AN INTERVIEW WITH CHIARO NETWORK'S STEVE WALLACH
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By Alan Beck, Editor-in-Chief

Steve Wallach has noted: The network was the computer in previous times, now the grid is the supercomputer today.

HPCwire interviewed Chiaro Network's VP, Office of Technology Steve Wallach about his company's latest announcements regarding their high-end routing platform and involvement with future grid technology.

HPCwire: Chiaro Networks has announced its involvement with CAL-(IT)2's OptIPuter project. Can you explain this to us?

Wallach: Chiaro will supply our high-end routing platform, Enstara, for OptIPuter's next generation optical networking grid. The project is being led by The California Institute for Telecommunication and Information Technology [CAL-(IT)2] and Larry Smarr. This research project was funded by a $13.5 million grant from the National Science Foundation. This is one the of largest IT grants ever awarded by the Foundation.

HPCwire: Why is this significant?

Wallach: The OptIPuter project will extend the reach of the current information infrastructure throughout the world, enabling anytime/anywhere access to the Internet. Initially, it will enable scientists who are generating massive amounts of data to interactively visualize, analyze and correlate data from multiple storage sites connected to optical networks. In the short-term and long-term, this will pioneer a new direction in the industry by providing a cohesive and consolidated grid infrastructure to offer increased, real-time supercomputing functionality without the supercomputing cost.

For Chiaro, it is an outstanding opportunity to demonstrate the unique advantages of our innovative routing platform technology in an exciting, next-generation application.

HPCwire: Why was Chiaro's routing platform chosen over the competition?

Wallach: Chiaro was selected because it provides the advantages of traditional routing along with leading edge optical switching technologies. In effect, Chiaro has created a fault tolerant routing platform that is programmable like a computer system. The Chiaro system is programmable with 24/7 reliability and virtual partitions, while converging the local, wide and storage area network environments.
The Chiaro routing platform employs several innovative technologies: nanosecond optical packet switching, centralized switch fabric scheduling, and the use of programmable network processors. For example, a fully configured 315 port system, in excess of 2 TeraOps of fixed point processing is used to support a 6.3 TeraBit/sec switch fabric.

HPCwire: Who else is involved in OptIPuter?

Wallach: Other CAL-(IT)2 partners include IBM, Telcordia Technologies and the San Diego Supercomputer Center (SDSC).

HPCwire: What do next generation grid networks mean to the industry as a whole?

Wallach: In the short-term and long-term, this will pioneer a new direction in the industry by providing a cohesive and consolidated grid infrastructure to offer increased, real-time supercomputing functionality without the supercomputing cost. It will make computing a cohesive and abundant resource regardless of geographic location.

HPCwire: What exactly is Cal-IT²?

Wallach: CAL-(IT)2 is a collaboration between The University of California San Diego and The University of California Irvine created by the State of California in 2000 to ensure that the state maintains its leadership in cutting-edge technologies. Its mission is to extend the reach of the current information infrastructure throughout the physical world, enabling anytime/anywhere access to the Internet.

HPCwire: What are some of the applications of grid networks?

Wallach: Medical imaging and microscopy, oceanography, chemistry, engineering and the arts.

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