NEBRASKA ADMINISTRATIVE CODE

TITLE 437

DIGITAL SIGNATURES ACT

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Chapter 1 - DEFINITIONS

001. For purposes of this title, and unless the context expressly indicates otherwise:

001.01. "Digitally-signed communication" is a message that has been processed by a computer in such a manner that ties the message to the individual that signed the message.

001.02. "Message" means a digital representation of information intended to serve as a written communication.

001.03. "Person" means a human being or any organization capable of signing a document, either legally or as a matter of fact.

001.04. "Signer" means the person who signs a digitally signed communication with the use of an acceptable technology to uniquely link the message with the person sending it.

001.05. "Technology" means the computer hardware and/or software-based method or process used to create digital signatures.

001.06. "Digital Signatures Act" or "Nebraska Digital Signatures Act" means Neb. Rev. Stat. §86-1701.

001.07. "NAC" means Nebraska Administrative Code.

001.08. State agency means any agency, board, court, or constitutional officer of the executive, judicial, and legislative branches of state government, except individual members of the Legislature.

001.09. Political subdivision shall mean and include villages, cities of all classes, counties, school districts, public power districts, and all other units of local government, including entities created pursuant to the Interlocal Cooperation Act or Joint Public Agency Act.

001.10. Electronic filing shall mean the submission of any filing, application, form, or renewal with a state agency or political subdivision.

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Chapter 2 - DIGITAL SIGNATURES MUST BE CREATED BY ACCEPTABLE TECHNOLOGY AND PRACTICES

001. For a digital signature to be valid for use under the Nebraska Digital Signatures Act and NAC Title 437 , it must be created by technologies and practices that are accepted for use by the State of Nebraska.

002. Nothing in NAC Title 437 is intended to or shall be deemed to invalidate or decrease the legal force and effect of any:

i. electronic mail message or file transmitted via any electronic means, including the internet, or physical file transfer, whether or not the such message includes a human-readable name purporting to identify the sender or author, even if such message has no signature of the type mentioned in Chapter 4 of this Title; or

ii. electronic mail message or file transmitted via any electronic means signed, endorsed, or otherwise validated pursuant to a pre-existing trade agreement between the parties; or

iii. digitally signed communication, or other message, a signature on which is valid under other applicable law.

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Chapter 3 - CRITERIA TO DETERMINE IF DIGITAL SIGNATURE TECHNOLOGY AND PRACTICES ARE ACCEPTABLE FOR USE UNDER THE DIGITAL SIGNATURES ACT

001. Acceptable technology and practices must be capable of creating signatures that conform to requirements set forth in Neb. Rev. Stat. §86-1701, specifically:

001.01. It is unique to the person using it;

001.02. It is capable of verification;

001.03. It is under the sole control of the person using it;

001.04. It is linked to data in such a manner that if the data are changed, the digital signature is invalidated;

001.05. It conforms to Title 437 of the Nebraska Administrative Code.

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Chapter 4 - ACCEPTABLE TECHNOLOGIES AND PRACTICES

001. The technology known as Public Key Cryptography is an acceptable technology for use in Nebraska, provided that the digital signature is created consistent with the provisions in NAC, Title 437, Ch. 3.

001.01. Definitions -- For purposes of Section 001, and unless the context expressly indicates otherwise:

001.01a. "Acceptable Certification Authorities" means a certification authority that meets the requirements of subsections 001.06c-001.06d of this section

001.01b. "Approved List of Certification Authorities" means the list of Certification Authorities approved by the Secretary of State to issue certificates for digital signature transactions in Nebraska.

001.01c. "Asymmetric cryptosystem" means a computer algorithm or series of algorithms which utilize two different keys with the following characteristics:

i. one key signs a given message;

ii. one key verifies a given message; and,

iii. the keys have the property that, knowing one key, it is computationally infeasible to discover the other key.

001.01d. "Certificate" means a computer-based record which:

i. identifies the certification authority issuing it;

ii. names or identifies its subscriber;

iii. contains the subscriber's public key; and

iv. is digitally signed by the certification authority issuing or amending it, and

v. conforms to widely-used standards.

001.01e. "Certification Authority" means a person or entity that issues a certificate, or in the case of certain certification processes, certifies amendments to an existing certificate.

001.01f. "Key pair" means a private key and its corresponding public key in an asymmetric cryptosystem. The keys have the property that the public key can verify a digital signature that the private key creates.

