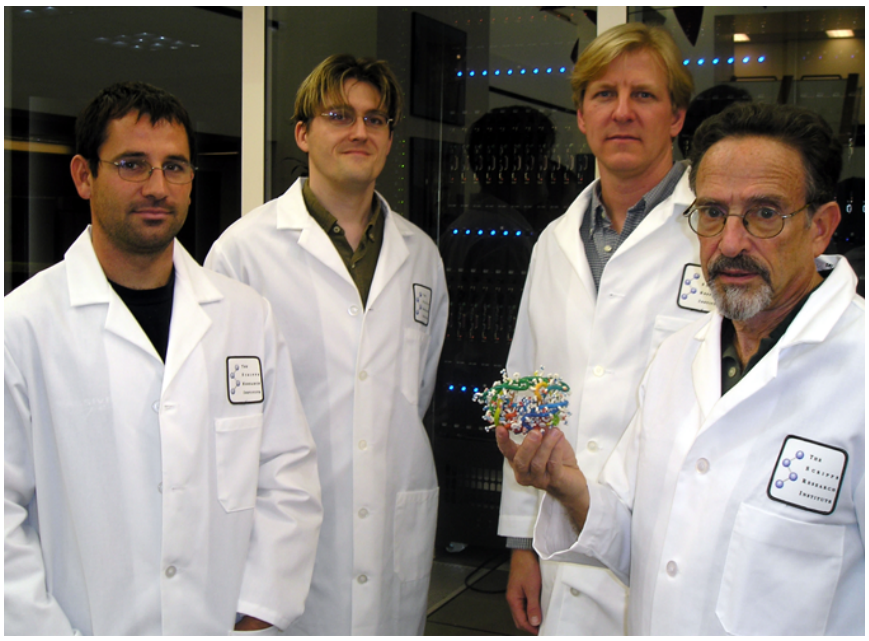
world community grid™
technology solving problems

World Community Grid—the power of sharing



Members of the Scripps Research Institute team, collaborating on the FightAIDS@Home project, display a three dimensional molecular model.

"World Community Grid has enabled my lab at Scripps to engage in critical computational research to design new anti-HIV drugs based on molecular structure. This is work that we would not have attempted in the absence of this powerful public computing grid. World Community Grid has allowed us to complete very complex research studies in six months that would have taken five years."

Professor Arthur Olson
Department of Molecular Biology
The Scripps Research Institute

The Power of Sharing

What if each of the world's estimated 1 billion PCs, as well as Macs and servers, could be linked to focus on humanity's most pressing issues?

World Community Grid — launched in November 2004 — is making this dream a reality. Today, it stands as the world's largest public computing grid benefiting humanitarian research.

This initiative allows hundreds of thousands of volunteers to donate unused computing power to researchers around the world. Progress on critical health issues, such as HIV/AIDS and cancer, as well as environmental and hunger issues, have already been achieved.

Grid Computing

Grid computing joins together many individual computers, creating a very large system with massive computational power that far surpasses the power of several supercomputers.

Because the work is split into small pieces that can be processed simultaneously, research time is reduced from years to months, or even days. The technology is also very cost-effective, enabling better use of critical funds.

World Community Grid establishes a permanent, flexible infrastructure that gives researchers a very large — and continuous — pool of available resources.

www.worldcommunitygrid.org

Active World Community Grid projects include:

- FightAIDS@Home: Research to identify effective and inexpensive anti-HIV drugs.
- Human Proteome Folding Phase 2: Research to obtain higher resolution structures for specific human proteins and pathogen proteins.
- Discovering Dengue Drugs – Together: Research to identify promising drug leads to combat the related dengue, hepatitis C, West Nile, Yellow Fever and other flaviviruses.
- Help Conquer Cancer: Research to speed up the process of crystallizing large cancer related proteins to determine their structure using X-ray crystallography. This will help in understanding the roles of these proteins in cancer initiation, progression and treatment.
- Nutritious Rice for the World: Research to study rice proteomes to help breed improved hybrids of rice strains with higher yield, greater disease and pest resistance as well as a full range of bioavailable nutrients.
- The Clean Energy Project: Research to calculate the electronic properties of tens of thousands of new materials and to determine which of these are the best candidates to make the next generation of more efficient and affordable solar cells and fuel cells
- Help Fight Childhood Cancer: Research to find drugs that can disable three particular proteins which would increase cure rates for neuroblastoma, one of the most frequently occurring solid tumors in children.
- Influenza Antiviral Drug Search: Research to find new drugs that can stop the spread of an influenza infection in the body. The research will specifically address the influenza strains that are drug resistant.
- Help Cure Muscular Dystrophy Phase 2: Research to investigate protein-protein interactions for more than 2,200 proteins whose structures are known, with particular focus on those proteins that play a role in neuromuscular diseases.

Completed World Community Grid projects include: Human Proteome Folding – Phase I, Help Defeat Cancer, Genome Comparison Project, AfricanClimate@Home and Help Cure muscular Dystrophy Phase 1. You may find additional information on all of our research projects on World Community Grid's website.

"The power of grid technology enabled us to analyze hundreds of arrays of cancer tissue statistical data that allow multiple experiments to be conducted simultaneously and more rapidly," said Dr. David J. Foran, professor and lead researcher at The Cancer Institute of New Jersey, UMDNJ-Robert Wood Johnson Medical School, principal investigator for the Help Defeat Cancer project on World Community Grid. "World Community Grid made it possible for us to analyze in one day the number of specimens that would take approximately 130 years to complete using a traditional computer."

Environmentally Friendly

Most computers have a very large amount of idle time, even in between keystrokes. Contributors are not required to leave their computers powered on more than normal. The research computations save intermediate results periodically so that little work is lost even if the computer is turned off. Furthermore, CPU usage by the grid computations is throttled so that the processor does not consume a large amount of extra electrical energy. Thus the otherwise wasted energy and CPU power contributes to humanitarian research in an environmentally friendly way.

Join Today

Making a difference has never been easier. To join World Community Grid, go to **www.worldcommunitygrid.org** and follow the simple instructions to download and install the free, secure and unobtrusive software program.

Besides individuals who contribute the unused cycle time of their computers, other leaders in the corporate, not-for-profit and academic communities are teaming with World Community Grid and encouraging their employees, members, students and faculty to participate.

Submit Research Proposal

If you have a humanitarian research project that requires vast amounts of CPU time, please submit a proposal using the Request for Proposal process described at: **http://www.worldcommunitygrid.org/projects_showcase/viewSubmitAProposal.do.**