also export charts in Flash format. Not all charting features are available when exporting to Flash. Also, only the bar and line type charts and flat pie charts are currently supported. Each chart is created as a separate file when exporting to Flash.

Parameter	Description
TYPE=text	One of the following: BAR-LINE, AREA, RIBBON, PIE, SCATTER, STOCK or RADAR. Not all parameters are valid for all chart types.
3D=number	Sets the depth of the chart based on units of 1/72 of an inch. Usually a value between 5 and 20 is best.
3DBOX	Outlines the front of 3D charts.
3DTOP=number	The amount to lighten or darken the top of 3D bars. Set to a value between -100 and 100. Negative values will darken and positive values will lighten. The color used is based on the color of the bar. The default is -25.
3DSIDE=number	The amount to lighten or darken the side of 3D bars or the side of 3D pie charts. Set to a value between -100 and 100. Negative values will darken and positive values will lighten. The color used is based on the color of the bar. The default is -17.5.

Charts

Parameter	Description
3DCOLORTOP=color	Optional. Color to use for the top of 3D bars. Any valid RGB color may be used (no CMYK or Pantone colors).
3DCOLORSIDE=color	Optional. Color to use for the side of 3D bars. Any valid RGB color may be used (no CMYK or Pantone colors).
3DLEFTCOLOR=color	Background color for the left pane of a 3D chart. Any valid RGB color may be used (no CMYK or Pantone colors).
3DLEFTSHADE=text	Background shading pattern for the left pane of a 3D chart.
3DBOTTOMCOLOR=color	Background color for the bottom pane of a 3D chart. Any valid RGB color may be used (no CMYK or Pantone colors).
3DBOTTOMSHADE=text	Background shading pattern for the bottom pane of a 3D chart.
3DBACKCOLOR=color	Background color for the back pane of a 3D chart. Any valid RGB color may be used (no CMYK or Pantone colors).
3DBACKSHADE=text	Background shading pattern for the back pane of a standard or 3D chart.

Charts

Parameter	Description
BORDEROPTS=text	Used to supply border and/or background options. You may supply this option more than once. Each one is applied over the last one. By using transparency with inner border options you can provide a glass effect to the chart against the background. Specify the border (top, bottom, left or right) followed by a colon then the size, type, and color. For example: "border:1 solid black" is used for a black border on all sides that is a width of 1 point. Use a semi-colon to separate multiple entries such as "border:1 solid black; border-bottom:2 dashed red;". This example will draw a solid 1 point black border on the top, left and right and a red dashed border that is 2 points thick on the bottom. You may use "border:" to set the options for all sides then use "border-top:", "border-bottom:", "border-left:", and "border-right:" to set any of the other borders as needed. Use a width of 0 to turn off a particular side, such as "border:1 solid black;border-top:0;border-bottom:1 dashed green". The type can be either solid, dotted, dashed, or a pair or numbers to represent the on/off length of a dash. The color can be any valid color setting.

Charts

Parameter	Description
	Use the "padding" option to add additional padding to the border. For example, "padding: 5" will add 5 units on all sides. Values for padding do not affect the size or placment of the chart so larger positive values may overlay other areas of the page. Use padding-top, padding-bottom, padding-left, or padding-right to adjust each side separately. You may use the short-hand "padding: top right bottom left;" to set the individual sides as well. For example, "border:1 solid #ccbb99;padding-left:10;padding-right:10;". The padding value can be positive or negative. Positive values will push the border farther away from the center and negative values will move the border closer to the center. Use "background" to set a background color for the border area. For example, "background:#e0e0e0". Use "background-image" to set a background image for the border area. The image will be scaled to fit the border area. For example, "background-image:c:\bkg.jpg". Use "shade" to set a background shading pattern for the border area. For example, "shade:yellowgreen". Use "transparency" to set the transparency name to use for the set. For example, "transparency:mytrans;".

Charts

Parameter	Description
ID=text	An optional ID to assign this chart. This ID can be used with the GetFlashChart method to return the Flash version of the chart.
HORIZONTAL	Displays basic bar charts horizontally rather than the default vertical format. Only 2D style charts are allowed.
LEFTDATALABEL=number	Vertically aligns bar values in horizontal bar charts next to the axis line as opposed to having the value labels show to the right of the bar. Specify the distance in points from the axis line.
BGCOLOR=color	Background color for the chart (all charts except PIE type). Any valid RGB color may be used (no CMYK or Pantone colors).
BARSTYLE=text	Default 3D bars are rectangular. Values for this option are: Cylinder Pyramid Cone
BARDATA=list	A list of numeric values separated by commas for bar charts. Also used as the values for a pie chart. Do not put any special formatting (such as dollar signs or commas).
HIGH=list	A list of numeric values for the high range separated by commas for stock charts. Do not put any special formatting (such as dollar signs or commas).
AVG=list	A list of numeric values for the average range separated by commas for stock charts. Do not put any special formatting (such as dollar signs or commas).

Charts

Parameter	Description
LOW=list	A list of numeric values for the low range separated by commas for stock charts. Do not put any special formatting (such as dollar signs or commas).
DATALAB=list	A list of values separated by a vertical bar (|) to print as the labels above the bars or in pie slices. Use a \n to indicate a new line. For instance, if you have 3 bars you could use Year\n2000|Year\n2001|Year\n2002 to stack "Year" on top of the number for the year.
DATALABBGCOLOR=color	Background color for the values in DATALAB. Use this to clear out a rectangle behind the number when drawing grid lines to prevent the grid line from interferring with the number. Any valid RGB color may be used (no CMYK or Pantone colors).
LABFONT=number	Used to specify the font for the data labels.
LABSIZE=number	Used to specify the point size for the data labels.
LABCOLOR=color	Sets text fill color for the data labels.
LABCOMP=number	A percentage to compress the text by. A value less than 100 compresses text while a value greater than 100 expands text.
BARSPACE=number	Used to specify the spacing between bars. The number represents a percentage of the bar size. A value of 10 means take the size of a bar, shrink it by 10% and use that as the spacing.

Charts

Parameter	Description
BARMARGIN=number	Used to specify the amount for the margin between the Y-axis and the first bar. The number represents a percentage of the size of the chart (usually 5 or 10 works good). A value of 5 means out of the size allocated for the chart, leave 5% as the margin.
BARMAX=number	Used to specify the maximum width of a bar. Normally, you'd only use this for a chart with one bar to prevent it's width from taking the entire width of the chart. The number represents a percentage of the size of the chart (usually 5 or 10 works good). A value of 5 means out of the size allocated for the chart, make each bar a maximum of 5%.
PIEOFFSET=number	Used to specify an offset amount to break out the pie pieces. The number represents a percentage of the size of the chart (usually 5 or 10 works good).
BARCOLOR=list	A list of comma separated numbers representing a color from 1 to 14 for each bar or pie slice. If not specified, each bar or pie slice is colored starting at 1 for the first, 2 for the second and so on.
BARSHADING=list	A list of comma separated shading names for bar and pie type graphs. Use the SHADING tag to setup the shading options.

Charts

Parameter	Description
BARSHADINGTOP	Set this if you want the shading function to run from the top of the graph to the bottom rather than the height of each bar. For example, assume you have a graph that shows monthly sales and you are coloring the top (higher sales) in green and bottom in red. In this case, you probably want to use this option so smaller bars are red while higher ones have more green at the top.
REVEFFECT	Applies shading on the left side of cylinder bar charts rather than the right. This is only when you are not already using a shading pattern.
ALLBARCOLOR=number	Used to set all the bars or lines to the same color (1 to 14).
ALLBARSHADING=text	Used to set all the bars or lines to the same shading pattern.
BARPATTERN=list	A list of comma separated numbers representing the patten code from 1 to 8 for each bar or pie slice. See the RECT command and its PATTERN option for a sample of each pattern's appearance.

Charts

Parameter	Description
IMAGE=text	Uses the image specified to fill in bars or pie slices. Set IMAGE to the path and file name of the image to use. Images are placed on top of any grid which may be drawn using the YGRID or XGRID option. For this reason, it is best to use images that are as wide as possible so the effect of broken grid lines is minimized. The image is scaled to fit the width of the bar. Use IMAGEFULLBAR or IMAGEFULLCHART to use the full-sized image instead. For pie charts, the image is used full-sized though you can use IMAGESCALE if necessary. Also, the image is always centered at the point of the slice. You may use SLICECOLOR to specify different images for each pie slice.
IMAGETOP=text	For use with the IMAGE option. This option allows you to specify an image for the top of the bar. Set IMAGETOP to the path and file name of the image to use. This could be rounded cap or other image you want at the top. The width should be the same as the image set with IMAGE but this image should be no more than 20 pixels high as a rough guide.
IMAGETOPVALIGN=text	Set to "bottom" to align the bottom of the top image with the bar value. The default without this option is to align the top of the image with the bar value. For example, if the bar value is 50, without this option the top of the image will be at the value 50 on the chart. With this option, the bottom of the image will be at 50 and the top will extend as high as the image.

Charts

Parameter	Description
IMAGEBOT=text	For use with the IMAGE option. This option allows you to specify an image for the bottom of the bar. Set IMAGEBOT to the path and file name of the image to use. This could be rounded cap or other image you want at the bottom. The width should be the same as the image set with IMAGE but this image should be no more than 20 pixels high as a rough guide.
IMAGETOPREV=text	For use with the IMAGE option. This option allows you to specify an image for the top of the bar (highest point) when the bar is drawn below the X axis (negative values). Set IMAGETOPREV to the path and file name of the image to use. This could be rounded cap or other image you want at the bottom - typically a vertically flipped image of IMAGEBOT. The IMAGEBOT is used and flipped vertically if this is not specified and you are using IMAGEBOT. The width should be the same as the image set with IMAGE but this image should be no more than 20 pixels high as a rough guide.

Charts

Parameter	Description
IMAGEBOTREV=text	For use with the IMAGE option. This option allows you to specify an image for the bottom of the bar (lowest point) when the bar is drawn below the X axis (negative values). Set IMAGEBOTREV to the path and file name of the image to use. This could be rounded cap or other image you want at the top - typically a vertically flipped image of IMAGETOP. The IMAGETOP is used and flipped vertically if this is not specified and you are using IMAGETOP. The width should be the same as the image set with IMAGE but this image should be no more than 20 pixels high as a rough guide.
LINECOLOR=list	A list of comma separated numbers representing a color from 1 to 14 for each data line. If not specified, each line is colored starting at 1 for the first, 2 for the second and so on.
LINENODE	Use this parameter to turn on drawing of nodes at each point for line charts.
NODEWIDTH=number	The width of stroke line for nodes.
LINELAB	Sets the XLABEL and DATAMLAB to align with line points rather than bars. Use this option when you're showing a line chart and want to show the data values along the bottom.
LEGEND=list	Specifies the labels to use in the legend. Separate each value by a vertical bar (|) and use \n as the new-line character.
LEGENDBGCOLOR=color	Background color for the chart legend. Any valid RGB color may be used (no CMYK or Pantone colors).

Charts

Parameter	Description
LEGENDSHADE=text	Background shading pattern for the chart legend.
LEGENDOFFSET=number	Used to position the legend if the default position is not where you want it. Use a positive or negative number (usually in the range of -5 to 5) to position the legend.
LEGENDLABWIDTH=number	The width to use for the legend label when using DATAMLAB. The default is 15.
LEGENDCOLS=number	Sets the number of columns to divide the legend into when using with pie charts. Default value is 1.
LEGENDPCT=number	Sets aside the percent of the total width for legends when using pie charts. For example, set to 40 to use 40% of the width for the legend and the other 60% to the left will be used for the chart. Using this option will cause text to wrap when necessary in the legend. This could result in text flowing below the area set aside for the chart. You'll need to add in your own line breaks in the legend, if necessary, if you do not use this option with pie charts.
NODE=number	The symbol to draw for scatter charts or the average point for stock charts. A solid square is used for scatter and a horizontal line for stock by default. Use a number from 1 to 12.
NODESIZE=number	Used to indicate the size of the nodes drawn for scatter and stock charts. NODESIZE should be set to a number between 1 and 10.
NODEFCOLOR=color	Sets the node fill color for scatter and stock charts (default is FCOLOR).

Charts

Parameter	Description
NODESCOLOR=color	Sets the node stroke color for scatter and stock charts (default is SCOLOR). Only for nodes that are filled.
BASEFCOLOR=color	Sets the base fill color for axis lines and other base elements. The default is black (#000000).
BASESCOLOR=color	Sets the base stroke color for axis lines and other base elements. The default is black (#000000).
XGRID=number	Used mainly for line charts. Specifies the number of equally spaced vertical lines to draw.
YGRID=number	Specifies the number of equally spaced horizontal lines to draw. Will be set automatically if YSCALE is not used. Set YGRID=0 If YSCALE is not used and you don't want lines drawn.
GRIDON=number	The length of the line segment to draw with the SCOLOR for the grid.
GRIDOFF=number	The length of the line segment to draw with the FCOLOR for the grid.
GRIDDASH=number,number [,number,number,...]	A comma separated list of numbers (in pairs) to specify the ON/OFF length for the grid.
GRIDFCOLOR=color	Sets the grid fill color.
GRIDSCOLOR=color	Sets the grid stroke color.
SHOWXTICKS=On|Off	Sets the display of the X axis tick marks.
XSCALE=list	Used for scatter charts to specifiy the minimum and maximum values for the X-axis. Enter a pair of values separated by a comma. To use from -50 to 100 enter -50,100.

Charts

Parameter	Description
YSCALE=list	Used for all charts except pie to specifiy the minimum and maximum values for the Y-axis. Enter a pair of values separated by a comma. To use from -50 to 100 enter -50,100. You may leave this option off and the program will compute a set of values to use.
YSCALE2=list	Used for line charts to set the scale for a second Y-axis. Enter a pair of values separated by a comma. To use from -50 to 100 enter -50,100.
YSCALEPFX=text	Text to place in front of the values when YSCALE is left off and the program computes the value. For example, use $ to place a dollar sign in front of the numbers on the Y-axis. This is only used when YSCALE is computed by the program.
YSCALESFX=text	Text to place after the values when YSCALE is left off and the program computes the value. For example, use K to place a the thousands symbol after the numbers on the Y-axis. This is only used when YSCALE is computed by the program.

Charts

Parameter	Description
DATAMULT=number	Used by bar charts to specify the number of values being grouped. For example, you may be listing actual vs. project on the same chart broken out by month. In this case you would use 2 as this value. Then for BARDATA you would enter actual-month1, projected-month1, actual-month2, projected-month2, etc. Alternatively, you may use the BARDATAMULT and BARDATALAB tags to enter groups of data. You do not need to specify this option in that case as the number of BARDATAMULT tags will determine this value.
DATAMLAB=list	Used to specify the label for each group when using DATAMULT. Separate the values by a vertical bar (|). If DATAMULT is set to 2 you should have two text items here with a | separating them.
BARCOLUMNS	Used with the DATAMULT option or BARDATAMULT tags and the 3D option. Places the columns in back of one another rather than next to each other.
LEGENDCOLOR=list	A list of comma separated numbers representing a color from 1 to 14 for the legend when using the DATAMULT option. If not specified, the colors used in the legend are taken from the beginning of the list in BARCOLOR. The only time this should be used is when the first n entries in BARCOLOR don't correspond the colors you want used in the legend (perhaps the first few bars have a special meaning from the rest of the bars and are colored differently).

Charts

Parameter	Description
NOCOLORLEGEND	Do not show the color blocks in the legend for bar charts using the DATAMULT or BARDATAMULT option.
MULTCOLORLEGEND	Show the color legend next to the values for bar charts using the DATAMULT or BARDATAMULT option.
OUTSIDELABELS	Used to force all labels for pie charts outside of the pie slice.
XSCALEFONT=number	Used to specify the font for the X-axis scale labels.
XSCALESIZE=number	Used to specify the point size for the X-axis scale labels.
XSCALECOLOR=color	Sets text fill color for the X-axis scale labels.
XSCALECOMP=number	A percentage to compress the X-axis scale labels text by. A value less than 100 compresses text while a value greater than 100 expands text.
YSCALEFONT=number	Used to specify the font for the Y-axis scale labels.
YSCALESIZE=number	Used to specify the point size for the Y-axis scale labels.
YSCALECOLOR=color	Sets text fill color for the Y-axis scale labels.
YSCALECOMP=number	A percentage to compress the Y-axis label text by. A value less than 100 compresses text while a value greater than 100 expands text.
XAXISLABEL=text	Used to specify the label for the X-axis.
XAXISFONT=number	Used to specify the font for the X-axis label.
XAXISSIZE=number	Used to specify the point size for the X-axis label.
XAXISCOLOR=color	Sets text fill color for the X-axis label.

Charts

Parameter	Description
XAXISCOMP=number	A percentage to compress the X-axis label text by. A value less than 100 compresses text while a value greater than 100 expands text.
XAXISOFFSET=number	Used to position the X-axis label if the default position is not where you want it. Use a positive or negative number (usually in the range of -5 to 5) to position the label.
YAXISLABEL=text	Used to specify the label for the Y-axis.
YAXISFONT=number	Used to specify the font for the Y-axis label.
YAXISSIZE=number	Used to specify the point size for the Y-axis label.
YAXISCOLOR=color	Sets text fill color for the Y-axis labels.
YAXISCOMP=number	A percentage to compress the Y-axis label text by. A value less than 100 compresses text while a value greater than 100 expands text.
YAXISOFFSET=number	Used to position the Y-axis label if the default position is not where you want it. Use a positive or negative number (usually in the range of -5 to 5) to position the label.
YAXISOFFSET2=number	Used to position the 2nd Y-axis label if the default position is not where you want it. Use a positive or negative number (usually in the range of -5 to 5) to position the label.
XLABEL=list	Used to specify the labels for the X-axis in charts or the spokes on a radar chart. Separate each entry with a vertical bar (|). Use \n for a new-line.
XLABELFONT=number	Used to specify the font for the X-axis labels.

Charts

Parameter	Description
XLABELSIZE=number	Used to specify the point size for the X-axis labels.
XLABELCOLOR=color	Sets text fill color for the X-axis labels.
XLABELCOMP=number	A percentage to compress the X-axis labels text by. A value less than 100 compresses text while a value greater than 100 expands text.
YLABEL=list	Used to specify the labels for the Y-axis in charts. Separate each entry with a vertical bar (|). Use \n for a new-line. You should leave this off if YSCALE is not used. The program will assign values automatically in this case.
YLABEL2=list	Used to specify the labels for the 2nd Y-axis in charts. These labels print on the right hand side of the chart. Separate each entry with a vertical bar (|). Use \n for a new-line.
XLABELOFFSET=number	Used to position the X-axis labels up or down if the default position is not where you want it. Use a positive or negative number (usually in the range of -5 to 5) to position the label. Positive numbers move the lables down and negative move them up.
YLABELOFFSET=number	Used to position the Y-axis labels right or left if the default position is not where you want it. Use a positive or negative number (usually in the range of -5 to 5) to position the label. Positive numbers move the lables right and negative move them left.

Charts

Parameter	Description
XLABELOFFSET2=number	Used to position the X-axis labels right or left if the default position is not where you want it. Use a positive or negative number (usually in the range of -5 to 5) to position the label. Positive numbers move the lables right and negative move them left.
YLABELOFFSET2=number	Used to position the Y-axis labels up or down if the default position is not where you want it. Use a positive or negative number (usually in the range of -5 to 5) to position the label. Positive numbers move the lables down and negative move them up.
XLABELPOS=number	The Y-axis value to display the XLABEL list at. Normally the XLABEL list is displayed at the bottom of the chart. For example, if your YSCALE=-50,50 then setting XLABELPOS=0 will display the X-axis labels at the Y=0 position - half of the height of the chart. This option is not for bar charts.
YLABELPOS=number	The X-axis value to display the YLABEL list at. Normally the YLABEL list is displayed at the right of the chart. For example, if your XSCALE=-50,50 then setting YLABELPOS=0 will display the Y-axis labels at the X=0 position - half of the width of the chart. This option is not for bar charts.
TOPLABELS	Used to specify that XLABEL and YLABEL text be drawn on top of other chart items. Only useful when using the XLABELPOS or YLABELPOS settings and you want the axis labels drawn on top of any chart graphics.

