

## 'Remote Censoring': DOD Blocks Symposium Papers

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The federal government moved swiftly and dramatically last week to block the presentation of about 100 unclassified scientific papers at an international symposium on optical engineering in San Diego. The Department of Defense requested that the papers be withdrawn for security reasons, DOD officials said, primarily because scientists from the Soviet Union were present at the meeting. Most of the U.S. scientists and engineers affected did not learn their presentations had been canceled until they arrived at the conference. At the same time, the Department of Commerce sent an early morning telegram Aug. 22—just hours before the start of the meeting—warning conference organizers that any presentation of "strategic" information might constitute a violation of the Commerce Department's regulations covering the export of technology. Scientists from 30 countries attended the conference, the 26th Annual International Technical Symposium of the Society of Photo-Optical Instrumentation Engineers (SPIE).

The actions prompted widespread concern among those at the meeting about the future of international exchange of scientific information at similar conferences.

The government has in the past censored scientific papers through its normal classification process and other screening methods, and it has even evicted Eastern Bloc scientists from several "sensitive" meetings, a Defense Department official acknowledges. These latest actions, however, appear to be unprecedented in their timing, in the large number of papers removed and in the scope of the papers' content. Prior to the last-minute notifications, none of the papers—although all were under DOD contracts—had been deemed sensitive enough in the area of weapons development to have been classified.

Defense Department spokesman James Freeman told SCIENCE NEWS that "it was determined that most of the [withdrawn] papers were covered by the international traffic in arms regulations. And for those to be presented in an international forum which would include Soviet and Eastern European participants, [the papers] would require a munitions license approval before being presented. The information in most of the papers would have been helpful in the design and development of equipment on the U.S. munitions list."

In addition, Freeman said, the action came late because many of the papers were not submitted to the Defense Department until two or three weeks before they were to be presented. He added that contractors were "not as careful as they should have been" in recognizing the sensitive nature of the contents.

However, a Defense Department official closely connected with the action confirmed that it represents a "step-up" in enforcement, resulting from a "growing sensitivity, on the part of the Central Intelligence Agency and others, toward the Soviet acquisition of Western technology." The official, who asked not to be identified by name, also said the incident "is really a result of the Reagan Administration[s]" attitude toward the release of scientific information to the Soviets. But a spokesman for George A. Keyworth II, President Reagan's science adviser, said Keyworth "hadn't heard anything about" the events in San Diego.

Joseph Yaver, executive director of SPIE, said he was surprised at the number of papers involved and the swiftness of the government's measures. "A significant number of U.S. government-sponsored papers were withdrawn on very short notice," Yaver said in a telephone interview from SPIE's headquarters in Bellingham, Wash., "on the basis that the required clearance procedures had not been fully completed by the authors and that it was not in the national interest to allow the papers to be presented under these circumstances." Yaver said the situation was "totally beyond the control of the society. SPIE regrets that many of those in attendance were unable to obtain the information which might otherwise have been available." He added that SPIE will work with the government to "assure that a similar situation need not occur again."

Along with DOD's action, the Commerce Department's telegram had a chilling effect on conference participants. Although the telegram was seen by many of the attending scientists as a form of intimidation, a Commerce Department spokesman said it was simply a reminder to adhere to the department's regulations governing technology export. "Saturday night [Aug. 21] at midnight, the people [in Commerce] who sent the telegram out told me—which is what we normally do with this sort of thing—simply that the telegram was alerting them [conference organizers] to the fact that they should refer to the regulations and make sure they comply with them," said Henry Mitman of the Commerce Department's Office of Export Administration and International Trade.

While the Commerce and Defense departments' actions were not related officially, they both seem aimed at research into optics, particularly involving infrared light, and microelectronics research. Even though many projects in these areas do not apply directly to weapons development right now, the Defense Department is concerned about "the potential applications to systems that are maybe three, five

years down the road, maybe longer," said the DOD official. "People are starting to think, 'What could be of help in the weapons system development by a potential enemy—namely the Soviet Union?'"

