



TEXT Aila Välikoski
ILLUSTRATION Tiina Lautamäki

You already have a green super computer

According to research, less than five percent of the computing power of corporate computers is in use, and server utilization rates are also rather low. While terminals and servers are running idle, the importance of computing is continually increasing in all fields of industry and science. New super computers are acquired for these needs – often unnecessarily because the organization already has a super computer standing idly by.

This untapped potential has been made available with a grid technology based system from Techila Technologies Ltd. The system identifies underutilized PC capacity in an organization's network and puts it to work so that computing power is easily increased to the level of a super computer.

Grid computing in itself isn't new. But the easy to use system enabling distributed computing as implemented by Techila Technologies is entirely novel. The innovation is already in use in all Finnish universities of technology and in many finance companies. An international opening has been made at the Prague University of Economics.

"Heavy computing is now needed in all fields. The sci-

ence world has pioneered the application of our grid technology, and virtual wonders have already been achieved with our system. Even calculations that have previously been considered almost impossible, lasting many years, have been possible in a few days," explains Managing Director **Rainer Wehkamp**.

Techila Technologies' grid solution has received interest from the European Organization for Nuclear Research CERN, among others. Cooperation with CERN has been carried out in research projects, and in future the collaboration will further solidify.

Some calculations require parallel computing, i.e. tight communication between super computers' processors. Techila Technologies' distributed computing system doesn't provide this. But it does untie the entire power of super computers for use where it is essential, thus complementing their operation.

*Grid saves time, energy,
material, work*

Environmental efficiency is becoming an increasingly pivotal factor in IT

of information technology will be greater than that of aviation. For every euro invested in IT, one has to reserve another euro for the energy needed for running and cooling," Rainer Wehkamp points out.

For example, a single high-power computer needs 25 kilowatts of electricity and heats the room enormously. Because a computer room must be continually cooled below 24 degrees, energy is wasted.

"Our grid system avoids this. It also helps save on significant, repeated investment costs because the time of use for a super computer is typically around three years, after which a new investment is needed. Our solution utilizes existing IT infrastructure which is regularly upgraded. This means that the grid computing capacity is upgraded, too, and grows without separate investments. Savings are naturally also achieved in materials and logistics."•

Techila Technologies was awarded the President of Finland's INNOFINLAND prize for innovative entrepreneurship in autumn 2009.

It has been calculated that by 2020, the carbon footprint of information technology will be greater than that of aviation."

investments alongside computing power.

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