Charts

Parameter	Description
LABANGLE=number	Used to set the angle in degrees for the labels on the X-axis. Typically this would be set to a value between 30 and 90.
FONT=number	Used to specify the font for the axis labels.
SIZE=number	Used to specify the point size for the axis labels.
COLOR=color	Sets text fill color for the axis labels.
COMP=number	A percentage to compress the axis label text by. A value less than 100 compresses text while a value greater than 100 expands text.
TITLE=text	Used to specify a chart title. Use \n for a new-line.
TITLEFONT=number	Used to specify the font for the chart title.
TITLESIZE=number	Used to specify the point size for the chart title.
TITLECOLOR=color	Sets text fill color for the chart title.
TITLECOMP=number	A percentage to compress the chart title text by. A value less than 100 compresses text while a value greater than 100 expands text.
TITLEOFFSET=number	Used to position the chart title if the default position is not where you want it. Use a positive or negative number (usually in the range of -2 to 2) to position the title up or down.

Charts

Parameter	Description
FLASH=text	The path and file name for a flash file containing the graph. This file should have a .swf extension for the name. Alternatively, you may pass -none for this value and the contents of the flash file will be streamed to standard output (typically the console) rather than a file. This can be useful for streaming the file for display in a web browser. Also, only the bar and line type charts and flat pie charts are currently supported.
FLASHONLY	Only create the flash chart file - do not build the chart in the PDF. This allows you to create a chart at the same time but with different options from the chart rendered in the PDF.
FLASHSIZE=number,number	A pair of numbers representing the size of the flash display in pixels. The first number is width and the second is the height. Enclose these values in quotes or be sure to not leave any spaces before or after the comma. This setting is optional.
FLASHBG=hex color	The background color for the chart in HEX. The default is FFFFFF for white.
FLASHROUND=number	Size in pixels for rounded corners on bar type charts. This setting is optional.
FLASHGRADIENT=text	Set to "radial" or "linear". Applies a gradient to bars or pie slices.
FLASHGRADIENTFULL	Uses the entire chart area for the gradient. Normally, the gradient is limited to the bar or pie section. This option expands the area for a different gradient effect.
FLASHGRADIENTXOFF=number	An offset in pixels for the gradient along the X axis. The default is 0. You may use either positive or negative numbers.

Charts

Parameter	Description
FLASHGRADIENTYOFF= number	An offset in pixels for the gradient along the Y axis. The default is 0. You may use either positive or negative numbers.
FLASHJPG=text	A JPEG file to use as the background for the chart. The file is not tiled or stretched so you will need to size it before using.
FLASHJPGWIDTH=number	Optional. The width of the background jpeg image. The image is tiled or cropped as necessary.
FLASHJPGHEIGHT=number	Optional. The height of the background jpeg image. The image is tiled or cropped as necessary.
FLASHJPGALPHA=number	The opacity for the FLASHJPG image. The range is 0 (completely transparent - image does not show) to 100 (the default - image is at full intensity).
FLASHBARJPG=text	A JPEG file to use for the bars in bar charts. You may use one large image the size of the chart and the area where the bars are located will show this image. Or use the FLASHBARJPGTILE option to tile or restart the image for each bar.
FLASHBARJPGTILE	Tiles the FLASHBARJPG image rather than treat as one background image with the bar areas showing through.
FLASHSCALE=number	Use to override the scaling factor for the font size. The value will be used as a multiplier so numbers between 1 and 3 would likely work best.

Charts

Parameter	Description
FLASHEFFECT=text	An effect or effects to use when the graph is opened in the flash player. You may use one of Random, Top, Bottom, Right or Left along with one of Zoomin or Zoomout. The Fadein effect may be combined with any other effects. Separate multiple effects with a space. For example, FLASHEFFECT="random zoomout". Only available with Windows versions of PDF Charts. The options are: Random Graph pieces fly in to the center Top Graph slides down from the top Bottom Graph slides up from the bottom Right Graph slides from right to left Left Graph slides from left to right Zoomin Graph zooms in from the center Zoomout Graph zooms out from the center Fadein Graph fades into view
FLASHBARFADE=number	A separate effect for fading bars in. Set to the number of frames the effect should last for each bar. Cannot be combined with the FLASHEFFECTs Random, Top, Bottom, Right or Left.
FLASHHEX	Converts the Flash stream to a hex stream for use with the GetFlashChart method. You must use the FLASH and ID options (in this section) in order to use GetFlashChart.

Charts

Parameter	Description
FLASHFRAMES=number	The number of frames per second. The default is 15. Higher numbers will cause the opening effect to move quicker and lower numbers will cause the opening effect to move slower.

Charts

<SLICECOLOR
VALUE=color
BORDER=color
IMAGE=text
SCALE=number
SCALEX=number
SCALEY=number>

Used to define a color for a pie chart or slice background image. Repeat the tag for as many colors as you need setting each one to the next color to use.

Parameter	Description
VALUE=color	Any valid RGB color code.
BORDER=color	Any valid RGB color code. The border is used with the SLICEBORDER option and will not draw a border by simply setting this value.
IMAGE=text	Uses the image specified to fill in the pie slice. Set IMAGE to the path and file name of the image to use. For pie charts, the image is used full-sized though you can use IMAGESCALE if necessary. Also, the image is always centered at the point of the slice. Be sure to use an image big enough or scale it to cover the entire pie chart so each slice can properly display its portion of the image.
SCALE=number	Optional. The amount to compress or expand the image by in the X and Y direction. Values less than 100 will compress and values greater than 100 will expand. Setting this value overrides any values specified for SCALEX or SCALEY.
SCALEX=number	Optional. The amount to compress or expand the image by in the X direction. Values less that 100 will compress and values greater than 100 will expand.
SCALEY=number	Optional. The amount to compress or expand the image by in the Y direction. Values less that 100 will compress and values greater than 100 will expand.

Charts

<BARBORDER
STRENGTH="number"
WIDTH="number"
COLOR="color">

Used to define border options for each bar on bar charts. The color of the border is based on the color of the bar. To force a particular color for each bar, set the COLOR option.

Parameter	Description
STRENGTH	The strength of the border based on the bar color. Set to a value between -100 and 100. Negative values will darken the border effect and positive values will lighten. The color used is based on the color of the bar. Use the COLOR option to force a particular color.
WIDTH	The width of the border around the bar to draw in points. The default is 0 or no border.
COLOR	The color for the border around the bar. Any valid RGB color may be used (no CMYK or Pantone colors). Or, use STRENGTH to set to a color lighter or darker based on the bar color.

Charts

<SLICEBORDER
ARC
SIDES="text"
STRENGTH="number"
WIDTH="number"
SHADE>

Used to define border options for each slice on pie charts. The color of the border or shading is based on the color of the slice the effect is applied to. To force a particular color for a slice, set the BORDER option on the SLICECOLOR tag.

Parameter	Description
ARC	Set this to apply the border options to the outer arc of the slice.
SIDES="text"	Set to "1" to apply the border options to one edge of the slice. Set to "2" to apply to the opposite edge. Set to "1,2" to apply to both edges. When using with ARC, both "1,2" will apply.
STRENGTH=number	The strength of the effect. Set to a value between -100 and 100. Negative values will darken the border effect and positive values will lighten. The color used is based on the color of the slice or the BORDER value from the SLICECOLOR tag.
WIDTH=number	The width of the border effect. This is units of points (1/72 of an inch).
SHADE	Transition the effect as a gradient rather than a solid color. This can be used to provide a shadow effect at the edges of pie slices.

Charts

<DATALINE
LINE=number
VALUES=list
YAXIS=number
ON=number
OFF=number
DASH=number,number[,number,number...]
WIDTH=number
NODE=file|number
NODESIZE=number
NODEFCOLOR=color
NODESCOLOR=color
FCOLOR=color
SCOLOR=color>

Used to define the values for each line in a line (BAR-LINE) or each set of points in a scatter chart. Each line or point group to be plotted will have a separate DATALINE tag. This tag goes between the opening and closing CHART tag. To leave out a data point (or points) for a given line don't put anything between the commas where that value would go. For example, if you have three lines but don't want to plot all points for all lines do something like this:

```
<DATALINE LINE=1 VALUES=15,23,45,42,21>
<DATALINE LINE=2 VALUES=,,46,58,18>
<DATALINE LINE=3 VALUES=12,43,,,>
```

The first line will show all five values, line 2 will only plot three points and the last line will have two points.

Parameter	Description
LINE=number	The line number. Start at 1 for the first line. Do not reuse a number in the same chart or the data will be overwritten.
VALUES=list	The list of values separated by a comma. Do not put in any special formatting like dollar signs or commas.
YAXIS=number	Default is primary Y-axis. You may set a secondary Y-axis by using the YSCALE2 option in a chart PARAMS tag. Set YAXIS=2 on any line set where the values reflect the scaling factor from the secondary Y-axis.

Charts

Parameter	Description
ON=number	The length of the line segment to draw with the SCOLOR.
OFF=number	The length of the line segment to draw with the FCOLOR.
DASH=number,number[,number,number,...]	A comma separated list of numbers (in pairs) to specify the ON/OFF length.
WIDTH=number	Sets the line width based on units of 1/72 of an inch.
NODE=file|number	The symbol to draw at the data points (box, triangle, etc). The symbol to use is determined by the software if not specified. Use a number from 1 to 12. Or, specify an image file name. The image will be used as the node in this case.
NODESIZE=number	Used to indicate the size of the nodes drawn. NODESIZE should be set to a number between 1 and 10.
NODEFCOLOR=color	Sets the node fill color (default is FCOLOR).
NODESCOLOR=color	Sets the node stroke color (default is SCOLOR). Only for nodes that are filled.
FCOLOR=color	Sets the fill color.
SCOLOR=color	Sets the stroke color.

Charts

<BARSERIES
VALUES=list
FCOLOR=color
FCOLORLIST=color[,color...]
PATTERN=number>

Used to define the values for a stacked bar chart. Each item with a series of values will have a separate BARSERIES tag. This tag goes between the opening and closing CHART tag.

Parameter	Description
VALUES=list	The list of values separated by a comma. Do not put in any special formatting like dollar signs or commas.
FCOLOR=color	Sets the fill color.
FCOLORLIST=color[,color]	Used to set a different fill color for each bar. Set to a comma separated list of color names or specify in hex format.
PATTERN=number	A number representing the patten code from 1 to 8 for the series. See the RECT command and its PATTERN option for a sample of each pattern's appearance.

<BARDATAMULT
VALUES=list
FCOLOR=color
PATTERN=number>

Used to set up a group of values for a bar chart with multiple groups. Each group of values will have a separate BARSERIES tag. This tag goes between the opening and closing CHART tag.

Parameter	Description
VALUES=list	The list of values separated by a comma. Do not put in any special formatting like dollar signs or commas.
FCOLOR=color	Sets the fill color.
PATTERN=number	A number representing the patten code from 1 to 8 for the bar group. See the RECT command and its PATTERN option for a sample of each pattern's appearance.

Charts

<BARDATALAB
VALUES=list>

Used to set up the labels for a group of values specified with the BARDATAMULT tag. Each group of labels will have a separate BARDATLAB tag. This tag goes between the opening and closing CHART tag.

Parameter	Description
VALUES=list	The list of values separated by a vertical bar (|).

Charts

<CHARTCOLOR
COLORNUM=number
COLOR=color>

Used to define a custom chart color. There are 14 default colors used by the charts. You can use this command to redefine any of the 14 colors. For example, the first bar on a bar chart uses color 1 (unless otherwised specified with the BARCOLOR option on the PARAMS tag). The next bar uses color 2, and so on. This command can be used to redefine what colors 1 through 14 are. Any valid RGB color may be used (no CMYK or Pantone colors). The color settings will remain in effect until set to another value or cleared out (by leaving off the COLOR option from this tag).

Parameter	Description
COLORNUM=number	The color number to change. This can be a value from 1 to 14.
COLOR=color	The color to use for this COLORNUM.

Charts

<CHARTPOINTS
VAR=[X|Y]
POINT=[M|A]
ON=number
OFF=number
DASH=number,number[,number,number...]
WIDTH=number
FCOLOR=color
SCOLOR=color
NODESIZE=number
NODE=number
NODEFCOLOR=color
NODESCOLOR=color>
x1, y1 [, x2, y2, ... xn, yn]
</CHARTPOINTS>

Used to draw points on the graph and optionally create a line histogram. Must use both the YSCALE and XSCALE parameters when setting up the chart. The X/Y coordinates are in terms of these values. For example, if the YSCALE goes from 0 to 50 then the Y values should be between 0 and 50.

Place any number of x, y pairs between the opening and closing tag. You may separate the values with commas or spaces or any combination of the two. In addition, you may include line breaks within the data section.

Use the VAR and POINT options to generate a line based histogram. This type of graph plots points and combines like values for one of the axes. A line is drawn between the endpoints for each of the like values and a line across the entire graph though the mid-points. See an example here.

Parameter	Description
VAR=[X|Y]	Optional. Used to specify the axis with the variable values. Use this parameter when one of the axis values contains several values for the same point on the other axis. For example, if you have several X values that all pertain to a given Y value, then set VAR=X.

Charts

Parameter	Description
POINT=[M|A]	Optional. Set to M for mid-point or A for average. Used to specify the function to compute the X or Y value to draw a line through for histograms. For example, if you have X values of 1, 1.5, and 1.75 then setting POINT=M will use the X value 1.375 (which is 1 + (1.75 - 1) / 2) for the main line. Using POINT=A for the same values will cause the X value to compute as 1.4166 (which is (1 + 1.5 + 1.75) / 3).
ON=number	The length of the line segment to draw with the SCOLOR.
OFF=number	The length of the line segment to draw with the FCOLOR.
DASH=number,number[,number ,number,...]	A comma separated list of numbers (in pairs) to specify the ON/OFF length.
WIDTH=number	Sets the line width based on units of 1/72 of an inch.
FCOLOR=color	Sets the fill color.
SCOLOR=color	Sets the stroke color.
NODESIZE=number	Used to indicate the size of the nodes drawn for the points. NODESIZE should be set to a number between 1 and 10.
NODEFCOLOR=color	Sets the node fill color for the points (default is FCOLOR).
NODESCOLOR=color	Sets the node stroke color for the points (default is SCOLOR). Only for nodes that are filled.

Charts

<CHARTLINE
X1=number
Y1=number
X2=number
Y2=number
YAXIS=number
ON=number
OFF=number
DASH=number,number[,number,number...]
WIDTH=number
FCOLOR=color
SCOLOR=color
BACKGROUND
ZORDER=number>

Used to draw a line on the graph. Must use both the YSCALE and XSCALE parameters when setting up the chart. The X/Y coordinates are in terms of these values. For example, if the YSCALE goes from 0 to 50 then the Y values should be between 0 and 50.

Parameter	Description
X1=number	From X point based on the graph's XSCALE.
Y1=number	From Y point based on the graph's YSCALE.
X2=number	Thru X point based on the graph's XSCALE.
Y2=number	Thru Y point based on the graph's YSCALE.
YAXIS=number	Default is primary Y-axis. You may set a secondary Y-axis by using the YSCALE2 option in a chart PARAMS tag. Set YAXIS=2 when the values reflect the scaling factor from the secondary Y-axis.
ON=number	The length of the line segment to draw with the SCOLOR.
OFF=number	The length of the line segment to draw with the FCOLOR.
DASH=number,number[,number,number,...]	A comma separated list of numbers (in pairs) to specify the ON/OFF length.

Charts

Parameter	Description
WIDTH=number	Sets the line width based on units of 1/72 of an inch.
FCOLOR=color	Sets the fill color.
SCOLOR=color	Sets the stroke color.
BACKGROUND	Draws the line first, before the chart is drawn if this is set.
ZORDER=number	The order to draw the line in releation to the other CHART drawing commands. Lower numbered objects are drawn first.

Charts

<CHARTSERIES
OVER=number
UNDER=number
YAXIS=number
ON=number
OFF=number
DASH=number,number[,number,number...]
WIDTH=number
FCOLOR=color
SCOLOR=color
BACKGROUND
ZORDER=number>
</CHARTSERIES>

Used to draw a series of lines on the graph and optionally highlight over/under regions. Must use both the YSCALE and XSCALE parameters when setting up the chart. The X/Y coordinates are in terms of these values. For example, if the YSCALE goes from 0 to 50 then the Y values should be between 0 and 50. Place the data points between the CHARTSERIES and /CHARTSERIES tags. You may split them up on as many lines as necessary. Separate values on the same line with a comma. Data should be entered in the form X1,Y1,X2,Y2,etc.

Parameter	Description
OVER=number	Optional. The Y point to use as a cutoff for the maximum value. Any areas of the series that go over this point will be filled in with the color specified by FCOLOR.
UNDER=number	Optional. The Y point to use as a cutoff for the minimum value. Any areas of the series that go under this point will be filled in with the color specified by FCOLOR.
YAXIS=number	Default is primary Y-axis. You may set a secondary Y-axis by using the YSCALE2 option in a chart PARAMS tag. Set YAXIS=2 when the values reflect the scaling factor from the secondary Y-axis.
ON=number	The length of the line segment to draw with the SCOLOR.

Charts

Parameter	Description
OFF=number	The length of the line segment to draw with the FCOLOR.
DASH=number,number[,number,number,...]	A comma separated list of numbers (in pairs) to specify the ON/OFF length.
WIDTH=number	Sets the line width based on units of 1/72 of an inch.
FCOLOR=color	Sets the fill color.
SCOLOR=color	Sets the stroke color.
BACKGROUND	Draws the series first, before the chart is drawn if this is set.
ZORDER=number	The order to draw the series in releation to the other CHART drawing commands. Lower numbered objects are drawn first.

Charts

<RADARSERIES
VALUES=list
WIDTH=number
FILL
NODE=file|number
NODESIZE=number
NODEFCOLOR=color
NODESCOLOR=color
FCOLOR=color
SCOLOR=color>

Used to define the values for each series in a RADAR type chart. Each series be plotted will have a separate RADARSERIES tag. This tag goes between the opening and closing CHART tag.

Parameter	Description
VALUES=list	The list of values separated by a comma. Do not put in any special formatting like dollar signs or commas.
WIDTH=number	Sets the line width based on units of 1/72 of an inch.
FILL	Include this option to fill in the area rather than draw a line.
NODE=file|number	The symbol to draw at the data points (box, triangle, etc). The symbol to use is determined by the software if not specified. Use a number from 1 to 12. Or, specify an image file name. The image will be used as the node in this case.
NODESIZE=number	Used to indicate the size of the nodes drawn. NODESIZE should be set to a number between 1 and 10.
NODEFCOLOR=color	Sets the node fill color (default is FCOLOR).
NODESCOLOR=color	Sets the node stroke color (default is SCOLOR). Only for nodes that are filled.
FCOLOR=color	Sets the fill color.
SCOLOR=color	Sets the stroke color.

Charts

<CHARTRECT
X1=number
Y1=number
X2=number
Y2=number
YAXIS=number
ON=number
OFF=number
DASH=number,number[,number,number...]
WIDTH=number
FILL
FCOLOR=color
SCOLOR=color
BACKGROUND
ZORDER=number>

Used to draw a rectangle on the graph. Must use both the YSCALE and XSCALE parameters when setting up the chart. The X/Y coordinates are in terms of these values. For example, if the YSCALE goes from 0 to 50 then the Y values should be between 0 and 50.

Parameter	Description
X1=number	From X point based on the graph's XSCALE.
Y1=number	From Y point based on the graph's YSCALE.
X2=number	Thru X point based on the graph's XSCALE.
Y2=number	Thru Y point based on the graph's YSCALE.
YAXIS=number	Default is primary Y-axis. You may set a secondary Y-axis by using the YSCALE2 option in a chart PARAMS tag. Set YAXIS=2 when the values reflect the scaling factor from the secondary Y-axis.
ON=number	The length of the line segment to draw with the SCOLOR.
OFF=number	The length of the line segment to draw with the FCOLOR.