001.01g. "Practice statement" means documentation of the practices, procedures

and controls employed by a Certification Authority.

001.01h. "Private key" means the key of a key pair used to create a digital signature.

001.01i. "Proof of Identification" means the document or documents presented to a Certification Authority to establish the identity of a subscriber.

001.01j. "Public key" means the key of a key pair used to verify a digital signature.

001.01k. "Subscriber" means a person who:

i. is the subject listed in a certificate;

ii. accepts the certificate; and

iii. holds a private key which corresponds to a public key listed in that certificate.

001.02. Nebraska Administrative Code Title 437, Ch. 3, sec. 001.01 requires that a digital signature be 'unique to the person using it'. A public key-based digital signature may be considered unique to the person using it, if:

001.02a. The private key used to create the signature on the document is known only to the signer, and

001.02b. The digital signature is created when a person runs a message through a one-way function, creating a message digest, then encrypting the resulting message digest using an asymmetrical cryptosystem and the signer's private key, and

001.02c. although not all digitally signed communications will require the signer to obtain a certificate, the signer is capable of being issued a certificate to certify that he or she controls the key pair used to create the signature, and

001.02d. it is computationally infeasible to derive the private key from knowledge of the public key.

001.03. Nebraska Administrative Code Title 437, Ch. 3, sec. 001.02 requires that a digital signature be `capable of verification'. A public-key based digital dignature is capable of verification if:

001.03a. the acceptor of the digitally signed document can verify the document was digitally signed by using the signer's public key to decrypt the message; and

001.03b. if a certificate is a required component of a transaction , the issuing Certification Authority, either through a certification practice statement or through the content of the certificate itself, if any, must identify which form(s) of identification it required of the signer prior to issuing the certificate.

001.04. Nebraska Administrative Code Title 437, Ch. 3, sec. 001.03 requires that the digital signature remain 'under the sole control of the person using it'. Whether a signature is accompanied by a certificate or not, the person who holds the key pair, or the subscriber

identified in the certificate, assumes a duty to exercise reasonable care to retain control of the private key and prevent its disclosure to any person not authorized to create the subscriber's digital signature.

001.05. The digital signature must be linked to the message of the document in such a way that if the data are changed, the digital signature is invalidated.

001.06. Acceptable Certification Authorities

001.06a. The Secretary of State shall maintain an "Approved List of Certificate Authorities" authorized to issue certificates for digitally signed communications in Nebraska.

001.06b. If a certificate is required for a transaction, in order for the signature to qualify as a digital signature under Title 437, Ch.4, sec. 001, the certificate must be issued by a Certification Authority that appear on the "Approved List of Certification Authorities" authorized to issue certificates by the Secretary of State

001.06c. The Secretary of State shall place Certification Authorities on the "Approved List of Certification Authorities" after the Certification Authority provides the Secretary of State with a copy of an unqualified performance audit performed in accordance with standards set in the American Institute of Certified Public Accountants (AICPA) Statement on Auditing Standards No. 70 (S.A.S. 70) "Reports on the Processing of Service Transactions by Service Organizations" (1992) to ensure that the Certification Authorities practices and policies are consistent with their stated control objectives and these regulations. The AICPA Statement on Auditing Standards No. 70 is hereby incorporated by reference and attached hereto as Appendix A .

i. Certification Authorities that have been in operation for one year or less shall undergo a SAS 70 Type One audit - A Report of Policies and Procedures Placed in Operation, receiving an unqualified opinion.

ii. Certification Authorities that have been in operation for longer than one year shall undergo a SAS 70 Type Two audit - A Report Of Policies And Procedures Placed In Operation And Test Of Operating Effectiveness, receiving an unqualified opinion

iii. To remain on the "Approved List of Certification Authorities" a Certification Authority must provide proof of compliance with Section 001.06c(ii) to the Secretary of State every two years after initially being placed on the list.

