Electronic Signatures: Review and Analysis

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TECHNICAL ASSISTANCE REPORT
Electronic Signatures: Review and Analysis

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Introduction

Electronic signatures, or e-signatures, are an increasingly ubiquitous component of a rapidly digitizing world. Compared to traditional paper signature, e-signatures have emerged as a viable, potentially more efficient method of entering into a contract. An e-signature can be thought of as an electronic symbol or marking associated with the signer. It acts as a signature and functions in lieu of a manual paper signature. Examples include checking a box, biometric authentication, and digital signatures (Stern, 2001). Whitaker (1999, p. 438) identified a number of issues that must be considered with e-signatures and records including:

- When may an electronic record substitute for a paper document?
- When is an electronic record "signed"?
- Under what circumstances will electronic records be admitted in evidence?
- When should government authorities permit electronic records to substitute for writings?

Whitaker described other issues, however, these are most pertinent when evaluating the use of e-signatures. Striking the appropriate balance among these issues can potentially yield time and cost savings for entering into contracts, particularly for an agency that contracts with a number of different service providers.

There are several laws and statutes that inform the proceeding discussion and use of e-signatures. Describing these regulations will assist the Kentucky Transportation Cabinet (KYTC) in assessing whether it is feasible to implement e-signatures. The Uniform Electronic Transactions Act (UETA), which is discussed in more detail below, defines an e-signature as: “An electronic sound, symbol, or process attached to or logically associated with a record and executed or adopted by a person with the intent to sign the record.” In KRS 369.102, “electronic record” refers to a record created, generated, sent, communicated, received, or stored by electronic means. This technical assistance report briefly reviews relevant Kentucky statutes and guidelines regarding e-signatures and public recordkeeping as well as applicable federal law. Following this, the report presents conclusions and points for continued discussion. Relevant statutes and laws are included as appendices.

Electronic Signatures in Global and National Commerce Act

The Electronic Signatures in Global and National Commerce Act (E-SIGN) was passed at the federal level in 2000. The full text of the law is included in Appendix A. E-SIGN was passed with to facilitate the use of electronic records and signatures and to “promote a uniform legal standard of acceptance” (Roland, 2001, p. 625-26). The law removed uncertainty over whether electronic contracts would be recognized nationally (Stern, 2001). Other effects of E-SIGN were reducing paperwork and improving the execution of transactions, particularly transactions related to e-commerce. In Section 101, the basic foundation of E-SIGN is defined as follows:

(1) a signature, contract, or other record relating to such transaction may not be denied legal effect, validity, or enforceability solely because it is in electronic form; and
ELECTRONIC SIGNATURES

(2) a contract relating to such transaction may not be denied legal effect, validity, or enforceability solely because an electronic signature or electronic record was used in its formation.

E-SIGN grants individuals the right to not use e-signatures and request paper signatures. There is explicit language in E-SIGN that requires consent to use electronic records. Companies wanting an individual to enter into an electronic contract must obtain consent from that person (Roland, 2001). E-SIGN includes consumer protections to prevent individuals from entering into a contract unintentionally. If a statute or law requires information be provided to individuals, then the individual must consent to electronic transactions. The other party must also (Stern, 2001, p. 400):

1) inform the consumer of any right or option to receive a record in non-electronic form;
2) inform the consumer of the right to withdraw consent to receive electronic notice and explain any consequences or fees upon termination;
3) inform the consumer whether the consent is to a particular transaction or to a category of notices made available during the course of the parties' relationship;
4) describe the procedures for withdrawal of consent and for updating information that is needed to contact the consumer electronically;
5) inform the consumer on how to obtain a paper-based copy of an electronic record and whether a fee will be charged;
6) notify the consumer of the necessary hardware and software requirements for access to and retention of records;
7) ensure that the consumer consents electronically or confirms electronically in a manner that confirms that the consumer can access information in the necessary electronic form.

Despite these stipulations, E-SIGN notes that failure to obtain consent alone does not necessarily invalidate an electronic contract. E-SIGN does not explicitly assign burden of proof when the authenticity of a signature is in question, rather relying on other laws.  

E-SIGN limit’ states ability to enact legislation that mandates paper signatures. Section 104 states that the government interests of law enforcement or national security are overriding concerns (Fry, 2000). However state law “may modify, limit or supersede the electronic contracting provisions of E-Sign under limited conditions.” Instances in KRS when statutes mention or modify E-SIGN are listed in Appendix B. None of these instances should prove problematic for a state agency seeking to use e-signatures. UETA is the state-level complement to E-SIGN, although UETA is more detailed regarding electronic agents and automated transactions, among other features. Both laws treat electronic documents and signatures and traditional paper documents and manual signatures as being legally valid and enforceable.

Uniform Electronic Transactions Act

UETA is a comprehensive state-level effort designed to unify and harmonize state laws regarding the retention of electronic records and the validity of e-signatures. “The Act is designed to facilitate and support the development of the information economy, and in particular

1 Attribution is a feature of UETA, and is discussed in that section.
its place in commercial transactions, throughout the states” (Fry, 2000, p. 248). It has been adopted by forty-seven states, the District of Columbia, Puerto Rico, and the U.S. Virgin Islands. New York, Illinois, and Washington are the only states which have not enacted some or all of the law. The Uniform Law Commission of the National Conference of Commissioners on Uniform State Laws lists reasons why states should adopt UETA2:

- **UETA defines and validates electronic signatures.** An electronic signature is defined as “an electronic sound, symbol, or process attached to or logically associated with an electronic record and executed or adopted by a person with the intent to sign the electronic record.”
- **UETA removes writing and signature requirements which create barriers to electronic transactions.**
- **UETA insures that contracts and transactions are not denied enforcement because electronic media are used.**
- **UETA insures that courts accept electronic records into evidence.**
- **UETA protects against errors by providing appropriate standards for the use of technology to assure party identification.**
- **UETA avoids having the selection of medium (paper vs. electronic) govern the outcome of any disputes or disagreements, and it assures that parties have the freedom to select the media for their transactions by agreement.**
- **UETA authorizes state governmental entities to create, communicate, receive and store records electronically, and encourages state governmental entities to move to electronic media.**

When UETA was drafted, primary concerns were technology neutrality, minimalism, and regulation avoidance. Fry (2000) described the goals as removing legal barriers to electronic commerce (e-commerce), ensuring that the choice of medium does not change the outcome of any dispute, maintaining neutrality, minimizing changes to existing law, conferring legal certainty to e-commerce, and achieving uniform adoption across states. Additionally, the commission maintained draft language of the UETA.3 Kentucky adopted UETA in 2000, and per KRS 369.104, UETA “applies to any electronic record or electronic signature created, generated, sent, communicated, received, or stored on or after August 1, 2000.” Appendix C includes KRS Chapter 369, *Use of Electronic Records and Electronic Signatures*, in its entirety.

UETA is focused on any e-signatures related to private sector or public sector legal activities. UETA has four main components (Whitaker, 1999) which are noted below; they are also found in KRS 369.107:

(a) *A record or signature may not be denied legal effect or enforceability solely because it is in electronic form.*
(b) *A contract may not be denied legal effect or enforceability solely because an electronic record was used in its formation.*
(c) *If a law requires a record to be in writing, an electronic record satisfies the law.*
(d) *If a law requires a signature, an electronic signature satisfies the law.*

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The purpose of the law is to ensure that electronic transactions have the same standard of enforceability as traditional paper-based transactions. Accordingly, UETA is designed to facilitate e-signatures, and thus it defines the scope, responsibilities and liabilities of agents. It also defines appropriate terms regarding electronic transactions and record keeping by private and public organizations, which facilitates and reduces the risks of electronic transfers and electronic commerce. Electronic transactions can be accomplished quicker, cheaper, and do not require a person’s physical presence. This is advantageous for businesses and government agencies wanting to capitalize on the possibilities of electronic commerce and transfers of payments and consent.