Charts

Parameter	Description
DASH=number,number[,number ,number,...]	A comma separated list of numbers (in pairs) to specify the ON/OFF length.
WIDTH=number	Sets the line width based on units of 1/72 of an inch.
FILL	If set fills the rectangle with the fill color.
FCOLOR=color	Sets the fill color.
SCOLOR=color	Sets the stroke color.
BACKGROUND	Draws the rectangle first, before the chart is drawn if this is set.
ZORDER=number	The order to draw the rectangle in releation to the other CHART drawing commands. Lower numbered objects are drawn first.

Charts

<CHARTPOLY
POINTS=number,number[,number]
YAXIS=number
ON=number
OFF=number
DASH=number,number[,number,number...]
WIDTH=number
FILL
FCOLOR=color
SCOLOR=color
BACKGROUND
ZORDER=number>

Used to draw a polygon on the graph. Must use both the YSCALE and XSCALE parameters when setting up the chart. The X/Y coordinates are in terms of these values. For example, if the YSCALE goes from 0 to 50 then the Y values should be between 0 and 50.

Parameter	Description
POINTS=number, number [,number]	Series of points in the form X1,Y1,X2,Y2,... as based on the current chart XSCALE and YSCALE settings.
YAXIS=number	Default is primary Y-axis. You may set a secondary Y-axis by using the YSCALE2 option in a chart PARAMS tag. Set YAXIS=2 when the values reflect the scaling factor from the secondary Y-axis.
ON=number	The length of the line segment to draw with the SCOLOR.
OFF=number	The length of the line segment to draw with the FCOLOR.
DASH=number,number[,number ,number,...]	A comma separated list of numbers (in pairs) to specify the ON/OFF length.
WIDTH=number	Sets the line width based on units of 1/72 of an inch.
FILL	If set fills the rectangle with the fill color.
FCOLOR=color	Sets the fill color.

Charts

Parameter	Description
SCOLOR=color	Sets the stroke color.
BACKGROUND	Draws the polygon first, before the chart is drawn if this is set.
ZORDER=number	The order to draw the polygon in releation to the other CHART drawing commands. Lower numbered objects are drawn first.

Charts

<CHARTCIRCLE
X=number
Y=number
RADIUS=number|numberI
YAXIS=number
ON=number
OFF=number
DASH=number,number[,number,number...]
WIDTH=number
FILL
FCOLOR=color
SCOLOR=color
BACKGROUND
ZORDER=number>

Used to draw a circle on the graph. Must use both the YSCALE and XSCALE parameters when setting up the chart. The X/Y coordinates are in terms of these values. For example, if the YSCALE goes from 0 to 50 then the Y values should be between 0 and 50.

Parameter	Description
X=number	X point based on the graph's XSCALE.
Y=number	Y point based on the graph's YSCALE.
RADIUS=number|numberI	Radius based on the graph's XSCALE. If you put a letter I after the number then radius is expressed in inches.
YAXIS=number	Default is primary Y-axis. You may set a secondary Y-axis by using the YSCALE2 option in a chart PARAMS tag. Set YAXIS=2 when the values reflect the scaling factor from the secondary Y-axis.
ON=number	The length of the line segment to draw with the SCOLOR.
OFF=number	The length of the line segment to draw with the FCOLOR.
DASH=number,number[,number,number,...]	A comma separated list of numbers (in pairs) to specify the ON/OFF length.

Charts

Parameter	Description
WIDTH=number	Sets the line width based on units of 1/72 of an inch.
FILL	If set fills the circle with the fill color.
FCOLOR=color	Sets the fill color.
SCOLOR=color	Sets the stroke color.
BACKGROUND	Draws the circle first, before the chart is drawn if this is set.
ZORDER=number	The order to draw the circle in releation to the other CHART drawing commands. Lower numbered objects are drawn first.

Charts

<CHARTCURVE
X1=number
Y1=number
X2=number
Y2=number
CPX1=number
CPY1=number
CPX2=number
CPY2=number
YAXIS=number
ON=number
OFF=number
DASH=number,number[,number,number...]
WIDTH=number
FCOLOR=color
SCOLOR=color
BACKGROUND
ZORDER=number>

Used to draw a curve on the graph. Must use both the YSCALE and XSCALE parameters when setting up the chart. The X/Y coordinates are in terms of these values. For example, if the YSCALE goes from 0 to 50 then the Y values should be between 0 and 50.

Parameter	Description
X1=number	First X point based on the graph's XSCALE.
Y1=number	First Y point based on the graph's YSCALE.
X2=number	Second X point based on the graph's XSCALE.
Y2=number	Second Y point based on the graph's YSCALE.
CPX1=number	X position of first control point.
CPY1=number	Y position of first control point.
CPX2=number	Optional. X position of second control point.
CPY2=number	Optional. Y position of second control point.

Charts

Parameter	Description
YAXIS=number	Default is primary Y-axis. You may set a secondary Y-axis by using the YSCALE2 option in a chart PARAMS tag. Set YAXIS=2 when the values reflect the scaling factor from the secondary Y-axis.
ON=number	The length of the line segment to draw with the SCOLOR.
OFF=number	The length of the line segment to draw with the FCOLOR.
DASH=number,number[,number,number,...]	A comma separated list of numbers (in pairs) to specify the ON/OFF length.
WIDTH=number	Sets the line width based on units of 1/72 of an inch.
FCOLOR=color	Sets the fill color.
SCOLOR=color	Sets the stroke color.
BACKGROUND	Draws the curve first, before the chart is drawn if this is set.
ZORDER=number	The order to draw the curve in releation to the other CHART drawing commands. Lower numbered objects are drawn first.

Charts

<CHARTNORMDIST
X1=number
X2=number
MU=number
SIGMA=number
SCALE=number
WIDTH=number
SCOLOR=color
YAXIS=number
BACKGROUND
ZORDER=number>

Used to draw a normal distribution (bell curve) on the graph. Must use the YSCALE and XSCALE parameters when setting up the chart. The X/Y coordinates are in terms of these values. For example, if the XSCALE goes from 0 to 50 then the X values should be between 0 and 50. The formula for a normal distribution is $\frac{1}{\sqrt{2\pi\sigma}} e^{-(x-\mu)^2/2\sigma^2}$ where μ is equal to the mean and σ is equal to the standard deviation.

Parameter	Description
X1=number	First X point based on the graph's XSCALE.
X2=number	Last X point based on the graph's XSCALE.
MU=number	The mean value.
SIGMA=number	The standard deviation value.
SCALE=number	A scaling factor to apply to the normal distribution. All Y values are multiplied by this value before plotting. Default is 1.
WIDTH=number	Sets the line width based on units of 1/72 of an inch.
SCOLOR=color	Sets the stroke color.
YAXIS=number	Default is primary Y-axis. You may set a secondary Y-axis by using the YSCALE2 option in a chart PARAMS tag. Set YAXIS=2 when the values reflect the scaling factor from the secondary Y-axis.
BACKGROUND	Draws the normal distribution first, before the chart is drawn if this is set.
ZORDER=number	The order to draw the normal distribution in releation to the other CHART drawing commands. Lower numbered objects are drawn first.

Charts

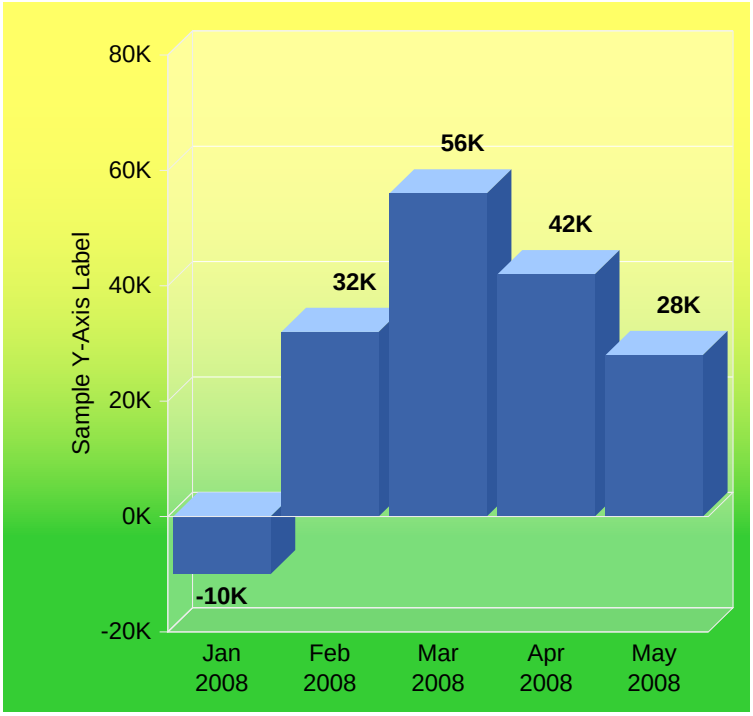
<CHARTTEXT
X=number
Y=number
ALIGN=L|R|C
FACE=font number
SIZE=point size
FCOLOR=color
SCOLOR=color
YAXIS=number
BACKGROUND
ZORDER=number>
</CHARTTEXT>

Used to place text on the graph. The actual text to print goes between the opening CHARTTEXT and closing /CHARTTEXT tags. Must use both the YSCALE and XSCALE parameters when setting up the chart. The X/Y coordinates are in terms of these values. For example, if the YSCALE goes from 0 to 50 then the Y values should be between 0 and 50. You may use BR tags inside the text itself but there is no autowrapping of text.

Parameter	Description
X=number	X point based on the graph's XSCALE.
Y=number	Y point based on the graph's YSCALE. The Y value is used for the baseline of the text.
ALIGN=L|R|C	Sets the initial alignment to Left, Right or Center. Default is Left.
FACE=font number	Sets the font.
SIZE=point size	Sets the point size for the font.
FCOLOR=color	Sets the fill color.
SCOLOR=color	Sets the stroke color.
YAXIS=number	Default is primary Y-axis. You may set a secondary Y-axis by using the YSCALE2 option in a chart PARAMS tag. Set YAXIS=2 when the values reflect the scaling factor from the secondary Y-axis.
BACKGROUND	Draws the text first, before the chart is drawn if this is set.
ZORDER=number	The order to draw the text in releation to the other CHART drawing commands. Lower numbered objects are drawn first.

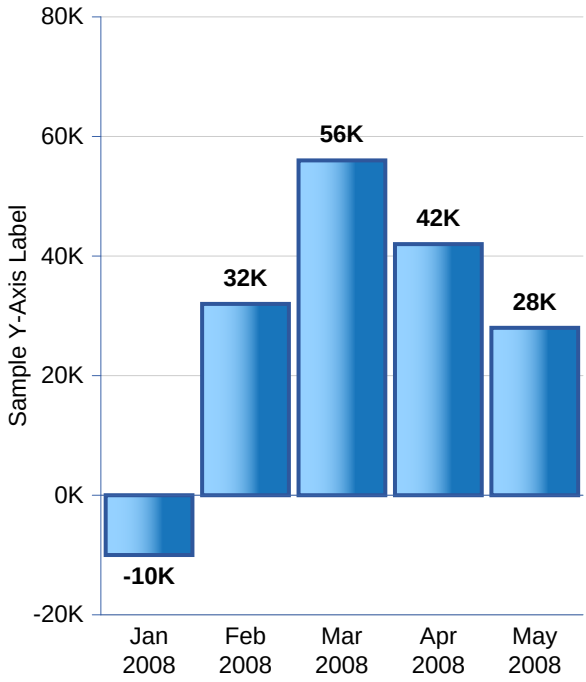
Charts

Sample 1



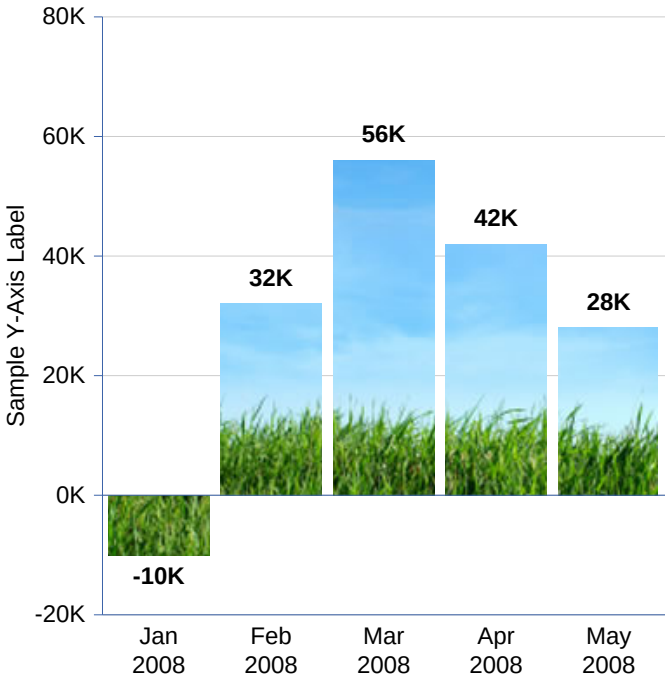

```
<SHADING NAME="yellgreen" COLOR1=#FFFF66 COLOR2=#33CC33
COLORARY="0,.25,0,1">
<TRANSPARENCY NAME="trans1" VALUE=65>
<GRID ML=.5 MR=.5 MT=.5 MB=.5 XUNITS=80 YUNITS=80>
<CHART HEIGHT=35 WIDTH=35>
<PARAMS TYPE="BAR-LINE">
<PARAMS TITLE="Sample 1" TITLEFONT=5 TITLESIZE=11>
<PARAMS 3D=15 3DTOP=40 3DSIDE=-5>
<PARAMS BARDATA=-10,32,56,42,28>
<PARAMS DATALAB="-10K|32K|56K|42K|28K">
<PARAMS YSCALE=-20,80>
<PARAMS YLABEL="-20K|0K|20K|40K|60K|80K">
<PARAMS BARSPACE=10 BASESCOLOR=#eee GRIDSCOLOR=#fff>
<PARAMS YGRID=5 BGCOLOR=#FFF>
<PARAMS BORDEROPTS="padding:5 3 18 35;shade:yellgreen">
<PARAMS ALLBARCOLOR=#3c64a9 LABFONT=5 XLABELFONT=2>
<PARAMS YAXISLABEL="Sample Y-Axis Label">
<PARAMS YAXISOFFSET=5 TRANSPARENCY=trans1>
<PARAMS
XLABEL="Jan\n2008|Feb\n2008|Mar\n2008|Apr\n2008|May\n20
08">
<PARAMS FONT=2 SIZE=9>
</CHART>
```

Sample 2

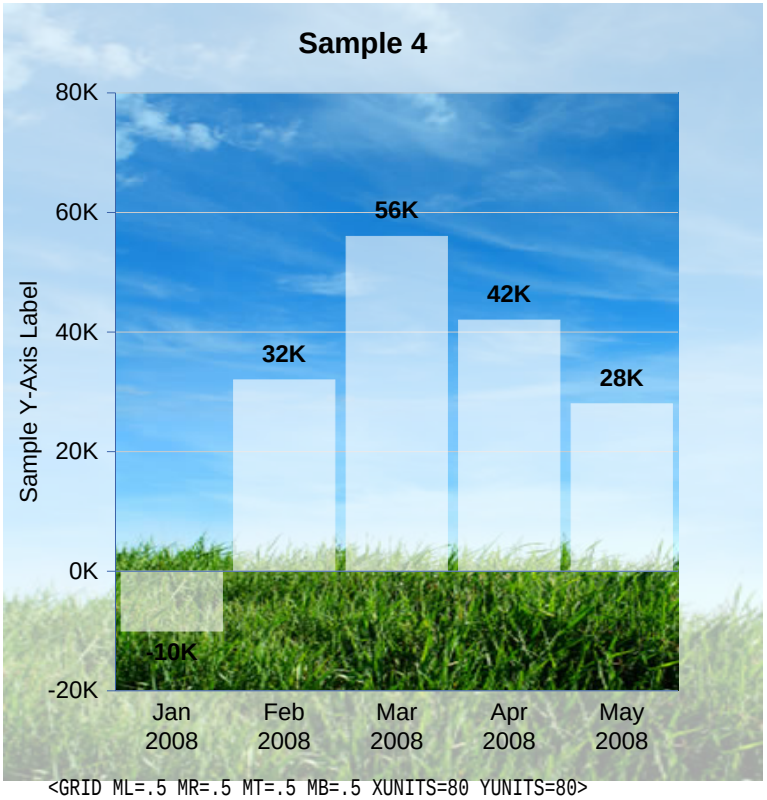



```
<GRID ML=.5 MR=.5 MT=.5 MB=.5 XUNITS=80 YUNITS=80>
<SHADING NAME="wb" COLOR1=#95d1ff COLOR2=#1774ba
COLORARY="0,0,.65,0">
<CHART HEIGHT=35 WIDTH=30>
<PARAMS TYPE="BAR-LINE">
<PARAMS TITLE="Sample 2" TITLEFONT=5 TITLESIZE=11>
<BARBORDER WIDTH=1.5 STRENGTH=-5>
<PARAMS BARDATA=-10,32,56,42,28>
<PARAMS DATALAB="-10K|32K|56K|42K|28K">
<PARAMS YSCALE=-20,80>
<PARAMS YLABEL="-20K|0K|20K|40K|60K|80K">
<PARAMS BARSPACE=10 BASESCOLOR=#3c64a9
GRIDSCOLOR=#ccc>
<PARAMS YGRID=5 ALLBARSHADING=wb>
<PARAMS ALLBARCOLOR=#3c64a9 LABFONT=5
XLABELFONT=2>
<PARAMS YAXISLABEL="Sample Y-Axis Label">
<PARAMS YAXISOFFSET=6>
<PARAMS
XLABEL="Jan\n2008|Feb\n2008|Mar\n2008|Apr\n2008|M
ay\n2008">
<PARAMS FONT=2 SIZE=9>
```

