

MakeAFP Viewer *User's Guide*

Version 1.1

This edition applies to the MakeAFP Viewer.

MakeAFP welcomes your comments and suggestions. You can send your comments and suggestions to:

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Chapter 1. Overview

With advanced powerful functionality and high processing performance, the MakeAFP Viewer provides excellent accuracy and quality of AFP presentation, making it ideal for the AFP content management environments that demand high performance and superior AFP viewing on-demand.

Functions at a Glance

Advanced MakeAFP Viewer provides the following advanced features, functions and capabilities to AFP business users/clients:

- Small footprint, high performance.
- Excellent easy-to-use graphical user interfaces.
- Superior presentation quality and accurate true fidelity.
- Able find and search texts and indexes quickly.
- Supports ICC profile-based color management natively in high performance.
- Supports CIELAB, CMYK, RGB color spaces.
- Supports using OpenType/TrueType fonts in AFP directly, with AFP texts encoded by ASCII, EBCDIC, DBCS-PC, DBCS-HOST, UTF-8 and UTF-16BE.
- Supports the complex text layout for the complex scripts (Arabic, Hebrew, Thai, etc), if AFP is formatted by using TrueType/OpenType fonts directly.
- Supports legacy AFP FOCA bitmap and outline fonts encoded by ASCII, EBCDIC, DBCS-PC, DBCS-HOST, UTF-16BE and third parties' non-standard own encodings.
- Supports the data-object containers in GIF, JPEG, PDF, TIFF and AFP page segment formats.
- Supports legacy AFP IOCA FS10, FS11, FS42 and FS45 monochrome and color images.
- Supports AFP GOCA vector graphics.
- Supports all of the 1D and 2D barcodes defined in AFP BCOCA standards.
- Presents legacy shading patterns in high quality.
- Provides user-friendly hand-moving tool, as well as dynamic zoom, marquee zoom and loupe zoom tools, to allow you quickly navigating and magnifying on the page.
- Supports full screen mode, zoom levels of entire page, page width, zooming from 25% to 500%, or a user-specify zoom level.
- Supports page display layout in 1-UP/2-UP viewing/scrolling modes, and 0/90/180/270 viewing rotation.
- Provides select tool to let you quickly copy the texts or images from AFP document.
- Provides snapshot tool to let you quickly capture the screen of AFP viewing.
- Supports graphic rulers with choice of measurement units.

- Able copy AFP pages by user specify page ranges.
- Able view each AFP page properties.
- Provides customize options to let you easily define the resource libraries, as well as the default RGB/CMYK color spaces.
- Supports printing on PCL/Postscript printers in high quality, without scaling or with scaling, rotation and offset options.
- Provides AFP Viewer Plug-in to view and print AFP document instantly with superior quality and true fidelity, works fine with the latest Google Chrome, Mozilla Firefox, Microsoft Internet Explorer and Opera in high performance.
- Provides user's interfaces in Chinese, English, Japanese, allows you edit language files and create a new language support file for your language at ease.

Starting MakeAFP Viewer

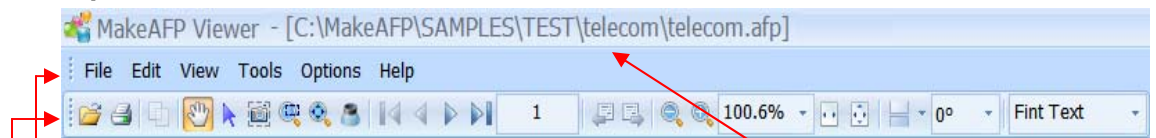
To start MakeAFP Viewer:

1. Click the **Start** button.
2. Select **Programs, MakeAFP Software**, and then **AFP Viewer**, or double-click the icon of **MakeAFP Viewer** on your desktop.

Parts of the MakeAFP Viewer Interface

MakeAFP Viewer provides all the tools you need to view AFP easily. The following overview identifies some basic features of the MakeAFP Viewer interface.

Top Portion of the Interface

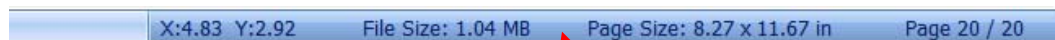


Menu Bar - gives access to most features. Menus are contextual.

Title Bar - shows the name of the AFP file.

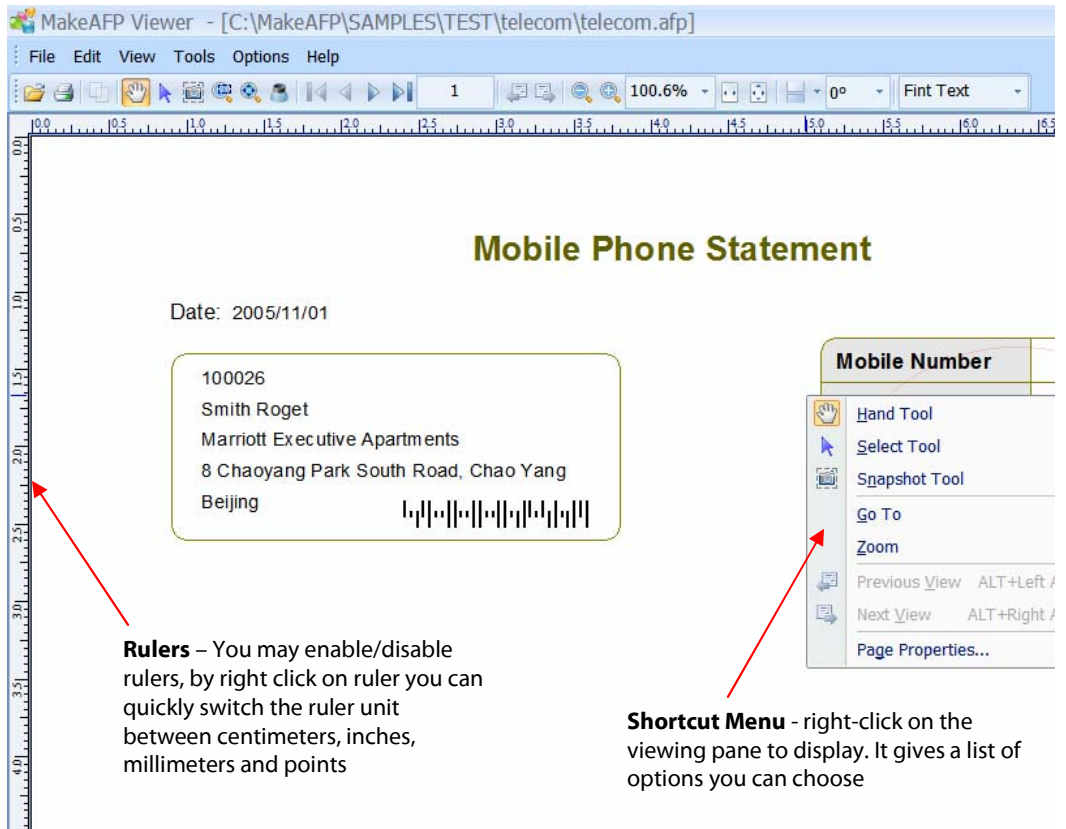
Main Toolbar - gives quick access to frequently used functions.

Bottom Portion of the Status Bar



Status Bar - Gives you information about the current AFP file, such as the file size, page size, page number, as well as the current cursor position

Middle Portion of the Interface



The screenshot shows the MakeAFP Viewer application window. The title bar reads "MakeAFP Viewer - [C:\MakeAFP\SAMPLES\TEST\telecom\telecom.afp]". The menu bar includes "File", "Edit", "View", "Tools", "Options", and "Help". The toolbar contains various icons for file operations and viewing. The main viewing area displays a document titled "Mobile Phone Statement" with the following content:

Date: 2005/11/01

100026
Smith Roget
Marriott Executive Apartments
8 Chaoyang Park South Road, Chao Yang
Beijing

Below the text is a barcode. A red arrow points from the text "Rulers" to the vertical ruler on the left side of the document. Another red arrow points from the text "Shortcut Menu" to a context menu that is open over the document. The context menu is titled "Mobile Number" and contains the following items:

- Hand Tool
- Select Tool
- Snapshot Tool
- Go To
- Zoom
- Previous View ALT+Left /
- Next View ALT+Right /
- Page Properties...

