

Deemed export controls expected to be eased

The US Department of Commerce has initiated what likely will be a major re-vamping of its system for keeping “dual-use” information out of the hands of potential adversaries abroad. The department announced last month that it is taking steps to implement the recommendations of a blue-ribbon advisory committee that urged a fundamental change in the government’s approach for controlling “deemed exports”—technological knowledge that is imparted to foreign nationals working in US institutions and companies. Tightened enforcement of deemed exports in the years since September 11, 2001, has become an administrative burden for American universities and has complicated US industry’s hiring of foreign-born scientists and engineers (see *PHYSICS TODAY*, July 2006, page 21).

In a statement issued 6 February, Commerce’s Bureau of Industry and Security (BIS) said it had completed its internal review of the panel’s recommendations and was beginning consultations with the other government agencies that share responsibility for export controls.

The advisory committee, chaired by retired Lockheed Martin chairman Norm Augustine, in December urged the BIS to replace the current system with a simplified regime that would erect “higher fences” around a few justifiably classified technologies. It further called for the development of more consistent criteria to more narrowly focus on the relatively few foreign nationals whose loyalties might be suspect. And it recommended establishment of a “trusted entity” system in which universities and companies that agreed to play by the rules could self-approve their deemed export license applications.

With the exception of very few highly sensitive military areas, the nation’s security would be better served “by seeking to accelerate its own technical prowess than by seeking to deny potential enemies access to broad ranges of knowledge,” the report says. “Stated otherwise, protecting what we know is in most instances not the primary concern; participating in the creation of that body of scientific and technical knowledge that is not known is the concern.”

Under the existing regime, a license is supposed to be a prerequisite for individuals from specified nations either to work on research in certain unclassified areas that are considered sensitive or to work with instruments that embody cer-

tain technologies. A separate license is required for each controlled technology used by the individual.

The export control regime is a vestige of the cold war era, when the US dominated the technological spectrum and its adversaries were few and well-known, the report states. Today, however, many of the listed items can be readily obtained from other nations, and US industry suffers a competitive disadvantage, the committee said.

The committee recommended narrowing the list to encompass critical aspects of the few exports that could pose real threats—nuclear weapons, biological pathogens, chemical warfare agents, and cryptography, plus a few “pivotal technological breakthroughs” such as advanced composites, stealth and night-vision technologies, and electronic countermeasures.

Under an executive order dating to the Reagan administration, all research considered fundamental in nature is to be freely disseminated. The same edict declares classification to be the only valid method for restricting fundamental research results. But since 9/11, pressure has built to restrict some research that isn’t classified but might still be considered sensitive. The detailed design of a nuclear facility and instructions for genetically engineering a super-bug pathogen are examples that officials often give for such sensitive but unclassified information.

In an interview, Augustine said the panel thought it prudent to provide the government an “opening” other than classification for keeping some research secret. But he stressed that the burden would be on the government to explicitly justify the need for secrecy. “I will grant you that people can abuse this,” he acknowledged.

The committee drew up a seven-step review procedure for determining whether to grant a deemed export license, starting with an “overall evaluation of the probable loyalty of the individual of interest.” If the review indicates a tie to a country on the terrorist-supporting list, the license application would be denied.

An Association of American Universities official questioned how universities could determine a foreign student’s loyalties and why the committee felt the loyalty review should precede the determination of whether the technology is controlled. Augustine acknowledged there was no good reason why the order couldn’t be reversed.

