



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

---

Accounting and Information  
Management Division

B-275391

November 19, 1996

Mr. John F. Wallace  
Director of Resource Management  
U.S. Army Corps of Engineers

Dear Mr. Wallace:

This letter responds to your October 2, 1996, request that we sanction the operation of your electronic signature system for full-scale implementation. We have reviewed the material provided by your staff, and we conclude that the electronic signatures generated by this system provide at least the same quality of evidence as the handwritten signatures they are designed to replace.<sup>1</sup> Specifically, your system produces electronic signatures that are (1) unique to the signer, (2) under the signer's sole control, (3) capable of being verified, and (4) linked to the data in such a manner that if the data are changed, the signature is invalidated upon verification.

Based on the materials provided by your staff and our observations during this system development effort, we concur with the opinion of your third-party reviewer who stated that the electronic signature system provides "a very robust implementation of the electronic signature capability." In addition, we noted that the development of a system that can be used by other agencies and applications was also one of the original program objectives. The security review concluded that

"This implementation, which is currently used by approximately 5,000 individuals (and is projected to have tens of thousands of users in the future), provides an excellent model for other computer systems in both the public and private sectors that require electronic signatures on a widely distributed basis. Principles applied in the development and implementation of the [electronic signature system] can be used in any number of applications to provide authenticity and data integrity capabilities."

The ability of your electronic signature system to be used by other agencies has also been demonstrated. It is our understanding that the Department of State has decided to implement your electronic signature system in one of its applications. According to the State Department official who is responsible for that project, adoption of the Corps' system allowed State to field a production system in about 6 months while minimizing development risk and cost. We understand that other agencies

---

<sup>1</sup>We outlined the necessary attributes of electronic signatures in Comptroller General Decision 71 Comp. Gen. 109 (1991).

---

are also looking at your system for possible integration into their applications.

The third-party security review conducted on your system resulted in a number of recommendations that were “intended to enhance the security of an already well-implemented system.” We were pleased to see that the Corps has already completed a number of these actions and has a detailed corrective action plan that specifies how and when the remainder will be completed. We would appreciate being kept informed of the progress and any problems in implementing your plan.

With this letter, we sanction full-scale deployment of your electronic signature system for financial management applications. As discussed with your staff, you will need to continue to monitor the system as part of your agency’s efforts to implement the Federal Managers’ Financial Integrity Act (FMFIA). Reviewing this system as part of your FMFIA process should provide management and others adequate assurance that the stated controls continue to function as designed and that when warranted, improvements are implemented. Although the electronic signature system is part of your financial management system, this letter does not constitute GAO approval of your financial management system as defined by 31 U.S.C. 3512(f)(2).

Should you have any questions, please contact Chris Martin, Assistant Director, at (202) 512-9481.

Sincerely yours,



Dr. Rona B. Stillman  
Chief Scientist for Computers  
and Telecommunications

---

### Ordering Information

The first copy of each GAO report and testimony is free. Additional copies are \$2 each. Orders should be sent to the following address, accompanied by a check or money order made out to the Superintendent of Documents, when necessary. VISA and MasterCard credit cards are accepted, also. Orders for 100 or more copies to be mailed to a single address are discounted 25 percent.

**Orders by mail:**

U.S. General Accounting Office  
P.O. Box 6015  
Gaithersburg, MD 20884-6015

**or visit:**

Room 1100  
700 4th St. NW (corner of 4th and G Sts. NW)  
U.S. General Accounting Office  
Washington, DC

Orders may also be placed by calling (202) 512-6000 or by using fax number (301) 258-4066, or TDD (301) 413-0006.

Each day, GAO issues a list of newly available reports and testimony. To receive facsimile copies of the daily list or any list from the past 30 days, please call (202) 512-6000 using a touchtone phone. A recorded menu will provide information on how to obtain these lists.

For information on how to access GAO reports on the INTERNET, send an e-mail message with "info" in the body to:

[info@www.gao.gov](mailto:info@www.gao.gov)

or visit GAO's World Wide Web Home Page at:

<http://www.gao.gov>

---

**United States  
General Accounting Office  
Washington, D.C. 20548-0001**

**Bulk Rate  
Postage & Fees Paid  
GAO  
Permit No. G100**

**Official Business  
Penalty for Private Use \$300**

**Address Correction Requested**

---

