Abstract
Without any optimization option, the compiler's goal is to reduce the cost of compilation and to make debugging produce the expected results. Statements are independent: if you stop the program with a breakpoint between statements, you can then assign a new value to any variable or change the program counter to any other statement in the function and get exactly the results you would expect from the source code. Turning on optimization flags makes the compiler attempt to improve the performance and/or code size at the expense of compilation time and possibly the ability to debug the program. The compiler performs optimization based on the knowledge it has of the program. To optimizing performance of program for real time system doesn't always mean what we might think. It's not just a matter of outright speed; sometimes it's about tuning the code and data so that it fits into a small memory footprint. It is hard-pressed to find a programmer that does not want to make programs that run faster, regardless of the platform. Real time system programmers are not exception for that some take an almost over-enthusiastic approach to the job of optimizing their code for performance.

References

- Keith D. Cooper, Philip J. Schielke, and Devika Subramanian, "Optimizing for Reduced Code Space using Genetic Algorithms", Rice University Houston, Texas, USA.

Index Terms

Computer Science Algorithms

Keywords