Charts



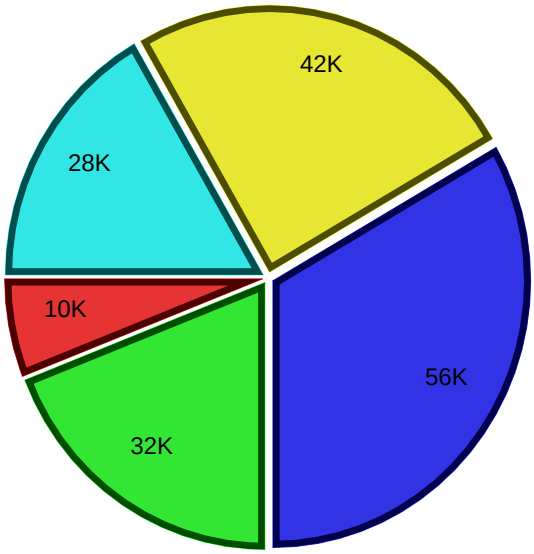

```
<SHADING NAME="yellgreen" COLOR1=#FFFF66 COLOR2=#33CC33
COLORARY="0,.25,0,1">
<TRANSPARENCY NAME="trans1" VALUE=65>
<GRID ML=.5 MR=.5 MT=.5 MB=.5 XUNITS=80 YUNITS=80>
<CHART HEIGHT=35 WIDTH=35>
<PARAMS TYPE="BAR-LINE">
<PARAMS TITLE="Sample 3" TITLEFONT=5 TITLESIZE=11>
<PARAMS IMAGE="blue_sky_grass.jpg" IMAGEFULLCHART
IMAGESCALE=65>
<PARAMS BARDATA=-10,32,56,42,28>
<PARAMS DATALAB="-10K|32K|56K|42K|28K">
<PARAMS YSCALE=-20,80>
<PARAMS YLABEL="-20K|0K|20K|40K|60K|80K">
<PARAMS BARSPACE=10 BASESCOLOR=#3c64a9 GRIDSCOLOR=#ccc>
<PARAMS YGRID=5>
<PARAMS ALLBARCOLOR=#3c64a9 LABFONT=5 XLABELFONT=2>
<PARAMS YAXISLABEL="Sample Y-Axis Label">
<PARAMS YAXISOFFSET=5>
<PARAMS
XLABEL="Jan\n2008|Feb\n2008|Mar\n2008|Apr\n2008|May\n20
08">
<PARAMS FONT=2 SIZE=9>
</CHART>
```




```
<GRID ML=.5 MR=.5 MT=.5 MB=.5 XUNITS=80 YUNITS=80>
<SHADING NAME="wb" COLOR1=#95d1ff COLOR2=#1774ba
COLORARY="0,0,.65,0">
<CHART HEIGHT=35 WIDTH=35>
<PARAMS
BORDEROPTS="padding:15;padding-left:20;background
-image:blue_sky_grass.jpg;transparency:trans1"">
<PARAMS
BORDEROPTS="background-image:blue_sky_grass.jpg">
<PARAMS BARDATA=-10,32,56,42,28>
<PARAMS DATALAB="-10K|32K|56K|42K|28K">
<PARAMS YSCALE=-20,80>
<PARAMS YLABEL="-20K|0K|20K|40K|60K|80K">
<PARAMS BARSPACE=10 BASESCOLOR=#3c64a9
GRIDSCOLOR=#ccc>
<PARAMS YGRID=5>
<PARAMS ALLBARCOLOR=#fff LABFONT=5 XLABELFONT=2
BARTRANSPARENCY=trans2>
<PARAMS YAXISLABEL="Sample Y-Axis Label">
<PARAMS YAXISOFFSET=5>
<PARAMS
XLABEL="Jan\n2008|Feb\n2008|Mar\n2008|Apr\n2008|M
ay\n2008">
<PARAMS FONT=2 SIZE=9>
</CHART>
```

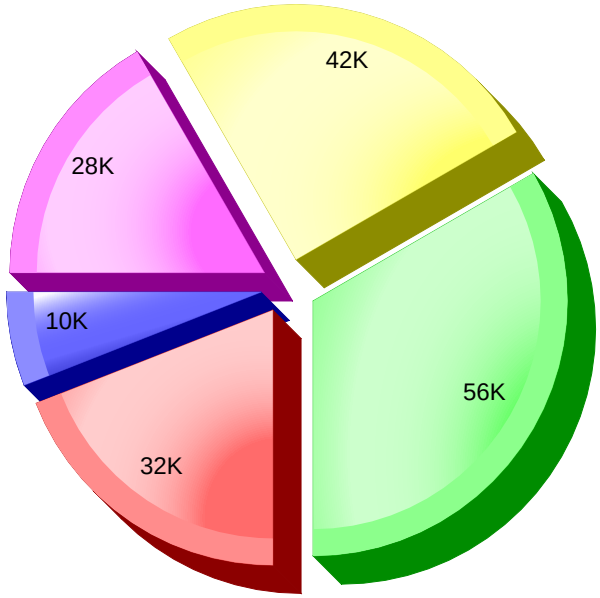
Charts

Sample 5




```
<SHADING NAME="yellgreen" COLOR1=#FFFF66
COLOR2=#33CC33 COLORARY="0,.25,0,1">
<TRANSPARENCY NAME="trans1" VALUE=65>
<GRID ML=.5 MR=.5 MT=.5 MB=.5 XUNITS=80 YUNITS=80>
<CHART HEIGHT=35 WIDTH=35>
<PARAMS TYPE="PIE">
<PARAMS TITLE="Sample 5" TITLEFONT=5 TITLESIZE=11>
<SLICEBORDER ARC SIDES="1,2" STRENGTH=-60 WIDTH=5>
<PARAMS BARDATA=10,32,56,42,28>
<PARAMS DATALAB="10K|32K|56K|42K|28K">
<PARAMS FONT=2 SIZE=9 PIEOFFSET=1>
</CHART>
```

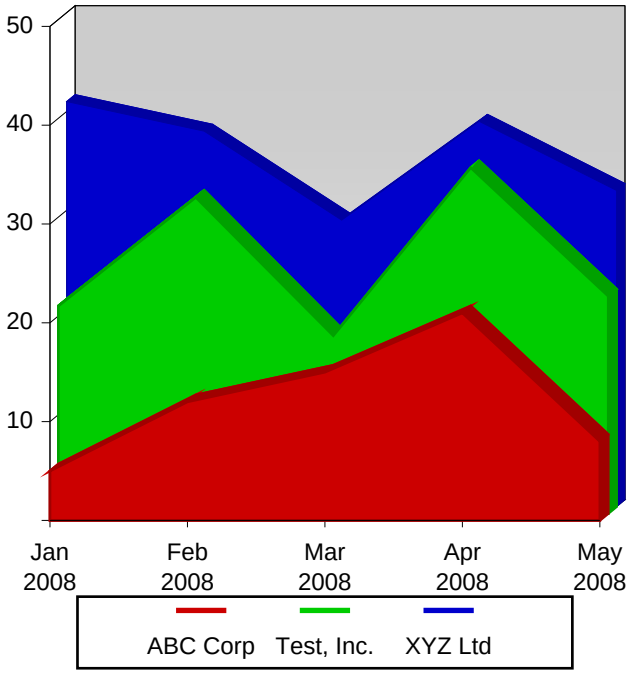
Sample 6




```
<SHADING NAME="b" COLOR1=#3333CC COLOR2=#6666FF
COLOR3=#9999FF COLOR4=#6666FF
COLORARY=".5,.5,2,1,.2,.3">
<SHADING NAME="r" COLOR1=#CC3333 COLOR2=#FF6666
COLOR3=#FF9999 COLOR4=#FF6666
COLORARY=".5,.5,2,1,.2,.3">
<SHADING NAME="g" COLOR1=#33CC33 COLOR2=#66FF66
COLOR3=#99FF99 COLOR4=#66FF66
COLORARY=".5,.5,2,1,.2,.3">
<SHADING NAME="y" COLOR1=#CCCC33 COLOR2=#FFFF66
COLOR3=#FFFF99 COLOR4=#FFFF66
COLORARY=".5,.5,2,1,.2,.3">
<SHADING NAME="p" COLOR1=#CC33CC COLOR2=#FF66FF
COLOR3=#FF99FF COLOR4=#FF66FF
COLORARY=".5,.5,2,1,.2,.3">
<GRID ML=.5 MR=.5 MT=.5 MB=.5 XUNITS=80 YUNITS=80>
<CHART X1=40 X2=75 HEIGHT=35>
<PARAMS TYPE="PIE">
<PARAMS TITLE="Sample 6" TITLEFONT=5 TITLESIZE=11>
<SLICEBORDER ARC STRENGTH=35 WIDTH=20>
<PARAMS BARDATA=10,32,56,42,28>
<PARAMS DATALAB="10K|32K|56K|42K|28K">
<PARAMS BARSHADING=b,r,g,y,p>
<PARAMS PIEOFFSET=5 3D=5>
<PARAMS FONT=2 SIZE=10>
</CHART>
```

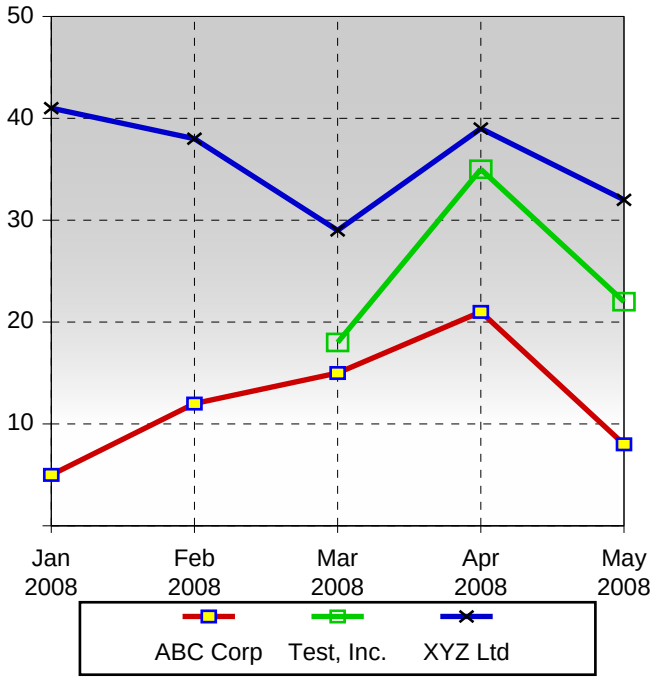
Charts

Sample 7




```
<SHADING NAME="gw" COLOR1=#CCCCCC COLOR2=#FFFFFF
COLORARY="0,.2,0,1">
<GRID ML=.5 MR=.5 MT=.5 MB=.5 XUNITS=80 YUNITS=80>
<CHART WIDTH=35 HEIGHT=35>
<PARAMS TYPE="AREA">
<PARAMS TITLE="Sample 7" TITLEFONT=5 TITLESIZE=11>
<PARAMS 3D=15 3DBACKSHADE="gw">
<DATALINE LINE=1 VALUES=5,12,15,21,8>
<DATALINE LINE=2 VALUES=21,32,18,35,22>
<DATALINE LINE=3 VALUES=41,38,29,39,32>
<PARAMS YSCALE=0,50>
<PARAMS YLABEL="|10|20|30|40|50">
<PARAMS
XLABEL="Jan\n2008|Feb\n2008|Mar\n2008|Apr\n2008|M
ay\n2008">
<PARAMS FONT=2 SIZE=9>
<PARAMS LEGEND="ABC Corp|Test, Inc.|XYZ Ltd">
</CHART>
```

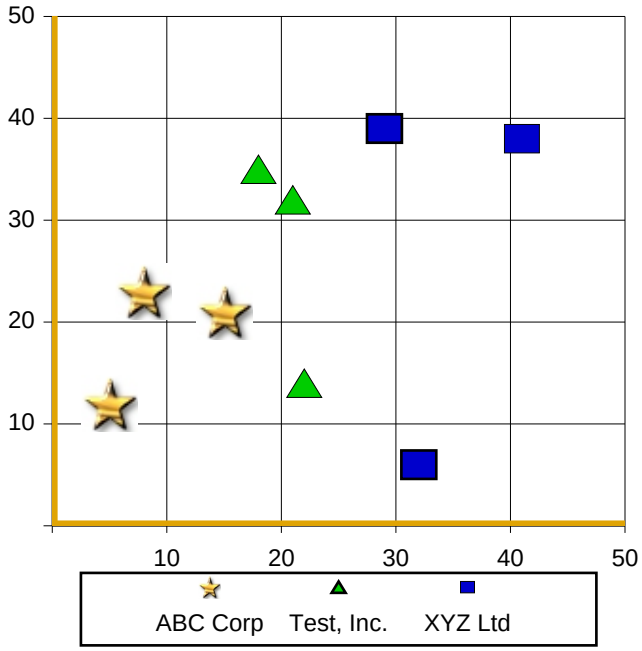
Sample 8




```
<SHADING NAME="gw" COLOR1=#CCCCCC COLOR2=#FFFFFF
COLORARY="0,.2,0,1">
<GRID ML=.5 MR=.5 MT=.5 MB=.5 XUNITS=80 YUNITS=80>
<CHART X1=40 X2=75 HEIGHT=35>
<PARAMS TYPE="BAR-LINE">
<PARAMS TITLE="Sample 8" TITLEFONT=5 TITLESIZE=11>
<DATALINE LINE=1 VALUES=5,12,15,21,8
NODESCOLOR=blue NODEFCOLOR=yellow WIDTH=2>
<DATALINE LINE=2 VALUES=,,18,35,22 NODESIZE=3
WIDTH=2>
<DATALINE LINE=3 VALUES=41,38,29,39,32
NODESCOLOR=black WIDTH=2>
<PARAMS YSCALE=0,50 3DBACKSHADE="gw">
<PARAMS YGRID=5>
<PARAMS XGRID=4>
<PARAMS GRIDDASH=3,3>
<PARAMS LINENODE NODEWIDTH=1>
<PARAMS YLABEL="|10|20|30|40|50">
<PARAMS
XLABEL="Jan\n2008|Feb\n2008|Mar\n2008|Apr\n2008|M
ay\n2008">
<PARAMS FONT=2 SIZE=9>
<PARAMS LEGEND="ABC Corp|Test, Inc.|XYZ Ltd">
</CHART>
```

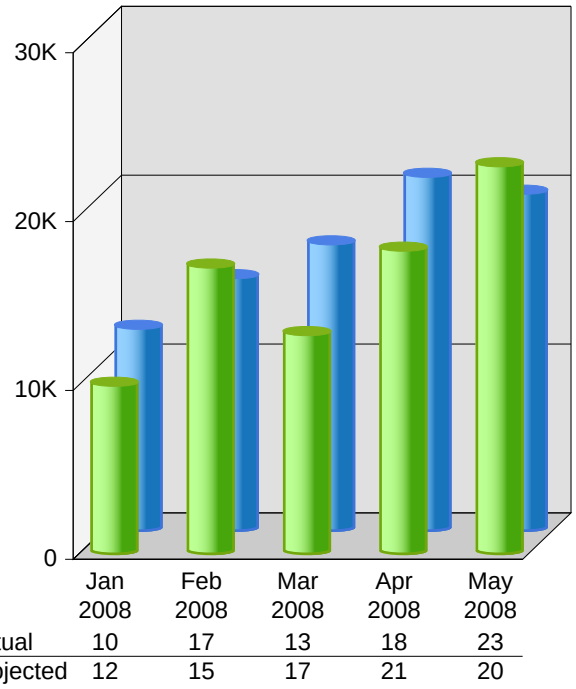
Charts

Sample 9




```
<GRID ML=.5 MR=.5 MT=.5 MB=.5 XUNITS=80 YUNITS=80>
<CHART WIDTH=35 HEIGHT=35>
<PARAMS TYPE="SCATTER">
<PARAMS TITLE="Sample 9" TITLEFONT=5 TITLESIZE=11>
<DATALINE LINE=1 VALUES=5,12,15,21,8,23
NODE="smallstr.jpg">
<DATALINE LINE=2 VALUES=21,32,18,35,22,14 NODE=7>
<DATALINE LINE=3 VALUES=41,38,29,39,32,6>
<PARAMS YSCALE=0,50>
<PARAMS XSCALE=0,50>
<PARAMS XGRID=5>
<PARAMS YGRID=5>
<PARAMS BORDEROPTS="border-left:4 solid
#e0a404;border-bottom:4 solid #e0a404">
<PARAMS NODESIZE=5 NODESCOLOR=black>
<PARAMS YLABEL="|10|20|30|40|50">
<PARAMS XLABEL="|10|20|30|40|50">
<PARAMS FONT=2 SIZE=9>
<PARAMS LEGEND="ABC Corp|Test, Inc.|XYZ Ltd">
</CHART>
```

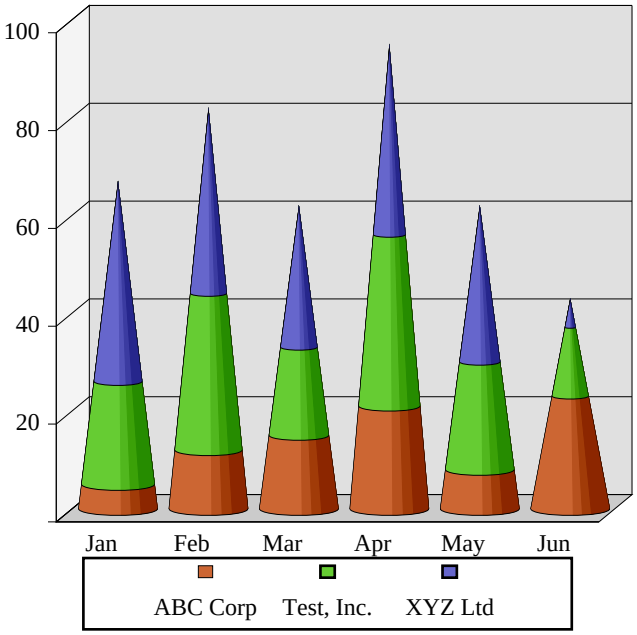
Sample 10




```
<GRID ML=.5 MR=.5 MT=.5 MB=.5 XUNITS=80 YUNITS=80>
<SHADING NAME="wb" COLOR1=#95d1ff COLOR2=#1774ba
COLORARY="0,0,.65,0">
<SHADING NAME="wg" COLOR1=#bdff94 COLOR2=#46a50b
COLORARY="0,0,.65,0">
<CHART X1=40 X2=75 HEIGHT=35>
<PARAMS TYPE="BAR-LINE" BGCOLOR=#E0E0E0>
<PARAMS 3D=30 BARSTYLE=Cylinder BARCOLUMNS>
<PARAMS TITLE="Sample 10" TITLEFONT=5
TITLESIZE=11>
<BARDATAMULT VALUES=10,17,13,18,23
LABELS=10|17|13|18|23 FCOLOR=#99CC33 LEGEND=Actual
SHADING=wg>
<BARDATAMULT VALUES=12,15,17,21,20
LABELS=12|15|17|21|20 FCOLOR=#6699FF
LEGEND=Projected SHADING=wb>
<BARBORDER WIDTH=2 STRENGTH=-15>
<PARAMS YSCALE=0,30>
<PARAMS YGRID=3 3DTOP=-10 3DSIDE=30 REVEFFECT>
<PARAMS BARSPACE=50>
<PARAMS YLABEL="0|10K|20K|30K">
<PARAMS
XLABEL="Jan\n2008|Feb\n2008|Mar\n2008|Apr\n2008|M
ay\n2008">
<PARAMS FONT=2 SIZE=9>
</CHART>
```

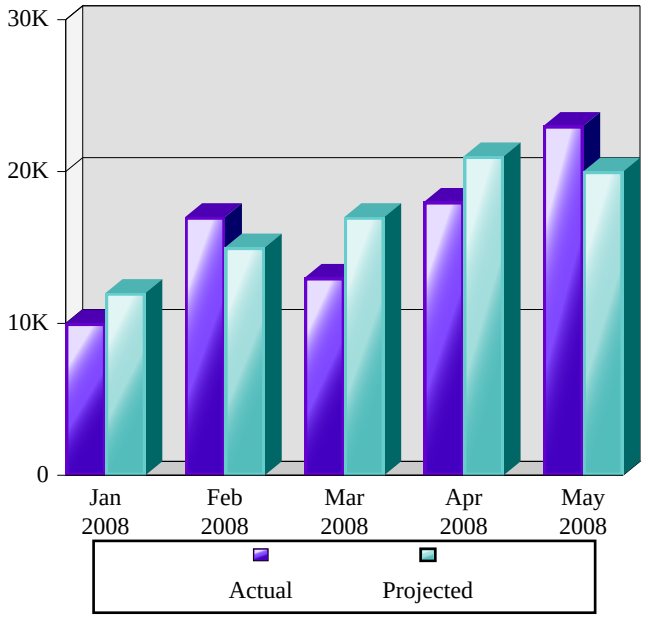
Charts

Sample 11




```
<GRID ML=.5 MR=.5 MT=.5 MB=.5 XUNITS=80 YUNITS=80>
<CHART WIDTH=35 HEIGHT=35>
<PARAMS TYPE="BAR-LINE" BARSTYLE=Cone>
<PARAMS TITLE="Sample 11" TITLEFONT=5
TITLESIZE=11>
<BARSERIES VALUES=5,12,15,21,8,23 FCOLOR=#CC6633>
<BARSERIES VALUES=21,32,18,35,22,14
FCOLOR=#66CC33>
<BARSERIES VALUES=41,38,29,39,32,6 FCOLOR=#6666CC>
<PARAMS BARSPACE=12 BGCOLOR=#E0E0E0>
<PARAMS 3D=20>
<PARAMS YSCALE=0,100>
<PARAMS YGRID=5>
<PARAMS YLABEL="|20|40|60|80|100">
<PARAMS XLABEL="Jan|Feb|Mar|Apr|May|Jun">
<PARAMS FONT=3 SIZE=9>
<PARAMS LEGEND="ABC Corp|Test, Inc.|XYZ Ltd">
</CHART>
```