Rulers – You may enable/disable rulers, by right click on ruler you can quickly switch the ruler unit between centimeters, inches, millimeters and points

Shortcut Menu - right-click on the viewing pane to display. It gives a list of options you can choose

MakeAFP Viewer Prerequisites

Here are the prerequisites to run MakeAFP Viewer:

1. Windows XP, Windows VISTA, Windows 7, 32-bit or 64-bit, Windows XP with SP3 or Windows 7 are recommended.
2. Windows Server 2003, Windows Server 2008, 32-bit or 64-bit.
3. [Microsoft Visual C++ 2005 Service Pack 1 Redistributable Package](#).

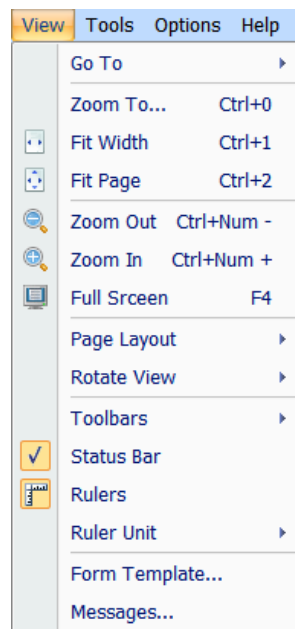
Chapter 2. Menu and Tool Bars

The Menu Bar and Tool bar in MakeAFP Viewer are similar to most Microsoft Windows-based software interfaces.

Additional features are available and their purposes are outlined in the following narrative.

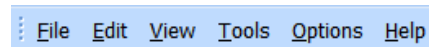
Using the Menu Bar

Click on an item in the Menu Bar to view its options. Available options and shortcut keys are displayed adjacent to the item, and menu options are context-sensitive.

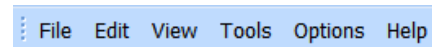


You can also access an item in the Menu Bar by **ALT +** the underscored letter in the Menu Bar. For example, ALT+F brings up the File Menu.

Menu Bar with Underscores



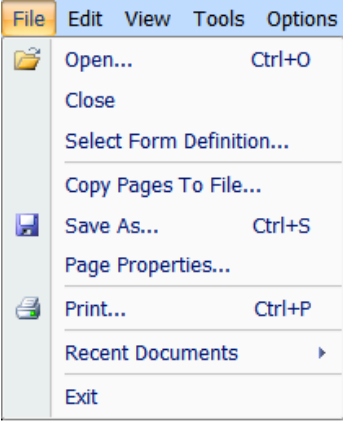
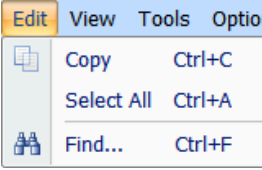
Menu Bar without Underscores

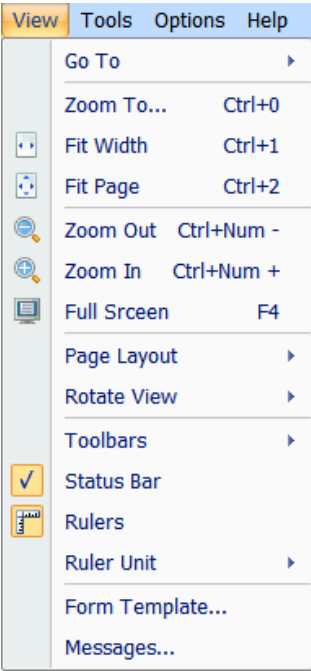


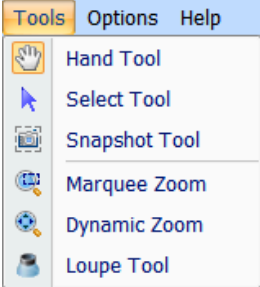
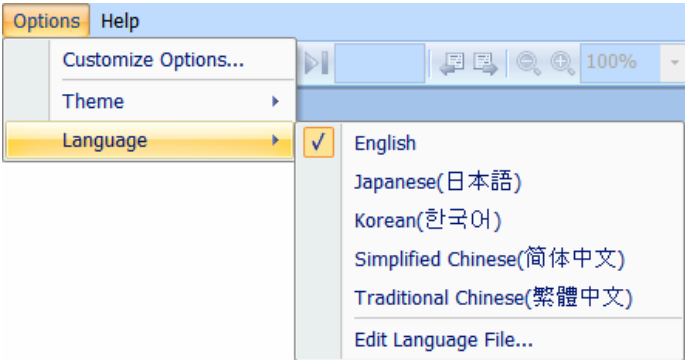
Menu Bar Options

Most of the options under the Menu Bar should be self-explanatory to any experienced computer user. For example, you should be able to comprehend how to open, close, and print a file as in any Microsoft Windows-based program.

The Menu Bar and options are listed in the following tables sequentially:

Menu Option	Functions
<p>File</p>	<p>When there is an AFP file opened, the File Menu options available are: Open, Close, Select Form Definition, Copy Pages To File, Page Properties, Print, Print Preview, Recent Projects and Exits.</p>  <p>Open – opens an AFP file. Close - closes the AFP file and active window. Select Form Definition - selects an AFP form definition to be used with the AFP file to be viewed. Copy Pages To File – selects pages by page numbers or ranges and then copies into a new AFP file. Page Properties – allows you to view the properties of current page, such as page size, fonts and resources used. Print - bring up the print & preview dialog. Recent Projects - A list of the most recent projects opened in Viewer. Exit - closes the active window and exits Viewer.</p>
<p>Edit</p>	<p>The Edit Menu offers some basic options for you to find text or copy the texts from the current active page to the Windows system clipboard.</p>  <p>Copy - copies texts or image if they are selected by the Select Tool or Snapshot Tool, copies the attribute information of font or image detected by the Sniff Tool, position and size information detected by the Measure Tool, or color RGB/CMYK values of any point of screen detected by the Color Picker Tool. Select All - selects all the texts from the current page if Select Tool is on, or whole page as an image is Snapshot Tool is currently on. Find – finds a text in the AFP document.</p>

Menu Option	Functions
<p>View</p>	<p>The View Menu lets you select the options for viewing AFP file and messages, as well as customize the toolbars and ruler.</p>  <p>Go To – allows you skip to a specific page of AFP document.</p> <p>Zoom To – displays the Zoom Dialog Box to change the zoom factor.</p> <p>Fit Width – selects the zoom factor to fit the width of the view pane.</p> <p>Fit page – selects the zoom factor to fit the entire page display within the borders of the view pane.</p> <p>Zoom In – increases the zoom percentage.</p> <p>Zoom Out – decreases the zoom percentage.</p> <p>Full Screen – displays only the AFP page, hides the screen borders, title bar, menu, status and toolbars. Pressing ESC key restores the normal screen display mode.</p> <p>Toolbars – customizes the Standard Toolbars.</p> <p>Status Bar – enables/disables the Status Bar at the bottom of view pane.</p> <p>Page Layout – customizes the page display layout.</p> <p>Rotate View – rotates the view of a page in 90° increments.</p> <p>Rulers – controls whether display the rulers with the view pane.</p> <p>Ruler Unit – sets the measurement unit of ruler.</p> <p>Form Template – selects an image, PDF page, AFP page or AFP overlay as a form template/overlay.</p> <p>Messages – shows the warning and error message reported.</p>
<p>Tools</p>	<p>The Tools menu allows you to select the features and functions to select texts or images, snapshots the screen display, manipulate the display by dynamic zoom, marquee zoom and loupe zoom tools, so you can quickly navigating and magnifying on the page</p>













Menu Option	Functions
<p>Tools</p>	<p>The Tools menu allows you to select the features and functions to select texts or images, manipulate the display, snapshots the screen display, measures the element/object position and dimension, finds out the font and object resources used by the page, pick any color from the screen.</p>  <p>Hand Tool - lets you to "grab" the page and move it within the pane by clicking and dragging the page.</p> <p>Select Tool - selects texts or an image on the screen for copying to the Windows system clipboard .</p> <p>Snapshot Tool – copies a rectangular area of view pane to the clipboard as a bitmap image.</p> <p>Marquee Zoom - enlarges the viewing by defining an area of the page that you want to fill the viewing pane.</p> <p>Dynamic Zoom - zooms in when you drag it up the page and it zooms out when you drag down.</p> <p>Loupe Tool – lets you to easily change the magnification of AFP viewing. It is best used when you want to keep an AFP viewing at a standard zoom level (like fix page width) and magnify certain portions.</p>
<p>Options</p>	<p>The Options Menu allows you customize the default options, resource libraries, color management default ICC color profiles; chooses a color theme for your GUI; selects a language for your Menu, edit and create the Language Files.</p>  <p>Customize Options – customizes the default options, resource libraries, color management default ICC color profiles.</p> <p>Theme – chooses a color theme for your GUI.</p> <p>Languages – chooses a prefer language for the Menu, edits or creates the language files.</p>


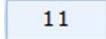




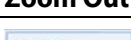





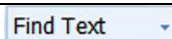
Tool Bar Options

MakeAFP Viewer provides a suite of tools to help you to view AFP instantly.