UETA holds that electronic documents and signatures are equivalent to printed and manually signed documents, such that “A record or signature may not be denied legal effect or enforceability solely because it is in electronic form” (KRS 369.107). Additionally KRS 369.107 includes text that pertains to the recognition of e-signatures: “If a law requires a signature, an electronic signature satisfies the law.” Individual signatures are valid if they are the act of the individual and are intended: “An electronic record or electronic signature is attributable to a person if it was the act of the person. The act of the person may be shown in any manner, including a showing of the efficacy of any security procedure applied to determine the person to which the electronic record or electronic signature was attributable” (KRS 369.109). It is critical to note the definition of security procedures. KRS 369.102 defines security procedure as: “a procedure employed for the purpose of verifying that an electronic signature, record, or performance is that of a specific person or for detecting changes or errors in the information in an electronic record. The term includes a procedure that requires the use of algorithms or other codes, identifying words or numbers, encryption, or callback or other acknowledgment procedures.” However, a security procedure is not accorded a specific legal effect in UETA (Fry, 2000). Nevertheless, an e-signature must be captured by a system that keeps a record of the process, resulting in the signature or adds text or a graphic to the record noting it was signed electronically. These systems must be able to retain or reproduce the record of a signature. If there is a dispute over a record or signature, the reproduced signature can be marshalled as evidence.

There are some caveats to the UETA. KRS 369.105 holds that electronic documents and signatures are not required, such that traditional methods can be used when deemed appropriate. UETA does allow for “variation by agreement,” under which the contracting parties can agree only to use manual signatures, and that parties that do agree “to conduct a transaction by electronic means may refuse to conduct other transactions by electronic means” (KRS 369.105). This is a key to UETA; there must be an agreement between the contracting parties to utilize e-signatures or any other electronic documentation. Once it is made, a party cannot rescind an electronic transaction agreement. UETA does not apply to certain transactions, which are listed in KRS 369.103. These include: wills, trusts, Uniform Commercial Code, real property interest, and titles or interest in a title. The Uniform Commercial Code is excluded because it already considers electronic means (Meehan, 2000). As noted, UETA also contains a provision to make a correction when there is an error in during transmission, providing protections for both parties, or for a party that conforms to agreed upon security procedures (KRS 369.110).
In addition to electronic records retention and signatures, the law is also concerned with electronic security procedures and attribution, electronic agents and automated transactions, record keeping and evidence gathering and maintenance, time and place of sending and receipt, consumer protection measures, the transfer of records, and government records (Fry, 2000). E-signatures and records are considered sent from a legal standpoint when it is directed to a system used for communication and the recipient is able to access the record. From the recipient’s perspective, an electronic record is viewed as received when it enters a communication system and can be processed. However, these provisions do not apply if the parties entering into the transaction have specified and agreed to alternative definitions of send and receive. Under UETA, electronic records cannot be transmitted through a system that does not let the receiver to print or download the information (Gabriel, 2000). Additionally, if there is a law that mandates delivery of records or signature in a specified manner, then the record or signature must follow that law (Dively, 2000). Under UETA, automated transactions are deemed legally valid if they are formed by electronic agents from either party, as denoted in KRS 369.114. This is a common feature of electronic transactions, as not every electronic transaction involves the direct participation of the parties. When notarization is required, UETA maintains that e-signatures are permissible if they are accompanied by the e-signature of a notary public and his/her credentials (Gabriel, 2000).

In terms of record keeping, UETA allows for states to specify the agency or department that is responsible for record keeping and functions as the authority on those matters. KRS 369.117 “Creation and retention of electronic records by governmental agencies -- Conversion of written records by governmental agencies” reads as follows:

Each governmental agency of this Commonwealth shall determine whether, and the extent to which, it will create electronic records. The Kentucky Department for Libraries and Archives shall determine whether, and the extent to which, the Commonwealth will retain electronic records and convert written records to electronic records.

The acceptance of electronic records is later stipulated in KRS 369.118, which notes that each agency should comply “with standards established by the Commonwealth Office of Technology.” This office determines the usage and acceptance of e-signatures and the processes by which they should be undertaken. Additionally, the Office of Technology is tasked with adopting standards to ensure consistent standards among agencies for e-signatures and records. The office has a section related to electronic signatures in its Kentucky Information Technology Standards (KITS). The standard is as follows:

IETF (Internet Engineering Task Force) X.509 Public Key Infrastructure (PKI latest version for digital certificates) Interoperates and fully supports critical enterprise infrastructure services and applications such as network protocols, desktop operating systems, e-mail, web servers, database management software, firewalls and directory services. Symmetric encryption algorithms required for securing content: U.S. Data Encryption Standard (DES) in accordance with U.S. FIPS PUB 46-2 and ANSI X3.92 and Triple-DES in accordance with ANSI X9.52.  

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Consultation with Office of Technology staff indicated that they had internally developed an eForm that uses SharePoint/InfoPath workflows and e-signature approval processes. Additionally, the Cabinet for Health and Family Services uses an e-signature application that requires individuals verify their identify as well as an option to use manual signatures that can be captured and digitized. The Secretary of State’s office requires an individual to type in their name as a signature when signing on Kentucky Business One Stop while the Department of Revenue requires a secure log in before a signature or other records are filed electronically. It was noted that electronic signatures are different from proving identity, however it is not used in Business One Stop as there is no requirement because there is no financial gain for those utilizing it.

The standards for electronic signatures also include a list of approved products. Approved products include the Entrust suite of PKI enabled products, Microsoft Forefront Identity Manager 2010, and Silanis e-Sign Desktop. The Kentucky Department for Libraries and Archives (KDLA) has published Electronic Signature Recordkeeping Guidelines based on KRS Chapter 368, UETA. This suggests the following for all agencies:

- Clarify the reasons for using electronic signatures and determine what business functions the technology will support.
- Determine who will use and rely on the electronic signature.
- Consider how long the signatures and the records to which the electronic signatures are affixed need to be preserved. Determine how the signatures and records will be preserved in a way that balances the ability to retrieve and read a record with the ability to verify its signature.
- Verify which state and federal statutes pertain to the functions and transactions that generate the signed records and determine what case law is available.
- Determine how the electronic signature technology fits into the overall technology architecture, the cost per transaction, and the cost of the technology.
- Consider what sort of electronic signature technologies customers use and if records will have to be shared with any other organizations or agencies.
- Establish a methodology for documenting information systems, policies, and practices.

UETA does not invalidate paper signatures and records. Rather, it gives e-signatures and record keeping legal weight, which they would otherwise lack absent the legislation. UETA addresses transferable records, however, these are related to promissory notes or documents of title, and thus are not as germane to the discussion of e-signatures. It also does not supersede pre-existing state legislation on electronic transaction and, ultimately, allows states to determine how to implement their own versions of the law, both pre- and post-UETA. The advantage of adopting UETA over pre-existing state legislation without having post-UETA legislation is the creation of more uniform and predictable standards for electronic transactions across the United States. The uniformity of the legislation enables there to be relative homogeneity across the U.S., which reduces barriers and risks for electronic commerce across the nation without needing direct

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5 Kentucky Business One Stop is a web portal designed to help businesses find the requirements to operate in Kentucky and assistance on other issues.
6 Compared to individuals applying for benefits from the Cabinet for Health and Family Services.
federal involvement in intra-state commerce and sub-federal government internal affairs. A disadvantage of deferring adhering to UETA is that state governments may relinquish some of their autonomy and flexibility to abide by UETA standards.

There are some critiques of UETA and electronic transactions in general. Cyber-security and the vulnerability to cyber-attack are some of the key issues raised by scholars and legislators alike when it comes to the enabling and promotion of electronic commerce (Roland, 2001). Consumer protection issues have been raised, including the following by Meehan (2000. p. 571):

(1) enabling a sales person to insist that a consumer receive any future notices via electronic mail when the consumer does not own a computer;
(2) negating disclosure and initializing requirements in consumer protection statutes;
(3) authorizing public utilities to send shutoff notices via electronic mail;
(4) validating modification of a written contract through an electronic record;
(5) offering no right for a consumer who has initially agreed to an electronic transaction to later rescind that agreement with regard to the transaction in progress; and
(6) permitting a recording of a telephone call to substitute for a writing.

While UETA mandates that something is attributable to a person if it was their act, this attribution can often be difficult to assign. “Proving that an electronic act was actually the act of a person can be complex. It might require the testimony of a number of parties (and many more where the electronic transaction goes through the Internet). In some cases, it simply may not be cost-effective to undertake the proof” (Dively, 1999, p. 220. Another one of the key problems with UETA is that it is not necessarily standard across all states, let alone across all countries. In a global economy, the need for standardization and legislative coordination has become a more pressing concern for policymakers and legislators.

