

# Delors white paper puts research firmly on Europe's political map

**Paris.** Europe's political leaders have given their formal endorsement to proposals that would enlarge their common research programmes, encourage the joint construction of new 'information highways' and increase incentives to persuade industry to invest in research.

At their summit meeting in Brussels last weekend, the leaders of the 12 member states of the European Union (EU) approved a white paper (policy document) on competitiveness, growth and unemployment prepared by Jacques Delors, the president of the commission. The paper is aimed at creating 15 million jobs in the EU by 2000.

Three of its ten chapters dealt exclusively with research and development (R&D). The EU's acknowledgement of the importance of R&D to its plans for economic recovery was further reinforced at the summit, when the heads of government also

broke the deadlock over the funding of the EU's next five-year Framework programme, by approving a budget of ECU12 billion (US\$13.6 billion, see sidebar).

In his white paper, Delors sets the EU the ambitious target of increasing spending on R&D to three per cent of gross national product (GNP). It now spends just 2 per cent (ECU104 billion) in contrast with the United States, which spends 2.8 per cent (ECU124 billion) and Japan three per cent (ECU77 billion).

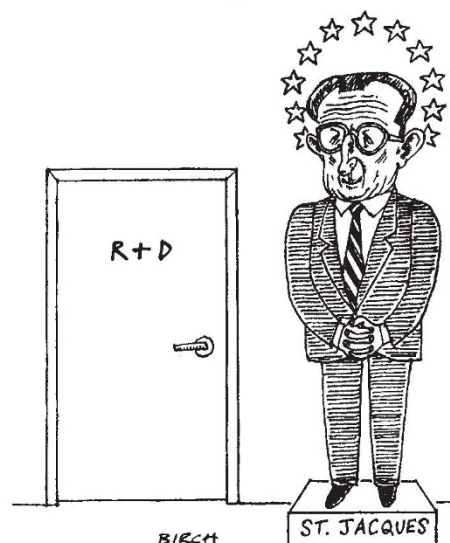
Such a large increase in spending seems improbable, given that member states have either frozen or cut science spending because of the economic downturn. Nevertheless, Delors is confident that the private sector could make up the difference. Companies fund just over half of all science spending in Europe, compared with more than three-quarters in Japan.

To this end, Delors encourages member states to provide tax and other incentives to companies to invest in research. He also wants the EU to make its rules for co-funding industrial research more flexible (see *Nature* 365, 775; 1993).

Delors also criticizes the lack of coordination between national research policies. His remedy would be to formalize cooperation within some form of European science agency, but it is too soon to say how this would operate. He also wants member states to take joint measures to improve technology transfer.

He recommends that national research organizations, companies and social groups need to develop a European strategy for biotechnology as a matter of urgency. He has also instructed the commission to consider revising legislation affecting biotechnology products.

The white paper proposes that governments encourage companies to work together on several big projects in the fields of information technology, biotechnology and environmental technology. The Euro-



pean Round Table, which brings together 40 leading industrialists, backs the plan.

The paper suggests ECU150 billion should be spent on information technology infrastructure over the next ten years. Furthermore, it accords priority to eight projects, including building a high-speed communications network and developing databases and electronic mail, requiring ECU67 billion in 1994-98.

Delors wants the EU to set up a high-level "Task Force on European Information Infrastructure" to plan the programme and start it by the middle of next year. Although EU has agreed to provide ECU12 billion a year for six years to create networks in transport, energy and telecommunications, it anticipates that most of the money for the electronic highway will come from the private sector.

It is too soon to say what effect the EU summit's adoption of the Delors plan will have on science and technology. Although the member states have committed themselves to implementing the white paper's recommendations, these are non-binding and will inevitably be subject to change.

**Declan Butler**

## Deadlock broken on Framework funding

**Paris.** The leaders of the European Union (EU) ended uncertainty about the next five-year Framework research programme last Friday by agreeing to a budget of "at least" ECU12 billion (US\$13.6 billion), and a reserve of ECU1 billion, for the period 1994-98.

