United States General Accounting Office

GAO Testimony

For Release
on Delivery
Expected at
10:00 a.m.
Wednesday
November 1, 1989

Problems with Commerce's Worldwide Commercial Information Management System

Statement of Allan I. Mendelowitz, Director
Trade, Energy, and Finance Issues
National Security and International
Affairs Division

Before the
Subcommittee on Foreign Commerce and Tourism
Committee on Commerce, Science
and Transportation
U. S. Senate

Mr. Chairman and Members of the Subcommittee:

We are pleased to be here today to discuss the results of our recent review of the U.S. and Foreign Commercial Service's (US&FCS) Commercial Information Management System, referred to by its acronym, CIMS.

The US&FCS is the export arm of Commerce's International Trade Administration (ITA). With its network of 122 overseas posts and 47 domestic offices, the US&FCS is uniquely situated to collect, analyze, and deliver commercial trade and economic data to businesses interested in exporting abroad and to U.S. government policy makers.

CIMS is ITA's third attempt since 1978 to develop a comprehensive, automated trade information data base. CIMS is designed to link the US&FCS' overseas posts and domestic offices to a central data base in Washington, D.C. The central data base is designed to contain three major files: (1) a client file (a list of domestic and foreign traders), (2) a research file (a repository of market research reports, catalogued by subject and country), and (3) an events file (a listing of upcoming trade promotion activities). Currently, the central data base includes only the client file and research file. Plans to add the events file are on hold.

The hardware used to operate the CIMS system consists of a Wang VS-300 minicomputer in Washington, D.C., with either smaller

minicomputers or personal computers in remote locations. CIMS is a data base management system written in three different programming languages--COBOL for overseas posts, "Knowledgeman" for personal computers, and "Speed II" for domestic minicomputers. As of May 1989, 83 sites (24 domestic minicomputer sites, 23 domestic personal computer sites, and 36 overseas minicomputer sites) had some limited operational capability.

We first raised questions about CIMS development in our January 1989 report,[1] in which we identified significant problems and concluded that CIMS would languish with only minimal capability if the system's problems were not addressed by senior Commerce officials. We recommended that Commerce commission an independent technical review of CIMS status and develop projections of total costs to fully support the system. ITA agreed with our recommendation and commissioned technical and strategic reviews of CIMS, which are now underway.

At the request of this Committee, we completed another, more detailed study of CIMS availability, data quality and cost.[2] As part of this review, we visited 19 domestic and overseas US&FCS offices. At each site, we made a standardized request for CIMS

---

[1]Export Promotion: Problems in Commerce's Programs (NSIAD-89-44, Jan. 1989).

[2]Export Promotion: Problems with Commerce's Commercial Information Management System (NSIAD-89-162, Aug. 1989).

information to compare the consistency and quality of CIMS output among the offices we visited.

Although about 83 of 169 overseas and domestic sites have some limited CIMS operational capacity, the system has been plagued by a host of hardware, software, and telecommunications problems, which severely affected its use. In most of the 19 locations we visited, CIMS was not used extensively. As a result, the system appears to have had a limited impact on improving ITA information collection and dissemination.

Let me briefly highlight some of the findings contained in our August 31, 1989 report.

One source of the problems is that CIMS has been implemented on a piecemeal basis as funds have become available from other programs. Although $35 million has been spent on CIMS and its predecessors, the amounts provided annually have not been adequate to support its development schedule.

HARDWARE AND SOFTWARE PROBLEMS

Hardware deficiencies, such as insufficient storage capacity and slow operating speeds, particularly for site personal computers and the central data base computer, limit the ability of staff to access CIMS files.

For example, in Charleston, West Virginia, the limited storage capacity of the personal computers makes the procedures for using CIMS complicated and makes it difficult to download information from the central data base in Washington, D.C. In response to our information request, the staff spent almost 8 hours trying to retrieve and store 15 client files from the central data base. In Detroit, where CIMS hardware consists of seven workstations linked to a minicomputer, staff said CIMS software takes up 65 to 75 percent of the site's computer memory capacity, leaving little core memory for data manipulation.

Users were also generally critical of CIMS software, including the newest release, complaining that it is overly complicated and difficult to grasp, giving them little or no incentive to use it. Because of software design deficiencies, which make the CIMS system slow and cumbersome to operate, it is difficult, if not impossible, to provide customers with immediate responses to information requests.

For example, in San Diego, software problems have prevented CIMS from becoming fully operational; as a result, the office is using another data base management system called "Find-It" to manage its client files. The Singapore office had CIMS installed in May 1988 but has not been able to use it since August 1988 because of software problems. US&FCS staff in Columbia, South Carolina, were experiencing similar problems. The office was using a local data

base on a personal computer using software left over from an earlier automation effort.

As stated in our August 1989 report, software maintenance and redesign have been complicated by the initial decision to use three different versions of CIMS software: (1) COBOL for overseas posts, (2) "Knowledgeman" for those with personal computers, and (3) "Speed II" for headquarters and district office minicomputers. The COBOL version was developed because the State Department allows only COBOL software to be used on its shared embassy systems. Plans to develop new software to improve CIMS operating efficiency were suspended in January 1989 because Commerce's Inspector General objected to the contracting procedures being employed by the CIMS program office.