Conclusion

Both E-SIGN and UETA are relevant to the consideration of e-signatures. Both laws hold that e-signatures and records are treated as the legal equivalents of paper or manual signatures or documents. UETA is more comprehensive than E-SIGN; it contains provisions relating to attribution, agreements to use electronic means between the parties, sending and receiving of e-signatures and records, dealing with errors, and admission of electronic records as evidence. UETA also differs from E-SIGN with respect to record keeping by denoting that third parties are permitted to keep records and records should be accessible. E-SIGN does not provide for states to impose paper or manual signatures or documents. UETA also defers to other state laws in applicable situations.

Kentucky passed UETA in 2000. KRS Chapter 369 deals with the Use of Electronic Records and Electronic Signatures, specifically UETA. KRS Chapter 369 states that UETA does not require the use of e-signatures or records and applies only when there is mutual consent. The four pillars of electronic records and signatures (previously noted) hold that e-signatures and records are legally valid when the law requires a signature or when enforcing contracts. There are certain exclusions and requirements associated with using e-signatures for contracts, but are not overly
burdensome. Also noteworthy is that, as per KRS 14.105, the Secretary of State accepts e-signatures for a number of filing requirements including corporations and partnerships.

For agencies considering whether to accept e-signatures KDLA has several recommendations for them to consider. KDLA recommends planning and documentation, addressing legal needs, updating processes, and ensuring technology is compatible — interoperable — across software platforms used by the agency. The last point on interoperability stresses that “complex or expensive solutions” are unlikely to be practical, and that it is critical to ensure the technology used for signatures is compatible with other applications. Additionally, risk assessments and plans based on those assessments are encouraged. Discussions with parties likely to contract with an agency will yield further insight on the possibilities. The proliferation of electronic records and signatures should ease agencies’ transition to accepting and working with them and the guidelines in UETA establish electronic records and signatures as a viable means of conducting business.
References


Appendix A: Electronic Signatures in Global and National Commerce Act Text

S.761

One Hundred Sixth Congress of the United States of America

AT THE SECOND SESSION

Begun and held at the City of Washington on Monday, the twenty-fourth day of January, two thousand

An Act

To facilitate the use of electronic records and signatures in interstate or foreign commerce.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the “Electronic Signatures in Global and National Commerce Act”.

TITLE I—ELECTRONIC RECORDS AND SIGNATURES IN COMMERCE

SEC. 101. GENERAL RULE OF VALIDITY.

(a) IN GENERAL.—Notwithstanding any statute, regulation, or other rule of law (other than this title and title II), with respect to any transaction in or affecting interstate or foreign commerce—

(1) a signature, contract, or other record relating to such transaction may not be denied legal effect, validity, or enforceability solely because it is in electronic form; and

(2) a contract relating to such transaction may not be denied legal effect, validity, or enforceability solely because an electronic signature or electronic record was used in its formation.

(b) PRESERVATION OF RIGHTS AND OBLIGATIONS.—This title does not—

(1) limit, alter, or otherwise affect any requirement imposed by a statute, regulation, or rule of law relating to the rights and obligations of persons under such statute, regulation, or rule of law other than a requirement that contracts or other records be written, signed, or in nonelectronic form; or

(2) require any person to agree to use or accept electronic records or electronic signatures, other than a governmental agency with respect to a record other than a contract to which it is a party.

(c) CONSUMER DISCLOSURES.—

(1) CONSENT TO ELECTRONIC RECORDS.—Notwithstanding subsection (a), if a statute, regulation, or other rule of law requires that information relating to a transaction or transactions in or affecting interstate or foreign commerce be provided in writing, the use of an electronic record to provide or make available (whichever
is required) such information satisfies the requirement that such information be in writing if—

(A) the consumer has affirmatively consented to such use and has not withdrawn such consent;

(B) the consumer, prior to consenting, is provided with a clear and conspicuous statement—

(i) informing the consumer of (I) any right or option of the consumer to have the record provided or made available on paper or in nonelectronic form, and (II) the right of the consumer to withdraw the consent to have the record provided or made available in an electronic form and of any conditions, consequences (which may include termination of the parties' relationship), or fees in the event of such withdrawal;

(ii) informing the consumer of whether the consent applies (I) only to the particular transaction which gave rise to the obligation to provide the record, or (II) to identified categories of records that may be provided or made available during the course of the parties' relationship;

(iii) describing the procedures the consumer must use to withdraw consent as provided in clause (i) and to update information needed to contact the consumer electronically; and

(iv) informing the consumer (I) how, after the consent, the consumer may, upon request, obtain a paper copy of an electronic record, and (II) whether any fee will be charged for such copy;

(C) the consumer—

(i) prior to consenting, is provided with a statement of the hardware and software requirements for access to and retention of the electronic records; and

(ii) consents electronically, or confirms his or her consent electronically, in a manner that reasonably demonstrates that the consumer can access information in the electronic form that will be used to provide the information that is the subject of the consent; and

(D) after the consent of a consumer in accordance with subparagraph (A), if a change in the hardware or software requirements needed to access or retain electronic records creates a material risk that the consumer will not be able to access or retain a subsequent electronic record that was the subject of the consent, the person providing the electronic record—

(i) provides the consumer with a statement of (I) the revised hardware and software requirements for access to and retention of the electronic records, and

(ii) the right to withdraw consent without the imposition of any fees for such withdrawal and without the imposition of any condition or consequence that was not disclosed under subparagraph (B)(i); and

(ii) again complies with subparagraph (C).

(2) OTHER RIGHTS.—

(A) PRESERVATION OF CONSUMER PROTECTIONS.— Nothing in this title affects the content or timing of any disclosure or other record required to be provided or made available to any consumer under any statute, regulation, or other rule of law.

(B) VERIFICATION OR ACKNOWLEDGMENT.—If a law that was enacted prior to this Act expressly requires a record to be provided or made available by a
specified method that requires verification or acknowledgment of receipt, the record may be provided or made available electronically only if the method used provides verification or acknowledgment of receipt (whichever is required).

(3) **Effect of failure to obtain electronic consent or confirmation of consent.**—The legal effectiveness, validity, or enforceability of any contract executed by a consumer shall not be denied solely because of the failure to obtain electronic consent or confirmation of consent by that consumer in accordance with paragraph (1)(C)(ii).

(4) **Prospective effect.**—Withdrawal of consent by a consumer shall not affect the legal effectiveness, validity, or enforceability of electronic records provided or made available to that consumer in accordance with paragraph (1) prior to implementation of the consumer’s withdrawal of consent. A consumer's withdrawal of consent shall be effective within a reasonable period of time after receipt of the withdrawal by the provider of the record. Failure to comply with paragraph (1)(D) may, at the election of the consumer, be treated as a withdrawal of consent for purposes of this paragraph.

(5) **Prior consent.**—This subsection does not apply to any records that are provided or made available to a consumer who has consented prior to the effective date of this title to receive such records in electronic form as permitted by any statute, regulation, or other rule of law.

(6) **Oral communications.**—An oral communication or a recording of an oral communication shall not qualify as an electronic record for purposes of this subsection except as otherwise provided under applicable law.

(d) **Retention of contracts and records.**—

(1) **Accuracy and accessibility.**—If a statute, regulation, or other rule of law requires that a contract or other record relating to a transaction in or affecting interstate or foreign commerce be retained, that requirement is met by retaining an electronic record of the information in the contract or other record that—

(A) accurately reflects the information set forth in the contract or other record; and

(B) remains accessible to all persons who are entitled to access by statute, regulation, or rule of law, for the period required by such statute, regulation, or rule of law, in a form that is capable of being accurately reproduced for later reference, whether by transmission, printing, or otherwise.

(2) **Exception.**—A requirement to retain a contract or other record in accordance with paragraph (1) does not apply to any information whose sole purpose is to enable the contract or other record to be sent, communicated, or received.

(3) **Originals.**—If a statute, regulation, or other rule of law requires a contract or other record relating to a transaction in or affecting interstate or foreign commerce to be provided,

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available, or retained in its original form, or provides corresponding sequences if the contract or other record is not provided, available, or retained in its original form, that statute, regulation, or rule of law is satisfied by an electronic record that complies with paragraph (1).

(4) **Checks.**—If a statute, regulation, or other rule of law requires the retention of a check, that requirement is satisfied by retention of an electronic record of the information on the front and back of the check in accordance with paragraph (1).

(e) **Accuracy and ability to retain contracts and other records.**—Notwithstanding subsection (a), if a statute, regulation, or other rule of law requires that a contract or other record relating to a transaction in or affecting interstate or foreign commerce be in
writing, the legal effect, validity, or enforceability of an electronic record of such contract or other record may be denied if such electronic record is not in a form that is capable of being retained and accurately reproduced for later reference by all parties or persons who are entitled to retain the contract or other record.