The heads of government acknowledged that the research programme was an important part of its plans for economic recovery (see above). In the final communique, they declared that the implementation of "an ambitious, well-targeted research programme constitutes a significant contribution to efforts towards recovery, particularly in areas such as information technology".

The programme had been hanging in the balance earlier in the week, after the council of research ministers failed to agree on the budget of ECU13.1 billion proposed by the European Commission, and had passed the buck to the summit (see *Nature* 366, 499; 1993).

The commission is now confident that the council of ministers will iron out its remaining disagreement over the funding of the EU's four Joint Research Centres at an extraordinary meeting a few days before Christmas. The Framework programme is then expected to pass easily through its final reading before the European Parliament, and to come into effect some time next year.

**D. B.**

## Newspaper ducks criticism of AIDS coverage

**London.** Under a 360-point heading set in blood-red type "AIDS — why we won't be silenced", Britain's *Sunday Times* this week (12 December) accuses *Nature* of "sinister intent" and of being "so tied to one particular hypothesis of Aids as to make it feel anybody who questions that theory must not only be in error, but must be silenced".

In particular, the newspaper criticizes John Maddox, editor of *Nature*, for his alleged refusal to publish articles "from

doctors and scientists who question the HIV theory of Aids". The newspaper describes Maddox as the "high priest" of *Nature*, and the journal as the "bible of the church of science". But it also concedes that the HIV virus may be involved in the onset of AIDS in some unspecified way.

The *Sunday Times* reprints the leading article from last week's *Nature* (366, 493-494; 1993), and purports to respond to the questions raised. But the points made ▶



by Neville Hodgkinson, the science correspondent of the *Sunday Times* and the author of the article, are familiar ones, and little attempt is made to provide detailed answers to the responses to claims made in earlier articles in the newspaper.

Much is made of the fact, for example, that new estimates of the global pattern of AIDS spread are not as high as some of the earlier estimates. But, as Professor Roy Anderson pointed out earlier this year (*Nature* 363, 393–394; 1993), the new figures are within the bounds of the original estimates, which were themselves known at the time to be subject to considerable uncertainty because of the lack of data which have since been collected.

Similarly, Hodgkinson repeats the claim that HIV-positive haemophiliacs have recovered after being treated for a blood-clotting disorder. But this claim is dismissed by the head of a haemophilia centre at one of London's main teaching hospitals, who says that she has explained to Hodgkinson why the view is wrong, and that repeating it is deeply distressing to affected people who may be given false hope.

(The comments on the "HIV theory" with respect to haemophiliacs is particularly odd given that, in a different part of the same edition of the *Sunday Times*, the paper congratulates itself for helping to win compensation for a group of British haemophiliacs who had been infected with HIV from contaminated US blood.)

Despite the aggressive style of the two-page attack on *Nature* and the (unnamed) supporters of what the newspaper describes as the "HIV theory", Hodgkinson appears to be backing off from the newspaper's position only the week before, when it promoted the views of a small but vociferous group of self-styled "dissidents" who do not believe that HIV causes AIDS.

In this week's article, Hodgkinson says "we have never argued that any of these findings rule out a role for HIV in Aids". His main complaint now is that *Nature* has not, he claims, examined the significance of the so-called anti-HIV results.

Such statements appear to ignore the many occasions on which *Nature* has indeed assessed some of the less generally accepted views on AIDS, most recently, for example, by M. Ascher *et al.* in *Nature* 364, 291–292; 1993.

Once again, the *Sunday Times* repeats the views of a few people who do not work with AIDS patients and say it is a disgrace that *Nature* has rejected their speculative hypotheses. In neither of its articles in the past two weeks has it reported the views of clinical researchers working with AIDS patients; nor has it reported the view of basic scientists who have published papers containing relevant data.