The tools are arranged on toolbars for convenient access, which are customizable. The tools are also available on the menus.



Tool	Function
 Open AFP Document	Lets you Open an AFP document file.
 Print	Lets you preview and Print the AFP document file.
 Copy to Clipboard	Lets you Copy the current selected texts or image to the clipboard.
 Hand Tool	Lets you "grab" the AFP page and move it within the pane by clicking and dragging the page. By default, the Hand Tool is selected when you open an AFP document. In addition, you can press PgUp, PgDn, up-arrow, down-arrow and space-bar keys to move the pages.
 Select Tool	Lets you select texts or an image on the screen for copying to the Windows system clipboard.
 Snapshot Tool	Lets you copy a rectangular area of view pane to the clipboard as a bitmap image.
 Marquee Zoom	Lets you to use it to enlarge the viewing by defining an area of the page that you want to fill the viewing pane. Press ESC key returns to the Hand Tool.
 Dynamic Zoom	Lets you zoom in when you drag it up the page and it zooms out when you drag down. Press ESC key returns to the Hand Tool.
 Loupe Tool	Lets you to easily change the magnification of AFP viewing. This tool is best used when you want to keep an AFP viewing at a standard zoom level (like fix page width) and magnify certain portions. Press ESC key returns to the Hand Tool.
 First Page	Lets you move the view to the top of the first page of AFP document, also supported by press Home key.
 Previous Page	Lets you move the view to the top of the previous page of AFP document, you can also do it by left-arrow key.
 Next Page	Lets you move the view to the top of the next page of AFP document, , you can also do it by right-arrow key.

Tool	Function
 Last Page	Lets you move the view to the top of the last page of AFP document, also supported by press End key.
 Page Number	Display the page number of current page, also lets you enter the page number of the page you want to view.
 Previous View	Lets you retrace backward the page portion viewed early on.
 Next View	Lets you retrace forward to the page portion viewed early on.
 Zoom In	Lets you increases the zooming percentage, enlarging AFP page within the view pane.
 Zoom Out	Lets you decreases the zooming percentage, shrinking the AFP page within the view pane.
 Zoom Value	Lets you select the zoom level. You can select Entire Page, Page Width, zooming from 25% to 500%, or specify a user-specify zoom level.
 Fit Current Page Width	Lets you fit the AFP page to the width of the view pane. Scroll bars are provided to enable you to scroll the page as desired.
 Fit Current Page Size	Lets you fit the entire AFP page within the borders of the view pane.
 Full Screen	Lets you display only the AFP page, hides the screen borders, title bar, menu, status and toolbars. Pressing ESC key restores the normal screen display mode.
 Page Layout	Lets you change the page display layout. 1-UP View for single Page view; 1-Up Enable Scrolling for scroll down continuously through one page after another; 2-UP View for view two pages at a time, side by side; 2-UP Enable Scrolling for scroll down continuously through two pages at a time, side by side.
 Rotate View	Lets you temporarily rotate the page view in 90° increments. This changes the view of the page, not its actual page orientation.
 Find Text	Lets you enter a text to find text in the AFP document.

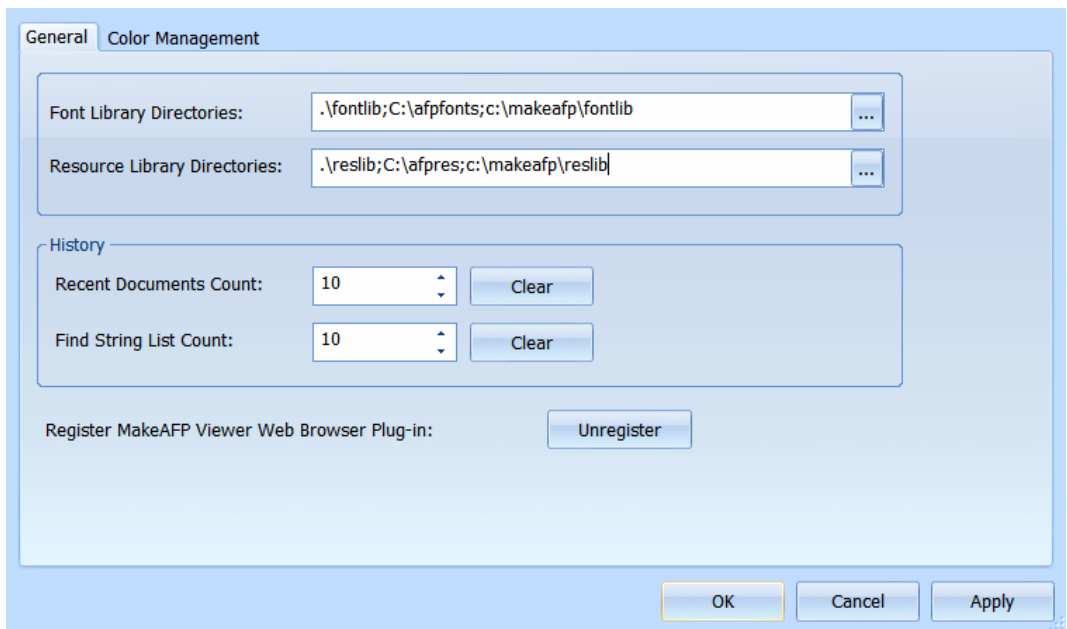
Chapter 3. Customize Options

MakeAFP Viewer provides the Customize Options to let you open the dialogs to customize and define miscellaneous options, such as the resource libraries, history keeping counter, default RGB/CMYK ICC profiles, as well as whether set up and register the MakeAFP Viewer Web Browser Plug-in.

General Options

You can access the **General Options** by opening the **Options** Menu and then selecting the **Customize Options**.

General Options Tab:



With the **Register MakeAFP Viewer Web Browser Plug-in** option, you can easily register and set up MakeAFP Viewer as a high performance AFP Viewer plug-in into the Internet Browsers installed on your Windows.

MakeAFP Viewer Web Browser Plug-in works fine with the latest Google Chrome, Mozilla Firefox, Microsoft Internet Explorer and Opera.

With resource and font library directories, you can define the directories of resources and AFP fonts respectively.

MakeAFP Viewer searches the resources and AFP fonts by the order of the directories list you specified, each directory name must be separated by a semicolon (;).

When MakeAFP Viewer finds more than one resource with the same base-filename in a resource directory, it auto-selects the matching resource by the following resource type and filename extension search order:

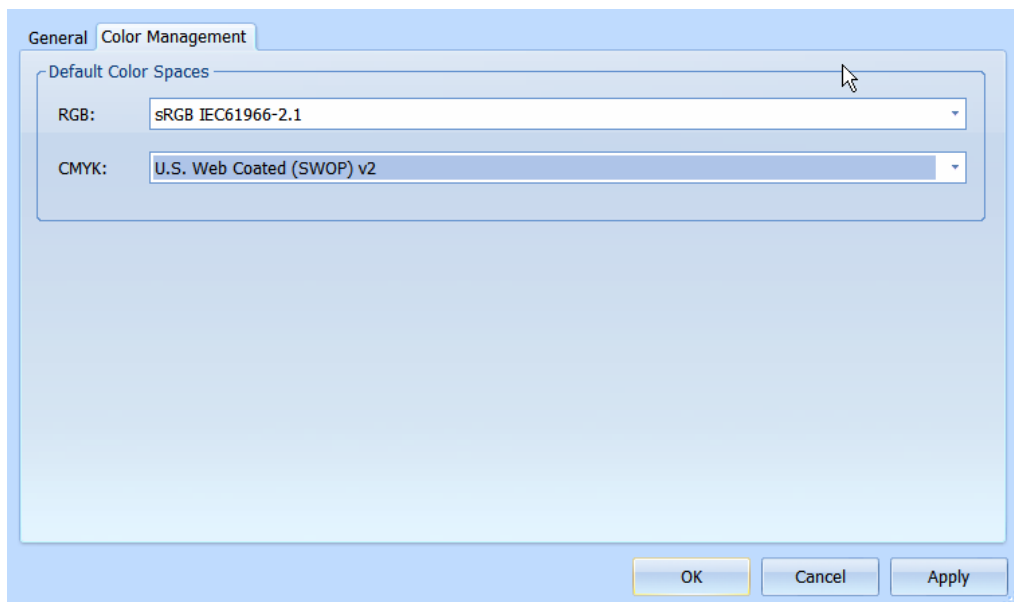
Resource Type	Filename Extension Search Order
AFP Character Set	No extension, OLN, 600, 480, 360, 300, CHS, FONTOLN, FONT240, FONT300, FONT38PP
AFP Coded Page	No extension, ECP, CDP
AFP Coded Font	No extension, CDF, CFT
AFP Form Definition	No extension, FDE, FIL, FDEF38PP
AFP Overlay	No extension, OVL, OLY, OVR, OVLY38PP, AFP
AFP Page Segment	No extension, PSG, PSE, PSEG38PP, AFP, 600, 480, 360, 300, 240
GIF	GIF, OBJ, No extension
JPEG	JPG, JPEG, OBJ, No extension
PDF	PDF, OBJ, No extension
TIFF	TIF, TIFF, OBJ, No extension

