

# A Real-world Solution Helps CMU Students Ace Programming Contest

Professor Stephen Roehrig set up a contest for students in his graduate-level programming course at Carnegie Mellon University. He was pleasantly surprised when a free download of Compuware DevPartner Profiler helped his students radically improve the speed of their programs.

## Highlights

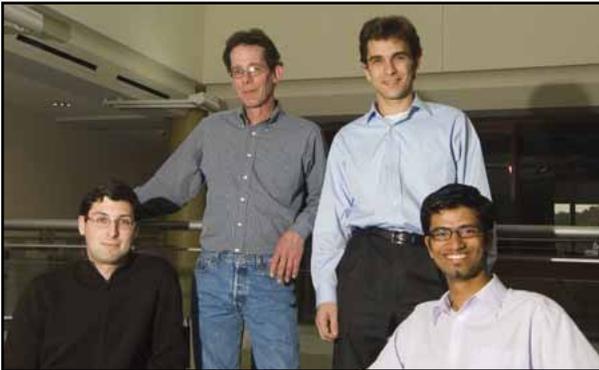
**Customer:**

**Carnegie Mellon**

Carnegie Mellon University

**Industry:**

Education



Carnegie Mellon University Professor Stephen Roehrig (second from left) guided graduate students Joshua Freeland (left), Vladimir Kobelev and Prashant Radhakrishnan to first place in a classroom contest using DevPartner Profiler.

**Compuware solutions used:**



Professor Roehrig gives courses in object-oriented programming as part of the Master of Science program in Computational Finance at CMU. His students frequently go on to high-powered careers at Wall Street firms, which mine their expertise in devising sophisticated programs for trading in the financial markets.

Speed is a prime requirement for such programs, which crunch huge volumes of data to detect trading opportunities in even small movements in prices. So Roehrig decided on a contest to simulate that real-world challenge, setting his students the goal of creating the fastest possible computer program to find the value of a complex financial instrument used to hedge risk while investing.

The students worked in teams of three, and he told each team to use a commercial software product for analyzing code performance, DevPartner Profiler, to make their work more effective. The students downloaded a free version of the program from Compuware's web site and used it extensively to improve their programs.

"That was a sort of lesson I wanted my students to get," Professor Roehrig explains. "They could write things faster if they knew where to put their energies, and obviously a profiling tool (like Compuware DevPartner) is a way to try to discover that.

"I gave them code that worked and they knew all of the mathematics, so there really wasn't a huge development challenge there other than just trying to make it faster. The better teams completely rearranged memory layout from my 'vanilla version' to eliminate allocating memory and wasting time bouncing around from here to there," says Roehrig.

