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by the comptroller general of the united states S



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Dear Mr. McClory:

Your letter of August 19, 1970, referred for our consideration a letter dated August 10, 1970, from your constituent, Mr. Sheldon I. Dorenfest, President of Compucare, Inc. Mr. Dorenfest expressed concern about the use of Government funds to develop a shared computer system for hospitals, which was subsequently sold to a private company—a competitor of Compucare—and requested comments on the legality of the action and suggestions concerning what recourse his company might have.

We previously advised you that the Department of Health, Education, and Welfare (HEW) had received from Senator Charles H. Percy a copy of a similar letter from Mr. Dorenfest and was investigating the matter for a reply to Senator Percy. HEW's investigation concluded that a large part of the computer system in question had been developed through the use of private funds and that there was no reason to doubt that the portion developed with Government funds would be made available to all interested parties in the immediate future. We were informed that HEW had no plans for future action on this matter.

Effective January 1, 1967, the Public Health Service (PHS) of HEW awarded a grant to the Sisters of the Third Order of St. Francis--a religious group which operates 11 hospitals in Illinois, Iowa, and Michigan--for a research project entitled "Demonstration of a Shared Hospital Information System." The grant was approved for a period of 3 years, from January 1, 1967, through December 31, 1969; the project period subsequently was extended, without additional funding, through January 31, 1971. The costs reimbursed by HEW during the 3-year period totaled about \$1.4 million, subject to final settlement of indirect costs. HEW records showed that the Third Order had made a cost-sharing contribution of about 25 percent of the total project costs.

The purpose of the project was to demonstrate the shared use, by a group of participating hospitals, of a central computer system to provide communication between various hospital departments and between physicians and hospitals and to automate patient records and hospital procedures for such operations as admittance, laboratory, and radiology.

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HEW records showed that the Third Order previously had demonstrated its ability to operate an automated system with associated hospitals through the establishment and operation of a shared business management computer system, which has been operational since 1964. The system was connected by a central computer to some 20 hospitals in the Midwest and provided for such functions as patient billing, accounts payable, payroll, and financial reporting. We were informed by Third Order officials that no PHS funds had been used to develop this system.

Near the end of the original project period, the Third Order submitted a proposal for a 2-year renewal of the grant and requested additional funds for direct costs totaling about \$2.6 million, plus an unspecified amount for indirect costs. After review and consideration by an HEW advisory group, the request was denied in March 1970. The project period, however, was extended by HEW through January 31, 1971, to permit the grantee to complete certain analyses and to issue a final report on the project. We have been informed that the final report is expected to be available in early 1971.

Effective March 1, 1970, the Third Order sold its entire data processing division to the McDonnell Automation Company, a division of the McDonnell Douglas Corporation. The operating employees were offered their choice of remaining with the Third Order or of accepting positions with McDonnell Automation; they all chose employment with the latter. McDonnell Automation also entered into a long-term service contract with the Third Order to provide all data processing services required by the hospital group.

The principal investigator, who was responsible for the scientific and technical direction of the grant project, is now an employee of McDonnell Automation. He advised HEW that the agreement between the Third Order and McDonnell Automation specifically excluded any proprietary rights to the Shared Hospital Information System (SHIS) developed with grant funds. He stated, however, that the computer programs used in SHIS were disseminated to McDonnell Automation as property in the public domain.

The principal investigator further advised HEW that the Third Order had documented on magnetic tape all programs developed under the HEW grant to fulfill, at a nominal charge, any individual's or corporation's request for the programs. The principal investigator originally had reserved his right, as permitted by HEW policy, to disseminate the programs for general use until the project work was completed and the final report was published. He informed us, however, that both he and the Third Order had now decided to release the program tapes to anyone who requests them before publication of the report.

We reviewed the sale and acquisition agreement between the Third Order and McDonnell Automation. Under this agreement, the Third Order sold and assigned to McDonnell Automation all proprietary rights to the business management system, identified as a Centralized Real-Time Accounting System for Hospitals (CRASH), and waived and disclaimed any proprietary interest in SHIS. McDonnell Automation is currently advertising CRASH as its Automated Hospital Financial Control System and SHIS as its Automated Hospital Patient Care System, although the latter system is only partially developed.

The sale and acquisition agreement did not indicate that the Third Order had received any monetary consideration for transfer of SHIS to McDonnell Automation. Further, we were informed by the principal investigator that SHIS was not fully developed at the time of the sale and that a substantial investment probably would be required by McDonnell Automation to complete development of the system before it could be considered marketable.

The sale and acquisition agreement showed that at March 1, 1970, the Third Order had developed three applications (identified as Phase I applications in the agreement) of SHIS; namely, admitting, laboratory, and radiology. According to data furnished to us by the principal investigator, however, at that date only the admitting application was in full operation at three pilot hospitals operated by the Third Order; the other two applications did not become fully operational at the pilot hospitals until May 1970. The sale and acquisition agreement states that the pharmacy, dietary, central supply, physical therapy, surgery,

clinical investigation, and patient status reporting applications (Phase II applications in the agreement) are yet to be developed.

We were informed by the principal investigator that SHIS was not marketable at March 1, 1970, because it was only partially developed and covered only a portion of hospital operations. He stated that McDonnell Automation had lost money on SHIS operations at the three pilot hospitals and had not been successful to any extent in marketing the system. He stated also that McDonnell Automation would probably invest up to \$500,000 to complete development of SHIS and indicated that the system would probably not be marketable until 1972.

Our review of pertinent Federal laws and HEW regulations revealed no provision covering the dissemination, before publication, of information developed under grants funded by HEW. Discussions with representatives of the HEW Office of the General Counsel confirmed that there was no such provision, either in regulation or in statute. These officials also expressed the opinion that this was a relatively unique case and that any competitive advantage to McDonnell Automation resulting from the earlier availability of the information was difficult to assess.

Information provided to us by Mr. Dorenfest indicated that McDonnell Automation also may have gained some advantage over its competitors by hiring the employees who were associated with the project supported by the grant and by using certain hospitals operated by the Third Order as demonstration sites to market the systems. As noted above, the operating employees were offered their choice of remaining with the Third Order or of working for McDonnell Automation. We know of no restriction or prohibition which would have prevented such actions in this case.

In the absence of any provision relating to the premature disclosure of information developed under grants funded by HEW, we know of no basis for questioning the legality of the actions of HEW, the grantee, or McDonnell Automation. Moreover, the only recourse that we can suggest to Compucare is to obtain the grantee's final report when it is

published and/or to obtain the magnetic tapes containing the SHIS programs developed to date, which the principal investigator and the Third Order have agreed to release to anyone requesting them before publication of the report.

We believe, however, that McDonnell Automation has gained a potential advantage over its competitors as a result of the transfer to it of the Third Order's data processing division and that HEW grant funds have played some part in the development of the capabilities of that division. In our opinion, the benefits obtained from the investment of Federal funds should be available, to the maximum extent to all potential beneficiaries on an equal basis. Therefore we plan to request HEW to explore the advisability of establishing grant conditions which would prohibit the premature disclosure of valuable information developed with Federal funds in situations similar to the one described above.

HEW, Third Order, and McDonnell Automation officials have not been given an opportunity to comment on the matters discussed in this report.

Sincerely yours,

Assistant

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of the United States

The Honorable Robert McClory House of Representatives