For the AFP documents formatted by using OpenType/TrueType fonts directly as the data-object containers, MakeAFP Viewer always uses the inline OpenType/TrueType fonts if they are embedded within AFP documents, otherwise uses the OpenType/TrueType fonts that are installed on your Windows system, for better performance with both viewing and printing, using Windows system fonts is strongly recommended.

Color Management Settings

You can access the **Color Management** settings options by opening the **Options** Menu, selecting the **Customize Options**, and then clicking on tab **Color Management**.

Color Settings Tab:



With **Color Management** Options, you can select the default RGB and CMYK ICC profiles for the color management.

MakeAFP Viewer supports ICC-based color management natively in high performance for the AFP CMYK texts, GOCA vector graphics and images, it supports CMYK images embedded with

ICC profiles, or use the CMYK ICC profile you selected with the Color Management setting or the default CMYK ICC profile “U.S. Web Coated SWOP v2”, if CMYK image did not embed an ICC profile.

With Windows Explore, you can right-click the ICC profile files and then install them into your Windows system.

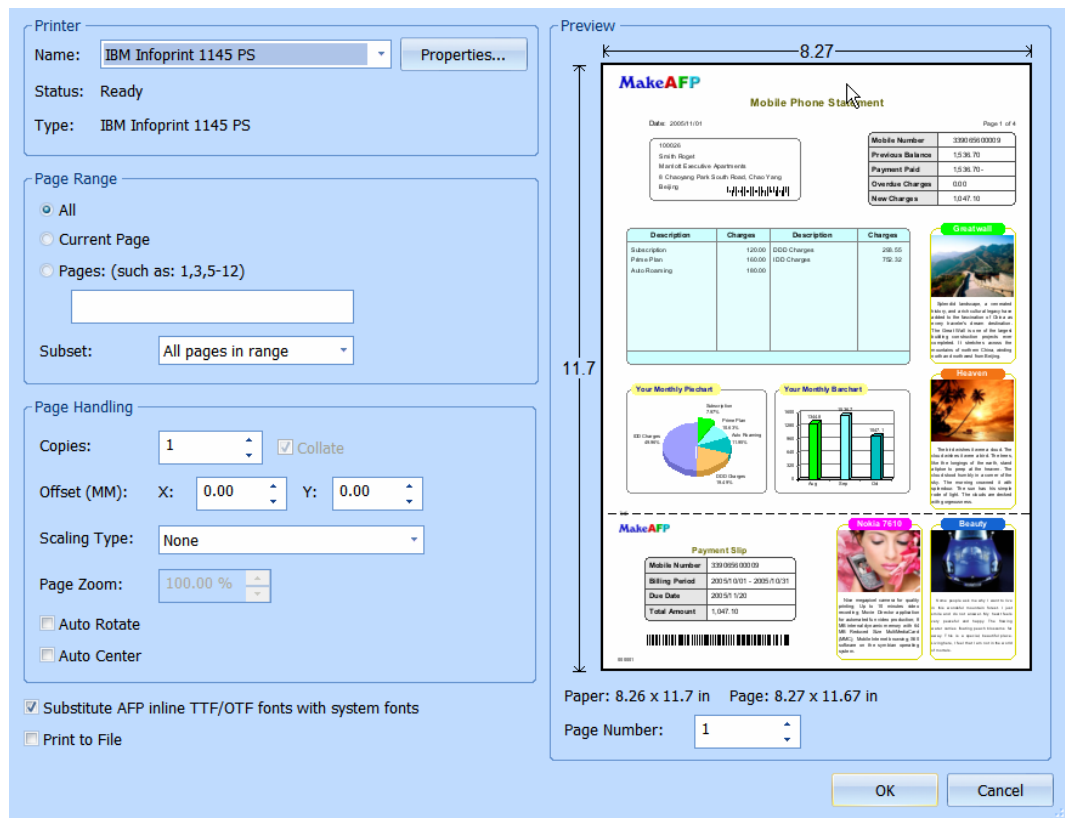
You can download the Adobe ICC profiles for Windows from [Adobe website](#). Check with your AFP printer vendors for the CMYK ICC profile specially developed for your color IPDS printers.

Chapter 4. Tools

MakeAFP Viewer provides a suite of comprehensive powerful tools, with which you can easily copy AFP pages, print AFP documents to PCL/Postscript printers in high quality, quick and easy navigating and magnifying on the page.

Print to Postscript/PCL/PDF Printer

MakeAFP Viewer provides you the high performance printing capability to print AFP pages to the Postscript/PCL/PDF printers defined on your Windows.



You can easily select the pages to be printed, control the page scaling, page offset position, page rotation and preview a page to be printed.

Page Scaling controls the fitting of the AFP pages to the selected printer's physical page printable area:

None – Prints AFP pages without any scaling. Page contents that do not fit on the page printable area will be cropped by the currently selected printer.

Fit To Printable Area – Reduces or enlarges each AFP page to fit the printable area of the currently selected paper size.

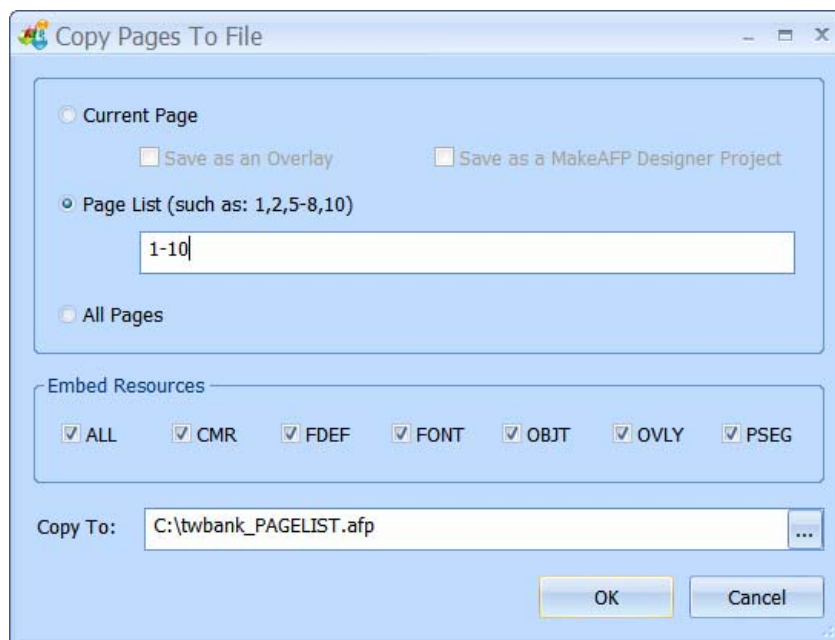
Shrink To Printable Area - Shrinks oversized pages to fit the currently selected paper size but does not enlarge undersized pages. If an area is selected and is larger than the printable area of the currently selected paper, the it will be scaled to fit the printable area.

Custom Scale - Allows you to print the AFP page after the page scale is set, by the zoom percentage of the Page Zoom.

By substituting AFP inline embedded TrueType/OpenType fonts with Windows system installed fonts, you can gain a much better printing performance, if your AFP document is formatted by using and embedding TrueType/OpenType fonts directly.