(0) **PROXIMITY.**—Nothing in this title affects the proximity required by any statute, regulation, or other rule of law with respect to any warning, notice, disclosure, or other record required to be posted, displayed, or publicly affixed.

(g) **NOTARIZATION AND ACKNOWLEDGMENT.**—If a statute, regulation, or other rule of law requires a signature or record relating to a transaction in or affecting interstate or foreign commerce to be notarized, acknowledged, verified, or made under oath, that 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 statute, regulation, or rule of law, is attached to or logically associated with the signature or record.

(h) **ELECTRONIC AGENTS.**—A contract or other record relating to a transaction in or affecting interstate or foreign commerce may not be denied legal effect, validity, or enforceability solely because its formation, creation, or delivery involved the action of one or more electronic agents so long as the action of any such electronic agent is legally attributable to the person to be bound.

(i) **INSURANCE.**—It is the specific intent of the Congress that this title and title II apply to the business of insurance.

(j) **INSURANCE AGENTS AND BROKERS.**—An insurance agent or broker acting under the direction of a party that enters into a contract by means of an electronic record or electronic signature may not be held liable for any deficiency in the electronic procedures agreed to by the parties under that contract if—

1. the agent or broker has not engaged in negligent, reckless, or intentional tortious conduct;
2. the agent or broker was not involved in the development or establishment of such electronic procedures; and
3. the agent or broker did not deviate from such procedures.

SECTION 102. **EXEMPTION TO PREEMPTION.**

(a) In General.—A State statute, regulation, or other rule of law may modify, limit, or supersede the provisions of section 101 with respect to State law only if such statute, regulation, or rule of law—

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1. constitutes an enactment or adoption of the Uniform Electronic Transactions Act as approved and recommended for enactment in all the States by the National Conference of Commissioners on Uniform State Laws in 1999, except that any exception to the scope of such Act enacted by a State under section 3(b)(4) of such Act shall be preempted to the extent such exception is inconsistent with this title or title II, or would not be permitted under paragraph (2)(A)(ii) of this subsection; or
2. (A) specifies the alternative procedures or requirements for the use or acceptance (or both) of electronic records or electronic signatures to establish the legal effect, validity, or enforceability of contracts or other records, if—

   i. such alternative procedures or requirements are consistent with this title and title II; and
   ii. such alternative procedures or requirements do not require, or accord greater legal status or effect to, the implementation or application of a specific technology or technical specification for performing the functions of creating, storing, generating, receiving, communicating, or authenticating electronic records or electronic signatures; and
3. if enacted or adopted after the date of the enactment of this Act, makes specific reference to this Act.
(b) Exceptions for Actions by States as Market Participants.—Subsection (a)(2)(A)(ii) shall not apply to the statutes, regulations, or other rules of law governing procurement by any State, or any agency or instrumentality thereof.

(c) Prevention of Circumvention.—Subsection (a) does not permit a State to circumvent this title or title II through the imposition of nonelectronic delivery methods under section 8(b)(2) of the Uniform Electronic Transactions Act.

SEC. 103. Specific Exceptions.

(a) Excepted Requirements.—The provisions of section 101 shall not apply to a contract or other record to the extent it is governed by—

1. a statute, regulation, or other rule of law governing the creation and execution of wills, codicils, or testamentary trusts;
2. a State statute, regulation, or other rule of law governing adoption, divorce, or other matters of family law; or
3. the Uniform Commercial Code, as in effect in any State, other than sections 1–107 and 1–206 and Articles 2 and 2A.

(b) Additional Exceptions.—The provisions of section 101 shall not apply to—

1. court orders or notices, or official court documents (including briefs, pleadings, and other writings) required to be executed in connection with court proceedings;
2. any notice of—
   A. the cancellation or termination of utility services (including water, heat, and power);
   B. default, acceleration, repossession, foreclosure, or eviction, or the right to cure, under a credit agreement secured by, or a rental agreement for, a primary residence of an individual;

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(C) the cancellation or termination of health insurance or benefits or life insurance benefits (excluding annuities); or

(D) recall of a product, or material failure of a product, that risks endangering health or safety; or

3. any document required to accompany any transportation or handling of hazardous materials, pesticides, or other toxic or dangerous materials.

(c) Review of Exceptions.—

1. Evaluation Required.—The Secretary of Commerce, acting through the Assistant Secretary for Communications and Information, shall review the operation of the exceptions in subsections (a) and (b) to evaluate, over a period of 3 years, whether such exceptions continue to be necessary for the protection of consumers. Within 3 years after the date of enactment of this Act, the Assistant Secretary shall submit a report to the Congress on the results of such evaluation.

2. Determinations.—If a Federal regulatory agency, with respect to matters within its jurisdiction, determines after notice and an opportunity for public comment, and publishes a finding, that one or more such exceptions are no longer necessary for the protection of consumers and eliminating such exceptions will not increase the material risk of harm to consumers, such agency may extend the application of section 101 to the exceptions identified in such finding.

SEC. 104. Applicability to Federal and State Governments.

(a) Filing and Access Requirements.—Subject to subsection (c)(2), nothing in this title limits or supersedes any requirement by a Federal regulatory agency, self-regulatory organization, or State
regulatory agency that records be filed with such agency or organization in accordance with specified standards or formats.

(b) PRESERVATION OF EXISTING RULEMAKING AUTHORITY.—
(1) USE OF AUTHORITY TO INTERPRET.—Subject to paragraph (2) and subsection (c), a Federal regulatory agency or State regulatory agency that is responsible for rulemaking under any other statute may interpret section 101 with respect to such statute through—
(A) the issuance of regulations pursuant to a statute;

or

(B) to the extent such agency is authorized by statute to issue orders or guidance, the issuance of orders or guidance of general applicability that are publicly available and published (in the Federal Register in the case of an order or guidance issued by a Federal regulatory agency). This paragraph does not grant any Federal regulatory agency or State regulatory agency authority to issue regulations, orders, or guidance pursuant to any statute that does not authorize such issuance.

(2) LIMITATIONS ON INTERPRETATION AUTHORITY.—Notwithstanding paragraph (1), a Federal regulatory agency shall not adopt any regulation, order, or guidance described in paragraph (1), and a State regulatory agency is preempted by section 101 from adopting any regulation, order, or guidance described in paragraph (1), unless—
(A) such regulation, order, or guidance is consistent with section 101;

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(B) such regulation, order, or guidance does not add to the requirements of such section; and

(C) such agency finds, in connection with the issuance of such regulation, order, or guidance, that—
(i) there is a substantial justification for the regulation, order, or guidance;
(ii) the methods selected to carry out that purpose—
(I) are substantially equivalent to the requirements imposed on records that are not electronic records; and
(II) will not impose unreasonable costs on the acceptance and use of electronic records; and
(iii) the methods selected to carry out that purpose do not require, or accord greater legal status or effect to, the implementation or application of a specific technology or technical specification for performing the functions of creating, storing, generating, receiving, communicating, or authenticating electronic records or electronic signatures.

(3) PERFORMANCE STANDARDS.—
(A) ACCURACY, RECORD INTEGRITY, ACCESSIBILITY.—Notwithstanding paragraph (2)(C)(ii), a Federal regulatory agency or State regulatory agency may interpret section 101(d) to specify performance standards to assure accuracy, record integrity, and accessibility of records that are required to be retained. Such performance standards may be specified in a manner that imposes a requirement in violation of paragraph (2)(C)(ii) if the requirement (i) serves an important governmental objective; and (ii) is substantially related to the achievement of that objective. Nothing in this paragraph shall be construed to grant any Federal regulatory agency or State regulatory agency authority to require use of a particular type of software or hardware in order to comply with section 101(d).

(B) PAPER OR PRINTED FORM.—Notwithstanding subsection (c)(1), a Federal regulatory agency or State regulatory agency
may interpret section 101(d) to require retention of a record in a tangible printed or paper form if—

(i) there is a compelling governmental interest relating to law enforcement or national security for imposing such requirement; and
(ii) imposing such requirement is essential to attaining such interest.

(4) Exceptions for Actions by Government as Market Participant.—Paragraph (2)(C)(iii) shall not apply to the statutes, regulations, or other rules of law governing procurement by the Federal or any State government, or any agency or instrumentality thereof.

(c) Additional Limitations.—

(1) Reimposing Paper Prohibited.—Nothing in subsection (b) (other than paragraph (3)(B) thereof) shall be construed to grant any Federal regulatory agency or State regulatory agency authority to impose or reimpose any requirement that a record be in a tangible printed or paper form.