Although deemed exports “could have had a serious impact had the government chosen to make it so,” Augustine said his committee was surprised at how few academic institutions and companies actually have applied for licenses. Only 900 or so applications are received in a given year, with just three companies submitting 56% of them. About 85% of the requests are approved, and fewer

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Joe Anderson, Scott Prouty, and Spencer Weart of the American Institute of Physics’ History Center have gone through the holdings of the Emilio Segrè Visual Archives and picked their **favorite photographs**. They also tallied the photos most often favored by the archive’s online visitors. The resulting 54 selections, which you can view and buy online, depict various scenes, including a double rainbow shining over Isaac

Newton’s birthplace, Edward Teller carrying his young son on his shoulders, and Robert Williams Wood gazing at his rotating mercury mirror.

http://www.agu.org/sci_soc/policy/positions/climate_change2008.shtml

“The Earth’s climate is now clearly out of balance and is warming.” Thus begins

“**Human Impacts on Climate**,” the revised statement on climate change issued earlier this year by the American Geophysical Union. The AGU’s leadership body, the AGU Council, adopted the statement at its meeting in December 2007.



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At **Labreporter** you’ll find a series of short, professionally made videos that explain the physics behind experiments conducted by CERN. Alom Shaha, a London-based physics teacher and science communicator, produced the series, which is aimed at the general public.

than 1% are rejected. The remainder are returned for additional information. "Many academic and industrial organizations appear to be unaware of the Deemed Export rules or have found means to conduct their affairs without being subject to them," the report states.

David Kramer

Canada abolishes science adviser post

Just four years after creating the position of national science adviser, Canada is scrapping it at the end of this month.



Carty

Created by a Liberal government in 2004 (see *PHYSICS TODAY*, March 2004, page 32), the position of science adviser suffered a blow in 2006 when the current Conservative government redirected the position to report to the research agency Industry Canada instead of to the prime minister. Arthur Carty, science adviser since the position's inception, says the move meant he "has not had access to the highest levels of government over the past two years." Nor, he adds, has the government sought his counsel since the reshuffling.

In a 1 February statement, Michèle Demers, president of the Professional Institute of the Public Service of Canada, a body that represents 55 000 scientists and other professionals, describes the scrapping of the science adviser post as "deeply disturbing" and calls for the government to reverse the decision. High-energy physicist Pekka Sinervo, the University of Toronto's dean of arts and sciences, notes that the government did not take advantage of Carty's advice, so "it's very difficult to tell whether [the post] was going to be effective long term." But in abolishing it, he adds, "we're not making steps forward."

Carty's achievements as science adviser included securing funds for international science and technology collaborations with developing countries; helping to create the Council of Canadian Academies, akin to the US National Academies; and developing a framework—which was not put in place—for managing and funding the country's large science facilities.

The Canadian government says it will now get advice on science and tech-

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nology policy from the new 18-member Science, Technology and Innovation Council. "We are expected to be nimble. Issues will be handled on anything from a two-week basis to a one-year basis," says STIC chair Howard Alper, a University of Ottawa chemist. Alper declined to compare the roles and potential influence of his committee with those of the science adviser. But, he says, the council is made up of "leaders of different sectors of industry, presidents of universities, leading researchers, and three deputy ministers. If you populate your council with outstanding individuals, you have an excellent prospect of contributing to decision making."

"We have yet to see anything come out of the [STIC]," says Sinervo. "The government feels it aligns better with their strategy of bringing better coherence to science and innovation." Lately, says Nigel Lockyer, director of TRIUMF, Canada's national laboratory for particle and nuclear physics, the government has emphasized commercialization, and new science facilities have had to "fight over crumbs" for operating funds.

"Maybe the committee [STIC] will be a good thing," Lockyer adds. "But you'd still like someone to sit with the

prime minister and drink a cup of coffee a couple of times a week."

Toni Feder

news notes

Italy's new research head. In January, former CERN director general Luciano Maiani of the University of Rome I ("La Sapienza") was appointed the newest president of Italy's National Research Council (CNR), the country's primary science and technology research funding organization.

When he takes office this spring, Maiani will look to promote joint programs with the European Union and businesses in Italy, restore staff confidence in a system that he says is "badly underfinanced by the state," and reinforce collaborations between the CNR's own research centers and Italian universities. He also plans to commit more money to reforming practices that make it difficult for the CNR to attract visiting foreign researchers.



Maiani

CERN

JNAM ■