Lead Inventor: Thomas Robertazzi, Ph.D., Professor, Department of Electrical Engineering

Title: Scalable Distributed Networked Computer Load Sharing

Background: Metacomputing is an emerging field that involves harnessing the power of many computers, possibly PCs, to create virtual supercomputers.

Technology Description: This patent pending technology teaches how to distribute load, under very generic assumptions, in a scalable manner, i.e. linear manner, as more processors are added. Performance is not shown to saturate, or saturate as rapidly, as more processors are added.

Applications: global computer server farms, grid computing companies, companies utilizing sophisticated computer modeling software programs, supercomputer manufacturers, metacomputing companies

Advantages: SUNY Stony Brook Electrical Engineering Professor, Thomas Robertazzi, has developed a novel protocol enabling the scalable use of distributed data nodes for intensive computing applications. With this technology, when load is distributed, it is sent simultaneously over all links available to a source node and unlike traditional technology, does not distributed the load sequentially over one link at a time.

The significance of linear speedup is that it allows for a significant and unending ability to improve performance by using larger and larger number of processors. The ultimate speedup limitation becomes not one of the scheduling protocol itself but of the ability of a single or multi-processor computer to keep its outputs links / buffers utilized.


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