



United States
General Accounting Office
Washington, D.C. 20548

Accounting and Information
Management Division

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November 10, 1994

Mr. Edwin L. Manky, Jr.
Director, Support Services
Defense Finance and Accounting Service
DFAS-DE/W
Denver, CO 80279-8000

Dear Mr. Manky:

This letter responds to your request for our views on whether the electronic images produced by the Distribution and Retrieval Image-based Value Enhancer System constitute records. It is our understanding that this system is designed to convert financial records, such as payment vouchers and supporting documentation, into electronic records. After the conversion, the paper documents would be destroyed and the electronic records would become the agency's official records. Traditionally, agencies maintain, on paper or similar physical mediums, many of their financial records that are subject to records retention requirements. We have not previously addressed the use of imaging in creating and maintaining records; however, we believe electronic technology, generally, can be used to process, store, and retrieve data that are currently contained on paper documents when adequate controls have been implemented to ensure data integrity.

GAO has long recognized that agency records are not required to be maintained in their original paper-based form. For example, we have found microfilm and similar technologies to be acceptable methods for storing the data on paper documents. In a 1991 Comptroller General decision, 71 Comp. Gen. 109 (1991), which addressed whether government contracts stored electronically rather than on paper satisfied a statutory requirement that a contract be "in writing," we stated that electronic technology that allows the data "to be examined in human readable form, as on a monitor, stored on electronic media, recalled from storage and reviewed in human readable form," can provide data integrity that is equal to that of a paper document. We also noted that although electronic documents are stored in a different manner than paper documents, they ultimately take the form of visual symbols. As stated in that decision, we "believe that it is sensible to interpret federal law in a manner to accommodate technological advancements unless the law by its own terms expressly precludes such an interpretation, or sound public policy reasons exist to do otherwise." We are not aware of any law or public

policy that generally requires financial records such as yours to be retained in paper form.

Any system, regardless of the technology used, must incorporate adequate controls to ensure the integrity of the data. You will need to ensure that (1) the digital images accurately represent the corresponding paper document, (2) any changes to an original digital image can be detected, (3) access to the images is limited to authorized personnel for authorized purposes, and (4) the digital images are not destroyed and remain accessible until the applicable records retention period expires. Although you may need to make authorized changes to an image, your system will need to maintain an unaltered copy of the original image.

This letter provides our views only on whether digital images can be used to replace paper documents for financial records and does not express an opinion on the adequacy of the controls in your planned Distribution and Retrieval Image-based Value Enhancer System. Accordingly, it does not constitute GAO approval of your financial management system as defined by 31 U.S.C. 3512(f)(2).

We recognize the challenges that your agency faces in automating its systems and appreciate the opportunity to comment on your proposed system. We hope that our comments will assist your efforts. Should you have any questions, please contact Chris Martin, Assistant Director, at (202) 512-9481.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Rona B. Stillman". The signature is fluid and cursive, with a large initial "R" and "S".

Rona B. Stillman
Chief Scientist for Computers
and Communications

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