001.06d. In lieu of the completing the auditing requirement in Section 001.06c, Certification Authorities may be placed on the "Approved List of Certification Authorities" upon providing the Secretary of State with proof of accreditation by a national or international accreditation body or licensing or approval in another state , acceptable to the Secretary of State whose requirements for accreditation, licensing or approval are consistent with the requirements of Title 437, Ch. 4, sec. 001.06c-001.06d.

i. Certification Authorities placed on the approved list of certification authorities pursuant to section Sec. 001.06d shall be removed from the "Approved List of Acceptable Certifications Authorities" unless they provide current proof of accreditation, licensing or approval to the Secretary of State at least once per year.

ii. If the Secretary of State becomes aware that a Certification Authority, placed on the approved list of certification authorities pursuant to section Sec. 001.06d, has had its accreditation, licensing or approval revoked in another jurisdiction, the Certification Authority shall be notified immediately by the Secretary of State of the Secretary's intent to revoke approval in Nebraska in writing. If the Certification Authority contests the intent to revoke within 30 days the Secretary of State shall set the matter for public hearing to determine whether approval of the Certification Authority should be revoked. If the intent to revoke is not contested within 30 days the Certication Authority shall be removed from the "Approved List of Certification Authorities". Certification authorities approved in Nebraska shall be required to notify the Secretary of State if they have had their accreditation, licensing or approval revoked, lapsed or terminated by any other means.

001.07 The Secretary of State may seek the advice and counsel of the Department of Administrative Services when approving certification authorities pursuant to chapter 4 of this Title.

002. The technology known as "Signature Dynamics" is an acceptable technology for use in Nebraska, provided that the signature is created consistent with the provisions in Section 002.01-002.05 of this section.

002.01. Definitions - For the purposes of Section 002, and unless the context expressly indicates otherwise:

002.01a. "Handwriting Measurements" means the metrics of the shapes, speeds and/or other distinguishing features of a signature as the person writes it by hand with a pen or stylus on a flat surface.

002.01b. "Signature Digest" is the resulting bit-string produced when a signature is tied to a document using Signature Dynamics.

002.01c. "Expert" means a person with demonstrable skill and knowledge based on training and experience who would qualify as an expert pursuant to Neb. Rev. Stat. §27-702.

002.01d. "Signature Dynamics" means measuring the way a person writes his or her signature by hand on a flat surface and binding the measurements to a message through the use of cryptographic techniques.

002.02. Nebraska Administrative Code Title 437, Ch. 3, sec. 001.01 requires that

a digital signature be 'unique to the person using it.' A signature digest produced by Signature Dynamics technology may be considered unique to the person using it, if:

002.02a. the signature digest records the handwriting measurements of the person signing the document using signature dynamics technology, and

002.02b. the signature digest is cryptographically bound to the handwriting measurements, and

002.02c. after the signature digest has been bound to the handwriting measurements, it is computationally infeasible to separate the handwriting measurements and bind them to a different signature digest

002.03. Nebraska Administrative Code Title 437, Ch. 3, sec. 001.02 requires that a digital signature be capable of verification. A signature digest produced by signature dynamics technology is capable of verification if:

002.03a. the acceptor of the digitally signed message obtains the handwriting measurements for purposes of comparison, and

002.03b. if signature verification is a required component of a transaction, the handwriting measurements can allow an expert handwriting and document examiner to assess the authenticity of a signature.

002.04. Nebraska Administrative Code Title 437, Ch. 3, sec. 001.03 requires that a digital signature remain 'under the sole control of the person using it'. A signature digest is under the sole control of the person using it if:

002.04a. the signature digest captures the handwriting measurements and cryptographically binds them to the message directed by the signer and to no other message, and

002.04b. the signature digest makes it computationally infeasible for the handwriting measurements to be bound to any other message.

002.05. The signature digest produced by signature dynamics technology must be linked to the message in such a way that if the data in the message are changed, the signature digest is invalidated.

003. Any technology which meets the specific requirements of Laws 1998, LB924, sec. 69 for digital signatures is an acceptable technology for use in Nebraska. An entity wishing to have a technology not specified in Chapter 4 of this title may apply to the Secretary of State to add that technology to this section as provided in Chapter 5.

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Chapter 5 - PROVISIONS FOR ADDING NEW TECHNOLOGIES AND PRACTICES

001. Provisions for Adding New Technologies and Practices to the List of Acceptable Technologies and Practices.

001.01. Any person may, by providing a written request that includes a full explanation of a proposed technology which meets the requirements of Chapter 3 of this Title, apply to the Secretary of State to review the technology and practices proposed. If the Secretary of State determines that the technology is acceptable for use under the Digital Signatures Act , the Secretary of State shall draft proposed regulations to be reviewed and adopted as provided in the Administrative Procedures Act which would add the proposed technology to the list of acceptable technologies in Chapter 4 of this Title.

