2008-10-16 OSC NEWS: A grid for all sciences (OSU On Research blog entry)

A grid for all sciences . . .

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[Editor's note: Ohio State science writer Pam Frost Gorder was one of dozens of international journalists invited last week to tour the international physics laboratory at CERN in Switzerland and learn about the GRID, the global computer network designed to handle the massive amounts of data flowing from the world's newest particle collider. This is the last of four entries about that trip.]

October 3, 2008

Les Robertson, CERN scientist and father of the LHC computing grid, is retiring. Seven years ago, he was the one who got the idea to link distant computer clusters from many countries together, to make data processing for the LHC more manageable.
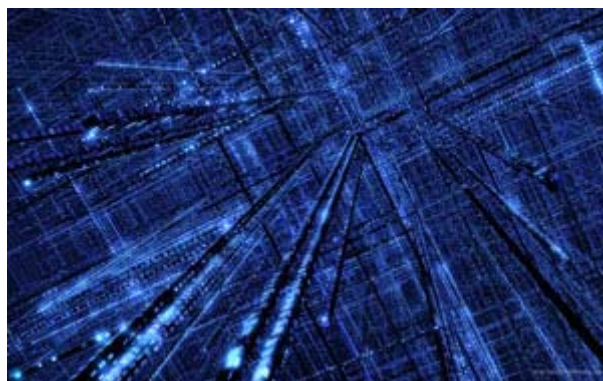

But that idea has taken on a life of its own, and now there is talk of making the grid permanent, even beyond the decade-plus expected lifespan of the LHC. Other data-heavy sciences, particularly climate science and microbiology, could make good use of the grid.

So after the LHC grid was officially unveiled, and Robertson's staff presented him with a bouquet of flowers and an ovation, he and I walked through the art exhibit currently displayed in the facility's entry hall. The LHC grid, he said, turned out almost exactly as he had originally envisioned it, although he didn't realize just how challenging it would be to manage the countless people and research groups around the world required to make it happen. He's traveled the world many times over, visiting computing sites of the grid's many partners.

He remembered visiting Ohio State — one of the "Tier 2″ universities on the grid. Robertson noticed the close linkage between the university and the Ohio Supercomputer Center, and remarked that our physicists and computer scientists worked together in a way that clearly benefitted the LHC. Tier 0 (CERN itself) and Tier 1 (a handful of sites around the world) are mainly data storage and distribution centers, but the Tier 2 centers are where the real action happens, he said — where scientists actually analyze the LHC data and make discoveries.
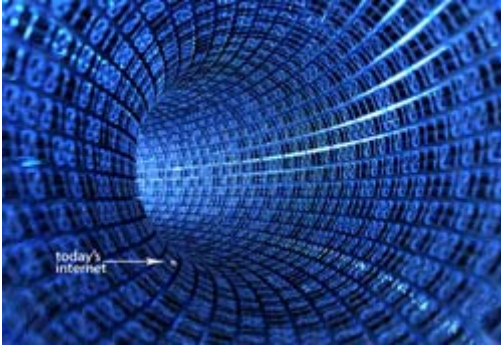
But for all this travels he has one regret: He never saw the rest of those countries he visited — the people and cultures beyond the computer centers in universities and laboratories.
His retirement, he promised, would carry him out of this "virtual world" and into the real world.

The "real world" is much better off for his efforts. Now that he's shown that grid computing can be run on this massive scale, other worldwide grids are linking together, with applications in environmental protection, disaster recovery, medicine, and public health.

And that's a lasting legacy that he didn't envision.

Pam Frost Gorder