

# Electronic Seals Provide Security for Electronic Signatures

## Electronic Seal

### By Definition

In the United States, the E-Sign Act defines an electronic signature as an electronic record that all parties to an agreement intend to be an electronic signature. There is no requirement for security. The simple act of sending a fax or the inclusion of a smiley face in an email message can be an electronic signature under the E-Sign Act.

Therefore, electronic signatures, by definition, cannot be assumed to be secure.

This problem of semantics requires the introduction of a new term to identify and discuss the security aspects of electronic signatures.

The term electronic seal has been proposed for use when the concept of signature, for the purpose of signifying agreement, is not required. An example of this is the sealing of electronic records to maintain the chain of custody over time. An electronic seal can guarantee that the level of authenticity of an electronic record is maintained while it is protected by an electronic seal. The function an electronic seal is very similar to the function of a wax seal affixed to a signature or to a ribbon around a rolled document.

Now that the security component has been removed from the definition of electronic signature, the term electronic seal can be used in combination with the term electronic signature to identify the ability to create a secure electronic signature.

To request a secure electronic signature, a prospective party to an agreement would specify an electronic signature and an electronic seal. The definition of electronic seal would then carry some reasonable assurance of security. (A common person would assume that an electronic seal carried some assurance of security.)

### Endless Confusion

Now that the US has defined security out of electronic signatures, any attempt to define electronic signatures as having any security at all will create endless confusion. The simple inclusion of the term electronic seal will bridge the gap (chasm) between the US electronic signature laws and laws that might require security as part of the signing process.

### Reference Laws

Draft Guide to Enactment of the UNCITRAL (United Nations Commission on International Trade Law Working Group on Electronic Commerce) Model Law on Electronic Signatures  
[[http://www.uncitral.org/english/sessions/wg\\_ec/wp-88e.pdf](http://www.uncitral.org/english/sessions/wg_ec/wp-88e.pdf)]

E-Sign (Electronic Signatures in Global and National Commerce Act; S. 761 of the 106 Congress / Public Law 106-229 / June 30, 2000)  
[[http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=106\\_cong\\_bills&docid=f:s761enr.txt.pdf](http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=106_cong_bills&docid=f:s761enr.txt.pdf)]

UETA (Uniform Electronic Transactions Act of 1999)  
[<http://www.law.upenn.edu/bll/ulc/fnact99/1990s/ueta99.pdf>]