

## Computer sanctions 'could affect US weapons research'

[WASHINGTON] A US Department of Energy (DoE) official last week warned a congressional committee about the possible side-effects of imposing sanctions on a US supercomputer manufacturer for selling computers to a Russian nuclear weapons laboratory.

Victor Reis, assistant secretary for defence programmes, was speaking to the House of Representatives national security procurement subcommittee. He asked for restraint in the government's investigation of Silicon Graphics Inc. (SGI), in case it damages DoE's work with the company in developing nuclear weapons simulations.

The investigation is examining whether the shipment of four high-performance computers to Russia last year violated export control laws. But Reis suggested to the committee that, "should sanctions or punishments for proven violations be considered, such measures be carefully structured so as not to undermine the US [nuclear weapons] stockpile stewardship programme".

SGI, which owns the supercomputer pioneer Cray Research, admitted in February that it had shipped several high-performance computers to Russia without export licences. The company's chairman, Edward McCracken, said its officials believed licences were not required, as the computers were thought to be for civilian use. But he acknowledged that they should have been more diligent in finding out their use.

Victor Mikhailov, the Russian Minister of Atomic Energy, said in January that the computers would help to maintain the reliability of Russia's nuclear arsenal. He claimed they would boost by 10 times the computational capability of Chelyabinsk-70, the once-secret nuclear design laboratory.

SGI is the partner of Los Alamos National Laboratory in the Accelerated Strategic Computing Initiative, an ambitious effort by DoE to increase dramatically over the next decade the computational capabilities of its weapons laboratories. The effort is considered the backbone of DoE's "science-based stockpile stewardship program", which is aimed at ensuring that ageing nuclear weapons will work properly.

Last October, DoE and Los Alamos announced a \$110-million deal for Cray Research to develop and build what they said will be the world's most powerful computer, with a peak performance of three teraflops (a thousand billion floating point calculations per second). When combined with a separate system planned for the laboratory, the peak performance will be rated at four teraflops.

David Kramer

## Human origins centre pulls up roots in move to Arizona

[BERKELEY, CALIFORNIA] The Institute of Human Origins is to leave Berkeley and affiliate with Arizona State University this summer, according to the institute's founder Donald Johanson, discoverer of the 3.2-million-year-old 'Lucy' fossil skeleton in Ethiopia.

Johanson set up the institute in 1981 as a non-profit, multidisciplinary research organization dedicated to "the recovery and analysis of the fossil evidence for human evolution and the establishment of a chronological framework for human evolutionary events". He will take a team of five scientists and the institute's programme coordinator to Arizona, where they will develop a multidisciplinary palaeoanthropology programme within the anthropology department.

The institute's departure will be a loss to the San Francisco Bay Area research community, where it acted as a magnet for visits from internationally recognized scientists and was responsible for strong community outreach programmes. But personal conflicts over the past few years have taken their toll on ties with the University of California at Berkeley, home to Tim White, a palaeontologist and once a close friend and colleague of Johanson, and others.

Three years ago, philanthropists Gordon and Ann Getty withdrew their support because of an apparent disagreement with Johanson. The institute dismissed Paul R. Renne, a geologist, and seven other scientists, who then sued the institute and formed the Berkeley Geochronology Center.

At Arizona, institute scientists will teach courses as well as continue their research, accompanying students to fieldwork sites in



Africa for on-site experience. The institute hopes eventually to expand its activities and to add more researchers in early hominids. "This new alliance opens the doors of East Africa to our students and faculty, with new opportunities to participate in potentially historical research missions," says Gary Krahenbuhl, dean of the college.

Johanson says that the new arrangement will allow money raised by the board to go directly into research and graduate education, rather than covering overhead expenses. Arizona State has committed \$320,000 to cover relocation, renovation and an operating budget during the first year, with about \$285,000 earmarked for the institute annually after that.

Johanson says that he is looking forward to working with both graduates and undergraduates, and to bringing to Arizona graduate students from field-research host countries such as Ethiopia and Eritrea. "It's time to give some serious thought to who's going to pick up the search where we leave off," he says.

William Kimbel, the institute's director of science, and Kaye Reed, a palaeontologist, are to join Johanson in the department of anthropology. Robert Walter, a geochronologist, will develop an argon dating facility in the geology department, and Eric Meikle, a palaeoanthropologist, will remain responsible for the institute's public outreach and education effort.

Sally Lehrman

## India takes French route to genome project

[NEW DELHI] India will collaborate with France on human genome sequencing under an agreement signed earlier this month between the Centre National de la Recherche Scientifique (CNRS) and its Indian counterpart, the Council of Scientific and Industrial Research (CSIR).

The agreement followed discussions between CSIR scientists and a French delegation led by Guy Aubert, director general of CNRS. It runs initially for three years, but is renewable by mutual consent.

Both sides have identified "genome sequencing and analysis" as a priority area for collaboration. "We expect that a project on sequencing the human genome will be launched this year," said a spokesman for the French embassy's science office.

CNRS has agreed to open up its genome sequencing facilities to Indian scientists. In turn, CSIR has offered its DNA fingerprinting facilities in Hyderabad and Delhi to French scientists. The list of shared facilities in the two countries will be updated as required.

Indian officials say the agreement became possible because of a clear understanding between both sides on the need to protect intellectual property rights. Under the agreement, results arising from the collaboration will be common property and the benefits will be shared equally.

In addition to genome sequencing, the two countries will cooperate on, drug development, oceanography and chemical sciences.

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