Easy-to-use tools for customizing complex documents.

IBM

IBM AFP Toolbox for MVS, OS/400, AIX and OS/2

Software Solutions

IBM Advanced Function Presentation™ (AFP™) is being utilized industry-wide to produce high-value, competitive documents. AFP Toolbox makes it easy to produce these documents from within your business applications.

A Programmer's Tool

AFP Toolbox allows you to take full control over the power of the AFP data stream through a set of easy, high-function Application Programming Interfaces. It gives high-level languages, such as C, C++ and COBOL, access to advanced formatting functions in terms the application programmer can easily understand and use in existing applications. As a programmer's "tool," the AFP Too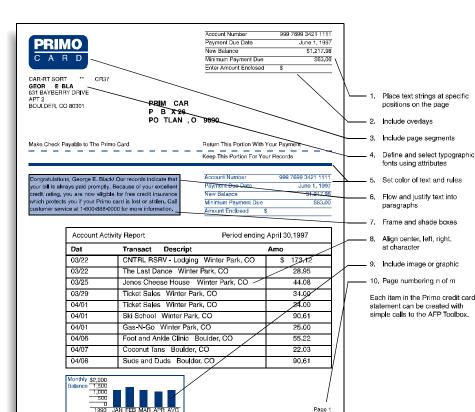lbox will become indispensible when you are formatting complex, electronic output — output with variable text, "floating" electronic forms, dynamic image and graphics, or imbedded indexing.

Platform Independent Output

The MO:DCA™-P documents created by AFP Toolbox are platform independent and can be printed or viewed by the AFP print drivers on all supported platforms: System/390®, AS/400®, OS/2®, RS/6000™, and AFP Workbench for Windows®, and can be stored in IBM's OnDemand for AIX® archive library. The output of the AFP Toolbox can also be written to a file or returned to the application for further processing.

Highlights

- *Provides superior ease of use to the application programmer in formatting complex documents*

- *Reduces development costs while shortening development cycles*

- *Provides high-level language access to AFP functions from a variety of application programming languages including C and C++*

- *New support for MVS and OS/400 in addition to current AIX and OS/2 platforms*

- *Ideal for development of portable cross-platform AFP applications*

1.	Place text strings at specific positions on the page
2.	Include overlays
3.	Include page segments
4.	Define and select typographic fonts using attributes
5.	Set color of text and rules
6.	Flow and justify text into paragraphs
7.	Frame and shade boxes
8.	Align center, left, right, at character
9.	Include image or graphic
10.	Page numbering n of m

Each item in the Primo credit card statement can be created with simple calls to the AFP Toolbox.

What does AFP Toolbox do?

AFP Toolbox lets you create print applications with complex, dynamic formatting tailored to the business requirements of each page. For example, for customer statements it would be desirable to customize each statement. Each customer has different types and numbers of transactions. With preprinted form documents, it is "one size fits all." With AFP Toolbox, each statement can be designed to exactly match each customer's data. The document can be further enhanced with the use of typographic fonts, graphics, images, bar coding or special messages. The result is a high-quality statement that is completely tailored to each customer, and projects a professional company image.

Why is the AFP Toolbox needed?

The design of most applications requiring a high degree of variability in formatted output is limited by the methods available to the programmer in developing the print output component. The external data-formatting capabilities provided by AFP page definitions and form definitions contain many new and rich capabilities, but the application is still tied to a static page format. For example, every page must contain room for 40 transaction items, regardless of the number of transactions for an individual customer.

Without AFP Toolbox, one way to create applications that can take advantage of the flexibility and power of AFP is to program the output in hexadecimal AFP-structured fields. While this is certainly still possible, and the structured fields are fully documented, the process requires the programmer to learn an entirely new technique that is basically foreign to most high-level language programmers.

With AFP Toolbox, a programmer coding in any language that supports calling a C or C++ interface can gain access to sophisticated AFP functions with superior ease of use in formatting printed output. These functions allow the programmer to specify and change such AFP formatting options as:

- The position and orientation of text
- Fonts used for printing lines and fields
- Rules and boxes with varying sizes and positions
- Color for rules, boxes or fonts
- Page segments, overlays, images and graphics

AFP Toolbox also provides application programmers with formatting capabilities that were not easily available even with MO:DCA-P (AFP) structured fields. These include:

- Centering and aligning lines of text using typographic fonts
- Flowing text into a paragraph while providing:
  – Left alignment
  – Right alignment
  – Centering
  – Full justification
- The ability to query the width and depth of a string of text before it is actually placed on the page to help the application make decisions about when to break a line or page
- Creation of bar code objects (BCOCA™)

Indexing and Navigation of the AFP Data Stream

AFP Toolbox allows the programmer to add indexing tags to the output document. These tags can be used by the Viewer application in AFP Workbench for Windows to navigate through the document and locate specific pages or groups of pages, such as the statement for customer number "12345."

The indexing tags can also be used by other applications, such as IBM's OnDemand for AIX archival and retrieval system to select and locate specific pages. The AFP Conversion and Indexing Facility (ACIF) can use these tags to create a separate index object file for more efficient processing by the Viewer or other applications.

A Helpful Tool

As a complete development system, AFP Toolbox provides a familiar, high-function interface to the AFP print data stream, an interface that is consistent across many server platforms. Developers who are consolidating electronic print formatting in a common subsystem across many applications, and require multi-platform support, will find IBM AFP Toolbox a helpful tool.

IBM AFP Toolbox at a glance

AFP Toolbox for Multiple Operating Systems	— Currently supports AIX and OS/2
	— Programming languages supported: C and C++
	— Includes sample programs and utilities
	— Includes IBM Font Collection for AIX and OS/2
	— Includes AFP Workbench for Windows
	— Prerequisites:
	  OS/2 Warp Version 3.0 with IBM C Set Version 2.0 or 2.1
	    with service or Borland Version 2.0 for OS/2
	  IBM VisualAge® for OS/2 Version 1.0 or above
	  AIX Version 3.2 or 4.1.5 with IBM C Set++
	— Order number 5765-594

AFP Toolbox for MVS	— Programming languages supported: C, C++ and COBOL
	— Includes sample programs and utilities
	— Prerequisites:
	  MVS/ESA™ SP Version 4.2 and above or
	  MVS/ESA SP Version 5.1 and above or
	  OS/390® Release 1
	  AFP Font Collection
	  C/C++ Runtime Libraries
	  IBM COBOL MVS Compiler if using COBOL
	— Order number 5655-A25

AFP Toolbox for OS/400	— Programming languages supported: ILE C, ILE COBOL, and ILE RPG — Includes sample programs — Feature of the AFP PrintSuite for AS/400 — Order number 5798-AF2 Feature 2703 for OS/400® V3R2 — Order number 5798-AF3 Feature 2803 for OS/400 V3R7