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(2) Continuing Obligation Under Government Paperless Work Elimination Act.—Nothing in subsection (a) or (b) relieves any Federal regulatory agency of its obligations under the Government Paperwork Elimination Act (title XVII of Public Law 105–277).

(d) Authority to Exempt from Consent Provision.—

(1) In general.—A Federal regulatory agency may, with respect to matter within its jurisdiction, by regulation or order issued after notice and an opportunity for public comment, exempt without condition a specified category or type of record from the requirements relating to consent in section 101(c) if such exemption is necessary to eliminate a substantial burden on electronic commerce and will not increase the material risk of harm to consumers.

(2) Prospectuses.—Within 30 days after the date of enactment of this Act, the Securities and Exchange Commission shall issue a regulation or order pursuant to paragraph (1) exempting from section 101(c) any records that are required to be provided in order to allow advertising, sales literature, or other information concerning a security issued by an investment company that is registered under the Investment Company Act of 1940, or concerning the issuer thereof, to be excluded from the definition of a prospectus under section 2(a)(10)(A) of the Securities Act of 1933.

(e) Electronic Letters of Agency.—The Federal Communications Commission shall not hold any contract for telecommunications service or letter of agency for a preferred carrier change, that otherwise complies with the Commission’s rules, to be legally ineffective, invalid, or unenforceable solely because an electronic record or electronic signature was used in its formation or authorization.

SEC. 105. STUDIES.

(a) Delivery.—Within 12 months after the date of the enactment of this Act, the Secretary of Commerce shall conduct an inquiry regarding the effectiveness of the delivery of electronic records to consumers using electronic mail as compared with delivery of written records via the United States Postal Service and private express mail services. The Secretary shall submit a report to the Congress regarding the results of such inquiry by the conclusion of such 12-month period.

(b) Study of Electronic Consent.—Within 12 months after the date of the enactment of this Act, the Secretary of Commerce and the Federal Trade Commission shall submit a report to the Congress evaluating any benefits provided to consumers by the procedure required by section 101(c)(1)(C)(ii): any burdens imposed on electronic commerce...
by that provision; whether the benefits outweigh the burdens; whether
the absence of the procedure required by section 101(c)(1)(C)(ii) would
increase the incidence of fraud directed against consumers; and
suggesting any revisions to the provision deemed appropriate by the
Secretary and the Commission. In conducting this evaluation, the
Secretary and the Commission shall solicit comment from the general
public, consumer representatives, and electronic commerce businesses.

SEC. 106. DEFINITIONS.
For purposes of this title:

(1) **Consumer.**—The term “consumer” means an individual who
obtains, through a transaction, products or services which are used
primarily for personal, family, or household purposes, and also
means the legal representative of such an individual.

(2) **Electronic.**—The term “electronic” means relating to
technology having electrical, digital, magnetic, wireless, optical,
electromagnetic, or similar capabilities.

(3) **Electronic agent.**—The term “electronic agent” means a
computer program or an electronic or other automated means used
independently to initiate an action or respond to electronic records or
performances in whole or in part without review or action by an
individual at the time of the action or response.

(4) **Electronic record.**—The term “electronic record” means a
contract or other record created, generated, sent, communicated,
received, or stored by electronic means.

(5) **Electronic signature.**—The term “electronic signature”
means an electronic sound, symbol, or process, attached to or
logically associated with a contract or other record and executed
or adopted by a person with the intent to sign the record.

(6) **Federal regulatory agency.**—The term “Federal regulatory
agency” means an agency, as that term is defined in section 552(f)
of title 5, United States Code.

(7) **Information.**—The term “information” means data, text,
images, sounds, codes, computer programs, software, data bases, or
the like.

(8) **Person.**—The term “person” means an individual,
corporation, business trust, estate, trust, partnership, limited
liability company, association, joint venture, governmental agency,
public corporation, or any other legal or commercial entity.

(9) **Record.**—The term “record” means information that is
inscribed on a tangible medium or that is stored in an electronic or
other medium and is retrievable in perceivable form.

(10) **Requirement.**—The term “requirement” includes a
prohibition.

(11) **Self-regulatory organization.**—The term “self-
regulatory organization” means an organization or entity that is
not a Federal regulatory agency or a State, but that is under the
supervision of a Federal regulatory agency and is authorized
under Federal law to adopt and administer rules applicable to its
members that are enforced by such organization or entity, by a
Federal regulatory agency, or by another self-regulatory
organization.

(12) **State.**—The term “State” includes the District of
Columbia and the territories and possessions of the United States.

(13) **Transaction.**—The term “transaction” means an action or
set of actions relating to the conduct of business, consumer, or
commercial affairs between two or more persons, including any of
the following types of conduct—

(A) the sale, lease, exchange, licensing, or other disposition of
(i) personal property, including goods and intangibles, (ii)
services, and (iii) any combination thereof; and
(B) the sale, lease, exchange, or other disposition of any interest in real property, or any combination thereof.

SEC. 107. EFFECTIVE DATE.

(a) In General.—Except as provided in subsection (b), this title shall be effective on October 1, 2000.

(b) Exceptions.—

(1) Record retention.—

(A) In General.—Subject to subparagraph (B), this title shall be effective on March 1, 2001, with respect to a requirement that a record be retained imposed by—

(i) a Federal statute, regulation, or other rule of law, or

(ii) a State statute, regulation, or other rule of law administered or promulgated by a State regulatory agency.

(B) Delayed effect for pending rulemakings.—If on March 1, 2001, a Federal regulatory agency or State regulatory agency has announced, proposed, or initiated, but not completed, a rulemaking proceeding to prescribe a regulation under section 104(b)(3) with respect to a requirement described in subparagraph (A), this title shall be effective on June 1, 2001, with respect to such requirement.

(2) Certain guaranteed and insured loans.—With regard to any transaction involving a loan guarantee or loan guarantee commitment (as those terms are defined in section 502 of the Federal Credit Reform Act of 1990), or involving a program listed in the Federal Credit Supplement, Budget of the United States, FY 2001, this title applies only to such transactions entered into, and to any loan or mortgage made, insured, or guaranteed by the United States Government thereunder, on and after one year after the date of enactment of this Act.

(3) Student loans.—With respect to any records that are provided or made available to a consumer pursuant to an application for a loan, or a loan made, pursuant to title IV of the Higher Education Act of 1965, section 101(c) of this Act shall not apply until the earlier of—

(A) such time as the Secretary of Education publishes revised promissory notes under section 432(m) of the Higher Education Act of 1965; or

(B) one year after the date of enactment of this Act.

TITLE II—TRANSFERABLE RECORDS

SEC. 201. TRANSFERABLE RECORDS.

(a) Definitions.—For purposes of this section:

(1) Transferable record.—The term "transferable record" means an electronic record that—

(A) would be a note under Article 3 of the Uniform Commercial Code if the electronic record were in writing;

(B) the issuer of the electronic record expressly has agreed is a transferable record; and

(C) relates to a loan secured by real property.

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A transferable record may be executed using an electronic signature.

(2) Other definitions.—The terms "electronic record", "electronic signature", and "person" have the same meanings provided in section 106 of this Act.

(b) Control.—A person has control of a transferable record if a system employed for evidencing the transfer of interests in the
transferable record reliably establishes that person as the person to which the transferable record was issued or transferred.

(c) CONDITIONS.—A system satisfies subsection (b), and a person is deemed to have control of a transferable record, if the transferable record is created, stored, and assigned in such a manner that—

(1) a single authoritative copy of the transferable record exists which is unique, identifiable, and, except as otherwise provided in paragraphs (4), (5), and (6), unalterable;

(2) the authoritative copy identifies the person asserting control as—

(A) the person to which the transferable record was issued; or

(B) if the authoritative copy indicates that the transferable record has been transferred, the person to which the transferable record was most recently transferred;

(3) the authoritative copy is communicated to and maintained by the person asserting control or its designated custodian;

(4) copies or revisions that add or change an identified assignee of the authoritative copy can be made only with the consent of the person asserting control;

(5) each copy of the authoritative copy and any copy of a copy is readily identifiable as a copy that is not the authoritative copy; and

(6) any revision of the authoritative copy is readily identifiable as authorized or unauthorized.