Copy Pages to File

With the tool of Copy Pages to File, you can quickly copy multiple ranges of pages into a new AFP file.



Magnification Tools

MakeAFP Viewer provides powerful user-friendly magnification tools to let you view AFP pages at ease.

You can use Marquee Zoom tool to drag a rectangle around a portion of the page that you want to fill the viewing area, or simply clicking the Marquee Zoom tool increases the magnification by one preset level.

The Dynamic Zoom tool zooms in when you drag it up the page and it zooms out when you drag down.

The Loupe tool is best used when you want to keep an AFP viewing at a standard zoom level (like fix page width) and magnify certain portions.

The Loupe Tool opens a special dialog window that is linked to a scrollable, resizable rectangular that acts as a cursor and permits the selection of a magnified portion of the AFP page, that matches the area in an adjustable rectangle on the viewing pane.

The toolbar at the bottom of the Loupe Tool dialog window allows you to change the zoom percentage, that can also be done by adjusting the size of rectangle.

Loupe Zoom Sample:

No. Called	De:	Amount			
:425810788	She	0.14			
:3959295982	Xian	0.07			
:088511074	Beiji	4.41			
:425368037	She	2.94			
:3827426642	She	3.78			
:085183737	Beiji	0.98			
:593394576	Zan	4.90			
:5582130662	She	0.56			
:3601154762	Beijing	10-20	17:43:41	00:01:04	0.77
:7782669012	Wenzhou	10-21	09:54:21	00:01:07	0.84

Chapter 5. MakeAFP Viewer Web Browser Plug-in

MakeAFP Viewer Web Browser Plug-in is an extension of MakeAFP Viewer. It provides users with the ability to view the AFP document instantly with superior quality and fidelity on the internet browsers in high performance.

The screenshot shows a Mozilla Firefox browser window displaying an AFP document. The document content includes:

本地基本费	160.00	国际长途费	249.85
国内漫游费	180.00		

本月话费比例分析饼图

项目	比例
国内长途费	39.14%
国内漫游费	15.43%
本地基本费	13.72%
基本月租费	10.29%
国际长途费	21.42%

近三月话费比较图

月份	话费
前月	1344.8
上月	1536.7
本月	1166.4

绿色食品

绿色食品是指按特定生产方式生产，并经国家有关的专门机构认定，准许使用绿色食品标志的无污染、无公害、安全、优质、营养型的自然食品。为了突出这类食品产自良好的生态环境和严格的加工程序，统一被称作“绿色食品”。

花卉夏装

精致感性的春夏时装穿出女性品位的气质，不同的面料设计出不同效果，从而表现出来的效果也有不同。洗料多采用轻盈而不庸俗的丝绸、彩纱、丝绒。层层叠叠褶皱的介入，使原本平面的服装变得立体跳跃，穿出女性品位十足的气质。

Setup of MakeAFP Viewer Web Browser Plug-in

Uninstall other AFP Viewer Plug-ins first and then install MakeAFP Viewer Plug-in is recommended.

By click-on the **Register MakeAFP Viewer Web Browser Plug-in** under **Customize Options** menu, you can easily and instantly register and set up MakeAFP Viewer as a high performance AFP Viewer plug-in into the Internet Browsers installed on your Windows.

Verify MakeAFP Viewer Plug-in for Internet Explorer

Once **MakeAFP Viewer** is registered as a web browser plug-in, normally you should able view AFP document by Internet Explorer immediately.

MakeAFP Viewer Plug-in is registered in the Windows system registry as an ActiveX Control component, by associating the MIME type with the unique CLSID of MakeAFP Viewer Plug-in as a registry item:

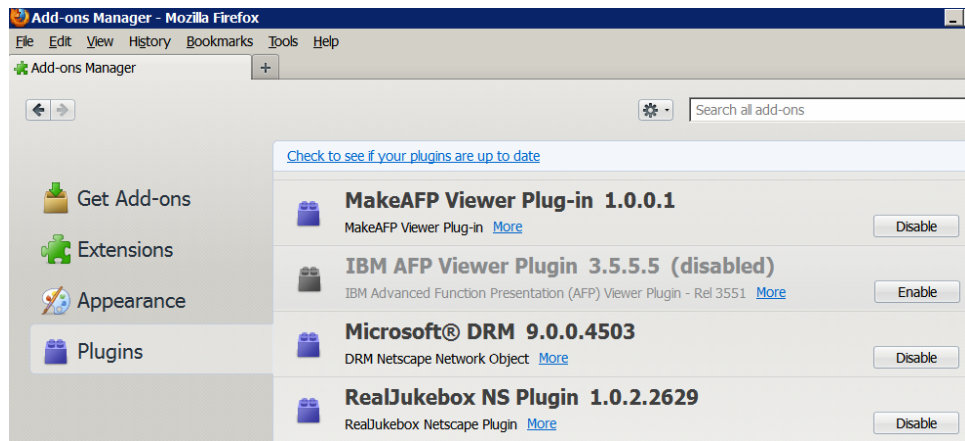
```
[HKEY_CLASSES_ROOT\Mime\Database\Content Type\application\afp]
"Extension"=".afp"
"CLSID"="{02EC0F7E-2E09-45F0-AE6D-2F1C6A103E20}"
```

You may need to type the command **regedit** to start the Registry Editor, to verify whether CLSID {02EC0F7E-2E09-45F0-AE6D-2F1C6A103E20} is defined and associated with the AFP document file extension .afp.

Verify MakeAFP Viewer Plug-in for Mizilla Firefox

Once **MakeAFP Viewer** is registered as a web browser plug-in, normally you should be able to view AFP documents by Firefox immediately.

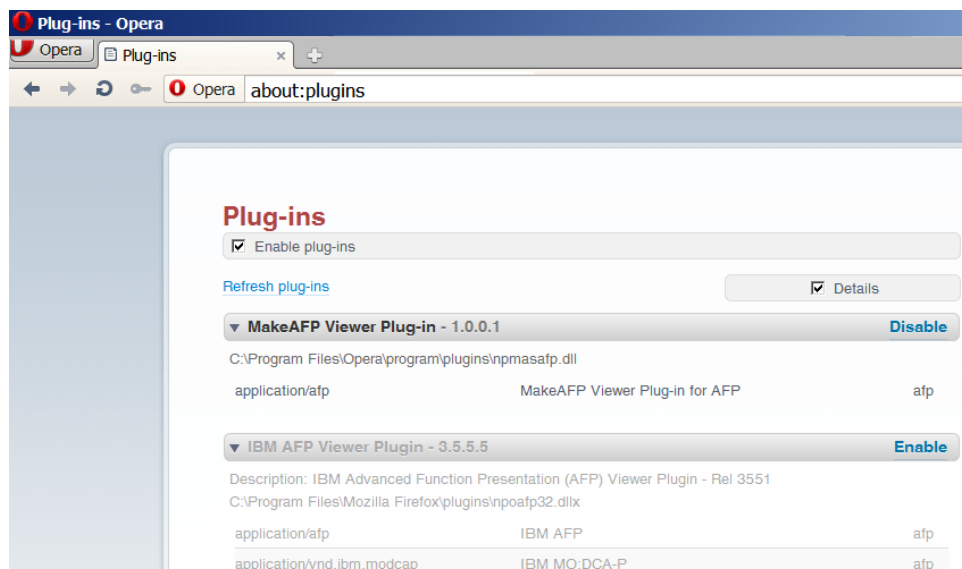
If previously you have installed another AFP Viewer Plug-in, you need to disable it first, then enable MakeAFP Viewer Plug-in by the Firefox Add-ons Manager and restart Firefox.



Verify MakeAFP Viewer Plug-in for Google Chrome and Opera

Once **MakeAFP Viewer** is registered as a web browser plug-in, normally you should be able to view AFP documents by Chrome or Opera immediately.

If previously you have installed another AFP Viewer Plug-in, you need to disable it, then enable MakeAFP Viewer Plug-in by entering **about:plugins** in the location bar and restarting Chrome or Opera.



Appendix A. Using Resources in an AFP System

This Appendix provides some additional overview information on how to use some of AFP resources, such as using the data-object resources of GIF/EPS/JPEG/PDF/TIFF and OpenType/TrueType fonts in an AFP production system.