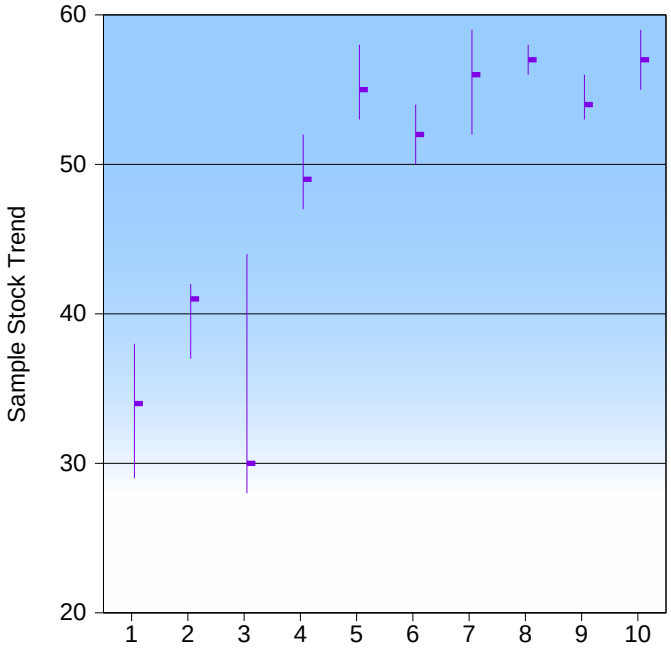
Sample 12




```
<SHADING NAME="a" COLOR1=#4400c0 COLOR2=#8149ff
COLOR3=#e9e1ff COLORARY=".3,.7,0,0">
<SHADING NAME="p" COLOR1=#53bdbc COLOR2=#a3dddc
COLOR3=#e4f6f6 COLORARY=".3,.7,0,0">
<GRID ML=.5 MR=.5 MT=.5 MB=.5 XUNITS=80 YUNITS=80>
<CHART X1=40 X2=75 HEIGHT=35>
<PARAMS TYPE="BAR-LINE" BGCOLOR=#E0E0E0>
<PARAMS 3D=10 3DTOP=-20 3DSIDE=-50>
<BARBORDER WIDTH=2 STRENGTH=-10>
<PARAMS TITLE="Sample 12" TITLEFONT=5
TITLESIZE=11>
<PARAMS BARDATA=10,12,17,15,13,17,18,21,23,20>
<PARAMS DATAMULT=2>
<PARAMS LEGEND="Actual|Projected">
<PARAMS YSCALE=0,30>
<PARAMS YGRID=3>
<PARAMS BARSHADING=a,p,a,p,a,p,a,p,a,p>
<PARAMS BARCOLOR=11,13,11,13,11,13,11,13,11,13>
<PARAMS YLABEL="0|10K|20K|30K">
<PARAMS
XLABEL="Jan\n2008|Feb\n2008|Mar\n2008|Apr\n2008|M
ay\n2008">
<PARAMS FONT=3 SIZE=9>
</CHART>
```

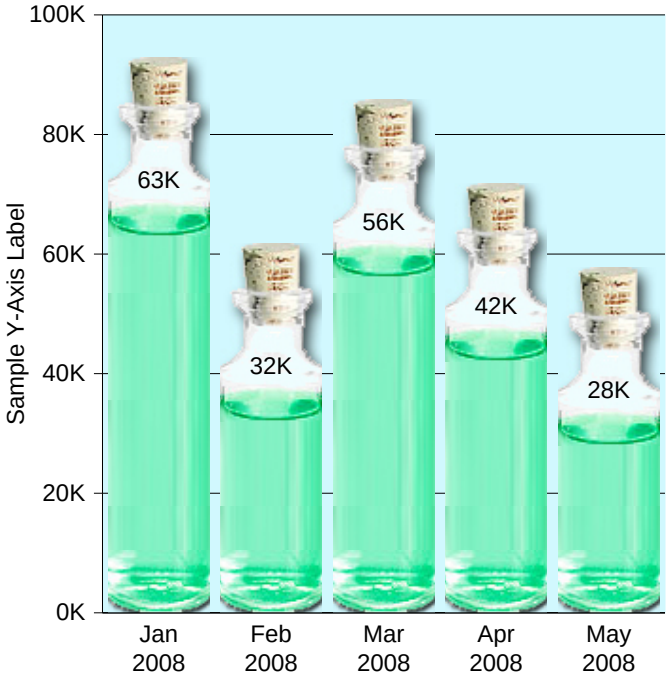
Charts

Sample 13




```
<GRID ML=.5 MR=.5 MT=.5 MB=.5 XUNITS=80 YUNITS=80>
<SHADING NAME="bw" COLOR1=#99CCFF COLOR2=#FFFFFF
COLORARY="0,.2,0,1"<
<CHART WIDTH=35 HEIGHT=35>
<PARAMS TYPE="STOCK">
<PARAMS TITLE="Sample 13" TITLEFONT=5
TITLESIZE=11>
<PARAMS HIGH=38,42,44,52,58,54,59,58,56,59>
<PARAMS LOW=29,37,28,47,53,50,52,56,53,55>
<PARAMS AVG=34,41,30,49,55,52,56,57,54,57>
<PARAMS YSCALE=20,60>
<PARAMS YLABEL="20|30|40|50|60">
<PARAMS YGRID=4 3DBACKSHADE="bw">
<PARAMS XGRID=1 SHOWXTICKS=On>
<PARAMS BARSPACE=10>
<PARAMS ALLBARCOLOR=11>
<PARAMS YAXISLABEL="Sample Stock Trend">
<PARAMS YAXISOFFSET=5>
<PARAMS XLABEL="1|2|3|4|5|6|7|8|9|10">
<PARAMS FONT=2 SIZE=9>
</CHART>
```

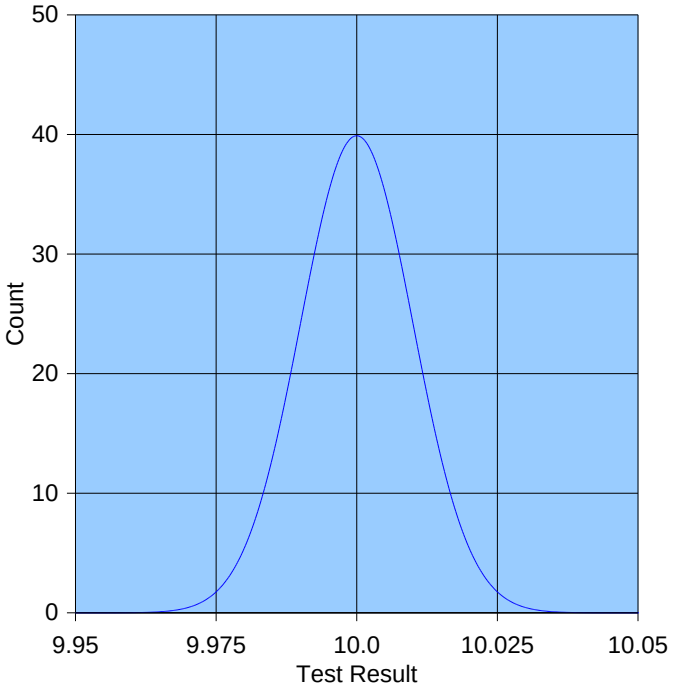
Sample 14




```
<GRID ML=.5 MR=.5 MT=.5 MB=.5 XUNITS=80 YUNITS=80>
<CHART X1=40 X2=75 HEIGHT=35>
<PARAMS TYPE="BAR-LINE">
<PARAMS TITLE="Sample 14" TITLEFONT=5
TITLESIZE=11>
<PARAMS BARDATA=63,32,56,42,28>
<PARAMS DATALAB="63K|32K|56K|42K|28K">
<PARAMS YSCALE=0,100 BGCOLOR="#d1f8fe">
<PARAMS YLABEL="0K|20K|40K|60K|80K|100K">
<PARAMS BARSPACE=10>
<PARAMS YGRID=5 LEGENDOFFSET=5>
<PARAMS IMAGE="chmid.jpg">
<PARAMS IMAGETOP="chtop.jpg">
<PARAMS IMAGEBOT="chbot.jpg">
<PARAMS IMAGETOPVALIGN="bottom">
<PARAMS YAXISLABEL="Sample Y-Axis Label">
<PARAMS YAXISOFFSET=5>
<PARAMS
XLABEL="Jan\n2008|Feb\n2008|Mar\n2008|Apr\n2008|M
ay\n2008">
<PARAMS FONT=2 SIZE=9>
</CHART>
```

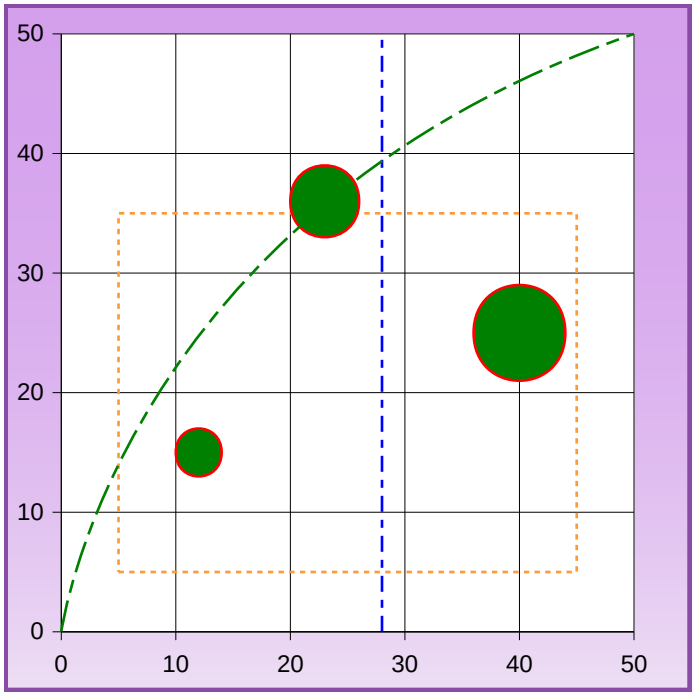
Charts

Sample 15




```
<GRID ML=.5 MR=.5 MT=.5 MB=.5 XUNITS=80 YUNITS=80>
<CHART WIDTH=35 HEIGHT=35>
<PARAMS TYPE="BAR-LINE">
<PARAMS TITLE="Sample 15" TITLEFONT=5
TITLESIZE=11>
<CHARTNORMDIST X1=9.95 X2=10.05 MU=10 SIGMA=.01
WIDTH=.1 SCOLOR=blue>
<PARAMS YSCALE=0,50>
<PARAMS XSCALE=9.95,10.05>
<PARAMS XGRID=4>
<PARAMS YGRID=5>
<PARAMS NODESIZE=5 BGCOLOR=#99CCFF>
<PARAMS YLABEL="0|10|20|30|40|50">
<PARAMS XLABEL="9.95|9.975|10.0|10.025|10.05">
<PARAMS XAXISLABEL="Test Result">
<PARAMS YAXISOFFSET=2 XAXISOFFSET=1>
<PARAMS YAXISLABEL="Count">
<PARAMS FONT=2 SIZE=9>
</CHART>
```

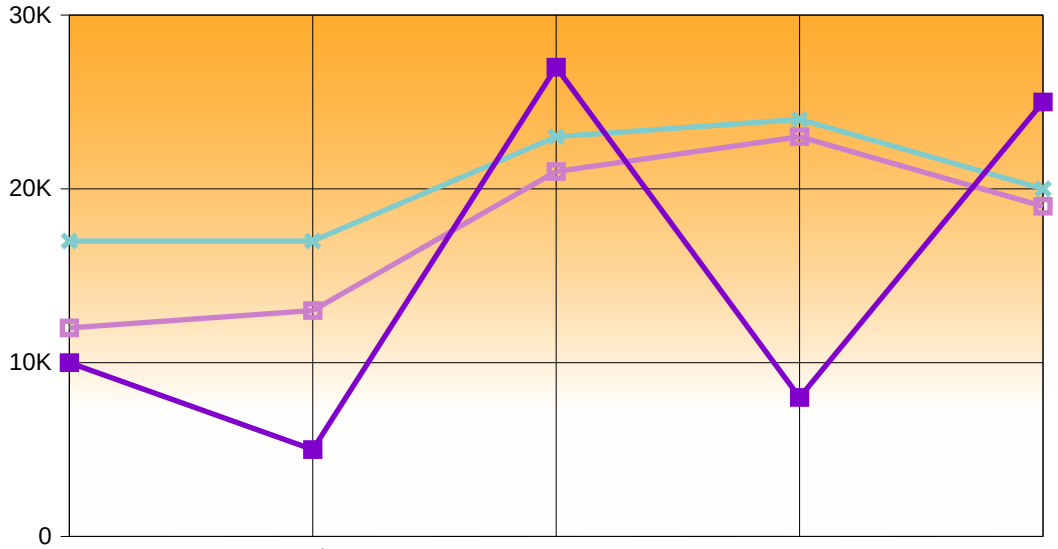
Sample 16




```
<GRID ML=.5 MR=.5 MT=.5 MB=.5 XUNITS=80 YUNITS=80>
<SHADING NAME="pw" COLOR1=#d39dec COLOR2=#eee0f4
COLORARY="0,0,0,1.5">
<CHART X1=40 X2=75 HEIGHT=35>
<PARAMS TYPE="BAR-LINE">
<PARAMS TITLE="Sample 16" TITLEFONT=5
TITLESIZE=11>
<PARAMS XSCALE=0,50 YSCALE=0,50>
<PARAMS YGRID=5 XGRID=5>
<CHARTCIRCLE X=12 Y=15 RADIUS=2 FCOLOR=green
SCOLOR=red FILL>
<CHARTCIRCLE X=23 Y=36 RADIUS=3 FCOLOR=green
SCOLOR=red FILL>
<CHARTCIRCLE X=40 Y=25 RADIUS=4 FCOLOR=green
SCOLOR=red FILL>
<CHARTLINE X1=28 Y1=0 X2=28 Y2=50 DASH=6,3,3,3
FCOLOR=white SCOLOR=blue>
<CHARTRECT X1=5 Y1=5 X2=45 Y2=35 ON=2 OFF=2
SCOLOR=1,.6,.2>
<CHARTCURVE X1=0 Y1=0 X2=50 Y2=50 CPX1=5 CPY1=35
DASH=12,3,5,3 FCOLOR=white SCOLOR=green>
<PARAMS YLABEL="0|10|20|30|40|50">
<PARAMS XLABEL="0|10|20|30|40|50">
<PARAMS FONT=2 SIZE=9 BORDEROPTS="padding:5 10 10
10;shade:pw;border:3 solid #884da4" BGCOLOR=#FFF>
</CHART>
```

Charts

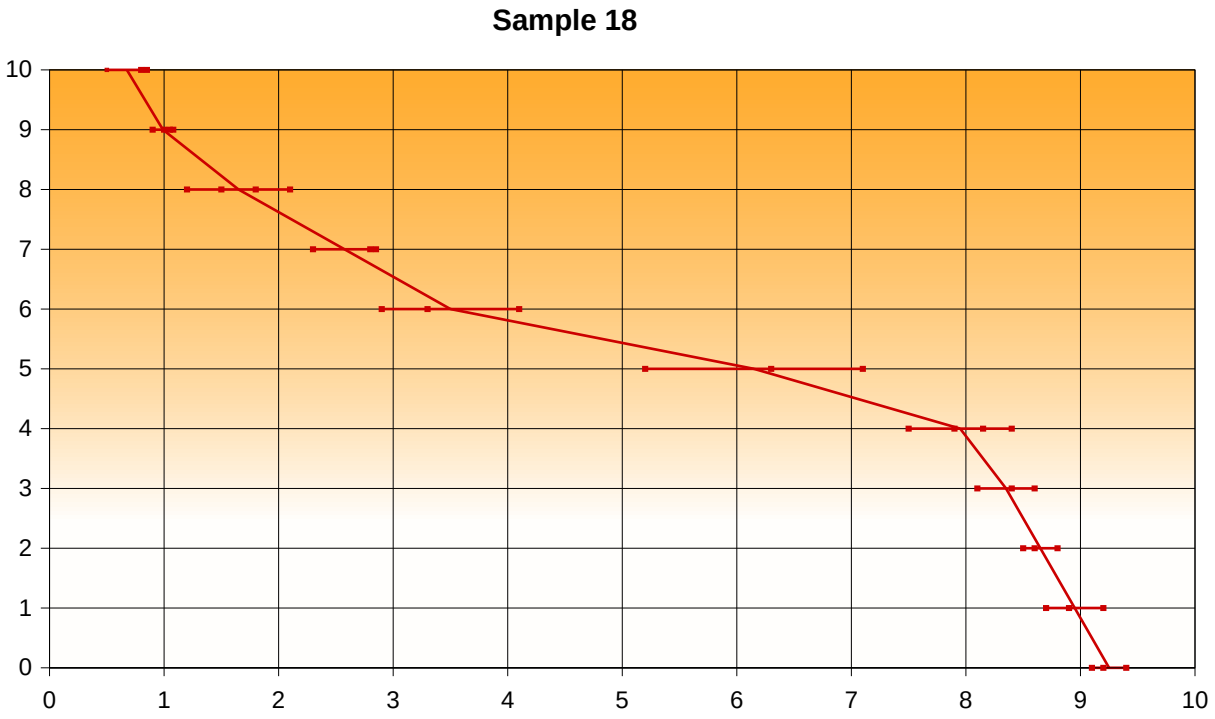
Sample 17



	Jan 2008	Feb 2008	Mar 2008	Apr 2008	May 2008
ABC Corp	10	5	27	8	25
Test Comp	12	13	21	23	19
XYZ, Inc.	17	17	23	24	20

```
<SHADING NAME="orange" COLOR1=#FF9900 COLOR2=#FFFFFF COLORARY="0,.25,0,2">
<GRID ML=.5 MR=.5 MT=.5 MB=.5 XUNITS=80 YUNITS=80>
<CHART X1=5 X2=75 HEIGHT=35>
<PARAMS TYPE="BAR-LINE">
<PARAMS LINELAB LINENODE NODEWIDTH=2>
<PARAMS TITLE="Sample 17" TITLEFONT=5 TITLESIZE=11>
<DATALINE LINE=1 VALUES=10,5,27,8,25 LABELS="10|5|27|8|25" WIDTH=2>
<DATALINE LINE=2 VALUES=12,13,21,23,19 LABELS="12|13|21|23|19" WIDTH=2>
<DATALINE LINE=3 VALUES=17,17,23,24,20 LABELS="17|17|23|24|20" WIDTH=2>
<PARAMS DATAMULT=3>
<PARAMS DATAMLAB="ABC Corp|Test Comp|XYZ, Inc.">
<PARAMS YSCALE=0,30>
<PARAMS YGRID=3>
<PARAMS XGRID=4>
<PARAMS 3DBACKSHADE="orange">
<PARAMS BARCOLOR=11,14,13>
<PARAMS LINECOLOR=11,14,13>
<PARAMS YLABEL="0|10K|20K|30K">
<PARAMS XLABEL="Jan\n2008|Feb\n2008|Mar\n2008|Apr\n2008|May\n2008">
<PARAMS FONT=2 SIZE=9>
</CHART>
```