(d) STATUS AS HOLDER.—Except as otherwise agreed, a person having control of a transferable record is the holder, as defined in section 1–201(20) of the Uniform Commercial Code, of the transferable record and has the same rights and defenses as a holder of an equivalent record or writing under the Uniform Commercial Code, including, if the applicable statutory requirements under section 3–302(a), 9–308, or revised section 9–330 of the Uniform Commercial Code are satisfied, the rights and defenses of a holder in due course or a purchaser, respectively. Delivery, possession, and endorsement are not required to obtain or exercise any of the rights under this subsection.

(e) OBLIGOR RIGHTS.—Except as otherwise agreed, an obligor under a transferable record has the same rights and defenses as an equivalent obligor under equivalent records or writings under the Uniform Commercial Code.

(f) PROOF OF CONTROL.—If requested by a person against which enforcement is sought, the person seeking to enforce the transferable record shall provide reasonable proof that the person is in control of the transferable record. Proof may include access to the authoritative copy of the transferable record and related business records sufficient to review the terms of the transferable record and to establish the identity of the person having control of the transferable record.

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(g) UCC REFERENCES.—For purposes of this subsection, all references to the Uniform Commercial Code are to the Uniform Commercial Code as in effect in the jurisdiction the law of which governs the transferable record.

SEC. 202. EFFECTIVE DATE.

This title shall be effective 90 days after the date of enactment of this Act.

TITLE III—PROMOTION OF INTERNATIONAL ELECTRONIC COMMERCE

SEC. 301. PRINCIPLES GOVERNING THE USE OF ELECTRONIC SIGNATURES IN INTERNATIONAL TRANSACTIONS.
(a) **Promotion of Electronic Signatures.**—

1. **Required Actions.**—The Secretary of Commerce shall promote the acceptance and use, on an international basis, of electronic signatures in accordance with the principles specified in paragraph (2) and in a manner consistent with section 101 of this Act. The Secretary of Commerce shall take all actions necessary in a manner consistent with such principles to eliminate or reduce, to the maximum extent possible, the impediments to commerce in electronic signatures, for the purpose of facilitating the development of interstate and foreign commerce.

2. **Principles.**—The principles specified in this paragraph are the following:
   - (B) Permit parties to a transaction to determine the appropriate authentication technologies and implementation models for their transactions, with assurance that those technologies and implementation models will be recognized and enforced.
   - (C) Permit parties to a transaction to have the opportunity to prove in court or other proceedings that their authentication approaches and their transactions are valid.
   - (D) Take a nondiscriminatory approach to electronic signatures and authentication methods from other jurisdictions.

(b) **Consultation.**—In conducting the activities required by this section, the Secretary shall consult with users and providers of electronic signature products and services and other interested persons.

(c) **Definitions.**—As used in this section, the terms “electronic record” and “electronic signature” have the same meanings provided in section 106 of this Act.

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**Appendix B: Kentucky Revised Statutes related to E-SIGN**

**164.6933 Effect of federal act.**

The provisions of KRS 164.6901 to 164.6935 governing the legal effect, validity, or enforceability of electronic records or signatures, and of contracts formed or performed with the use of such records or signatures, conform to the requirements of Section 102 of the

272A.17-020 Electronicsignature.

This chapter modifies, limits, or supersedes, the federal Electronic Signatures in Global and National Commerce Act, 15 U.S.C. secs. 7001 et seq., but does not modify, limit, or supersede Section 101(c) of that act, 15 U.S.C. sec. 7001(c), or authorize electronic delivery of any of the notices described in Section 103(b) of that act, 15 U.S.C. sec. 7003(b).


The provisions of this chapter governing the legal effect, validity, or enforceability of electronic records or electronic signatures, and of contracts formed or performed with the use of such records or signatures, modify, limit, and supersede the Electronic Signatures in Global and National Commerce Act, 15 U.S.C. secs. 7001 et seq., but this chapter does not modify, limit, or supersede Section 101(c) of the Electronic Signatures in Global and National Commerce Act or authorize electronic delivery of any of the notices described in Section 103(b) of that Act.

311.1957 Relation of KRS 311.1911 to 311.1959 to Electronic Signatures in Global and NationalCommerce Act.


This chapter modifies, limits, and supersedes the federal Electronic Signatures in Global and National Commerce Act, 15 U.S.C. sec. 7001 et seq., except that nothing in this chapter modifies, limits, or supersedes Section 7001(c) of that Act or authorizes electronic delivery of any of the notices described in Section 7003(b) of that Act.

355.7-103 Relation of article to treaty or statute.
(1) This article is subject to any treaty or statute of the United States or a regulatory statute of this state to the extent the treaty, statute, or regulatory statute is applicable.

(2) This article does not repeal or modify any law prescribing the form or contents of a document of title or the services or facilities to be afforded by a bailee, or otherwise regulating a bailee’s businesses in respects not specifically treated in this article. However, violation of these laws does not affect the status of a document of title that otherwise complies with the definition of a document of title.

(3) This article modifies, limits, and supersedes the federal Electronic Signatures in Global and National Commerce Act, 15 U.S.C. secs. 7001 et seq., but does not modify, limit, or supersede Section 101(c) of that Act, 15 U.S.C. sec. 7001(c), or authorize electronic delivery of any of the notices described in Section 103(b) of that Act, 15 U.S.C. sec. 7003(b).

(4) To the extent there is a conflict between the Uniform Electronic Transactions Act and this article, this article governs.

362.2-973 Electronicsignatures.

The provisions of this subchapter governing the legal effect, validity, or enforceability of electronic records or signatures, and of contracts formed or performed with the use of such records or signatures, conform to the requirements of Section 102 of the Electronic Signatures in Global and National Commerce Act, Pub. L. No. 106-229, and supersedes, modify, and limit the Electronic Signatures in Global and National Commerce Act.

378A.140 Relation to Electronic Signatures in Global and National Commerce Act. (Effective January 1, 2016)

This chapter modifies, limits, or supersedes the Electronic Signatures in Global and National Commerce Act, 15 U.S.C. secs. 7001 et seq., but does not modify, limit, or supersede Section 101(c) of that Act, 15 U.S.C. sec. 7001(c), or authorize electronic delivery of any of the notices described in Section 103(B) of that Act, 15 U.S.C. sec. 7003(b).

386A.10-020 Relation to Electronic Signatures in Global and National Commerce Act.

This chapter does modify, limit, and supersedes the federal Electronic Signatures in Global and National Commerce Act, 15 U.S.C. secs. 7001 et seq., but does not modify, limit, or supersedes Section 101(c) of that act, 15 U.S.C. sec. 7001(c), or authorize electronic delivery of any of the notices described in Section 103(b) of that act, 15 U.S.C. sec. 7003(b).

386B.11-020 Electronic records and signatures.

The provisions of this chapter governing the legal effect, validity, or enforceability of electronic records or electronic signatures, and of contracts formed or performed with the use of such records or signatures, conform to the requirements of Section 102 of the Electronic Signatures in Global and National Commerce Act, 15 U.S.C. sec. 7002, and supersedes, modify, and limit
the requirements of the Electronic Signatures in Global and National Commerce Act, 15 U.S.C. secs. 7001 et seq.

387.852 Relation to Electronic Signatures in Global and National Commerce Act.

KRS 387.810 to 387.854 modify, limit, and supersede the federal Electronic Signatures in Global and National Commerce Act, 15 U.S.C. sec. 7001 et seq., but do not modify, limit, or supersede Section 101(c) of that Act, 15 U.S.C. sec. 7001(c), or authorize electronic delivery of any of the notices described in Section 103(b) of that Act, 15 U.S.C. sec. 7003(b).