SCIENCE NEWS has learned that one of the papers withdrawn from the symposium dealt with small, deformable mirrors, which would be used in creating large (3- to 5-meter) mirrors to beam a laser to a satellite and then down to submerged submarines. "You don't have a bunch of dummies that the Soviets send over to these technical meetings," said one of several Defense Department officials who reviewed the paper. "Why give... I won't say aid and comfort to the enemy... but why help them out?"

The apparent escalation of the government's science-related security measures follows repeated warnings by former Deputy Director of the CIA Admiral Bobby R. Inman and others of the potential dangers in giving the Soviets access to U.S. technical and scientific research (SN: 4/3/82, p. 229; 1/16/82, p. 35). And this is not the first time the government has taken security measures involving SPIE. Several months ago, U.S. Customs held up a Japan-bound shipment of books containing the proceedings of a previous SPIE symposium. The society was able to persuade Customs that nothing sensitive was leaving the country, and the shipment took place. "I think the fact that they're [Customs] scrutinizing all shipments much more carefully is part of a general tightening up," Yaver said in an interview in March, shortly after the incident. "Therefore, it's something to be concerned about. How far they are going to carry it, I don't know, but there is a big gray area here."

At last week's meeting in San Diego, news of the government actions spread quickly among the hundreds of scientists in attendance. The 700 remaining papers that *were* presented covered a broad range of topics, including holography, fiber optics, lasers and robotics. Nevertheless, many participants were frustrated and angry over the 100 withdrawn papers. Typical of the reaction of foreign registrants was that of a British scientist who, after looking over a list of canceled papers for one session, asked, "I came 6,000 miles for this?" Over a notice about a session on advanced remote sensing someone scribbled the phrase "Remote censoring?" Others found ways of getting around the problem by arranging private meetings and discussions with authors.

It is not uncommon, the Defense Department official said, for a scientific paper to get bogged down in one or more layers of the DOD review process and have to be pulled from a conference at the last

minute. What is uncommon, he acknowledged, is the pulling of as many papers as were affected in San Diego.

In addition, since President Reagan took office, Eastern Bloc scientists were prohibited from attending at least two other meetings, according to the official. The incidents "haven't been publicized at all," he said, "but the fact is, it happens all the time." He referred to such meetings as "unclassified but closed."

"So much of the research and development that goes on today leads very closely from basic science to an application," said the Defense official. "The bottom line is a need for relative balance between science communication and national security. That's vital." —*Reported by Ivars Peterson in San Diego and Janet Raloff and Joel Greenberg in Washington, D.C.; written by Joel Greenberg*

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## Agent Orange issue: Far from settled

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A standing-room-only crowd gathered last week at the Veterans Administration in Washington, D.C., for the routine, quarterly meeting of a VA advisory committee on the health effects of the herbicides that U.S. troops had used in Vietnam to kill unwanted vegetation and to defoliate trees. As was the case during past meetings, the focus was on Agent Orange, a reddish-brown liquid herbicide that contains traces of the contaminant 2,3,7,8-TCDD, a dioxin that causes cancer and birth defects in animals. The larger-than-expected turn-out, one speaker stated, reflects the growing public awareness of the possible health problems related to exposure to dioxins.

One reason for that growing awareness is a class action suit, being heard in the District Court for the Eastern District of New York, that represents many suits filed against manufacturers of Agent Orange by veterans who had been exposed to the dioxin-containing herbicide. In addition, dioxins were the subject of a recently settled suit filed by 47 former and current employees of the Norfolk & Western Railway Co., who participated in the clean-up of a TCDD-containing chemical spill from a ruptured tank car at Sturgeon, Mo., in January 1979. A jury awarded 32 of those plaintiffs an average of at least \$1 million each—a decision being hailed as a major victory by those sympathetic to the veterans involved in the Agent Orange lawsuit.

Asked what bearing this recent dioxin decision could have on the Agent Orange lawsuit, VA advisory committee members would only say that they are very interested in the case and are looking into its details. Another topic discussed was the proposed epidemiological study that will investigate the health complaints of veterans exposed to Agent Orange. This study has been at the drawing board stage for

years (SN: 12/12/81, p. 377), and at the recent VA committee meeting, Chairman Barclay M. Shepard announced that a National Academy of Sciences review of the proposed study protocol is expected within the next three weeks. Once an agreed-upon protocol is designed, a pilot study will be conducted to test it. Then, and only then, can a full-scale study be undertaken, Shepard said. As a result, the chairman said, meaningful results from such an epidemiological study are not expected until 1989. —*L. Garmon*

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## Ores: Prospecting with computers

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An artificial intelligence program has successfully located concentrations of molybdenum, a mineral widely used in industry, researchers report in the Sept. 3 SCIENCE. The program, called PROSPECTOR, demonstrated for the first time the kind of expertise, intuition and judgment acquired by experienced geologists after years in the field.

