Gates on BASIC's Future

Bill Gates, Chairman of Microsoft Corporation

GUEST
OPINION

BASIC IS ALREADY A SERIOUS

LANGUAGE, BUT THERE'S A LOT

MORE TO COME, INCLUDING

OBJECT ORIENTED EXTENSIONS.

William Gates is the Chairman and CEO of Microsoft Corporation, a company he co-founded with Paul Allen. Their first product was the first version of BASIC for a personal computer.

Over 25 years ago, when John G. Kemeny and Thomas E. Kurtz wanted an all-purpose computer programming language that would give nontechnical people a way to interact with computers, they developed the original BASIC. Fifteen years ago Paul Allen and I brought that language to the first personal computer, the MITS Altair.

Although many other languages have moved to the personal computer, BASIC remains the world's most popular programming language. According to market research, more people—both professional and casual programmers—use BASIC than any other language.

Features that make BASIC easy to learn and use also make it a highly productive tool for professional programmers. Through continuous innovation the BASIC languages match Pascal and C in power and debugging sophistication, while still providing greater programmer productivity.

Despite this apparent enthusiasm for BASIC, a question persists about the continued strength of BASIC. This perplexes me. Some people say that BASIC cannot be a cornerstone for development of personal computer applications because it is not a "serious" programming language. Yet, our research shows that nearly two-thirds of BASIC programmers write software to be used by other people, and 50 percent of our QuickBASIC users write software for sale. In its 26-year evolution, BASIC has incorporated virtually all the features of modern, professional programming languages.

But what of the future? Many of you may be aware of my goal for the personal computer industry, "Information at Your Fingertips." Will BASIC have a role in fulfilling that vision? Absolutely.

Over the past five years, we have seen personal computer software become more powerful and more "personal." Applications such as spreadsheets and word processors have added features that allow the user to customize the application, creating "programmable" applications.

The trend is toward more accessible end-user programming systems. Microsoft has delivered increasingly powerful macro languages with its applications, such as the macro programming language in Microsoft Word for Windows. We call this language WordBASIC. It is a complete procedural programming language embedded in an application package.

Using a macro language based on BASIC was a natural choice for us. Since BASIC is the most widely taught programming language, more users are familiar with it than any other language. And, it is well known for its ease-of-learning and ease-of-use.

In the area of language development, we have sought to improve the accessibility of our programming languages. QuickBASIC, combining a high-speed compiler and an interpreter into one integrated environment, has brought programming to people that were not professionally trained as developers.

In today's world, a user may manipulate three or four different applications to produce a single document. My vision for the future is that PC systems will evolve to the point where the user is not even aware that different applications are being invoked to produce a document. One essential element in this vision is a common macro language. A common macro language will have several advantages for users. First, it will be easy to use. Second, it will be the same in a variety of applications. Finally, by using agents—a graphical interface "operative" that can cross applications boundaries—users can work in one application and call parts of other applications into play as needed, or they can start from outside any application and tie them together in various ways.

Thus, just as applications are becoming increasingly programmable, programming languages are becoming generally more accessible. Soon we will have tools that make the creation of Windows applications easy and enjoyable.

Imagine designing the visual components of an application graphically—merely by placing controls on a form. All programs would be designed, created and run within the Windows environment. Taking the ease of use that is common to both BASIC and Windows, the result would be a visual, productive, and interoperable tool for creating applications in the environment that is currently the most popular for personal computers.

Thus, I see a world of BASIC that is healthy and thriving. I believe that the number of BASIC users will continue to grow, especially as BASIC is enhanced to meet the needs of more and more users. We will see BASIC develop as a macro language across applications, and we will see the numbers of BASIC users grow even further.

So, I welcome Jim Fawcette and this publication, ***BASICPro*** magazine. You are joining the BASIC community at a time when I expect lots of growth and interest in the language. Microsoft intends to continue its leadership role in the BASIC community, and you will see evidence of our work in the coming months. ■