The information provided in this Appendix are mainly based on the IBM and InfoPrint AFP systems, such as IBM Content Manager OnDemand for Multiplatforms, InfoPrint Manager for Windows and AIX, and InfoPrint ProcessDirector for Linux. You may use the information provided here as your reference if you are using other AFP systems.

OpenType/TrueType Fonts

The latest AFP systems have supported using OpenType/TrueType fonts directly in the AFP systems and IPDS printers.

With your new generation of AFP systems, using OpenType/TrueType fonts directly is strongly recommended. The new support for the OpenType/TrueType font technologies in AFP provides you with significant benefits of:

- Much more choices and flexibility for typefaces, particularly non-Latin typefaces.
- A truly worldwide multilingual presentation environment through the support of Unicode.
- Supporting data encoding directly not only in Unicode UTF-8 and UTF-16 but also legacy ASCII/EBCDIC/DBCS-HOST/DBCS-PC.
- Migration towards a single font technology across all presentation environments.
- Much better font loading and processing performance on the new generation of IPDS controller.
- A much lower cost for typefaces and straight forward to use them at ease.
- Avoid the font copyright issues for such font conversion from OpenType/TrueType font formats to AFP FOCA raster or outline font formats.

MakeAFP Viewer supports directly using OpenType/TrueType fonts installed on your Windows system which is strongly recommended for a better performance, and viewer also supports the OpenType/TrueType fonts embedded inline within AFP document file if you really need to embed them inline in AFP document for some reasons.

OpenType/TrueType fonts are not required storing on the servers of IBM Content Manager OnDemand for Multiplatforms, just need to make sure the relevant OpenType/TrueType fonts are available on the Windows workstations of IBM Content Manager OnDemand Client.

The Resource Access Table (RAT) is required by the AFP print server to send the OpenType/TrueType fonts to the IPDS printers if the fonts are not embedded inline within AFP file, RAT may also required by some AFP application software, like IBM/InfoPrint ACIF if OpenType/TrueType fonts need to be embedded inline within an AFP file. RAT must be updated whenever OpenType/TrueType fonts are updated on the AFP print server.

The RAT resides in the font directories on your AFP print server, and there can be multiple RATs in an AFP system, but only one for each font directory, the filename of the RAT in IBM and InfoPrint AFP print server is hard-coded as **IBM_DataObjectFont.rat.**, to be accessed by the InfoPrint Manager, InfoPrint ProcessDirector, and PSF via the font library searching list.

You can create a RAT table for OpenType/TrueType fonts by the FontRAT utility of MakeAFP, InfoPrint AFP Resource Installer, and Océ PRISMAproduction Resource Preparer, etc.

For the AFP created by using OpenType/TrueType fonts, make sure the relevant OpenType and TrueType fonts are stored in the AFP print server font libraries and RAT tables are updated whenever any new OpenType/TrueType font is added.

Although RAT is not required by the MakeAFP Formatter, MakeAFP Form Designer and MakeAFP Viewer, which accessing OpenType/TrueType fonts information directly, but RAT is still required by the AFP print server if you do not want to embed such OpenType/TrueType fonts as the inline resources.

The latest AFP systems allow you to capture the inline OpenType/TrueType fonts embedded in AFP file. The OpenType/TrueType font capture allows a latest IPDS printer to capture a downloaded font and treat it as if it were a printer-resident font. Treating a downloaded font as a printer-resident font improves performance for the new jobs that use the same fonts. Printers retain captured fonts across job boundaries and power cycles.

Refer to Chapter 26. Working with fonts of *InfoPrint Manager for Windows: Procedure (S500-1073)* for more about how to use and capture OpenType/TrueType fonts.

AFP FOCA Fonts

MakeAFP Viewer supports using AFP FOCA fonts from AFP resource libraries directly, also the AFP FOCA fonts embedded inline in AFP document file.

AFP printing servers sending AFP FOCA fonts from AFP font libraries to IPDS printers directly.

Refer to Chapter 15. Creating and managing resource-context objects of *InfoPrint Manager for Windows: Procedure (S500-1073)* for more about how to define AFP resources libraries and the file extensions supported for the AFP FOCA fonts.

AFP Page Segments

AFP page segments are the image objects in AFP IOCA image formats, make sure they are available on your AFP systems, under the resources searching lists of AFP resource libraries or AFP page segment libraries.

MakeAFP Viewer and MakeAFP From Designer support AFP IOCA images in FS10, FS11 formats for monochrome images, FS42 and FS45 formats for color images.

AFP page segment name can be one to eight alphanumeric characters (a-z, A-Z, 0-9) and special characters (# \$ @), including the two-character prefix S1, if there is one. S1 prefix is required for the page segment to be used by PSF for z/OS, and it is recommended for the AFP print servers for multi-platforms.

When AFP server system finds more than one page segment with the same base-filename in a resource directory, it selects the matching page segment by the following file extension search order:

1. No filename extension
2. PSEG3820

3. PSEG38PP
4. PSG
5. PSE

Data-object Container Resources

GIF, EPS, JPEG, PDF, TIFF and AFP page segment can be used in the latest AFP systems directly as the data-object container resources. Using a data-object container as an object resource is more efficient when that object appears more than once in an AFP file; resources are downloaded to the IPDS printer or AFP Viewer just once and then repeating referenced as needed.

MakeAFP Viewer supports ICC-based color management natively in high performance for the data objects in CMYK mode, ICC profile can be embedded inline in CMYK image and PDF, or use the default CMYK ICC profile you selected with **Color Management** settings options if CMYK ICC profile was not embedded.

With Windows Explore, you can right-click your ICC profile files and then install them into your Windows system.

You can download the Adobe ICC profiles for Windows from [Adobe website](#). Check with your AFP printer vendors for the CMYK ICC profile specially developed for your color IPDS printers.

MakeAFP Viewer allows using the traditional AFP resource naming convention for the filename of the data-object, under which the base-filename can only be one to eight alphanumeric characters (a-z, A-Z, 0-9) and special characters (# \$ @).

Using the traditional AFP resource naming is recommended for the data object resources to be used on IBM z/OS mainframe system and across platforms compatibility.

Although MakeAFP Viewer allows you use up to 250 characters long filename for the object resources, but an additional software is required to create the RAT (Resource Access Table) for the long-name data object resources to be used by the AFP printing servers on Windows and Unix. For example, You may create RATs of data object resources by the InfoPrint AFP Resources Installer, Océ PRISMAproduction Resource Preparer, etc.

When AFP system finds more than one data-object with the same traditional base-filename in a directory, it selects the matching data-object by the following file extension search order:

1. No filename extension
2. OBJ

AFP Overlays

AFP overlays are the collections of coded information describing the elements of boxes, lines, shading, text, logos, and graphics on forms. When printed with variable data from AFP applications, overlays can replace the needs for the preprinted forms.

Make sure AFP overlays available on your AFP systems, under the resources searching lists of AFP resource libraries or AFP overlay libraries.

AFP overlay name can be one to eight alphanumeric characters (a-z, A-Z, 0-9) and special characters (# \$ @), including the two-character prefix O1, if there is one. O1 prefix is required for the overlay to be used by PSF for z/OS, and it is recommended for the AFP print servers for multi-platforms.

When AFP server system finds more than one overlay with the same base-filename in a resource directory, it selects the matching overlay by the following file extension search order:

1. No filename extension
2. OVLY3820
3. OVLY38PP
4. OVL
5. OLY
6. OVR

Transferring AFP Files and Resources

Make sure FTP is in **binary** mode if you need to transfer AFP files and resources across multi-platforms.

For uploading AFP files and resources to z/OS, z/VSE and z/VM, you may need to use IBM AFP Reblocking Utility, more information and downloads are available at [IBM webpage for AFP software](#).

For uploading AFP resources to OS/400, refer to Appendix D of *Advanced Print Utility User's Guide (S544-5351)* or *AS/400 Guide to Advanced Function Presentation and Print Services Facility (S544-5319)* for more information.

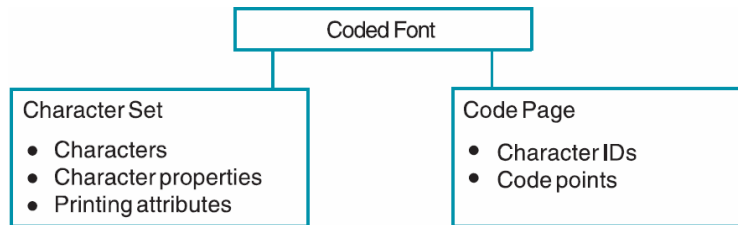
Appendix B. AFP Font Basic Concepts

This appendix introduces some basic AFP font terminology, structure and how characters are represented in digitized presentation type.