The artificial intelligence model differs from standard computer programs for evaluating ore deposits because it incorporates into its reasoning process incomplete data as well as a large degree of uncertainty. PROSPECTOR can use the body of information an expert employs in thinking about a particular situation, such as a certain kind of ore deposit, explains René Reboh, director of the PROSPECTOR project at the Artificial Intelligence Center at SRI International in Menlo Park, Calif. "With incomplete, sometimes wrong, data a human expert still is able to give you some kind of opinion," he says. The artificial intelligence system tries to use the same kinds of techniques a human expert uses to try to arrive at a conclusion.

With refinement, the experimental program will help preserve and maintain the "library of judgment in exploration matters," which is difficult to express in writing, says Alan Campbell, a geologist who works as a consultant on the project. He co-authored the article along with independent field geologist Victor F. Hollister, and Richard Duda and Peter Hart of Fairchild Laboratory for Artificial Intelligence Research in Palo Alto, Calif. The researchers drew heavily on Hollister's extensive knowledge of molybdenum to provide PROSPECTOR with the deductive tools needed to evaluate a potential ore deposit.

Campbell says that "no exploration geologist will ever be replaced by this kind of thing," but adds that the technique may help people make more informed decisions.

PROSPECTOR was applied to an existing mine at Mt. Tolman in eastern Washington. Molybdenite was first reported there in 1918. PROSPECTOR indicates that the deposit is larger than previously thought,

and that mineralization might occur in other parts of the area. Thus, Campbell explains, while the program could not necessarily find a mine site, it can provide information leading to exploratory drilling. —*C. Simon*

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## Rescue search ends

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The British Antarctic Survey in Cambridge, England announced last week that it has discontinued the search for three employees who were stranded by storms July 16 on Petermann Island off the East Coast of the Antarctic Peninsula. The island is about six miles from a British base camp at Faraday. The last radio contact with the men was August 13. Weather conditions had improved and the men were planning to cross the sea ice leading toward the Yalour Islands, three miles northeast of Faraday. They have not been heard from since. "We believe the men were drowned when they fell through thin ice," said Richard Laws, director of the survey. "If that didn't happen, then they were on thin ice when it was broken up by a sea swell, and they were carried out to sea." The team had enough food and fuel to last through October. Missing are Kevin Ockleton, atmospheric scientist; Ambrose Morgan, radio operator; and John Coll, diesel mechanic. □

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## Asbestos and bankruptcy

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The Manville Corp., ranked 181 on FORTUNE magazine's latest list of the top 500 companies, recently filed for bankruptcy, stating it is "overwhelmed" by the 16,500 claims against it by persons exposed to asbestos (SN: 6/19/82, p. 409). Manville is the nation's largest producer of asbestos, a fire-proofing and insulating fibrous material. Inhalation of the fibers can cause asbestosis, an emphysema-like lung disease, and several forms of cancers (SN: 1/7/78, p. 5; 7/15/78, p. 41). Thousands of workers suffering from such illnesses have filed lawsuits now pending against Manville, a Denver-based company with a net worth of \$1.1 billion.

Manville's filing for reorganization under federal bankruptcy laws automatically freezes further proceedings of those lawsuits. What happens next depends on whether the U.S. District Court, Southern District of New York—where Manville filed for bankruptcy—dismisses the company's petition. Lawyers for asbestos victims could attack the bankruptcy petition on grounds that it was not filed in good faith, explains Charles Vihon of Cape Elizabeth, Maine, a former bankruptcy lawyer and now a consultant to the practice. And while "the issue of good faith is a difficult one to decide," says Vihon, it already has been used in a number of cases to get a bankruptcy petition tossed out of court. □