001.02. The Secretary of State has 180 days from the date of the request to review the application and either accept or reject it. If the Secretary of State does not approve the request within 180 days, the petitioner's request shall be considered denied, unless an extension is granted in writing by the Secretary of State.

001.02a. If the petitioner's proposed technology meets the requirements of Chapter 3, the Secretary of State shall prepare and submit proposed amendments to reflect the state's acceptance of the new technology for use in Nebraska.

001.02b. If the proposed technology is rejected, the petitioner can appeal the decision through the Administrative Procedures Act.

002. The Secretary of State may seek the advice and counsel of the Department of Administrative Services when approving new technologies for inclusion in these regulations.

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Chapter 6 - ELECTRONIC FILING

001. In any communication in which a signature or writing is required or used a state agency or political subdivision may accept a digital signature which meets the requirements of chapters 2-5 of these regulations or an electronic signature which meets the requirements of chapters 6-8 of these regulations and may accept the communication in electronic format.

002. Informational requirements for filings or other transactions are not altered or affected in any way by the Digital Signature Act and regulations.

003. Any tax or fee associated with an electronic filing may be paid by any means allowable by law including credit card or electronic funds transfer. The allowable means of payment for electronic filings, if any, shall be determined by the agency or political subdivision accepting the filing.

004. Nothing in this act or regulations shall be construed to require the use of digital signatures, electronic signatures or electronic filing by any state agency, political subdivision, or any other party or entity.

005. Notarial requirements for any document submitted may be met by complying with the requirements of Neb. Rev. Stat. §86-2111 (Laws, 2000, LB 929, Sec. 11) , which provides as follows:

> If a law requires a signature or record to be notarized, acknowledged, verified, or made under oath, the requirement is satisfied if the electronic signature of the person authorized to perform those acts, together with all other information required to be included by other applicable law, is attached to or logically associated with the signature or record.

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Chapter 7 - ELECTRONIC SIGNATURES

001. In order to be used for electronic filing under Chapters 6-8 of these regulations, an electronic signature must meet and follow the requirements contained in these regulations and the Digital Signatures Act.

001.01. An electronic signature shall mean an alphabetical, numeric, or alphanumeric string of characters which meets the following requirements:

001.02. It is at least four characters long.

001.03. It is unique to the person or entity assigned the code.

001.04. It is known and agreed to by all parties to the transaction.

001.05. It is understood by the user that he or she has a duty to exercise reasonable care to retain control of the electronic signature and prevent its disclosure to other persons. The user shall be presumed to understand the requirement of this subsection if the electronic signature is issued accompanied by a statement that the user is responsible for the security of the electronic signature, preventing its disclosure to others, and any filings or other documents endorsed with the electronic signature shall be presumed to be legally valid and enforceable.

001.06. It is used with the understanding that by including the electronic signature with the document or filing the filer is signing and legally validating the document or filing with which the electronic signature is associated.

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Chapter 8 - SECURITY PROVISIONS

001. Electronic filing using electronic signatures pursuant to the Digital Signatures Act and these regulations must, at a minimum, follow the following procedures.

001.01. The state agency or political subdivision must maintain, for the period the filing is valid or in effect, a record of:

001.01a. The time and means by which the electronic signature was communicated to the person or entity to whom it was assigned.

001.01b. The time and means by which the electronic signature was received or used in the electronic filing or filings.

001.01c. If the electronic filing is for purpose of filing an individual's claim for benefits or determining eligibility of an individual for benefits, the state agency or political subdivision need only retain the actual date the electronic filing was made.

002. An agency or political subdivision may impose audit or security features in addition to those specified in section 001 of this chapter. The additional security features shall be reasonably related to the risks and consequences of fraud or misuse for the type of electronic communication.

002.01 The state agency or political subdivision shall prepare a risk assessment which identifies and evaluates the degree of risk for fraud or misuse of the electronic signature. The risk assessment shall include strategies for mitigating risk.

002.02. The security provisions of the state agency or political subdivisions shall conform to security policies and standards adopted by the Nebraska Information Technology Commission.

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Chapter 9 - SEVERABILITY

001. The federal preemption or any other legal impediment to the validity of Chapters 2-5 of these regulations shall not effect the validity of Chapters 6-8 of these regulations, and the two groups of chapters as defined above are intended to be and shall be deemed to be independently operable and enforceable.