



CONGRESSIONAL BUDGET OFFICE
COST ESTIMATE

July 9, 1999

S. 798

**Promote Reliable Online Transactions to Encourage Commerce
and Trade (PROTECT) Act of 1999**

*As ordered reported by the Senate Committee on Commerce, Science, and Transportation
on June 23, 1999*

SUMMARY

S. 798 would encourage the use of encryption technology in electronic commerce for domestic purposes and would allow exports of such technology with specified limits on the type of key used for encrypted products. (The term “key” refers to the mathematical code used to translate encrypted information back into its original, unencrypted format.) The effectiveness or strength of contemporary encryption products is measured by the number of bits that make up the key for the encryption algorithm. Under current policy, domestic producers may export encryption products with key lengths of up to 56 bits and stronger products for specified industries. S. 798 generally would allow domestic producers to export encryption products with key lengths of up to 64 bits and stronger products that are publicly available. The bill would require the National Institute of Standards and Technology (NIST) within the Department of Commerce (DOC) to select, by January 1, 2001, a standard for an encryption algorithm with a key length of at least 128 bits that would be available to anyone without charge. Upon adoption of the new standard, S. 798 would allow domestic producers to export products of strength comparable to that standard.

S. 798 also would require NIST to provide assistance and information on encryption products to law enforcement officials. In addition, the bill would prohibit states or the federal government from requiring individuals to relinquish the key to encryption products. Finally, the bill would establish an advisory board to determine which products should be publicly available.

Assuming the appropriation of the necessary amounts, CBO estimates that enacting this bill would result in additional discretionary spending by DOC of at least \$25 million over the 2000-2004 period. Enacting S. 798 would not affect direct spending or receipts; therefore, pay-as-you-go procedures would not apply.

S. 798 contains intergovernmental mandates as defined in the Unfunded Mandates Reform Act (UMRA), but would impose no costs on state, local, or tribal governments. The bill would preempt state laws that regulate specified aspects of the use of encryption products or services. The bill contains no new private-sector mandates as defined in UMRA.

ESTIMATED COST TO THE FEDERAL GOVERNMENT

CBO estimates that implementing S. 798 would increase discretionary costs for DOC by at least \$5 million a year over the 2000-2004 period. The costs of this legislation fall within budget function 370 (commerce and housing credit).

S. 798 would require NIST to select an advanced encryption standard by January 1, 2001. Based on information from NIST, CBO estimates that completing the selection process would cost about \$1 million a year in fiscal years 2000 and 2001, assuming appropriation of the necessary amounts.

S. 798 also would assign NIST a broad range of duties, including providing information and assistance, serving as an information clearinghouse, and conducting research. The costs to NIST would depend in part on the law enforcement community's need for help in decrypting certain communications and responding to security threats. Based on information from DOC, we estimate that the minimum costs to fulfill the bill's requirements would be \$4 million to \$5 million annually, but the costs could be much greater. Any spending by NIST would be subject to the availability of appropriations.

Under current policy, DOC's Bureau of Export Administration (BXA) would likely spend about \$500,000 a year reviewing exports of encryption products. If S. 798 were enacted, BXA would still be required to review requests to export encryption products. Thus, CBO estimates that implementing S. 798 would not significantly change the costs to DOC to control exports of nonmilitary encryption products.

In coming years, advances in encryption and digital technology may substantially increase the costs of agencies responsible for law enforcement and national security. S. 798 would authorize appropriations of such sums as may be necessary to allow these agencies to complete their authorized tasks despite such advances. CBO estimates that the vast majority of these costs would be incurred under current law because law enforcement and national security agencies must already contend with highly effective forms of encryption developed by foreign producers. Any additional costs that would result from enacting S. 798 would be partially mitigated by the research required by the bill. CBO estimates that the net impact of the bill on agencies' costs for law enforcement and protection of national security are not likely to be significant.

PAY-AS-YOU-GO CONSIDERATIONS: None.

ESTIMATED IMPACT ON STATE, LOCAL, AND TRIBAL GOVERNMENTS

S. 798 contains intergovernmental mandates as defined in UMRA, but CBO estimates that the costs would not be significant and would not exceed the threshold established by the act (\$50 million in 1996, adjusted annually for inflation). The bill would preempt state laws that: (1) require encryption keys to be registered or accessible to the government; (2) authorize or require links between encryption products used for confidentiality and those used for authenticity or integrity; and (3) authorize the use of encryption products that do not interact with other commercially available encryption products. These preemptions would be mandates as defined in UMRA. However, states would bear no cost as a result of these mandates because none currently have such laws.

ESTIMATED IMPACT ON THE PRIVATE SECTOR

This bill would impose no new private-sector mandates as defined in UMRA.

PREVIOUS CBO ESTIMATES

On April 21, 1999, CBO transmitted a cost estimate for H.R. 850, the Security and Freedom Through Encryption (SAFE) Act, as ordered reported by the House Committee on the Judiciary on May 24, 1999. On July 1, 1999, CBO transmitted a cost estimate for H.R. 850 as ordered reported by the House Committee on Commerce on June 23, 1999. CBO estimated that the Judiciary Committee's version of H.R. 850 would cost between \$3 million and \$5 million over the 2000-2004 period and that the Commerce Committee's version of that bill would increase costs by at least \$25 million over the same period.

ESTIMATE PREPARED BY:

Federal Costs: Mark Hadley

Impact on State, Local, and Tribal Governments: Shelley Finlayson

ESTIMATE APPROVED BY:

Robert A. Sunshine

Deputy Assistant Director for Budget Analysis