

Paris computer centre

Orsay protests

The *Université de Paris-Sud* at Orsay, one of the principal centres of physics in France, has withdrawn from a plan to assist in the installation and development of the "largest" commercial computer in the world, a Cray-1. The computer is to be installed on the new site of the *Ecole Polytechnique* just a mile or two from the university, but Paris-Sud will have nothing to do with it (except to make a little use of it, once it is running). Orsay physicists have demonstrated over the matter and, at the same time, the scientific director of Paris-Sud's own computer laboratory, *Paris-Sud Informatique* (PSI), has threatened to resign on 20 June unless the government agrees to keep his own laboratory going.

The underlying issue is tangled, and the tangle goes right to the top. *Paris-Sud's* president, physicist Roland Omnès, is going to see the minister of education, Alain Savary, about the matter. But a remark that funding for PSI might not be renewed came from the ministry of research and technology, which is attempting to establish a computer policy for universities and research centres; and the two ministers, Savary and the research minister Jean-Pierre Chevènement, are not the best of friends.

The ministry of defence is also involved, both through its control of the *Ecole Polytechnique* and through the long-expressed wish of the military to purchase a Cray-1 (reportedly vetoed by Washington). So is the ministry of industry, which is trying to revitalize the French computer industry. Given the ever-present IBM lobby and the traditional hostility between the *grandes écoles* (such as the *Ecole Polytechnique*) and the universities, the result is a highly political problem.

At root, however, the dispute is technical. Cray-1 is a "vectorial" computer, whose great power depends on the parallel processing of a series of numbers. It is thus stretched for linear algebra (matrices and so on) only where the sizes of arrays are very large. Physicists generally do not need such arrays (except for modelling large systems such as the atmosphere) and for them the Cray-1 is far from being the most cost-effective machine. So when PSI computer engineers went to the *Ecole Polytechnique* to collaborate over Cray-1 development, they found themselves in conflict with *polytechnique* interests — which were, largely, in engineering and systems modelling. This led to personal conflict and ultimately Omnès withdrew the PSI team from the collaboration.

Since then the atmosphere has become even more heated, with PSI staff claiming, in effect, that the *Ecole Polytechnique* staff are in the hands of IBM; and indeed, the *polytechnique* has scrapped plans to link the Cray-1 to a French-built CII-Honeywell-Bull EBS-8 (a link PSI was to

Schering-Plough take \$30 million plunge

Palo Alto

DNAX Ltd, a small Californian company best known for having some pioneers in genetic engineering on its scientific advisory board, seems likely to be acquired by the New Jersey pharmaceutical company Schering-Plough for \$29.4 million. Schering-Plough already owns 13 per cent of another leading biotechnology company, Biogen SA.

Schering-Plough is to pay \$19 million in cash and is offering 340,000 shares of its common stock valued at approximately \$10.5 million. The common stock is to be distributed over 5 years under an incentive plan to the 18-member advisory board and staff of 40 scientists. Preferred shares of DNAX are at present owned by a Swiss group and a US venture capital unit of Elf Aquitaine, the French oil company.

Founded in 1980, DNAX has not so far launched any products or filed any patents. Its scientific advisory board boasts three Nobel laureates: Paul Berg and Arthur Kornberg, both of Stanford

University, and George Palade of Yale University.

Alejandro Zaffaroni, DNAX's founder, hopes that the company will eventually manufacture the protein antibodies made by the human body when it is combating infections and inflammatory diseases and allergies, and hopes to have specific macromolecules ready for testing in four to five years.

Zaffaroni is also founder and president of Alza, a company specializing in the delivery of drugs to target organs within the body. Alza's common shares in DNAX, valued at \$5.3 million, will be bought by Schering-Plough in its acquisition of DNAX.

In his search for a suitable buyer for DNAX, Zaffaroni says he approached more than 20 companies in Europe, Japan and the United States. Schering-Plough's purchase of DNAX will be the first instance of a major pharmaceuticals company acquiring an entire biotechnology firm.

Charlotte K. Beyers

work on) and will go for an IBM instead. The final crunch was a comment made at a meeting by a ministry of research and technology official, who said that Chevènement would probably not sanction the renewal of PSI equipment (a ten-year-old UNIVAC), and that Orsay physicists should use the Cray-1 "only three kilometres away".

Omnès, however, is calm. He believes official thinking is moving his university's way, and that this is not the time for a big public campaign. Nevertheless, some of his more vocal staff disagree with him. Nor does time seem to be on his side. A ministry of research spokesman said this week that it did not want to replace university computers in response to "piecemeal" pressure, and that it would take "several months" to establish a coherent policy. In the meantime the (part-time) scientific director of the Orsay computer centre may have resigned and some of his full-time technical staff, uncertain about their future, may have begun to look for other jobs. That — ultimately — would leave one of France's leading laboratories without a computer. Robert Walgate

Law of the Sea

Soviet enterprise

In advance of the inconclusive end to the UN conference on the law of the sea, the Soviet Union last month passed enabling legislation to cover the granting of prospecting and exploitation licences to Soviet enterprises wishing to engage in undersea mining beyond the continental shelf.

The decree of the Supreme Soviet now

published describes the measures as "temporary" and stresses that the Soviet Union "is and will continue to be in favour of the settlement of urgent problems of the legal regime of the world ocean on an international basis . . . taking into account the legitimate interests of all states". In the absence of any such legislation, however, the Soviet Union has been "compelled" to protect its interests by granting off-shelf licences to Soviet mineralogical concerns.

The decree was clearly an answer to Western proposals on off-shelf mining. In particular, the head of the Soviet delegation to the law of the sea conference, deputy foreign minister S. P. Kozyrev, categorically rejected Western proposals to grant licences on a "first-come first served" basis. This, he said, was a principle "widely employed during the colonial enslavement of countries and peoples".

Commenting on the new decree, the daily *Socialisticheskaya Industriya* stressed the interest of US companies in off-shelf strategic minerals which, it alleged, had pressurized President Reagan to renege on earlier understandings. The new decree has therefore been interpreted by some commentators as simply a tactical move to strengthen the Soviet position at the bargaining table.

The provisions of the decree, however, are considerably more detailed than would be necessary for such a purpose. It goes into considerable detail about safety zones around deep drilling installations, the notification of temporary navigation hazards, disputes over rights with the "agencies of foreign states" and the setting up of a special fund under the Council of Ministers to which Soviet licence-holders must pay part of their profits.