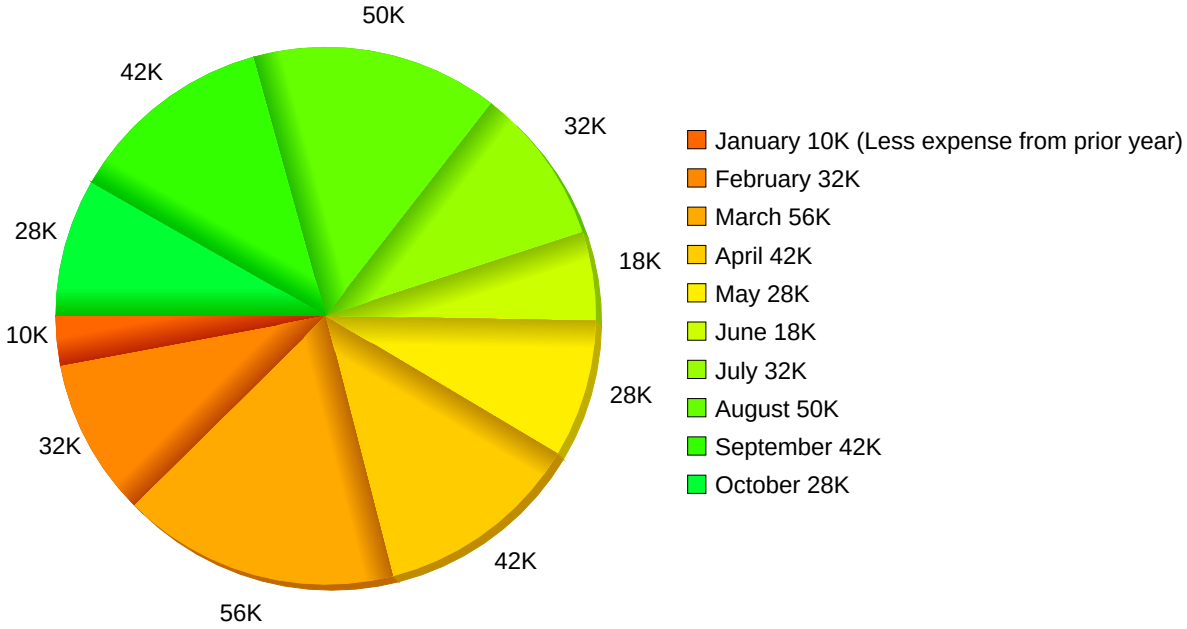
Charts




```
<SHADING NAME="orange" COLOR1=#FF9900 COLOR2=#FFFFFF COLORARY="0,.25,0,2">
<GRID ML=.5 MR=.5 MT=.5 MB=.5 XUNITS=80 YUNITS=80>
<CHART X1=5 X2=75 HEIGHT=35>
<PARAMS TYPE="SCATTER">
<PARAMS TITLE="Sample 18" TITLEFONT=5 TITLESIZE=11>
<CHARTPOINTS VAR=X POINTS=M WIDTH=1 COLOR=red NODESIZE=.5>
.5,10,.8,10,.85,10
.9,9,1,9,1.05,9,1.08,9
1.2,8,1.5,8,1.8,8,2.1,8
2.3,7,2.8,7,2.85,7
2.9,6,3.3,6,4.1,6
5.2,5,6.3,5,7.1,5
7.5,4,7.9,4,8.15,4,8.4,4
8.1,3,8.4,3,8.6,3
8.5,2,8.6,2,8.8,2
8.7,1,8.9,1,9.2,1
9.1,0,9.2,0,9.4,0
</CHARTPOINTS>
<PARAMS XSCALE=0,10> <PARAMS YSCALE=0,10>
<PARAMS YGRID=10> <PARAMS XGRID=10>
<PARAMS 3DBACKSHADE="orange">
<PARAMS YLABEL="0|1|2|3|4|5|6|7|8|9|10">
<PARAMS XLABEL="0|1|2|3|4|5|6|7|8|9|10">
<PARAMS FONT=2 SIZE=9>
</CHART>
```

Charts

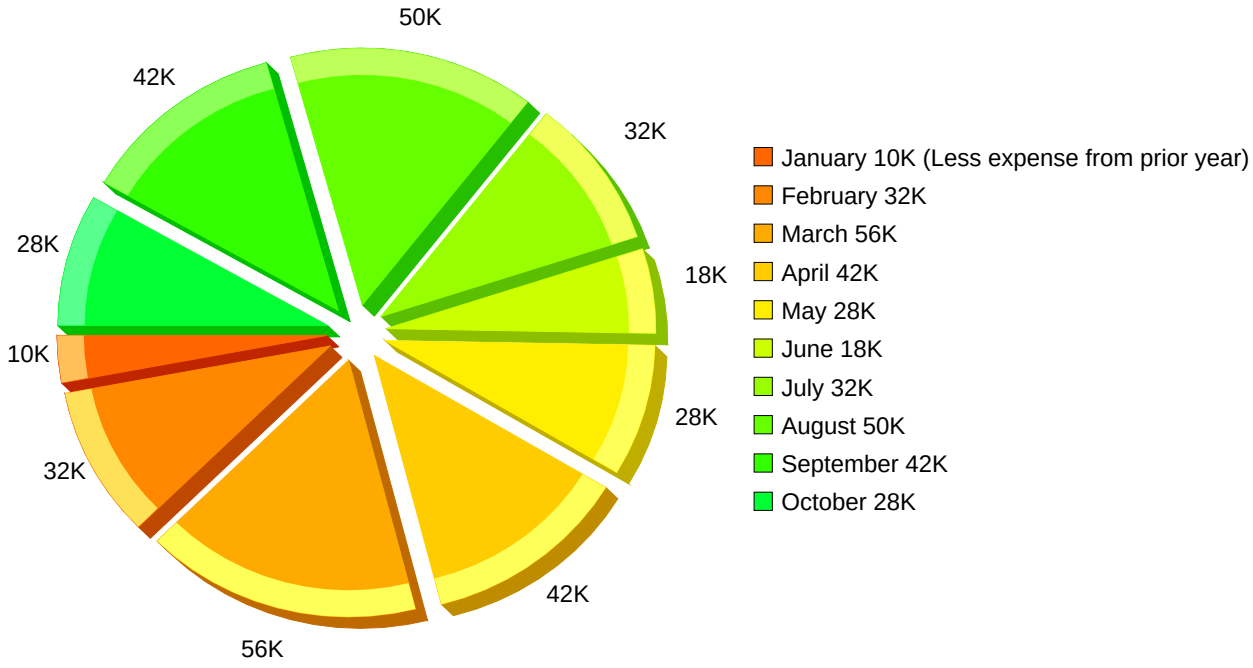
Sample 19




```
<GRID ML=.5 MR=.5 MT=.5 MB=.5 XUNITS=80 YUNITS=80>
<CHART X1=5 X2=75 HEIGHT=35>
<PARAMS TYPE="PIE">
<PARAMS TITLE="Sample 19" TITLEFONT=5 TITLESIZE=11>
<PARAMS BARDATA=10,32,56,42,28,18,32,50,42,28>
<PARAMS DATALAB="10K|32K|56K|42K|28K|18K|32K|50K|42K|28K">
<PARAMS LEGEND="January 10K (Less expense from prior year)|February 32K|March 56K|April 42K|May
28K|June 18K|July 32K|August 50K|September 42K|October 28K">
<PARAMS 3D=1 OUTSIDELABELS>
<SLICEBORDER SIDES="2" STRENGTH=-25 WIDTH=20 SHADE>
<SLICECOLOR VALUE="#f60">
<SLICECOLOR VALUE="#f80">
<SLICECOLOR VALUE="#fa0">
<SLICECOLOR VALUE="#fc0">
<SLICECOLOR VALUE="#fe0">
<SLICECOLOR VALUE="#cf0">
<SLICECOLOR VALUE="#9f0">
<SLICECOLOR VALUE="#6f0">
<SLICECOLOR VALUE="#3f0">
<SLICECOLOR VALUE="#0f3">
<PARAMS FONT=2 SIZE=9>
</CHART>
```

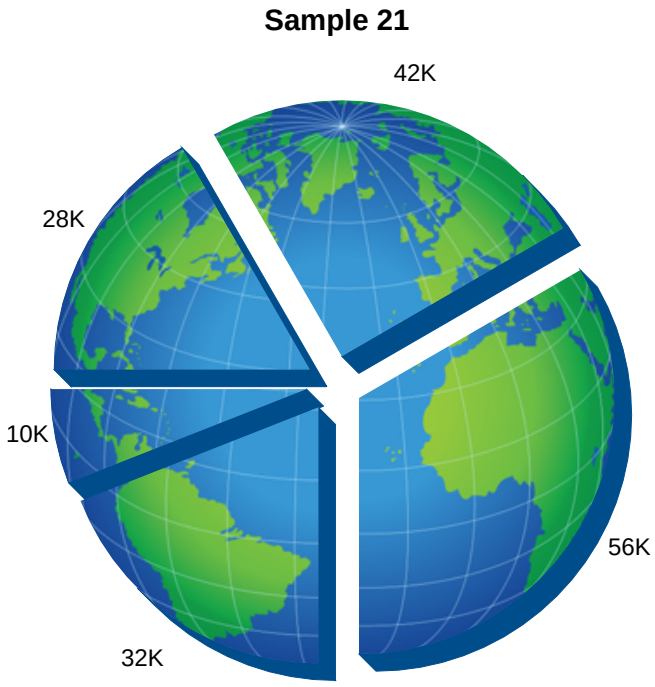
Charts

Sample 20



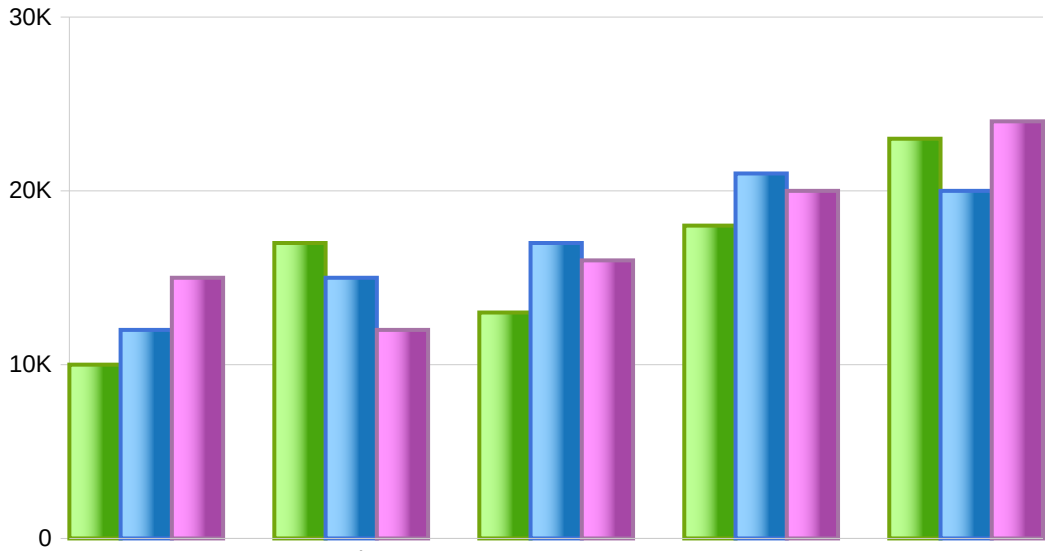

```
<GRID ML=.5 MR=.5 MT=.5 MB=.5 XUNITS=80 YUNITS=80>
<CHART X1=5 X2=75 HEIGHT=35>
<PARAMS TYPE="PIE">
<PARAMS TITLE="Sample 20" TITLEFONT=5 TITLESIZE=11>
<PARAMS 3D=2>
<PARAMS BARDATA=10,32,56,42,28,18,32,50,42,28>
<PARAMS DATALAB="10K|32K|56K|42K|28K|18K|32K|50K|42K|28K">
<PARAMS LEGEND="January 10K (Less expense from prior year)|February 32K|March 56K|April 42K|May
28K|June 18K|July 32K|August 50K|September 42K|October 28K">
<PARAMS PIEOFFSET=5 OUTSIDELABELS>
<SLICEBORDER ARC STRENGTH=35 WIDTH=20<
<SLICECOLOR VALUE="#f60">
<SLICECOLOR VALUE="#f80">
<SLICECOLOR VALUE="#fa0">
<SLICECOLOR VALUE="#fc0">
<SLICECOLOR VALUE="#fe0">
<SLICECOLOR VALUE="#cf0">
<SLICECOLOR VALUE="#9f0">
<SLICECOLOR VALUE="#6f0">
<SLICECOLOR VALUE="#3f0">
<SLICECOLOR VALUE="#0f3">
<PARAMS FONT=2 SIZE=9>
</CHART>
```

Charts




```
<GRID ML=.5 MR=.5 MT=.5 MB=.5 XUNITS=80 YUNITS=80>
<CHART X1=5 X2=40 HEIGHT=35>
<PARAMS TYPE="PIE" 3d=3>
<PARAMS TITLE="Sample 21" TITLEFONT=5 TITLESIZE=11>
<SLICECOLOR VALUE=#338dcc 3DSIDE=-30>
<PARAMS IMAGE="globe.jpg" IMAGESCALE=65>
<PARAMS BARDATA=10,32,56,42,28>
<PARAMS DATALAB="10K|32K|56K|42K|28K">
<PARAMS PIEOFFSET=5 OUTSIDELABELS>
<PARAMS FONT=2 SIZE=9>
</CHART>
```

Charts

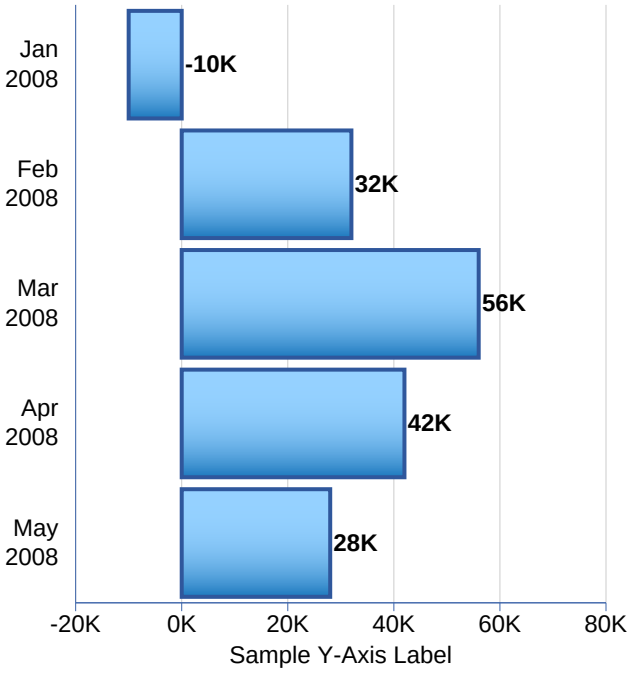


	Jan 2008	Feb 2008	Mar 2008	Apr 2008	May 2008
ABC	10	17	13	18	23
Test	12	15	17	21	20
XYZ	15	12	16	20	24

```
<GRID ML=.5 MR=.5 MT=.5 MB=.5 XUNITS=80 YUNITS=80>
<SHADING NAME="wb" COLOR1=#95d1ff COLOR2=#1774ba COLORARY="0,0,.65,0">
<SHADING NAME="wg" COLOR1=#bdff94 COLOR2=#46a50b COLORARY="0,0,.65,0">
<SHADING NAME="wp" COLOR1=#ff94ff COLOR2=#a546a5 COLORARY="0,0,.65,0">
<CHART X1=5 X2=75 HEIGHT=35>
<PARAMS TYPE="BAR-LINE">
<PARAMS TITLE="Sample 22" TITLEFONT=5 TITLESIZE=11>
<BARDATAMULT VALUES=10,17,13,18,23 LABELS=10|17|13|18|23 FCOLOR=#99CC33 LEGEND=ABC Corp SHADING=wg>
<BARDATAMULT VALUES=12,15,17,21,20 LABELS=12|15|17|21|20 FCOLOR=#6699FF LEGEND=Test Co. SHADING=wb>
<BARDATAMULT VALUES=15,12,16,20,24 LABELS=15|12|16|20|24 FCOLOR=#CC99CC LEGEND=XYZ Inc. SHADING=wp>
<BARBORDER WIDTH=1.5 STRENGTH=-15>
<PARAMS YSCALE=0,30>
<PARAMS YGRID=3>
<PARAMS BASESCOLOR=#ccc GRIDSCOLOR=#ccc>
<PARAMS YLABEL="0|10K|20K|30K">
<PARAMS XLABEL="Jan\n2008|Feb\n2008|Mar\n2008|Apr\n2008|May\n2008">
<PARAMS FONT=2 SIZE=9>
</CHART>
```

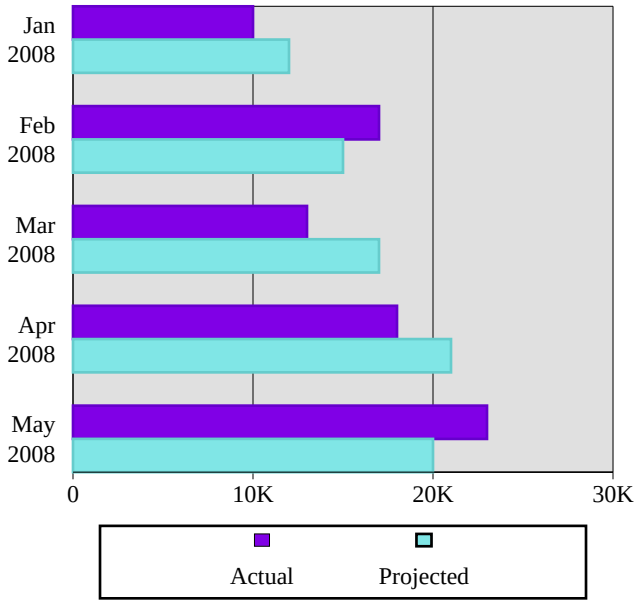
Charts

Sample 23



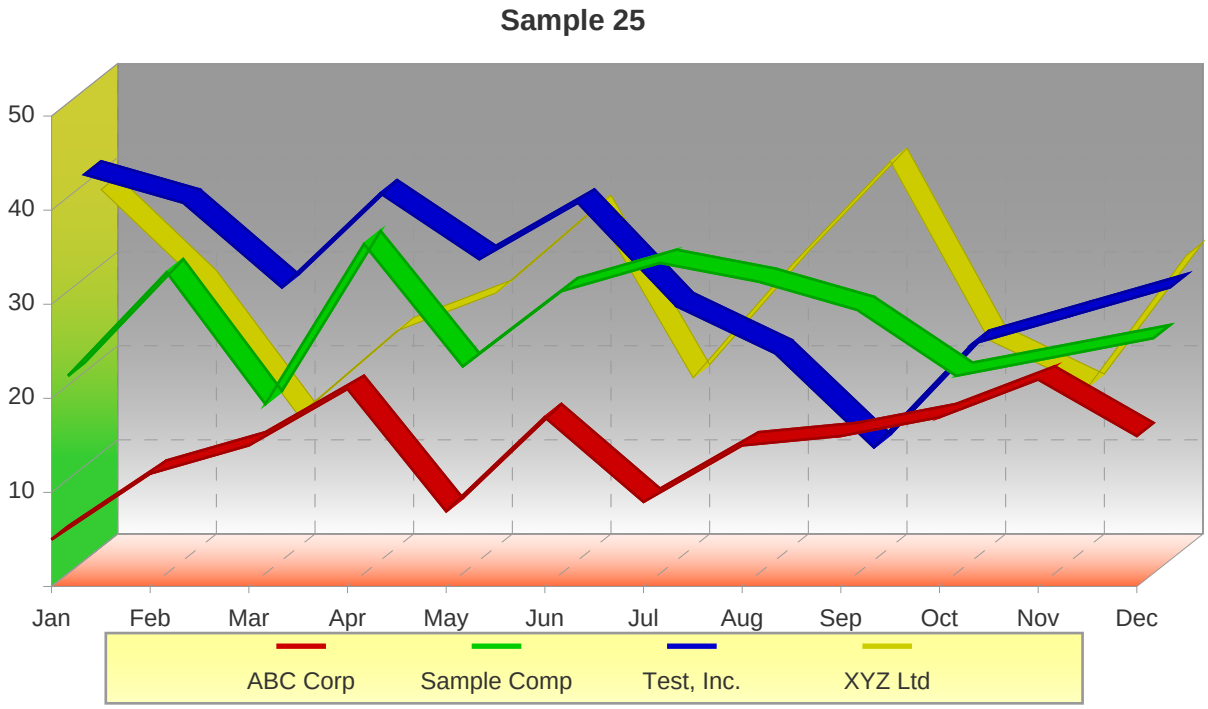

```
<GRID ML=.5 MR=.5 MT=.5 MB=.5 XUNITS=80 YUNITS=80>
<SHADING NAME="wbh" COLOR1=#95d1ff COLOR2=#1774ba
COLORARY="0,0,0,1">
<CHART HEIGHT=35 WIDTH=30>
<PARAMS TYPE="BAR-LINE">
<PARAMS TITLE="Sample 23" TITLEFONT=5
TITLESIZE=11>
<BARBORDER WIDTH=1.5 STRENGTH=-5>
<PARAMS BARDATA=-10,32,56,42,28>
<PARAMS DATALAB="-10K|32K|56K|42K|28K">
<PARAMS YSCALE=-20,80 HORIZONTAL>
<PARAMS YLABEL="-20K|0K|20K|40K|60K|80K">
<PARAMS BARSPACE=10 BASESCOLOR=#3c64a9
GRIDSCOLOR=#ccc>
<PARAMS YGRID=5 ALLBARSHADING=wbh>
<PARAMS ALLBARCOLOR=#3c64a9 LABFONT=5
XLABELFONT=2>
<PARAMS YAXISLABEL="Sample Y-Axis Label">
<PARAMS YAXISOFFSET=6>
<PARAMS
XLABEL="Jan\n2008|Feb\n2008|Mar\n2008|Apr\n2008|M
ay\n2008">
<PARAMS FONT=2 SIZE=9>
```