Appendix C: Kentucky Revised Statutes Chapter 369 Use of Electronic Records and Electronic Signatures

369.102 Definitions for KRS 369.101 to 369.120.

As used in KRS 369.101 to 369.120, unless the context requires otherwise:
(1) "Agreement" means the bargain of the parties in fact, as found in their language or inferred from other circumstances and from rules, regulations, and procedures given the effect of agreements under laws otherwise applicable to a particular transaction;
(2) "Automated transaction" means a transaction conducted or performed, in whole or in part, by electronic means or electronic records, in which the acts of records of one (1) or both parties are not reviewed by an individual in the ordinary course in forming a contract, performing under an existing contract, or fulfilling an obligation required by the transaction;
(3) "Computer program" means a set of statements or instructions to be used directly or indirectly in an information processing system in order to bring about a certain result;
(4) "Contract" means the total legal obligation resulting from the parties' agreement as affected by KRS 369.101 to 369.120 and other applicable law;
(5) "Electronic" means relating to technology having electrical, digital, magnetic, wireless, optical, electromagnetic, or similar capabilities;
(6) "Electronic agent" means a computer program or an electronic or other automated means used independently to initiate an action or respond to electronic records or performances in whole or in part, without review or action by an individual;
(7) "Electronic record" means a record created, generated, sent, communicated, received, or stored by electronic means;
(8) "Electronic signature" means an electronic sound, symbol, or process attached to or logically associated with a record and executed or adopted by a person with the intent to sign the record;
(9) "Governmental agency" means an executive, legislative, or judicial agency, department, board, commission, authority, institution, or instrumentality of the federal government or of a state or of a county, municipality, or other political subdivision of a state;
(10) "Information" means data, text, images, sounds, codes, computer programs, software, databases, or the like;
(11) "Information processing system" means an electronic system for creating, generating, sending, receiving, storing, displaying, or processing information;
(12) "Person" means an individual, corporation, business or statutory trust, estate, trust, partnership, limited partnership, limited liability company, association, limited cooperative association, joint venture, governmental agency, public corporation, or any other legal or commercial entity;
(13) "Record" means information that is inscribed on a tangible medium or that is stored in an electronic or other medium and is retrievable in perceivable form;
(14) "Security procedure" means a procedure employed for the purpose of verifying that an electronic signature, record, or performance is that of a specific person or for detecting changes or errors in the information in an electronic record. The term includes a procedure that requires the use of algorithms or other codes, identifying words or numbers, encryption, or callback or other acknowledgment procedures;
(15) "State" means a state of the United States, the District of Columbia, Puerto Rico, the United States Virgin Islands, or any territory or insular possession subject to the jurisdiction of the United States. The term includes an Indian tribe or band, or Alaskan native village, which is recognized by federal law or formally acknowledged by a state; and
(16) "Transaction" means an action or set of actions occurring between two (2) or more persons relating to the conduct of business, commercial, or governmental affairs.

369.103 Scope of KRS 369.101 to 369.120.
(1) Except as otherwise provided in subsection (2) of this section, KRS 369.101 to 369.120 applies to electronic records and electronic signatures relating to a transaction.

(2) KRS 369.101 to 369.120 does not apply to a transaction to the extent it is governed by:
   (a) A law governing the creation and execution of wills, codicils, or testamentary trusts;
   (b) KRS Chapter 355 other than KRS 355.1-107 and 355.1-206, and Articles 2 and 2A of KRS Chapter 355;
   (c) A law governing the conveyance of any interest in real property; and
   (d) A law governing the creation or transfer of any negotiable instrument or any instrument establishing title or an interest in title.

(3) KRS 369.101 to 369.120 applies to an electronic record or electronic signature otherwise excluded from the application of KRS 369.101 to 369.120 under subsection (2) of this section to the extent it is governed by a law other than those specified in subsection (2) of this section.

(4) A transaction subject to KRS 369.101 to 369.120 is also subject to other applicable substantive law.

369.104 Prospective application of KRS 369.101 to 369.120.

KRS 369.101 to 369.120 applies to any electronic record or electronic signature created, generated, sent, communicated, received, or stored on or after August 1, 2000.

369.105 Use of electronic records and electronic signatures — Variation by agreement.

(1) KRS 369.101 to 369.120 does not require a record or signature to be created, generated, sent, communicated, received, stored, or otherwise processed or used by electronic means or in electronic form.

(2) KRS 369.101 to 369.120 applies only to transactions between parties each of which has agreed to conduct transactions by electronic means. Whether the parties agree to conduct a transaction by electronic means is determined from the context and surrounding circumstances, including the parties' conduct.

(3) A party that agrees to conduct a transaction by electronic means may refuse to conduct other transactions by electronic means. The right granted by this subsection may not be waived by agreement.

(4) Except as otherwise provided in KRS 369.101 to 369.120, the effect of any of its provisions may be varied by agreement. The presence in certain provisions of KRS 369.101 to 369.120 of the words "unless otherwise agreed," or words of similar import, does not imply that the effect of other provisions may not be varied by agreement.

(5) Whether an electronic record or electronic signature has legal consequences is determined by KRS 369.101 to 369.120 and other applicable law.

369.106 Construction and application of KRS 369.101 to 369.120.

KRS 369.101 to 369.120 must be construed and applied:

(1) To facilitate electronic transactions consistent with other applicable law;

(2) To be consistent with reasonable practices concerning electronic transactions and with the continued expansion of those practices; and
(3) To effectuate its general purpose to make uniform the law with respect to the subject of KRS 369.101 to 369.120 among states enacting it.


(1) A record or signature may not be denied legal effect or enforceability solely because it is in electronic form.
(2) A contract may not be denied legal effect or enforceability solely because an electronic record was used in its formation.
(3) If a law requires a record to be in writing, an electronic record satisfies the law.
(4) If a law requires a signature, an electronic signature satisfies the law.

369.108 Provision of information in writing -- Presentation of records.

(1) If parties have agreed to conduct a transaction by electronic means and a law requires a person to provide, send, or deliver information in writing to another person, the requirement is satisfied if the information is provided, sent, or delivered, as the case may be, in an electronic record capable of retention by the recipient at the time of receipt. An electronic record is not capable of retention by the recipient if the sender or its information processing system inhibits the ability of the recipient to print or store the electronic record.
(2) If a law other than KRS 369.101 to 369.120 requires a record to be posted or displayed in a certain manner, to be sent, communicated, or transmitted by a specified method, or to contain information that is formatted in a certain manner, the following rules apply:
   (a) The record must be posted or displayed in the manner specified in the other law.
   (b) Except as otherwise provided in subsection (4)(b) of this section, the record must be sent, communicated, or transmitted by the method specified in the other law.
   (c) The record must contain the information formatted in the manner specified in the other law.
(3) If a sender inhibits the ability of a recipient to store or print an electronic record, the electronic record is not enforceable against the recipient.
(4) The requirements of this section may not be varied by agreement, but:
   (a) To the extent a law other than KRS 369.101 to 369.120 requires information to be provided, sent, or delivered in writing but permits that requirement to be varied by agreement, the requirement under subsection (1) of this section that the information be in the form of an electronic record capable of retention may also be varied by agreement; and
   (b) A requirement under a law other than KRS 369.101 to 369.120 to send, communicate, or transmit a record by United States mail may be varied by agreement to the extent permitted by the other law.


(1) An electronic record or electronic signature is attributable to a person if it was the act of the person. The act of the person may be shown in any manner, including a showing of the efficacy of any security procedure applied to determine the person to which the electronic record or electronic signature was attributable.
(2) The effect of an electronic record or electronic signature attributed to a person under subsection (1) of this section is determined from the context and surrounding circumstances at the time of its creation, execution, or adoption, including the parties' agreement, if any, and otherwise as provided by law.

369.110 Effect of change or error.

If a change or error in an electronic record occurs in a transmission between parties to a transaction, the following rules apply:
(1) If the parties have agreed to use a security procedure to detect changes or errors and one (1) party has conformed to the procedure, but the other party has not, and the nonconforming party would have detected the change or error had that party also conformed, the conforming party may avoid the effect of the changed or erroneous electronic record.
(2) In an automated transaction involving an individual, the individual may avoid the effect of an electronic record that resulted from an error made by the individual in dealing with the electronic agent of another person if the electronic agent did not provide an opportunity for the prevention or correction of the error and, at the time the individual learns of the error, the individual:
   (a) Promptly notifies the other party of the error and that the individual did not intend to be bound by the electronic record received by the other party;
   (b) Takes reasonable steps, including steps that conform to the other person's reasonable instructions, to return to the other person or, if instructed by the other person, to destroy the consideration received, if any, as a result of the erroneous electronic record; and
   (c) Has not used or received any benefit or value from the consideration, if any, received from the other person.
(3) If neither subsection (1) of this section nor subsection (2) of this section applies, the change or error has the effect provided by other law, including the law of mistake, and the parties' contract, if any.
(4) Subsections (2) and (3) of this section may not be varied by agreement.

369.111 Notarization and acknowledgment.

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.

