IBM

PL/I for OS/2

Look back at the future

Past Perfect

*E*verything is easier than it used to be. That's the conventional wisdom — that technology has simplified our lives, given us more time, made us more productive than we've ever been before.

Nonsense.

Developers still write programs in COBOL and FORTRAN. They still have seemingly unreasonable, business-driven deadlines. They still wish that development could go a lot faster. They still have objections to newer, unproven technologies.

Yet they also still have something very close to perfect.

That something is a programming technology that combines the business logic of COBOL, the engineering functions of FORTRAN, and the pointer arithmetic of C. It offers

➤ *a high-productivity, visual programming environment*

➤ *client/server architecture*

➤ *cross-platform portability and flexibility*

➤ *easy access to data*

➤ *PC-based transaction processing*

➤ *preservation of existing applications*

➤ *lower long-term development costs.*

Oh, yes. It can also take one-third to one-half less time to develop mission-critical applications.

Welcome to the future. It's a 30-year-old language named PL/I.

The legacy of tomorrow

PL/I was designed by programmers. People like you. Members of SHARE and GUIDE.

They called the shots. IBM hit the mark. And they continue to hit it today with PL/I for OS/2® Professional Edition and PL/I for OS/2 Personal Edition — client/server, 32-bit technology that runs on OS/2 Version 2.

Developers can now write mainframe-power programs in the high productivity, low-cost environment of desktop PCs... whether they run them in a client/server environment or move them back to the mainframe.

Moving forward

The PL/I family of products offers a completely free-form programming language. There are no reserved keywords, freeing developers to focus on the logic of an application instead of worrying about the words they use. Then, once they create an application, PL/I's block-oriented nature makes the code modular, independently testable, and even re-usable, which makes it easier to maintain. Just like object-oriented programming (OOP).

PL/I isn't snobbish, though. It readily converses with C, C++, C-Set/2, and REXX. That makes PL/I applications highly extensible or, since PL/I came first, adds value to those other programming languages.

Though PL/I can handle data items as single elements, it isn't insistent. Items can be aggregates, too, combined in many different ways and manipulated as a group. In other languages, an array, for example, would have to be divided into elementary operations, resulting in code that's harder to understand and maintain.

By contrast, "easy" is the guide word for PL/I. With 200 built-in functions and subroutines, developers avoid writing code for common program components. That kind of automation saves them time and increases productivity.

Progress makes perfect

With five types of storage classes, two types of I/O, exception detection that executes corrective action, consistency maintenance that automatically recalculates dependent values when a named constant is modified, conditional compilation, and pre-compilation code modification, PL/I gives developers more flexibility than any other procedural language. On the desktop, however, the range of capabilities extends even further.

PL/I for OS/2 Professional Edition provides

➤ a visual development environment for generating graphical user interfaces (GUIs)

➤ support for IMS Client Server/2™ and the development of client/server applications that call IMS data and transactions

➤ a CICS™ pre-processor for the easy development of complex client/server applications running under CICS OS/2™

The best market for PL/I is corp downsize to client/server. [PL/I gives them the ability to stay wi that works in OS/2.

PL/I is C made simple. Actually, since PL/I came first, I should say that C is PL/I made difficult.

Eric Lumpkin
Container Corporation

➤ an SQL pre-processor that lets PL/I programs access DB2/2™ and, with DDCS/2, call data in other relational databases, thus extending the power of the applications

➤ a built-in debugger that utilizes a graphical user interface to make it easier to find and fix programming errors and deliver higher quality code

➤ multithreading for faster, more efficient development.

The Personal Edition of PL/I for OS/2 offers an abbreviated set of features designed specifically for smaller LAN or standalone environments. Yet it still provides comparable power. It contains a

➤ 32-bit compiler

➤ run-time library

➤ graphical, interactive debugger.

While PL/I's visual development environment in OS/2 makes it easy to create intuitive and user-friendly GUIs, PL/I lets programmers create character-based applications under PM windows — without changing any code. Developers can also exploit the cost efficiencies of desktop development and testing. They can use the PL/I for OS/2 Professional Edition to build and test host-based VSAM, DB2®, CICS, and IMS applications, or they can take advantage of PL/I for OS/2 (in combination with DB2/2, CICS OS/2, and IMS Client Server/2) to create client/server applications that integrate with existing mainframe programs.

In effect, every improvement in PL/I makes everything else look far from perfect. And who really wants to settle for second best?

Future perfect

The PL/I family of development tools includes the PL/I for OS/2 products and multiple mainframe versions of PL/I, all of which provide robust programming capabilities that have yet to be matched by any other procedural language. Language Environment ®/370 adds a uniform run-time environment for mainframe programming languages. Altogether, these products offer a level of cross-platform compatibility that enhances application development in heterogeneous operating environments and greatly simplifies client/server migration.

So, with integration of multiple languages, mainframe compatibility, a visual development environment, and the ability to create client/server applications that access local and remote databases and transaction managers, PL/I for OS/2 is perfect for creating rapidly developed applications that can be relied upon far into the future.

Get started today by contacting your IBM representative (phone numbers are on the back cover). If you have a specific question about PL/I, you can fax your inquiry directly to the PL/I development team at (408) 463-4820.

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Rich Stadnick
Stadnick & Company, Inc.

I can do anything I want to do with PL/I.

Bob Jacobs
TASC

It is difficult to say what is impossible, for the dream of yesterday is the hope of today and the reality of tomorrow.

Robert H. Goddard

IBM

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