Sample 24




```
<SHADING NAME="a" COLOR1=#4400c0 COLOR2=#8149ff
COLOR3=#e9e1ff COLORARY=".3,.7,0,0">
<SHADING NAME="p" COLOR1=#53bdbc COLOR2=#a3dddc
COLOR3=#e4f6f6 COLORARY=".3,.7,0,0">
<GRID ML=.5 MR=.5 MT=.5 MB=.5 XUNITS=80 YUNITS=80>
<CHART X1=40 X2=75 HEIGHT=35>
<PARAMS TYPE="BAR-LINE" BGCOLOR=#E0E0E0>
<BARBORDER WIDTH=1 STRENGTH=-10>
<PARAMS TITLE="Sample 24" TITLEFONT=5
TITLESIZE=11>
<PARAMS BARDATA=10,12,17,15,13,17,18,21,23,20>
<PARAMS DATAMULT=2>
<PARAMS LEGEND="Actual|Projected"
LEGENDOFFSET=-10>
<PARAMS YSCALE=0,30>
<PARAMS YGRID=3 XGRID=1 HORIZONTAL>
<PARAMS BARCOLOR=11,13,11,13,11,13,11,13,11,13>
<PARAMS YLABEL="0|10K|20K|30K">
<PARAMS
XLABEL="Jan\n2008|Feb\n2008|Mar\n2008|Apr\n2008|M
ay\n2008">
<PARAMS FONT=3 SIZE=9>
</CHART>
```

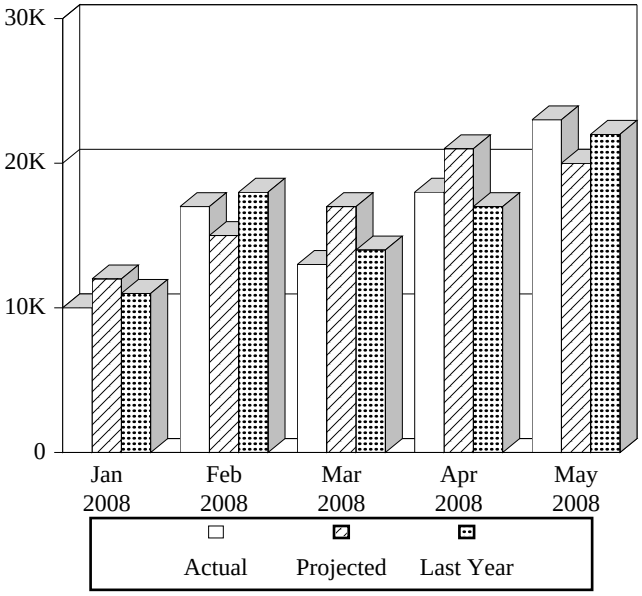
Charts




```
<SHADING NAME="yellgreen" COLOR1=#CCCC33 COLOR2=#33CC33 COLORARY="0,.25,0,1">
<SHADING NAME="whitered" COLOR1=#FFFFFF COLOR2=#FF6633 COLORARY="0,0,0,2">
<SHADING NAME="greywhite" COLOR1=#999999 COLOR2=#FFFFFF COLORARY="0,0,0,1">
<SHADING NAME="yellwhite" COLOR1=#FFFF99 COLOR2=#FFFFFF COLORARY="0,-.5,0,1.5">
<CHART WIDTH=70 HEIGHT=35>
<PARAMS TYPE="RIBBON">
<PARAMS TITLE="Sample 25" TITLEFONT=5 TITLESIZE=11>
<PARAMS 3D=40>
<DATALINE LINE=1 VALUES=5,12,15,21,8,18,9,15,16,18,22,16>
<DATALINE LINE=2 VALUES=21,32,18,35,22,30,33,31,28,21,23,25>
<DATALINE LINE=3 VALUES=41,38,29,39,32,38,27,22,12,23,26,29>
<DATALINE LINE=4 VALUES=38,28,14,23,27,36,18,30,41,22,17,31>
<PARAMS YSCALE=0,50>
<PARAMS YLABEL="|10|20|30|40|50">
<PARAMS BASEFCOLOR=#333333 BASESCOLOR=#999999>
<PARAMS GRIDON=5 GRIDOFF=5 GRIDFCOLOR="#CCCCCC">
<PARAMS 3DLEFTSHADE=yellgreen>
<PARAMS 3DBOTTOMSHADE=whitered>
<PARAMS 3DBACKSHADE=greywhite>
<PARAMS LEGENDSHADE=yellwhite>
<PARAMS XGRID=11 YGRID=5>
<PARAMS XLABEL="Jan|Feb|Mar|Apr|May|Jun|Jul|Aug|Sep|Oct|Nov|Dec">
<PARAMS FONT=2 SIZE=9>
<PARAMS LEGEND="ABC Corp|Sample Comp|Test, Inc.|XYZ Ltd">
</CHART>
```

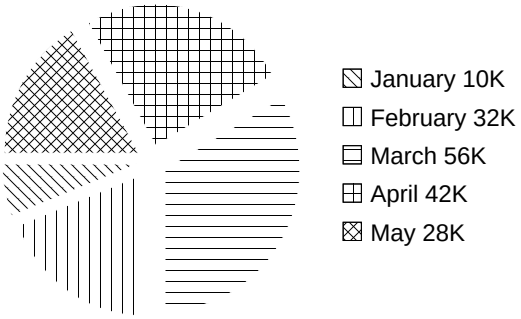
Charts

Sample 26




```
<GRID ML=.5 MR=.5 MT=.5 MB=.5 XUNITS=80 YUNITS=80>
<CHART WIDTH=35 HEIGHT=35>
<CHARTCOLOR COLORNUM=14 COLOR=white>
<PARAMS TYPE="BAR-LINE">
<PARAMS 3D=10>
<PARAMS TITLE="Sample 26" TITLEFONT=5
TITLESIZE=11>
<PARAMS
BARDATA=10,12,11,17,15,18,13,17,14,18,21,17,23,20
,22>
<PARAMS BARPATTERN=0,1,8,0,1,8,0,1,8,0,1,8,0,1,8>
<PARAMS DATAMULT=3>
<PARAMS LEGEND="Actual|Projected|Last Year">
<PARAMS YSCALE=0,30>
<PARAMS YGRID=3>
<PARAMS ALLBARCOLOR=14>
<PARAMS YLABEL="0|10K|20K|30K">
<PARAMS
XLABEL="Jan\n2008|Feb\n2008|Mar\n2008|Apr\n2008|M
ay\n2008">
<PARAMS FONT=3 SIZE=9>
</CHART>
```

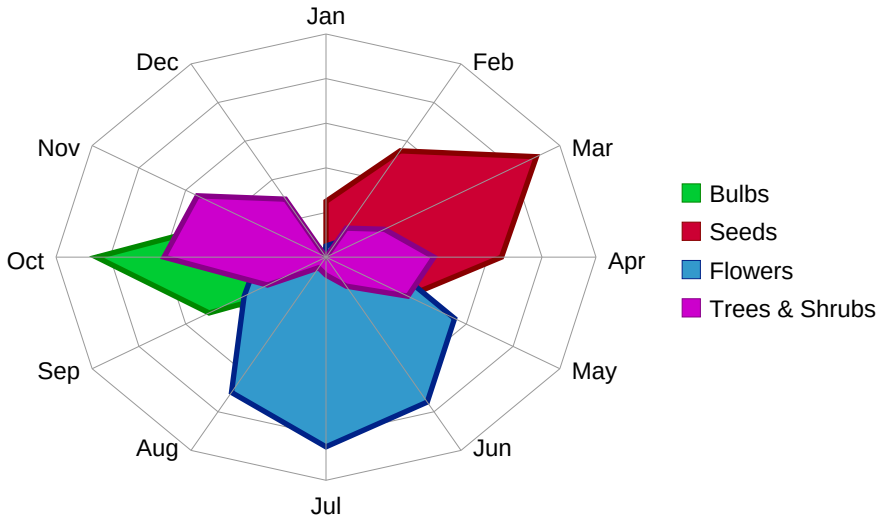
Sample 27




```
<GRID ML=.5 MR=.5 MT=.5 MB=.5 XUNITS=80 YUNITS=80>
<CHART X1=40 X2=75 HEIGHT=20>
<CHARTCOLOR COLORNUM=14 COLOR=white>
<PARAMS TYPE="PIE">
<PARAMS TITLE="Sample 27" TITLEFONT=5
TITLESIZE=11>
<PARAMS BARDATA=10,32,56,42,28>
<PARAMS BARPATTERN=2,3,4,5,6>
<PARAMS LEGEND="Jan 10K|Feb 32K|Mar 56K|Apr
42K|May 28K">
<PARAMS PIEOFFSET=5>
<PARAMS ALLBARCOLOR=14>
<PARAMS FONT=2 SIZE=9>
</CHART>
```

Charts

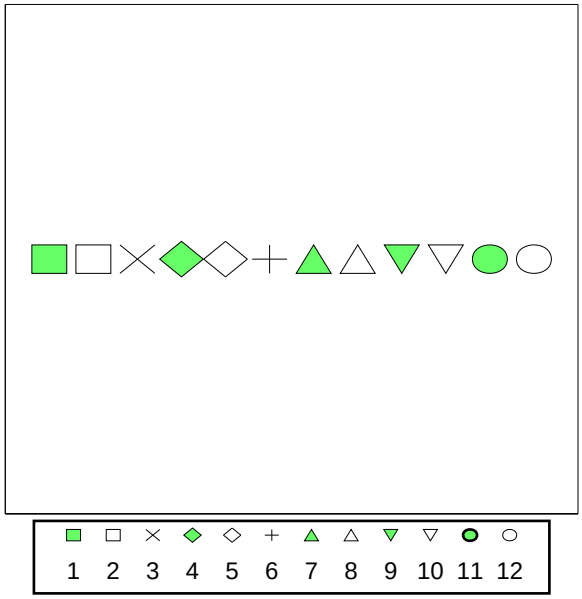
Sample 28




```
<CHART WIDTH=70 HEIGHT=35>
<PARAMS TYPE="RADAR">
<PARAMS TITLE="Sample 28" TITLEFONT=5 TITLESIZE=11>
<PARAMS YGRID=3 GRIDSCOLOR=#999>
<PARAMS XLABEL="Jan|Feb|Mar|Apr|May|Jun|Jul|Aug|Sep|Oct|Nov|Dec">
<RADARSERIES VALUES=0,0,0,0,0,0,0,1500,5000,8500,3500,500 LEGEND="Bulbs"
   FCOLOR="#00CC33" SCOLOR="#008800" FILL WIDTH=2>
<RADARSERIES VALUES=2500,5500,9000,6500,3500,0,0,0,0,0,0,0 LEGEND="Seeds"
   FCOLOR="#CC0033" SCOLOR="#880000" FILL WIDTH=2>
<RADARSERIES VALUES=500,750,1500,2000,5500,7500,8500,7000,3500,2500,500,100 LEGEND="Flowers"
   FCOLOR="#3399CC" SCOLOR="#002288" FILL WIDTH=2>
<RADARSERIES VALUES=0,1500,2500,4000,3500,1500,800,550,2500,6000,5500,3000 LEGEND="Trees & Shrubs"
   FCOLOR="#CC00CC" SCOLOR="#880088" FILL WIDTH=2>
<PARAMS FONT=2 SIZE=9>
</CHART>
```

Charts

Sample 29



Sample showing the various node types.

Drawing

Drawing

Drawing commands are used to draw lines, rectangles and circles. These commands are typically placed outside of TEXT blocks.

Drawing

<LINE
X1=number
Y1=number
X2=number
Y2=number
ON=number
OFF=number
DASH=number,number[,number,number...]
WIDTH=number
LINEC=number
FCOLOR=color
SCOLOR=color>

Used to draw a line. You can also use HR in place of LINE. This allows you to draw a horizontal rule like you would in HTML.

Parameter	Description
X1=number	From X point based on the GRID command.
Y1=number	From Y point based on the GRID command.
X2=number	Thru X point based on the GRID command.
Y2=number	Thru Y point based on the GRID command.
ON=number	The length of the line segment to draw with the SCOLOR.
OFF=number	The length of the line segment to draw with the FCOLOR.
DASH=number,number[,number,number,...]	A comma separated list of numbers (in pairs) to specify the ON/OFF length.
WIDTH=number	Sets the line width based on units of 1/72 of an inch.
LINEC=number	Sets the line end style 0 = Butt ends 1 = Round ends 2 = Projecting square caps
FCOLOR=color	Sets the fill color. Only used when drawing dashed lines.
SCOLOR=color	Sets the stroke color. This is the color used for the line.

Drawing

You may leave the Y1 and Y2 positions out to simply draw a horizontal rule at your current position. For example, the following line is positioned just below this text by using <LINE X1=10 X2=70 SCOLOR=green WIDTH=2>.

Drawing

<LINEC
VALUE=number>

Used to set the line caps.

Parameter	Description
VALUE=number	Sets the line end style 0 = Butt ends 1 = Round ends 2 = Projecting square caps

Here a an example with 0

Here a an example with 1

Here a an example with 2

Drawing

<LINED
ON=number
OFF=number
DASH=number,number[,number,number,...]>

Used to set the on/off pixels for line drawing. Note that the "on" color is set with the SCOLOR value. The line won't appear dashed if both FCOLOR and SCOLOR are the same.

Parameter	Description
ON=number	The length of the line segment to draw with the SCOLOR.
OFF=number	The length of the line segment to draw with the FCOLOR.
DASH=number,number[,number,number,...]	A comma separated list of numbers (in pairs) to specify the ON/OFF length. The DASH option and the ON/OFF options are mutually exclusive.

The line below is drawn with ON=8, OFF=4, FCOLOR=white and SCOLOR=green.

Drawing

<LINEW
VALUE=number>

Sets the line thickness. Default is 1.

Parameter	Description
VALUE=number	The width of the line.

Here a width of .1

Here a width of 1

Here a width of 5

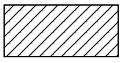
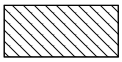
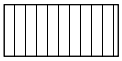
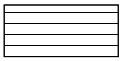
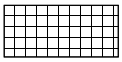
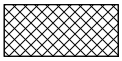
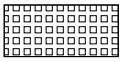
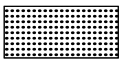
Drawing

<RECT
X1=number
Y1=number
X2=number
Y2=number
ON=number
OFF=number
DASH=number,number[,number,number...]
WIDTH=number
LINEC=number
FILL
FCOLOR=color
SCOLOR=color
PATTERN=number
CORNERSIZE=number
CORNERSTYLE=text>

Used to draw a rectangle.

Parameter	Description
X1=number	From X point based on the GRID command.
Y1=number	From Y point based on the GRID command.
X2=number	Thru X point based on the GRID command.
Y2=number	Thru Y point based on the GRID command.
ON=number	The length of the line segment to draw with the SCOLOR.
OFF=number	The length of the line segment to leave blank.
DASH=number,number[,number,number,...]	A comma separated list of numbers (in pairs) to specify the ON/OFF length.
WIDTH=number	Sets the line width based on units of 1/72 of an inch.
FILL	If set fills the rectangle with the fill color.
FCOLOR=color	Sets the fill color.
SCOLOR=color	Sets the stroke color.

Drawing

Parameter	Description
PATTERN=number	A patten for the interior. Set to a value from 1 to 8. 1 =  2 =  3 =  4 =  5 =  6 =  7 =  8 = 
CORNERSIZE=number	The size of the optional CORNERSTYLE in inches (centimeters if METRIC is used).
CORNERSTYLE=text	The optional type of corners to use for the rectangle. Valid values are: Round Bevel Scoop Stair

Drawing

Parameter	Description
	In addition, you may specify a different style for any given corner. Pass a comma separated string containing a code for each corner followed by a colon then the type. The codes for each corner is: TL - Top left TR - Top right BR - Bottom right BL - Bottom left For example, set to "TL:round,TR:scoop,BR:round" to give the top left and bottom right corners a round edge and the top right a scoop edge. The bottom left edge, since it wasn't specified, will have a standard right-angled corner.

You may leave the Y1 position out to draw a rectangle at the current position. The value for Y2 will then be added to the current position rather than used as an absolute position. For example, the following rectangle is positioned just below this text by using <RECT X1=10 X2=70 Y2=5 SCOLOR=green FCOLOR=red WIDTH=2 FILL>.

Drawing

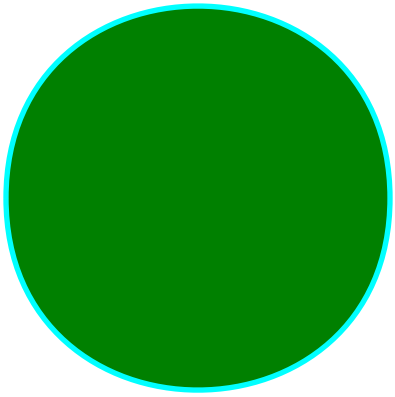
<CIRCLE
X=number
Y=number
ON=number
OFF=number
DASH=number,number[,number,number...]
RADIUS=number|numberI
WIDTH=number
FILL
FCOLOR=color
SCOLOR=color>

Used to draw a circle.

Parameter	Description
X=number	X point based on the GRID command.
Y=number	Y point based on the GRID command.
RADIUS=number|numberI	Radius based on the GRID command. If you put a letter I after the number then radius is expressed in inches.
ON=number	The length of the line segment to draw with the SCOLOR.
OFF=number	The length of the line segment to leave blank.
DASH=number,number[,number ,number,...]	A comma separated list of numbers (in pairs) to specify the ON/OFF length.
WIDTH=number	Sets the line width based on units of 1/72 of an inch.
FILL	If set fills the circle with the fill color.
FCOLOR=color	Sets the fill color.
SCOLOR=color	Sets the stroke color.

Drawing

For example, the following circle is created using <CIRCLE X=40 Y=20 RADIUS=1I SCOLOR=aqua FCOLOR=green WIDTH=2 FILL>.



Drawing

<POLY
POINTS=number,number[,number]
ON=number
OFF=number
DASH=number,number[,number,number...]
WIDTH=number
FILL
FCOLOR=color
SCOLOR=color>

Used to draw a polygon.