TELECOMMUNICATIONS PROBLEMS

Most of the foreign posts we visited experienced difficulties in communicating with the central data base in Washington, D.C., because of faulty telecommunications links. When we visited the posts in Paris and London last spring, staff were unable to make any retrievals from the central data base's domestic client files because of the lack of adequate telecommunications links between the posts and the central data base. The London embassy's computer officer complained that current State Department telecommunications links were not intended for long data transmissions, as often required by CIMS, but for short bursts of data which are less

likely to be disrupted by line static. This official told us that CIMS transmissions to the central data base in Washington, D.C., frequently failed, even if almost complete, because of occasional static in the line.

QUESTIONABLE DATA QUALITY

Although program officials told us that the CIMS data base now contains client files--lists of foreign traders--for 37 countries, which represent approximately 80 percent of the U.S. export market, the quality of some of this information is questionable because files have not been consistently or systematically updated. For example, at the time of our review, 95 percent of the 7,000 CIMS records in Tokyo had not been updated in 4 years.

The second major component of the CIMS data base, the market research data base, primarily consists of information on 10 high-technology industries, such as computer equipment and peripherals. Some trade specialists we interviewed complained that the information provided was not sufficient to respond to the wide range of client requests; for example, market research on such commodities as coal, lumber, apparel, and mining machinery is limited or non-existent. US&FCS officials acknowledged these limitations but said that limited resources require them to channel their efforts toward areas which have the greatest export potential.

INADEQUATE FIELD STAFF TO SUPPORT SYSTEM

It is questionable whether adequate field staff is in place to implement CIMS as currently designed. The current design requires extensive data input from field staff. US&FCS field staff has declined since 1985, when the concept for CIMS, which is heavily dependent on field staff, was formulated. From 1985 to 1989, domestic office field staff levels were reduced from 368 to 291 positions while overseas staff positions fell from 696 to 647 positions.

These field staff reductions have been made as part of an Office of Management and Budget initiative encouraging state governments to assume greater roles in export promotion. The staff reductions also helped to offset the increase in foreign post operating costs caused by the depreciation of the dollar, according to Commerce officials.

POTENTIAL ENHANCEMENT COSTS FOR CIMS

If a decision is made to enhance the current system, we estimated that it will cost at least $13.5 million in fiscal year 1990 for CIMS to reach full operational capacity, which includes funds to upgrade existing hardware, provide additional training, and procure additional market research. Between $9 million and $11 million will be needed each year to support the system between fiscal years 1991 and 1993. This is significantly higher than the funding of about $5 million a year that was provided from 1985 to 1988.

NATIONAL TRADE DATA BANK

CIMS program officials told us they had expected the Omnibus Trade and Competitiveness Act of 1988 to enhance CIMS status and to be the impetus for expanding and improving its capability. The Act requires Commerce to establish a National Trade Data Bank by August 23, 1990. The data bank is to consist of two data bases, the International Economic Data System and the Export Promotion Data System. Section 5401(4) of the Act specifically defines the Export Promotion Data System as "the Commercial Information Management System (CIMS) which is maintained and operated by the United States and Foreign Commercial Service..." The Act also requires the system to include elements not presently included in CIMS, such as data on tariffs, export financing, and transactions involving barter and countertrade. Thus the statute effectively provides for the expansion of the present system.

Commerce currently plans only to package existing CIMS data together with information from other government agencies to form this component of the National Trade Data Bank. Current plans are to make this data available to users on computer disks. Commerce officials told us that Congress did not appropriate funds for this effort, so this low-cost approach for satisfying the legislative mandate to create the National Trade Data Bank was all that could be supported. At the time of our review, Commerce officials told

us they had no firm plans for adding the additional information called for in the Trade Act to CIMS.

We believe that the Secretary of Commerce needs to assess whether the resulting system fully complies with the requirements in the Omnibus Trade Act regarding the composition of the export promotion component of the National Trade Data Bank. If it is determined that the expansion of CIMS to include all items required by the law is not feasible or practical, the Secretary should seek legislative relief from this requirement.

CURRENT DEVELOPMENT ON HOLD PENDING OUTCOME OF TECHNICAL REVIEW

Given the magnitude of the problems we identified and the cost to overcome them, we question whether CIMS is still a viable approach for meeting US&FCS information needs. As previously stated, in response to the concerns we raised in our reports, ITA is reviewing CIMS technical design and implementation strategy. As part of this review, ITA officials have agreed to examine all viable options for meeting ITA information needs, including the potential for using private sector sources. During our audit work, we learned of several commercial trade data bases and visited two of these firms. One system, which is an on-line system for users, has software that is much more sophisticated and easier to use than CIMS. This firm's data base includes trade leads and market research reports prepared by ITA and various other government agencies. It also contains financial, travel, and trade data. The

other firm had an extensive European Community 1992 data base and access to a business-matching data base of European Community firms. It is possible that some of ITA's information processing and distribution needs could be met by such private commercial networks.

US&FCS officials have told us that the technical review, which is being conducted by a large public accounting firm, will be completed by mid-November 1989. The review will discuss a host of alternatives for meeting ITA's future information needs along with the costs associated with each alternative. The report will also discuss possible short-term fixes to improve the performance of the present system.

Mr. Chairman, this concludes my statement and I will be happy to respond to any questions you or the other members of the Committee may have.