AFP Font Structure

In AFP font terminology, an AFP FOCA font has three components:

- Coded font
- Character set
- Codepage



Coded Font

AFP coded font is a font file that associates AFP character set with AFP codepage.

A bitmap coded font consists of two parts:

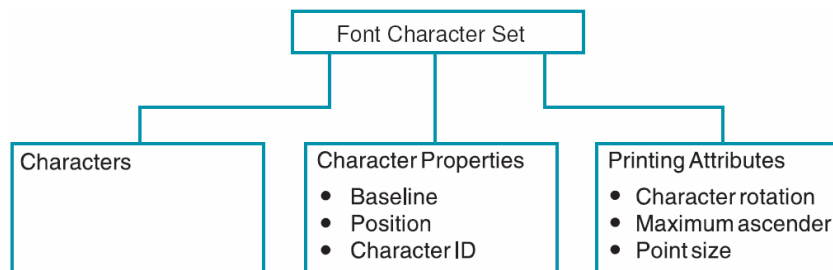
- References to specific character sets
- References to specific codepages

An outline coded font consists of three parts:

- References to specific character sets
- References to specific codepages
- References to point size

Character Set

AFP character set consists of a finite set of characters. It contains information about a font type family, typeface, and point size, and also includes each character properties and its printing attributes, such as baseline positioning, rotation, ascenders, descenders, etc.



Characters

Characters are the letters, numerals, marks, and symbols of a font.

Character Properties

Character properties detail how a character is positioned relative to the characters around it. Some character properties include the following:

- The baseline of a character showing its general alignment
- The dimensions of space in which the character is printed
- The position of the character within that space
- The identifier of the character (the character ID)

One of the character properties is the character ID, named GCGID (graphic character global identifier). Each character is assigned an unique 8-character GCGID; for instance, the character uppercase A is assigned the GCGID LA020000 registered by IBM.

For a list of GCGIDs, the character each represents, and the codepages where the characters are found, refer to *IBM AFP Fonts: Technical Reference for Codepages (S544-3802-02)*.

Printing Attributes

The printing attributes define how the character set will be printed, such as, baseline positioning, rotation, ascenders, descenders and point size, etc.

Single-byte and Double-byte Character Sets

A single-byte character set (SBCS) is a font character set to be used with a single-byte codepage. The maximum number of characters in a character set is 256.

A double-byte AFP bitmap font consists by multiple sections of double-byte character sets (DBCS), to be used with CJK (Chinese, Japanese, Korean).

Bitmap Format of Character Set

AFP font character sets in bitmap format can be in 240/300/600 dpi, some printers and AFP print server may support character sets in 360/480/720 dpi also. The character positioning values in bitmap character set can be expressed in either fixed-metric or relative-metric.

Outline Format of Character Set

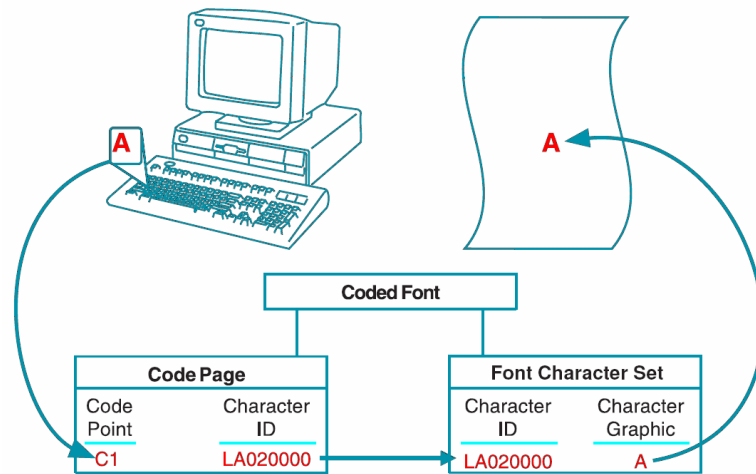
AFP outline character sets can be in SBCS outline format (by Adobe Postscript Type 1 outline font encapsulated in AFP font architecture wrappers), or DBCS outline format (by Adobe Postscript CID-keyed outlines font encapsulated in AFP font architecture wrappers). The character positioning values in outline character set are expressed in relative-metric.

Codepage

AFP codepage maps each character of text to the characters in an AFP character set. As you enter your text on your keyboard, each key in character is translated into a hexadecimal code point. When the text is printed, each hexadecimal code point is matched to a GCGID on the AFP codepage you specified. The GCGID is then matched to the AFP bitmap pattern or outline vector pattern of the character in the AFP character set you specified. The character pattern in the character set is being finally used for the printing of your character.

The following picture shows an example with AFP EBCDIC codepage T1V10037 for IBM mainframe USA English.

When the IPDS printer receives EBCDIC hexadecimal code point C1, it prints an uppercase A, whose GCGID is LA020000.



A SBCS codepage contains up to 256 one-byte code points. SBCS codepages are good enough for languages with alphabetic writing systems, such as English, Latin, Greek, Thai, and Arabic, etc.

A DBCS codepage can contain up to 65536 double-byte code points for CJK (Chinese, Japanese and Korean) languages.

For bitmap DBCS AFP fonts, AFP treats DBCS codepage as a collection of single-byte codepages, a double-byte is split into two parts, the first byte indicating the section number of the codepage and the second byte indicating a code point within the section.

For outline DBCS AFP fonts, AFP treats DBCS codepage as single large codepage. Each DBCS character has a 2-byte code point.

AFP Font Naming Convention

Each AFP FOCA component's name is only allowed up to 8 characters. The following list shows the prefix of the AFP font naming convention and the type of font component represents.

AFP Font Name Prefix	Font Component
C0	Character set of AFP bitmap font
CZ	Character set of AFP outline font
T1	AFP codepage
X0	Coded font of AFP bitmap font
XZ	Coded font of AFP outline font

Appendix C. ASCII/EBCDIC AFP Codepages Summary

Name	Description	Encoding
T100037	USA/Canada - CECP	EBCDIC
T1000273	Germany F.R./Austria- CECP	EBCDIC
T1000274	Belgium - CECP	EBCDIC
T1000275	Brazil - CECP	EBCDIC
T1000277	Denmark/Norway - CECP	EBCDIC
T1000278	Finland/Sweden- CECP	EBCDIC
T1000280	Italic- CECP	EBCDIC
T1000281	Japan (Latin) - CECP	EBCDIC
T1000282	Portugal - CECP	EBCDIC
T1000284	Austria/Latin America - CECP	EBCDIC
T1000285	United Kingdom - CECP	EBCDIC
T1000290	Japan (Katakana)	EBCDIC
T1000297	France - CECP	EBCDIC
T1000361	International Set 5	EBCDIC
T1000367	ASCII	ASCII
T1000382	Austria, Germany, Switzerland	EBCDIC
T1000383	Belgium	EBCDIC
T1000384	Brazil	EBCDIC
T1000385	Canada (French)	EBCDIC
T1000386	Denmark/Norway	EBCDIC
T1000387	Sweden/Finland	EBCDIC
T1000388	France, Switzerland	EBCDIC
T1000389	ITALY, Switzerland (Italian)	EBCDIC
T1000390	Japan (Latin)	EBCDIC
T1000391	Portugal	EBCDIC
T1000392	Austria/Philippines	EBCDIC
T1000393	Latin America (Spanish)	EBCDIC
T1000394	U.K., Austral., IRE., H.K., N.Z.	EBCDIC
T1000395	United States, Canada (English)	EBCDIC
T1000420	Arabic Bilingual	EBCDIC
T1000424	Israel (Hebrew)	EBCDIC
T1000437	Personal Computer	ASCII
T1000500	International Set 5	EBCDIC
T1000803	Hebrew Character Set A	EBCDIC
T1000813	Greece - ISO/ASCII 8-Bit	ASCII
T1000819	Latin1 ISO/ANSI 8-BIT	ASCII
T1000829	Math Symbols	EBCDIC
T1000836	Peoples Republic of China (PRC)	EBCDIC
T1000838	Thai - EBCDIC	EBCDIC
T1000848	PC, Cyrillic, Ukraine with Euro	ASCII
T1000849	PC, Cyrillic, Belo Russian Euro	ASCII
T1000850	PC Multilingual	ASCII
T1000851	Greek - Personal Computer	ASCII

