C++ celebrates its 25th anniversary

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Dr. Bjarne Stroustrup

(PhysOrg.com) -- Oct. 14 marked the 25th anniversary of the commercial release of the programming language C++, which was designed and implemented by Dr. Bjarne Stroustrup, Distinguished Professor and College of Engineering Chair in Computer Science.

C++ is one of the most popular programming languages in the world. The first commercial release of the language and the publication of the first edition of the book, The C++ Programming Language, happened on Oct. 14, 1985.

C++ is used in a wide range of applications such as internet browsers and

cell phones, as well as for scientific endeavors. C++ is used on both NASA Mars Rovers and also in the human genome project DNA string matching system. Its key strength is infrastructure applications, such as wind turbine control, micro-electronics industrial tools, and the Google search engine. C++ can also be found in cameras, cars, airplanes, and video games. Chances are if that you have an appliance in your house that uses a computer, it is running C++.

Stroustrup created C++ to deal with the ever increasing complexity of the systems that he and his colleagues worked on at AT&T Bell Labs.

“We had a wide variety of problems, and the programming language C seemed to be an unnecessarily primitive tool for doing the kinds of design and implementation needed for what we could do with faster computers and larger memories. However, back then the computers had a low amount of storage and memory by today’s standards, so minimizing process overhead to what was necessary was important.”

Stroustrup said he initially didn’t realize that C++ would become such an integral part of the modern software landscape.

“I was too busy getting work done to reflect on its increasing popularity, and I knew that the success rate for general-purpose programming languages is small. I also knew that the chance of success was affected by marketing clout, which I did not have. C++ was initially designed and implemented as a set of general facilities addressing some specific problems that I and my colleagues faced. The generality — and efficiency — of the facilities provided turned out to serve much wider needs than I had anticipated. The emphasis on general facilities — as opposed to the provision of specific solutions to specific problems — has remained with C++ and has served its community well as the specific problems facing the community have changed over the years. “

The next International Organization for Standardization (ISO) Standard of C++ is set for release in 2011. Beyond that, Stroustrup said he has high hopes for the programming language that he introduced to the world 25 years ago.

“I expect two or three revised standards to C++ within the next 20 years, and I hope and expect those revisions to reflect a large and vibrant user community and support new and better programming techniques. Ultimately my hope is that programmers will use C++ to make the world a better place for all people. In today’s world where software is ubiquitous, improving and finding new uses for software are ways that programmers can help to better the lives of many.”

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