369.112 Retention of electronic records -- Originals.

(1) If a law requires that a record be retained, the requirement is satisfied by retaining an electronic record of the information in the record which:
   (a) Accurately reflects the information set forth in the record after it was first generated in its final form as an electronic record or otherwise; and
   (b) Remains accessible for later reference.
(2) A requirement to retain a record in accordance with subsection (1) of this section does not apply to any information the sole purpose of which is to enable the record to be sent, communicated, or received.
(3) A person may satisfy subsection (1) of this section by using the services of another person if the requirements of that subsection are satisfied.
(4) If a law requires a record to be presented or retained in its original form, or provides consequences if the record is not presented or retained in its original form, that law is satisfied by an electronic record retained in accordance with subsection (1) of this subsection.
(5) If a law requires retention of a check, that requirement is satisfied by retention of an electronic record of the information on the front and back of the check in accordance with subsection (1) of this subsection.
(6) A record retained as an electronic record in accordance with subsection (1) of this section satisfies a law requiring a person to retain a record for evidentiary, audit, or like purposes, unless a law enacted after August 1, 2000, specifically prohibits the use of an electronic record for the specified purpose.
(7) This section does not preclude a governmental agency of this state from specifying additional requirements for the retention of a record subject to the agency's jurisdiction.

369.113 Admissibility in evidence.

In a proceeding, evidence of a record or signature may not be excluded solely because it is in electronic form.

369.114 Automated transaction.

In an automated transaction, the following rules apply:
(1) A contract may be formed by the interaction of electronic agents of the parties, even if no individual was aware of or reviewed the electronic agents' actions or the resulting terms and agreements.
(2) A contract may be formed by the interaction of an electronic agency and an individual, acting on the individual's own behalf or for another person, including by an interaction in which the individual performs actions that the individual is free to refuse to perform and which the individual knows or has reason to know will cause the electronic agent to complete the transaction or performance.
(3) The terms of the contract are determined by the substantive law applicable to it.

369.115 Time and place of sending and receipt.

(1) Unless otherwise agreed between the sender and the recipient, an electronic record is sent when it:
   (a) Is addressed properly or otherwise directed properly to an information processing system that the recipient has designated or uses for the purpose of receiving electronic records or information of the type sent and from which the recipient is able to retrieve the electronic record;
   (b) Is in a form capable of being processed by that system; and
   (c) Enters an information processing system outside the control of the sender or of a person that sent the electronic record on behalf of the sender or enters a region of the information processing system designated or used by the recipient which is under the control of the recipient.
Unless otherwise agreed between a sender and the recipient, an electronic record is received when:

(a) It enters an information processing system that the recipient has designated or uses for the purpose of receiving electronic records or information of the type sent and from which the recipient is able to retrieve the electronic record; and

(b) It is in a form capable of being processed by that system.

(3) Subsection (2) of this section applies even if the place the information processing system is located is different from the place the electronic record is deemed to be received under subsection (4) of this section.

(4) Unless otherwise expressly provided in the electronic record or agreed between the sender and the recipient, an electronic record is deemed to be sent from the sender's place of business and to be received at the recipient's place of business. For purposes of this subsection, the following rules apply:

(a) If the sender or recipient has more than one (1) place of business, the place of business of that person is the place having the closest relationship to the underlying transaction.

(b) If the sender or the recipient does not have a place of business, the place of business is the sender's or recipient's residence, as the case may be.

(5) An electronic record is received under subsection (2) of this section even if no individual is aware of its receipt.

(6) Receipt of an electronic acknowledgment from an information processing system described in subsection (2) of this section establishes that a record was received but, by itself, does not establish that the content sent corresponds to the content received.

(7) If a person is aware than an electronic record purportedly sent under subsection (1) of this section, or purportedly received under subsection (2) of this section, was not actually sent or received, the legal effect of the sending or receipt is determined by other applicable law. Except to the extent permitted by the other law, the requirements of this subsection may not be varied by agreement.

**369.116 Transferable records.**

(1) In this section, "transferable record" means an electronic record that:

(a) Would be a note under Article 3 of KRS Chapter 355 or a document under Article 7 of KRS Chapter 355 if the electronic record were in writing; and

(b) The issuer of the electronic record expressly has agreed is a transferable record.

(2) A person has control of a transferable record if a system employed for evidencing the transfer of interests in the transferable record reliably establishes that person as the person to which the transferable record was issued or transferred.

(3) A system satisfies subsection (2) of this section, and a person is deemed to have control of a transferable record, if the transferable record is created, stored, and assigned in such a manner that:

(a) A single authoritative copy of the transferable record exists which is unique, identifiable, and, except as otherwise provided in paragraphs (d), (e), and (f) of this subsection, unalterable;

(b) The authoritative copy identifies the person asserting control as:

1. The person to which the transferable record was issued; or
2. If the authoritative copy indicates that the transferable record has been transferred, the person to whom the transferable record was most recently transferred;

(c) The authoritative copy is communicated to and maintained by the person asserting control or its designated custodian;

(d) Copies of revisions that add or change an identified assignee of the authoritative copy can be made only with the consent of the person asserting control;

(e) Each copy of the authoritative copy and any copy of a copy is readily identifiable as a copy that is not the authoritative copy; and

(f) Any revision of the authoritative copy is readily identifiable as authorized or unauthorized.

(4) Except as otherwise agreed, a person having control of a transferable record is the holder, as defined in KRS 355.1-201(20), of the transferable record and has the same rights and defenses as a holder of an equivalent record or writing under KRS Chapter 355, including, if the applicable statutory requirements under KRS 355.3-302(1), 355.7-501, or 355.9-330 are satisfied, the rights and defenses of a holder in due course, a holder to which a negotiable document of title has been duly negotiated, or a purchaser, respectively. Delivery, possession, and indorsement are not required to obtain or exercise any of the rights under this subsection.

(5) Except as otherwise agreed, an obligor under a transferable record has the same rights and defenses as an equivalent obligor under equivalent records or writing under KRS Chapter 355.

(6) If requested by a person against which enforcement is sought, the person seeking to enforce the transferable record shall provide reasonable proof that the person is in control of the transferable record. Proof may include access to the authoritative copy of the transferable record and related business records sufficient to review the terms of the transferable record and to establish the identity of the person having control of the transferable record.

369.117 Creation and retention of electronic records by governmental agencies -- Conversion of written records by governmental agencies.

Each governmental agency of this Commonwealth shall determine whether, and the extent to which, it will create electronic records. The Kentucky Department for Libraries and Archives shall determine whether, and the extent to which, the Commonwealth will retain electronic records and convert written records to electronic records.

369.118 Acceptance and distribution of electronic records by governmental agencies.

(1) Except as otherwise provided in KRS 369.112(6), each governmental agency of this state, in compliance with standards established by the Commonwealth Office of Technology, shall determine whether, and the extent to which, it will send and accept electronic records and electronic signatures to and from other persons and otherwise create, generate, communicate, store, process, use, and rely upon electronic records and electronic signatures.

(2) To the extent that a governmental agency uses electronic records and electronic signatures under subsection (1) of this section:

(a) The Commonwealth Office of Technology, giving due consideration to security, may specify the manner and format in which the electronic records must be created, generated, sent, communicated, received, and stored and the systems established for those purposes;
(b) If electronic records must be signed by electronic means, each governmental agency, giving due consideration to security, may specify the type of electronic signature required, the manner and format in which the electronic signature must be affixed to the electronic record, and the identity of, or criteria that must be met by, any third party used by a person filing a document to facilitate the process;
(c) The Commonwealth Office of Technology and the Department for Libraries and Archives, giving due consideration to security, may specify control processes and procedures as appropriate to ensure adequate preservation, disposition, integrity, security, confidentiality, and auditability of electronic records; and
(d) Each governmental agency, giving due consideration to security, may specify any other required attributes for electronic records which are specified for corresponding non-electronic records or reasonably necessary under the circumstances.

(3) Except as otherwise provided in KRS 369.112(6), KRS 369.101 to 369.120 does not require a governmental agency of this state to use or permit the use of electronic records or electronic signatures.

369.119 Interoperability.

The Commonwealth Office of Technology, which adopts standards pursuant to KRS 369.118(2)(a), may encourage and promote consistency and interoperability with similar requirements adopted by other governmental agencies of this and other states and the federal government and nongovernmental persons interacting with governmental agencies of this state. If appropriate, those standards may specify differing levels of standards from which governmental agencies of this state may choose in implementing the most appropriate standard for a particular application.

369.120 Severability of provisions.

If any provision of KRS 369.101 to 369.120 or its application to any person or circumstance is held invalid, the invalidity does not affect other provisions or applications of KRS 369.101 to 369.120 which can be given effect without the invalid provision or application, and to this end the provisions of KRS 369.101 to 369.120 are severable.