T1000852	Latin2 Multilingual PC	ASCII
T1000855	Cyrillic - Personal Computer	ASCII
T1000856	Hebrew - Personal Computer	ASCII
T1000857	Latin5 PC	ASCII
T1000858	PC - Multilingual with euro	ASCII
T1000860	Portugal - Personal Computer	ASCII
T1000861	Iceland - Personal Computer	ASCII
T1000862	Hebrew - Personal Computer	ASCII
T1000863	Canadian French – PC	ASCII
T1000864	Arabic - Personal Computer	ASCII
T1000865	Nordic – Personal Computer	ASCII
T1000866	Cyrillic #2 - Personal Computer	ASCII
T1000867	Israel - Personal Computer	ASCII
T1000869	Greece - Personal Computer	ASCII
T1000870	Latin 2 Multilingual	EBCDIC
T1000871	Iceland - CECP	EBCDIC
T1000872	Cyrillic PC with Euro	ASCII
T1000874	Thai - Personal Computer	ASCII
T1000875	Greece	EBCDIC
T1000876	OCR-A ASCII	ASCII
T1000877	OCR-B ASCII	ASCII
T1000892	OCR-A EBCDIC	EBCDIC
T1000893	OCR-B EBCDIC	EBCDIC
T1000895	Japanese Latin EUC	ASCII
T1000896	Japanese Katakana EUC	ASCII
T1000897	Japan PC #1	ASCII
T1000901	PC, Baltic – Multilingual w Euro	ASCII
T1000902	8-bit Estonia with euro	ASCII
T1000903	Peoples Republic of China – PC	ASCII
T1000904	Republic of China (ROC) – PC	ASCII
T1000912	Latin2 ISO/ANSI 8-BIT	ASCII
T1000913	Latin 3, ISO/ASCII	ASCII
T1000914	Latin4 ISO/ANSI 8-BIT	ASCII
T1000915	Cyrillic ISO/ASCII 8-Bit	ASCII
T1000916	Hebrew ISO/ASCII 8-Bit	ASCII
T1000920	Latin5 ISO/ANSI 8-BIT	ASCII
T1000921	PC, Baltic – Multilingual	ASCII
T1000922	Estonia PC	ASCII
T1001004	IBM PC Desktop Publishing	ASCII
T1001006	Urdu ISO – PC	ASCII
T1001008	Arabic ISO/ASCII 8-Bit	ASCII
T1001025	Cyrillic Multilingual	EBCDIC
T1001026	Latin5	EBCDIC
T1001027	Japanese (Latin) Extended	EBCDIC
T1001028	Hebrew Publishing	EBCDIC
T1001032	MICR for EBCDIC	EBCDIC
T1001033	MICR for ASCII	ASCII
T1001041	Japanese Extended – PC	ASCII
T1001043	Traditional Chinese Extended PC	ASCII
T1001046	Arabic Extended ISO/ASCII 8-Bit	ASCII
T1001088	Korean KS-PC	ASCII
T1001089	Arabic ISO-PC	ASCII
T1001112	Baltic – Multilingual, EBCDIC	EBCDIC
T1001115	Chinese GB	ASCII
T1001116	Estonia-PC	ASCII

T1001117	Latvia-PC	ASCII
T1001118	Lithuania-PC	ASCII
T1001119	Lithuania, Russian – PC	ASCII
T1001122	Estonia, EBCDIC	EBCDIC
T1001123	Cyrillic, Ukraine EBCDIC	EBCDIC
T1001124	Cyrillic, Ukraine ISO-8	ASCII
T1001140	USA, Canada ECECP	EBCDIC
T1001141	Austria, Germany ECECP	EBCDIC
T1001142	Denmark, Norway ECECP	EBCDIC
T1001143	Finland, Sweden ECECP	EBCDIC
T1001144	Italy ECECP	EBCDIC
T1001145	Austria, Latin America ECECP	EBCDIC
T1001146	UK ECECP	EBCDIC
T1001147	France ECECP	EBCDIC
T1001148	International ECECP	EBCDIC
T1001149	Iceland ECECP	EBCDIC
T1001153	Latin2 Multilingual with Euro	EBCDIC
T1001154	Cyrillic Multilingual with euro	EBCDIC
T1001155	EBCDIC Turkey with euro	EBCDIC
T1001156	EBCDIC Baltic – Multi with euro	EBCDIC
T1001157	EBCDIC Estonia with euro	EBCDIC
T1001158	EBCDIC Cyrillic, Ukraine w euro	EBCDIC
T1001160	Thailand EBCDIC with Euro	EBCDIC
T1001162	Windows Thailand	ASCII
T1001164	Vietnamese EBCDIC with euro	EBCDIC
T1001250	Windows, Latin 2	ASCII
T1001251	Windows Cyrillic	ASCII
T1001252	Windows, Latin 1	ASCII
T1001253	Windows Greek	ASCII
T1001254	Windows Turkish	ASCII
T1001257	Windows Baltic Rim	ASCII
T1001258	Windows Vietnamese	ASCII
T1001275	Apple Latin 1	ASCII
T1001276	Adobe PS Standard	ASCII
T1001277	Adobe PS ISO Latin 1	ASCII
T1001280	Apple Greece	ASCII
T1001281	Apple Turkey	ASCII
T1001283	Apple Cyrillic	ASCII
T1005346	Latin 2 – Windows	ASCII
T1005347	Cyrillic – Windows	ASCII
T1005348	Latin 1 – Windows	ASCII
T1005349	Greece – Windows	ASCII
T1005350	Turkey – Windows	ASCII
T1005351	Israel – Windows	ASCII
T1005352	Arabic – Windows	ASCII
T1005353	Latin 4 – Windows	ASCII
T1005354	Vietnamese – Windows	ASCII

Appendix D. SBCS/DBCS/UTF-16BE AFP Codepages Summary

Name	Description	Encoding
T1H00037	Traditional Chinese EBCDIC	EBCDIC
T1H00290	Japanese Katakana Extended	EBCDIC
T1H00833	Korean EBCDIC	EBCDIC
T1H00836	Simplified Chinese EBCDIC	EBCDIC
T1H01002	Japanese DCF Rel 2 Compatibility	EBCDIC
T1H01027	Japanese Latin Extended	EBCDIC
T1H01030	Japanese Katakana Extended with Box Characters	EBCDIC
T1H01031	Japanese Latin Extended with Box Characters	EBCDIC
T1H01041	Japanese PC Extended	ASCII
T1H01043	Traditional Chinese PC	ASCII
T1H01114	Traditional Chinese PC BIG5 with Euro	ASCII
T1H01115	Simplified Chinese PC (GB)	ASCII
T1H01126	Korean PC	ASCII
T1H01150	Korean EBCDIC with Box Characters	EBCDIC
T1H01151	Simplified Chinese EBCDIC with Box Characters	EBCDIC
T1H01152	Traditional Chinese EBCDIC with Box Characters	EBCDIC
T1H01159	Traditional Chinese EBCDIC with Euro	EBCDIC
T1H01252	Simplified Chinese PC (GB18030)	ASCII
T1HK0037	Japanese English	EBCDIC
T1HK0290	Japanese Katakana	EBCDIC
T10300, T11300, T1J300, T1K300	Japanese DBCS-HOST	DBCS-HOST
T10834	Korean DBCS-HOST (Small Set)	DBCS-HOST
T10835	Traditional Chinese DBCS-HOST	DBCS-HOST
T10837	Simplified Chinese DBCS-HOST (GB2312)	DBCS-HOST
T10941	Japanese SJIS-PC	DBCS-PC
T10947	Traditional Chinese BIG5-PC	DBCS-PC
T10951	Korean KSC-PC (Small Set)	DBCS-PC
T11200	Unicode UTF-16 Big-endian	UTF-16BE
T11362	Korean KSC-PC (Big Set)	DBCS-PC
T11374	Traditional Chinese HKSCS-PC	DBCS-PC
T11376	Traditional Chinese HKSCS-HOST	DBCS-HOST
T11380	Simplified Chinese GB2312-PC (Small Set)	DBCS-PC
T11385	Simplified Chinese GBK-PC (Big Set)	DBCS-PC
T1K834	Korean DBCS-HOST (Big Set)	DBCS-HOST
T1K837	Simplified Chinese DBCS-HOST (GB18030)	DBCS-HOST