Parameter	Description
POINTS=number, number [,number]	Series of points in the form X1,Y1,X2,Y2,... as based on the current GRID settings.
ON=number	The length of the line segment to draw with the SCOLOR.
OFF=number	The length of the line segment to leave blank.
DASH=number,number[,number ,number,...]	A comma separated list of numbers (in pairs) to specify the ON/OFF length.
WIDTH=number	Sets the line width based on units of 1/72 of an inch.
FILL	If set fills the polygon with the fill color.
FCOLOR=color	Sets the fill color.
SCOLOR=color	Sets the stroke color.

Drawing

For example, the following polygon is created using <POLY POINTS=100,2,77,68,7,68,62,110,42,177,100,137,157,177,136,110,192,68 ,122,68 WIDTH=2 FCOLOR=.2,.3,.7 SCOLOR=.2,.3,.7 FILL>.

Drawing

<CURVE
X1=number
Y1=number
X2=number
Y2=number
CPX1=number
CPY1=number
CPX2=number
CPY2=number
ON=number
OFF=number
DASH=number,number[,number,number...]
WIDTH=number
FILL
FCOLOR=color
SCOLOR=color>

Used to draw a closed curve.

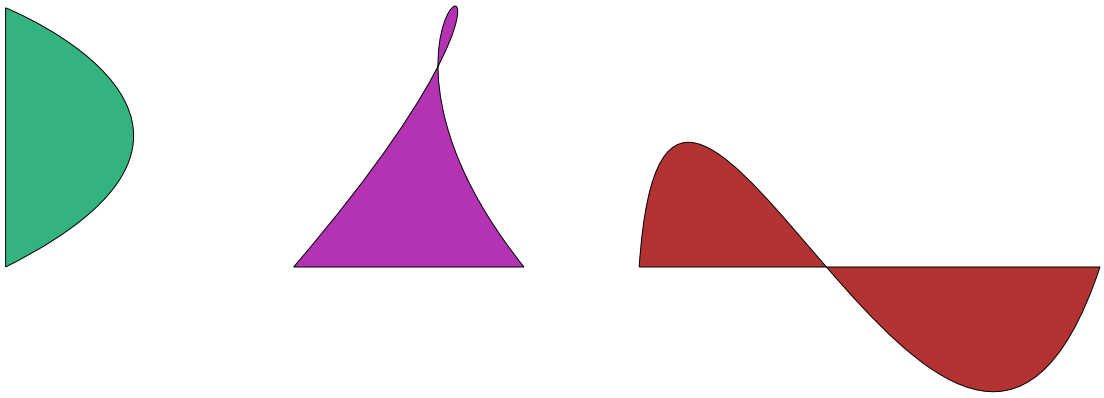
Parameter	Description
X1=number	X GRID position of first point.
Y1=number	Y grid position of first point.
X2=number	X grid position of second point.
Y2=number	Y grid position of second point.
CPX1=number	X grid position of first control point.
CPY1=number	Y grid position of first control point.
CPX2=number	Optional. X grid position of second control point.
CPY2=number	Optional. Y grid position of second control point.
ON=number	The length of the line segment to draw with the SCOLOR.
OFF=number	The length of the line segment to leave blank.
DASH=number,number[,number,number,...]	A comma separated list of numbers (in pairs) to specify the ON/OFF length.
WIDTH=number	Sets the line width based on units of 1/72 of an inch.

Drawing

Parameter	Description
FILL	If set fills the curve with the fill color.
FCOLOR=color	Sets the fill color.
SCOLOR=color	Sets the stroke color.

Drawing

Here are some examples:



Drawing

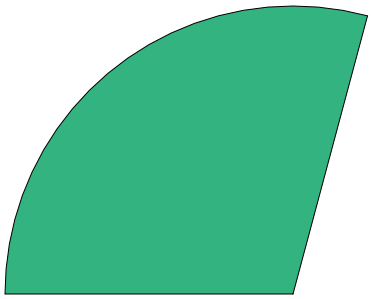
<ARC
X=number
Y=number
RADIUS=number|numberI
DEG1=number
DEG2=number
ON=number
OFF=number
DASH=number,number[,number,number...]
WIDTH=number
FCOLOR=color
SCOLOR=color>

Used to draw an arc.

Parameter	Description
X=number	X point based on the GRID command.
Y=number	Y point based on the GRID command.
RADIUS=number|numberI	Radius based on the GRID command. If you put a letter I after the number then radius is expressed in inches.
DEG1=number	Starting degree value (from 0 to 360).
DEG2=number	Ending degree value (from 0 to 360).
ON=number	The length of the line segment to draw with the SCOLOR.
OFF=number	The length of the line segment to leave blank.
DASH=number,number[,number ,number,...]	A comma separated list of numbers (in pairs) to specify the ON/OFF length.
WIDTH=number	Sets the line width based on units of 1/72 of an inch.
FCOLOR=color	Sets the fill color.
SCOLOR=color	Sets the stroke color.

Drawing

For example, the following arc is drawn from 0 to 105 degrees.



Encryption

You can encrypt your PDFs for added security. An encrypted PDF will prompt the user for a password before opening the document using Acrobat or Acrobat Reader. There are two passwords that can be set. The owner password and the user password. Opening a document with the owner password allows full access to the document. Opening a document with the user password will place restrictions on what the user can do based on flag settings when the document was created. These restrictions are:

- Disable printing of the document
- Disable changes to the document
- Disable copying of text and/or graphics from the document
- Disable add/change of form fields or annotations

Supplying just an owner password will protect the document against the restrictions above, however no password will be prompted for. No one will be able to print the document if you disable printing and use only an owner password. Supplying just a user password will have the same effect except the password will be prompted for before the document can be opened.

See the list of parameters for the exe version of PDF Charts or the methods for the DLL version on how to set these restrictions. You may also use the ENCRYPT tag. The actual contents of the PDF are encrypted in addition to just placing password protection on the document. Standard encryption is 40-bit using a combination of the MD5 and RC4 algorithms. You can specify 128-bit encryption but only users of Acrobat or Acrobat Reader 5.0 or higher will be able to open the documents.

XML Data Merge

You can use an XML approach to separate your data from the actual layout. This method allows you export your data in XML format and have multiple forms or layouts for presenting that data. You can also modify the layout template without changing the program that pulls data from your database.

The basic concept is to have two files that are merged when creating the PDF - one with your data and one with the layout. The layout has placeholders for the data which are populated from the data file. The DATASET command is used in both files to specify a block of data fields (in the data file) or the area in the layout the data belongs. DATASETs may be nested inside of either files.

Here is a sample data file (note you may also pass in standard XML formatted files):

```
<DATASET ID=main>
  <yscale>0,30</yscale>
  <ylabel>0|10K|20K|30K</ylabel>
  <xlabel>Jan\n2001|Feb\n2001|Mar\n2001|Apr\n2001|May\n2001</xlabel>
  <DATASET ID=dtl>
    <color>#99CC33</color>
    <data>10,17,13,18,23</data>
    <label>10|17|13|18|23</label>
  </DATASET>
  <DATASET ID=dtl>
    <color>#6699FF</color>
    <data>12,15,17,21,20</data>
    <label>12|15|17|21|20</label>
  </DATASET>
</DATASET>
```

XML Data Merge

A sample layout file:

```
<PDF>
<GRID ML=.5 MR=.5 MT=.5 MB=.5 XUNITS=80 YUNITS=80>
<PAGE>
<CHART X1=5 X2=75 Y1=10 HEIGHT=60>
<PARAMS TYPE="BAR-LINE" BGCOLOR=#E0E0E0>
<PARAMS 3D=30 BARSTYLE=Cylinder BARCOLUMNS>
<PARAMS TITLE="XML Sample" TITLEFONT=5 TITLESIZE=11>
<DATASET ID="main">
<DATASET ID="dtl">
<BARDATAMULT VALUES=<&data> FCOLOR=<&color>>
<BARDATALAB VALUES=<&label>>
</DATASET>
<PARAMS YSCALE=<&yscale>>
<PARAMS YLABEL=<&ylabel>>
<PARAMS XLABEL=<&xlabel>>
</DATASET>
<PARAMS DATAMLAB="Actual|Projected">
<PARAMS YGRID=3>
<PARAMS BARSPACE=50>
<PARAMS FONT=2 SIZE=9>
</CHART>
```

Variables are placed in the layout as a tag with an & in front of the variable name. The same technique is used in the data file except the & is left off of the tag. There is also a closing tag in the data file for each variable. The data between the opening and closing tag in the data file is the value that will go into the placeholder in the layout.

There are two levels of data in the example above but you can nest more levels if you need to. The first level, using DATASET with ID=main, is the header information. The second, using DATASET with ID=dtl, is the detail information. You pass the layout and data on the command line as follows:

pdfcharts.exe filein.fch fileout.pdf -data data.xml

Where filein.fch is the layout, fileout.pdf is the output file and data.xml is the data file. The DLL uses the method SetDataFile or SetDataCmd to specify the data file or data commands to use.

Alternatively, you may pass in standard XML files that start with the tag <?xml version="1.0"?>. This file will be pre-processed and converted to the DATASET layout described above. The -dataout option or SetDataFileOut method can be used to write the contents of the converted XML input to a file on disk. It may be helpful to view the converted file to see where the DATASET tags are placed and what the converted file looks like.

XML Data Merge

The DATASET levels are created based on how the data is grouped in the XML file. Note the root element is the top most DATASET. The ID value for the DATASET is taken from the tag name. Parent elements in the source XML convert to DATSETs. Child elements and attributes become name/value pairs.

XML Data Merge

Pass a comma separated list of attribute names to further break them out into DATASETS. For example:

```
<?xml version="1.0"?>
<note>
<msg num="1">
<from>Kris</from>
<to>Joe</to>
</msg>
<msg num="2">
<from>Jane</from>
<to>Tom</to>
</msg>
</note>
```

Is converted to:

```
<DATASET ID=note>
   <DATASET ID=msg>
     <to>Joe</to>
     <num>1</num>
     <from>Kris</from>
   </DATASET>
   <DATASET ID=msg>
     <to>Tom</to>
     <num>2</num>
     <from>Jane</from>
   </DATASET>
</DATASET>
```

The -datakeyattr option or SetDataFileKeyAttr method can be used to further break on the "num" attribute of "msg". They take a value or a string of comma separated values to further break on. Any attributes matching the string passed become their own DATASET block. By passing the string "num" to this option or method the above example becomes:

```
<DATASET ID=note>
   <DATASET ID=msg>
     <DATASET ID=1>
       <to>Joe</to>
       <from>Kris</from>
     </DATASET>
     <DATASET ID=2>
       <to>Tom</to>
       <from>Jane</from>
     </DATASET>
   </DATASET>
</DATASET>
```

Note there are now DATASETs within a single "msg" block instead of two "msg" blocks. You'll want to set these options depending on how you want

the data arranged.

You may use an element=>id syntax instead if you want more control over which elements and attributes are broken out. For example, suppose you have another tag called "note" that also has a "num" attribute but you don't want to break out a DATASET for this element. You would use "msg=>num" rather than just "num" in this case. Only the "msg" elements will be broken out on "num" and not the "note" elements. A comma may be used to separate multiple entries. Either specify just a list of attributes to break out or a list of element/attribute pairs but don't mix the two. For example, "msg=>num,type" is not valid.

The layout file (the .fch) does not change based on the type of input XML file used. It still uses the DATASET tags and the <&var> syntax for variable values.

Colors

Parameters such as FCOLOR, SCOLOR and BORDERCOLOR take a color value. Colors may be entered in any of the following ways:

- You may specify the red, green and blue components as decimal values from 0 to 1, separated by a comma. In this case 0,0,0 is black and 1,1,1 is white.
- You may specify the red, green and blue components as values from 0 to 255, separated by a comma. In this case 0,0,0 is black and 255,255,255 is white.
- You may specify the red, green and blue components as a hex string preceded by a # sign. In this case #000000 is black and #FFFFFF is white. If all three red, green and blue components are pairs of the same character, such as #ee33dd, you may shorten to #e3d. When three characters are found after the # sign they are expanded by duplicating each chracter to make the longer six character code.
- You may specify the cyan, magenta, yellow and black components (CMYK) as decimal values from 0 to 1, separated by a comma. In this case 0,0,0,1 or 1,1,1,0 is black and 0,0,0,0 is white.
- You may specify the cyan, magenta, yellow and black components (CMYK) as decimal values from 0 to 1, separated by a comma. In this case 0,0,0,255 or 255,255,255,0 is black and 0,0,0,0 is white.
- You may specify one of the RGB colors in the table below or use the Pantone® color chart on the following page. (Pantone is a registered trademark of Pantone, Inc.)

Color	Name
	Black
	Silver
	Gray
	White
	Maroon
	Red
	Purple
	Fuchsia

Color	Name
	Green
	Lime
	Olive
	Yellow
	Navy
	Blue
	Teal
	Aqua

Colors

Use the number or name shown as the color value (enclose names with spaces in quotes). Pantone® colors shown are converted to CMYK values in the PDF.

PROCESS YELLOW	PROCESS MAGENTA	PROCESS CYAN	PROCESS BLACK	100	101	102	PANTONE YELLOW	103	104	105	106	107	108	109	110	111	112	113	114	115
116	117	118	119	120	121	122	123	124	125	126	1205	1215	1225	1235	1245	1255	1265	127	128	129
130	131	132	133	134	135	136	137	138	139	140	1345	1355	1365	1375	1385	1395	1405	141	142	143
144	145	146	147	148	149	150	151	152	153	154	1485	1495	1505	ORANGE 021	1525	1535	1545	155	156	157
158	159	160	161	1555	1565	1575	1585	1595	1605	1615	162	163	164	165	166	167	168	1625	1635	1645
1655	1665	1675	1685	169	170	171	172	173	174	175	176	177	178	WARM RED	179	180	181	1765	1775	1785
1788	1795	1805	1815	1767	1777	1787	RED 032	1797	1807	1817	182	183	184	185	186	187	188	189	190	191
192	193	194	195	1895	1905	1915	1925	1935	1945	1955	169	197	198	199	200	201	202	203	204	205
206	207	208	209	210	211	212	213	214	215	216	217	218	219	RUBINE RED	220	221	222	223	224	225
226	227	228	229	230	231	232	RHODAMINE RED	233	234	235	236	237	238	239	240	241	242	2365	2375	2385
2395	2405	2415	2425	243	244	245	246	247	248	249	250	251	252	PANTONE PURPLE	253	254	255	256	257	258
259	260	261	262	2562	2572	2582	2592	2602	2612	2622	2563	2573	2583	2593	2603	2613	2623	2567	2577	2587
2597	2607	2617	2627	263	264	265	266	267	268	269	2635	2645	2655	2665	VIOLET	2685	2695	270	271	272
273	274	275	276	2705	2715	2725	2735	2745	2755	2765	2706	2716	2726	2736	2746	2756	2766	2707	2717	2727
BLUE 072	2747	2757	2767	2708	2718	2728	2738	2748	2758	2768	277	278	279	REFLEX BLUE	280	281	282	2905	2915	2925
2935	2945	2955	2965	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299
300	301	302	303	2975	2985	2995	3005	3015	3025	3035	304	305	306	PROCESS BLUE	307	308	309	310	311	312
313	314	315	316	3105	3115	3125	3135	3145	3155	3165	317	318	319	320	321	322	323	324	325	326
327	328	329	330	3242	3252	3262	3272	3282	3292	3302	3245	3255	3265	3275	3285	3295	3305	3248	3258	3268
3278	3288	3298	3308	331	332	333	PANTONE GREEN	334	335	336	337	338	339	340	341	342	343	3375	3385	3395
3405	3415	3425	3435	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360
361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381
382	383	384	385	386	387	388	389	390	391	392	400	401	402	403	404	405	PANTONE BLACK	406	407	408
409	410	411	412	393	394	395	396	397	398	399	3935	3945	3955	3965	3975	3985	3995	413	414	415
416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436
437	438	439	440	441	442	443	444	445	446	447	WARM GREY 1	WARM GREY 2	WARM GREY 3	WARM GREY 4	WARM GREY 5	WARM GREY 6	WARM GREY 7	WARM GREY 8	WARM GREY 9	WARM GREY 10
WARM GREY 11	COOL GREY 1	COOL GREY 2	COOL GREY 3	COOL GREY 4	COOL GREY 5	COOL GREY 6	COOL GREY 7	COOL GREY 8	COOL GREY 9	COOL GREY 10	COOL GREY 11	448	449	450	451	452	453	454	4485	4495
4505	4515	4525	4535	4545	455	456	457	458	459	460	461	462	463	464	465	466	467	468	4625	4635
4645	4655	4665	4675	4685	469	470	471	472	473	474	475	4695	4705	4715	4725	4735	4745	4755	476	477
478	479	480	481	482	483	484	485	486	487	488	489	504	505	506	507	508	509	510	511	512
513	514	515	516	517	5115	5125	5135	5145	5155	5165	5175	497	498	499	500	501	502	503	4975	4985
4995	5005	5015	5025	5035	490	491	492	493	494	495	496	518	519	520	521	522	523	524	5185	5195
5205	5215	5225	5235	5245	525	526	527	528	529	530	531	5255	5265	5275	5285	5295	5305	5315	532	533
534	535	536	537	538	539	540	541	542	543	544	545	5395	5405	5415	5425	5435	5445	5455	546	547
548	549	550	551	552	5463	5473	5483	5493	5503	5513	5523	5467	5477	5487	5497	5507	5517	5527	553	554
555	556	557	558	559	5535	5545	5555	5565	5575	5585	5595	560	561	562	563	564	565	566	5605	5615
5625	5635	5645	5655	5665	567	568	569	570	571	572	573	574	575	576	577	578	579	580	5743	5753
5763	5773	5783	5793	5803	5747	5757	5767	5777	5787	5797	5807	600	601	602	603	604	605	606	607	608
609	610	611	612	613	614	615	616	617	618	619	620	621	622	623	624	625	626	627	581	582
583	584	585	586	587	5815	5825	5835	5845	5885	5865	5875	628	629	630	631	632	633	634	635	636
637	638	639	640	641	642	643	644	645	646	647	648	649	650	651	652	653	654	655	656	657
658	659	660	661	662	663	664	665	666	667	668	669	670	671	672	673	674	675	676	677	678
679	680	681	682	683	684	685	686	687	688	689	690	691	692	693	694	695	696	697	698	699
700	701	702	703	704	705	706	707	708	709	710	711	712	713	714	715	716	717	718	719	720
721	722	723	724	725	726	727	728	729	730	731	732	BLACK 2	BLACK 3	BLACK 4	BLACK 5	BLACK 6	BLACK 7			

Error Checking

You can check your PDF commands for errors during your development stage. When you use this option, any errors found are written to the error log file along with the line number from the input file that caused the error. The error log file will not be created if no errors are found. If errors are found, the PDF file will not be created.

You turn on error checking in the executable or Perl version with the -e parameter. For example: "pdfcharts filein.fch fileout.pdf -e errlog.dat" will place the error information in the errlog.dat file. Use the SetErrFile method with the DLL version and pass it the file name to use.

The following table lists possible errors and their cause.

Error	Description
FONT xxxx not found	The font file specified in an ADDFONT tag could not be found. Check the path on the FILE parameter and the spelling.
IMAGE xxxx not found	The image file specified in an IMG tag could not be found. Check the path on the SRC parameter and the spelling.
TEXT tag not closed	An opening TEXT tag was found but no closing /TEXT tag was found.
BODY tag not closed	An opening BODY tag was found but no closing /BODY tag was found.
BODY tag encountered while still in HEADER/FOOTER	A BODY tag was found before either the HEADER or FOOTER was closed. You must close out a HEADER or FOOTER before issuing the BODY command.
HEADER/FOOTER tag encountered while still in BODY	A HEADER or FOOTER tag was issued while inside of the BODY. Close out the BODY tag first. If you are using HEADERS/FOOTERS they should always come after the PAGE command and before the BODY command.

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