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UNITED STATES GENERAL ACCOUNTING OFFICE

WASHINGTON, D.C. 20540

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PROCUREMENT AND SYSTEMS
ACQUISITION DIVISION



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AUG 6 1 1973

The Honorable
The Secretary of Defense

74-0422

Dear Mr. Secretary:

In 1971 DOD established a data bank on contractors' independent research and development (IR&D) programs at the Defense Documentation Center (DDC), Cameron Station, Virginia. Its objective is to provide a centralized source of information through which DOD scientists, engineers, and managers can become acquainted with IR&D technical projects conducted in defense-oriented industrial organizations. The U.S. Army Missile Command (MICOM), Redstone Arsenal, Alabama, had established an IR&D data bank in 1970, to provide MICOM scientists with information on contractors' IR&D programs and to prevent them from duplicating contractors' IR&D work.

As part of our review of DOD's implementation of section 203; Public Law 91-441, relating to IR&D, we compared the two data banks to determine whether any data was unnecessarily duplicated. We considered the costs and usefulness of the banks and the reactions of the users. We reviewed pertinent records and held discussions with personnel concerned with contractors' IR&D data at DDC, MICOM, and the Office of the Director of Defense Research and Engineering.

We found that:

- Much of the contractor data in the two banks was duplicated.
- Two problem areas might affect the banks' operations:
 - (1) some Government representatives were reluctant to fully utilize the banks and
 - (2) some contractors objected to providing the data in the DDC-prescribed format.

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Dr. John S. Foster, Jr., former Director of Defense Research and Engineering, testified before the Armed Services Committees in March 1970 on establishing DDC's data bank. He stated that the bank would be followed up to see how useful it was--if DOD found it to be useful, it would be expanded; if not, it would be terminated. We are sending our observations to assist you in this evaluation.

BACKGROUND

Contractors conduct IR&D programs to maintain technical competence and competitive positions and to advance their technology toward fulfilling future military requirements. The Government partially funds these programs. Contractors that receive Government reimbursement of more than \$2 million for 1 year's IR&D and bid and proposal costs are required by law to submit technical brochures to DOD describing their proposed IR&D projects for the following year. In fiscal year 1973, about 175 contractor activities submitted brochures to DOD.

DDC's IR&D data bank was patterned after another DDC bank which accumulated and disseminated information on ongoing research and development (R&D) projects performed by Government laboratories or by contractors under direct Government contracts. DDC set up its data bank to make the IR&D information readily available to the more than 30,000 DOD scientists and engineers.

DDC obtains information for its IR&D data bank from contractors which submit data on projects in the DDC-prescribed format. About 31 data elements are put on each project record in the data bank. Data elements include project title; corporate source; contractor's principal investigator; and such descriptive key words as "holography," "gyroscopes," or "navigational aids" which indicate the project's technical aspects. The record also offers a technical description of the project similar to the project narrative in the brochures. DOD users can ask the bank for data and receive printouts of project records in any of three report formats. DDC's objective is to transmit printouts to users on the day after the inquiry.

DDC's data bank operation is currently undergoing a 3-year trial period to be completed in 1974. As of December 1972, only 58 contractors had submitted IR&D project record data to DDC. DDC estimates that 2 to 3 man-years will be required annually during the trial period to put project records into the data bank and to answer users' inquiries. We estimate that DDC's 1973 costs of operating its data bank were about \$92,000.

At January 1973 the MICOM data bank contained records of 135 contractors. MICOM abstracts IR&D project information from copies of the contractor brochures and places 11 data elements on each project record in its bank. Included are project title, corporate source, contractor's principal investigator, funding, and descriptive key words. Users ask the bank for data and receive printouts which are used as leads to identify contractors' IR&D projects in the users' particular areas of interest. After users identify projects of interest, they can obtain more descriptive information from the brochures or from the contractors. Project printouts can be transmitted to users the day after the inquiry.

MICOM's data bank, unlike DDC's, was established on a permanent basis and is fully operational. It currently has three employees who abstract information from brochures and process inquiries. The estimated annual operating cost for MICOM's bank is about \$85,000.

OBSERVATIONS

Duplication of data

Both banks have data from many of the same contractors, and certain project data is duplicated. Of the 11 data elements on each MICOM project record, 8 are on each DDC project record. Both banks contain information on some identical projects. On holography, for example, MICOM's bank had 67 project records and DDC's data bank had 47. Our analysis showed that at least 20 of the projects were identical.

We did not attempt to determine the overall duplication of project records. However, MICOM's bank has 8,731 project records and DDC's has 6,213; therefore, the total duplication could be significant.

Limited use

During the 18-month period, July 1971 to January 1973, DDC processed 393 inquiries and MICOM processed 191. We interviewed potential users who were reluctant to use the data banks; 15 had received data from the MICOM bank and 9 had requested data from the DDC bank. Some of these users did not use the data received, and others erroneously received no data or received irrelevant data.

Although utilization goals had not been established for either data bank, the banks must be used more to be cost effective.

Contractors not participating

Two contractors voluntarily told us that they did not plan to continue submitting data in the DDC-prescribed format after the trial period ends because of the cost of preparing the data and the lack of tangible benefits. Other contractors had declined to participate during the trial period, because of the detailed reporting format, the volume of information required, and the cost of participation. For example, one contractor declined to participate because of the administrative burden of preparing and accumulating the desired data for both small and large projects.

In our opinion, the DDC data bank will not be useful unless most contractors participate and the participants agree to report the data in a uniform format.

CONCLUSIONS

One IR&D data bank may be adequate to serve DOD's needs and thereby reduce overall costs and increase use. If the DDC data bank is to be continued, its adoption of MICOM's

APPROPRIATE

method of abstracting data with its own personnel could reduce contractor costs.

RECOMMENDATION

We recommend that you review DDC's and MICOM's IR&D data banks during the trial period of DDC's bank. In making that review, you should consider the following.

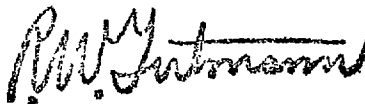
- Since both data banks contain similar information and since both can respond to inquiries in about the same time, one bank may be sufficient to meet DOD's needs. If retaining one bank can be justified, DOD should determine which one.
- Because present use may not warrant the cost of operating any IR&D data bank, DOD should determine whether there is a potential to increase use. If so, the errors which have deterred users should be corrected. DOD scientists, engineers, and R&D managers should be informed of (1) how they can benefit from the data bank and (2) whether they are ever required to use it.
- Assuming the desirability and economic feasibility of retaining an IR&D data bank, DOD should decide what information users need and how contractors should provide it in view of their objections to the cost of providing both IR&D brochures, which are required by law, and data in the DDC format.

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We shall appreciate receiving your comments on these matters. If additional information is desired, Mr. Harold H. Rubin, Deputy Director, may be contacted on code 129, extension 4325.

We are sending copies of this report to the Chairmen of the House and Senate Committees on Government Operations, the House and Senate Committees on Appropriations, and the House and Senate Committees on Armed Services. We are also sending copies to the Director, Office of Management and Budget; the Director of Defense Research and Engineering; the Assistant Secretary of Defense (Installations and Logistics); and the Secretaries of the Army, Navy, and Air Force.

Sincerely yours,

A handwritten signature in dark ink, appearing to read "R. W. Gutmann". The signature is written in a cursive style with a horizontal line underlining the name.

R. W. Gutmann
Director