US defence research

## Pentagon asks for stricter control of publication

Washington

THE Pentagon is seeking extensive new powers to change or block the publication of scientific papers written under Department of Defense (DoD) contracts. In a new policy directive (number 2040.2), DoD sets out a general policy for reviewing both basic and applied research carried out in academic settings.

Under the scheme, basic and applied research papers deemed not to be sensitive will have to be submitted to a DoD contract office at the same time as they are submitted for publication, although DoD will have no right to insist on changes or to block publication. Basic research characterized as sensitive will have to be submitted to DoD 60 days before it is submitted for publication. In these cases DoD will be allowed to suggest changes or recommend that publication should not go ahead, but the final decision will rest with the investigator.

Applied research papers which are sensitive will, however, have to be submitted to DoD 90 days before they are



submitted for publication, and DoD will be entitled to insist on changes in the manuscripts or to block publication altogether.

The new directive is part of an extensive Pentagon review of technology transfer which started in 1981 and is now nearing completion. As part of the review, six panels looked at research contracts, visa controls, emerging technologies, scientific conferences, publication and rules for exemption from the Freedom of Information Act. Their findings are being coordinated with those of a still secret interagency review of technology transfer started in 1982 after a National Academy of Sciences report called for an easing and simplification of existing controls on the publication of research with a bearing on national security.

The restrictions on publication proposed in the DoD directive are far stricter than those recommended by the academy's report, prepared under the direction of Dale Corson, former president of Cornell University. The main conclusion of the Corson panel was that too much secrecy in scientific communication would damage rather than strengthen US security because of its chilling effect on the scientific enterprise itself.

Warning that the effort to protect sensitive information was spread too thinly, the Corson panel proposed confining controls to a few "grey areas" where the technology was developing rapidly, had clear military applications and would, if released, give the Soviet Union a short-term military advantage it could not otherwise acquire.

DoD, however, wants to extend the scope of its controls. It suggests a looser definition of sensitive technology as that "perceived to have a military impact" and in which the Soviet Union is less advanced than the United States. Furthermore, DoD wants a new Militarily Significant Emergent Technologies Awareness List (METAL) to pinpoint frontier technologies that could be candidates for stricter controls.

DoD's break with the Corson recommendations has come in spite of a formal improvement in liaison with the universities. Twenty academics have been invited to join an academic advisory group for Comex, the committee on exchanges which recommends whether scientific visitors from unfriendly nations should be granted visas. A government/industry/university research round table has been established within the National Academy of Sciences but has not yet met. And a working group on export controls, attached to the DoD/University Forum, has given the academic community periodic progress reports on the Pentagon's internal review of scientific controls.

The complexity of the existing control mechanisms continues, however, to baffle both scientists and officials. For example, an extension course on materials science held recently at the University of California, Los Angeles (UCLA), was barred to foreign citizens. Michael Bley, UCLA's director of marketing, said some of the technologies to be discussed were on the US Munitions List. But he admitted that publicity for the course had not mentioned that citizens of the United Kingdom, Canada, Australia and New Zealand would have been able to attend under the terms of a technical cooperation agreement with the United States.

Publication, if it is ever declassified, of the interagency study on technology transfer may clarify the issue. The DoD study, however, gives little cause for optimism. From the point of view of the universities, its only welcome recommendation is the creation, for the first time, of a technology transfer appeals board within the Pentagon. Otherwise, its recommendations are far more conservative than Carson had wished.

Peter David

Ariane launch delay

## Europe's hands clean

THE launch of Ariane, Europe's hope of an answer to the space shuttle, is suffering from greater and greater delays, just as the shuttle is getting into its stride.

For once, however, the problem is in the United States. Ford Aerospace in Palo Alto, California, is desperately trying to remedy a fault discovered in the Intelsat V (F8) series of communications satellites, one of which was due to have been launched by Ariane last November. Neither Ford nor the European Space Agency (ESA), administratively responsible for launching the satellite from its Kourou (French Guyana) base, will commit itself to a date more precise than "the end of February". Only two weeks ago, the canvassed launch date was mid-February

The problem — interference on an L-band maritime communications system attached to Intelsat Vs from the fifth onwards — is "intermittent", says Ford. This may be taken as a code word for almost impossible to reproduce.

The Intelsat organization has leased these L-band systems to London-based Inmarsat, which deals solely in ship communications, and Intelsat will suffer penalties if the systems do not work. Equally, however, the organization faces penalty clauses in the contract with ESA, if launch is delayed too long. But, according to an ESA official, relations with Intelsat have not deteriorated to that stage yet: "we are not thinking about it", said the official.

According to ESA, if Intelsat V (F8)

According to ESA, if Intelsat V (F8) does get away by the end of February, there will still be five Ariane launches this year. But this compares with as many as eight foreseen last May and with ten scheduled shuttle launches. The next 18 or so satellites to be launched in the Ariane series, some in multiple launches with the more powerful Ariane-3 launcher, are all communications satellites, the first novelty coming with the high-resolution French SPOT remote sensing satellite, now due to be launched some time in mid-1985.

Robert Walgate