

Trident Wins R&D 100 Award

Justin Tripp of CCS-1, the principal developer of Trident, was out of town when the announcement came: Trident had won an R&D 100 award.

Tripp said that he and his wife, Megan, were in Roswell, where she participated in a 10K race on July 1, 2006. When he returned, Tripp found a wonderful surprise. “I came into my office, and there was a fax sitting on my desk,” he said. It was a letter from Tim Studt, editor-in-chief of R&D 100 Magazine, informing him that Trident had won.

Tripp said his reaction was “utter amazement.” He said he was very pleased. “Yes, it was good,” he said—but, he added, “It’s still somewhat unreal.”

“All sorts of people knew before me,” he said. When he started reading his e-mail, he found that he had messages telling him about the award from Maya Gokhale in CCS-1 (one of Trident’s co-developers) and from the Laboratory’s Technology Transfer Division. He also had e-mail congratulations from many other people.

Gokhale had already informed the other Trident co-developers: Kristopher D. Peterson of CCS-1, Christine Ahrens of HPC-1, and former Laboratory employees Jeffrey D. Poznanovic, and Neil J. Steiner.

Tripp received an invitation to the R&D 100 banquet in Chicago on October 19, 2006. He planned to go and take his wife.

Subsequently, Trident was mentioned in the “Technical Highlights” portion of Associate Director Alan Bishop’s Theory, Simulation & Computation Weekly Update for July 10, 2006.

As the Weekly Update said: “Trident is a high-level language compiler that supports floating-point data types and operations. It translates into field-programmable-gate-array hardware scientific algorithms in the C computer programming language that contain floating-point mathematics. Without a compiler such as Trident, computational scientists cannot access the reconfigurable hardware. In the future, Trident, combined with tools to locate computationally intensive regions, may be used to identify through the use of reconfigurable-logic arrays blocks of code suitable for acceleration.”

The Laboratory NewsLetter featured the R&D 100 winners when it came out on the week of July 17, 2006. The NewsLetter described Trident and the four other Laboratory award winners. It also went into detail on the 11 other entries nominated. Of those 11, three involved people from CCS-1: EnergyFit: Cool, Fast, Reliable Computing, submitted by team members Wu-chun Feng and Chung-Hsing Hsu, both then in CCS-1; ParaView, with team members James Ahrens, John Patchett, Patrick McCormick, and Nehal Desai of CCS-1, Kristi Brislawn and Lee Ankeny of HPC-1, Brian Wylie and Ken Moreland of Sandia National Laboratories, Berk Geveci and Charles Law of Kitware, and Jerry Clarke of the U.S. Army Research Laboratory; and ReLocATE: Reconfigurable Logic

Accelerated Traffic Engine, with team members Gokhale and Tripp of CCS-1, Anders Hansson and Matthew Nassr of CCS-5, and Henning Mortveit of Virginia Polytechnic Institute and State University.

Trident is the latest in a series of CCS-1 R&D 100 winners. Among the previous winners were Clustermatic, the 10-Gigabit Ethernet Adapter, and “mpiBlast,” all in 2004, and Green Destiny in 2003.