

**Department of Fiscal Services**  
Maryland General Assembly

**FISCAL NOTE**

Senate Bill 822 (Senator Forehand)  
Finance

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**Commercial Law - Maryland Digital Signature Act**

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The purposes of this bill include (1) facilitating commerce by means of reliable electronic messages; (2) minimizing the incidence of forged digital signatures and fraud in electronic commerce; and (3) establishing, in coordination with multiple states, uniform rules regarding the authentication and reliability of electronic messages. The bill requires the Secretary of State to be a certification authority (CA) for subscribers and authorizes the Secretary to issue, suspend, or revoke certificates of licensed CAs. The Secretary must maintain a publicly accessible database containing a CA disclosure record for each licensed CA and publish the contents of the database in at least one recognized repository. The Secretary must adopt regulations regarding the licensing and regulation of CAs. The bill specifies duties of CAs and subscribers, the effect of a digital signature, and authorizes the Secretary to recognize repositories.

The bill specifies that a person who violates certain orders of the Secretary is subject to civil penalties of up to \$5,000 per violation or 90% of the recommended reliance limit of a material certificate, whichever is less. The bill provides that a person that alters any writing, including printing, electronic storage or transmission of valuable information, is guilty of forgery under certain circumstances. Forgery is a felony of the third degree.

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**Fiscal Summary**

**State Effect:** Indeterminate increase in general fund revenues due to filing fees collected by the Secretary of State for licensure of CAs. Indeterminate, but potentially significant, increase in expenditures by the Secretary of State. Potential indeterminate increase in general fund revenues and expenditures due to the bill's penalty provisions.

**Local Effect:** Potential minimal effect on local government finances, as discussed below. Potential indeterminate increase in revenues and expenditures due to the bill's penalty provisions.

**Small Business Effect:** Potential meaningful impact on small businesses as discussed below.

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## **Fiscal Analysis**

**Background:** The bill is based on the Utah Digital Signature Act, the first comprehensive law enabling electronic commerce through digital signatures. The Utah Act was in turn based on a model digital signature statute that is now available from the American Bar Association. The Utah Act took effect on May 1, 1995, but will not be fully implemented until July 1997. The Act is being implemented by the Division of Corporations and Commercial Code of the Utah Department of Commerce.

Digital signature technology can be applied as a computer-based alternative to traditional signatures. The bill is based on an encryption system known as “asymmetric cryptosystem,” which utilizes a “public key” and a “private key.” The public key decodes a message encrypted with a private key. The key pair is generated with a mathematical algorithm that ensures that a message could only be decoded with a particular public key if it had been encoded with the corresponding private key. The bill provides for the licensure and regulation of CAs, who would issue certificates to subscribers. The certificate, in effect, verifies the identity of a particular user (subscriber) who has registered with the CA and verifies the public key associated with that user. The subscriber assumes a duty to exercise reasonable care in retaining control of the private key and keeping it confidential. Certificates are published in recognized repositories, which are on-line databases of certificates available for retrieval and use in verifying digital signatures. The bill provides that a digitally signed document is as valid as if it had been written on paper.

**State Revenues:** General fund revenues would increase by an indeterminate amount depending on the amount set for the filing fee and the number of applicants for CA licenses. Given the time delay involved in implementing the Utah Act, it is likely that the effects of the bill would not be felt until at least the second year after the effective date. For illustrative purposes only, Utah expects to charge between \$500 and \$1,000 annually for a CA license and only expects to issue 10-15 CA licenses in the first year.

**State Expenditures:** State expenditures are indeterminate, but potentially significant. The Office of the Secretary of State advises that it would first need to hire technical consultants with expertise in the field of electronic communications and commerce in order to acquire a conceptual understanding of the scope of the State’s regulatory authority, acceptable technology, liability analysis, and interstate and international standardization. The National Association of Secretaries of State has had and will continue to have programs on digital signature issues.

For illustrative purposes only, in the phases prior to full implementation Utah has employed

one coordinator and one secretary at a cost of about \$90,000 per year. A consultant was hired at a cost of about \$66,000 to assist in drafting the request for proposals for software and developing a repository. (It is expected that software for the use of digital signatures by individuals will cost \$75 to \$125.) It is expected that the repository will be developed at no cost to the State, with costs recovered by user fees. Utah will likely incur some additional costs for purchasing computer hardware. It is expected that two - three more employees may be necessary on a full-time basis, once the law is fully implemented, at an estimated additional cost of \$150,000 per year.

The Office of the Attorney General advises that expenditures could increase reflecting additional costs of enforcement related to the bill.

The Administrative Office of the Courts advises that any additional court filings could be handled with existing resources.

**Local Effect:** The bill authorizes a court clerk or a county clerk to (1) suspend a certificate issued by a licensed CA for a period of 48 hours under certain circumstances; and (2) require a person requesting suspension to provide certain evidence. A county attorney may investigate suspensions of certificates for possible wrongdoing by persons requesting suspension. Any impact on local government finances is assumed to be minimal.

**Small Business Effect:** Small businesses could benefit from the increased ability to conduct commerce over the Internet. In addition, small businesses that serve as licensed CAs, sell software packages to subscribers, or manage repositories could benefit from additional business opportunities. Companies that act as CAs are currently doing some business in the private sector, but their market would be expanded by the bill's requirement that digital signatures be accepted as legally binding with the same force and affect of manual signatures. It is not known at this time how much of the growing industry would comprise small businesses.

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**Information Source(s):** Judiciary (Administrative Office of the Courts), Office of the Attorney General, Office of the Secretary of State, Utah Department of Commerce, Department of Fiscal Services

**Fiscal Note History:** First Reader - March 10, 1997

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