The newspaper appears to dismiss the views of such individuals on the grounds that they are part of what it describes as the "HIV industry".

Maxine Clarke

## Fusion experiments give lift to future funding prospects

**Washington.** Physicists at the University of Princeton are this week starting to analyse data from a series of record-breaking experiments which they hope will help to establish the commercial potential of nuclear fusion.

The experiments were carried out at the Princeton University Plasma Physics Laboratory, which last week sustained a power output from fusion of as much as 6 MW for three-quarters of a second. They were described by O'Leary, the Secretary of Energy, as "the most significant achievement in fusion energy in the past two decades."

Previously, the record for fusion power output was 1.7 MW, set at the Joint European Torus (JET) facility at Culham in Britain in 1991. But where the JET experiments used a plasma of 90 per cent deuterium and 10 per cent tritium, Princeton used a much more powerful 50:50 mixture of the two hydrogen isotopes, similar to that likely to be needed in commercial fusion reactors.

Ron Davidson, director of the Princeton laboratory, says that the duration of the fusion event is restricted by the ability of his equipment to store and deliver the 25 MW of electricity needed to power the copper magnets. These suspend the plasma in space as it is heated to temperatures of more than 100 million degrees Kelvin.

The 1 GW International Thermonuclear

Experimental Reactor (ITER), being planned for an unspecified site by the United States, Japan, Europe and Russia as the next fusion prototype, will use superconducting magnets which require far less power. As a result, it is hoped that ITER will be able to sustain a continuous and energy-efficient fusion reaction.

A programme of around a thousand fusion "shots" at Princeton will continue through this winter, providing vital data on the control of the plasma, on ways of removing heat from it, and on the best choice of reactor materials. The experiment will also study the effects of alpha radiation from fusion on the behaviour of the plasma itself.

The Department of Energy, which provides the Princeton facility's \$80 million budget, hopes that publicity from the experiments will help secure fusion funding in Congress, where sceptics complain that a fuel source which will yield no commercial energy until at least 2040 gets more research support than any other.

Congressional aides said that the fusion budget is unlikely to come under any real pressure next year. But laws have already been passed which make future United States support conditional on the ITER partners agreeing on an international framework for fusion research.

Colin Macilwain

## NSF opens network to Russian scientists

**Washington.** Another barrier left over from the Cold War fell last week when NSFNET, the scientific information network of the US National Science Foundation, began carrying data from the former Soviet Union (FSU) for the first time.

The decision to allow such traffic was taken by the National Science Board, and will considerably ease electronic mail and data exchanges between FSU scientists and their US counterparts.

From its inception in 1986, NSFNET, which connects approximately 10 million users in federally sponsored research laboratories, colleges and universities, and forms one of the main backbones of the global network Internet, has had a policy of refusing traffic from FSU states.

As a result, although Soviet messages could find alternative routes through Internet, Steven Goldstein of the NSF's networking and communications research division estimates that at least 30 per cent of US sites were not directly accessible to FSU scientists. These scientists should now be able to reach all those sites by electronic mail directly.

At the same time, the National Aero-

navics and Space Administration (NASA) has unveiled plans to link a group of Russian space scientists directly to its own NASA Science Internet — another major backbone of Internet — by early January. A satellite link will connect the Ames Research Center near San Francisco to Russia's Space Research Institute (IKI), which will act as the hub of a Russian network linking nine additional space research facilities.

The system will support collaborative projects in areas ranging from astrophysics to space life sciences. But its use will be restricted to scientists working on those projects. The US Department of Energy (DOE) plans a similar connection between its Energy Sciences Network and several Russian sites later in 1994.

Both the NASA and DOE efforts should benefit from work being completed in Moscow on wiring the city's leading research centres with fibre optic cable for high-quality communications. Funded by philanthropist George Soros's International Science Foundation (ISF), the work is expected to be completed next spring.

Tony Reichhardt