University _{of} Colorado	Procedure
Electronic Signatures in Loan	Transactions

Effective:	June 1, 2008	
Responsible Office:	Office of University Counsel	
Related APS:	Electronic Signatures and Records	
Brief Description: Describes th	e requirements for electronic signatures used in loan transactions.	

I. Definitions

Italicized terms used in this procedure are defined in the Administrative Policy Statement Dictionary.

II. PROCEDURE DESCRIPTION

This procedure establishes the requirements for electronic signatures in electronic loan transactions. A loan transaction means a transaction where a borrower is required to sign one of the following:

- A promissory note or loan application
- A forbearance agreement
- A request and sworn statement to discharge a loan
- A new repayment agreement
- A request to cancel a loan
- A request for a deferment on a loan

A. Borrower Consent

- 1. Prior to conducting an electronic loan transaction, the borrower must affirmatively consent, in writing, to conducting the transaction electronically.
- 2. The borrower's consent must be voluntary and based on accurate information about the transaction to be completed.
- 3. The University must maintain a record that the borrower's consent was granted prior to commencing an electronic loan transaction.

B. Demonstrated Ability to Receive Electronic Transactions

1. Prior to conducting an electronic loan transaction, the borrower must demonstrate that he or she is capable of receiving electronic transactions from the University.

C. Required Disclosures

- 1. Prior to conducting an electronic loan transaction, a borrower must receive a clear and conspicuous disclosure of the following:
 - a. Any right or option he or she has to conduct the transaction on paper or in non-electronic form.
 - b. The right to have documents provided or made available on paper at no charge.
 - c. The right to withdraw consent at any time and the procedure for doing so.
 - d. The consequences of withdrawing consent to conducting the transaction electronically.

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- e. The scope of the consent, i.e., whether the consent applies to a particular transaction or other transactions.
- f. The procedure for obtaining paper copies of electronic records.
- g. The hardware and software requirements for accessing, printing, and retaining, as appropriate, electronic records used in transactions or covered under the scope of the transaction.

D. Electronic Signature Process for Loan Transactions

- 1. The following processes may be used as electronic signatures for executing electronic loan transaction documents:
 - a. A shared secret, such as a personal identification number (PIN) or password uniquely associated with the borrower and known only to the borrower and the University.
 - b. A unique credential or token provided to the borrower by a trusted third party, such as a public private key pair, a cryptographic smartcard, or a one-time password device.
 - c. A computer file or number that corresponds to a biometric measurement uniquely associated with the borrower, such as a fingerprint or retinal pattern.
 - d. A signature image (a computer file that is created from the scanned image of the borrower's handwritten signature); or
 - e. A typed name combined with any of the above items in this section.
- 2. Audio recordings or oral statements or conversations are not acceptable electronic signature processes.

E. Attribution

- 1. Attribution is the process of associating the identity of a borrower with his or her signature. The University must maintain evidence sufficient to establish that the electronic signature may reasonably and effectively be attributed to the borrower purported to have provided the electronic signature.
- 2. The following methods may be used to establish attribution for electronic signatures in loan transactions:
 - a. Selection by the borrower, or assignment to the borrower of a PIN, password, or other shared secret, that the borrower uses as part of the signature process, together with:
 - i. an express agreement by the borrower not to share or disclose the PIN, password, or secure access procedures to others;
 - ii. a procedure by which the borrower may notify other parties to the transaction that the shared secret has been compromised; and
 - iii. effective procedures to protect against disclosure of the shared secret to unauthorized parties.
 - b. Measurement of some unique biometric attribute of the borrower and creation of a computer file that represents that measurement, together with procedures to protect against disclosure of the associated computer file to unauthorized parties.
 - c. Capture of the borrower's handwritten signature as a digitized graphic representation, together with procedures to protect against disclosure of the associated computer file to unauthorized parties.

F. Authenticating the Borrower's Identity

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- 1. Prior to issuing a shared secret or other credential that may be used by a borrower as part of a process to sign an electronic record for a loan transaction, the University must confirm the identity of the borrower by authenticating data provided by the borrower with data maintained by an independent source (e.g. by conducting data matches). Independent sources include, but are not limited to: national commercial credit bureaus; commercially available data sources or services; state motor vehicle agencies; and government databases. School databases are not independent sources. At a minimum, the borrower's name, social security number or driver's license number, and date of birth must be verified.
- 2. After completing the required data match verifying the borrower's identity, the shared secret or other identity credential must be provided to the borrower via the U.S. Postal Service, as part of a secure online session, or in some other secure way. Unencrypted e-mail, by itself, is not considered secure enough for direct delivery of the secret or credential but may be used as part of a multi-step delivery of the secret or credential. For example, unencrypted e-mail may be used by the lender or holder to deliver a private key or a web (URL) address to the borrower. The borrower may then use this private key or web address to obtain (over a session-encrypted link) the shared secret or identity credential that will be used to sign electronic documents.
- 3. The shared secret or other credential may be issued to the borrower without conducting the data matches if the borrower's identity has previously been authenticated in a manner that satisfies the requirements of this section. For example, by confirming the borrower's identity through paper documents submitted by the borrower (social security card and driver's license).

G. Intent to Sign an Electronic Record

- 1. The process used for obtaining an electronic signature for loan transactions must be designed to demonstrate that the borrower intended to sign the record. Establishing intent includes:
 - a. Identifying the purpose the borrower is signing the electronic record. The purpose of the signature may be apparent within the context of the transaction; described to the borrower in the electronic record itself; or described in a separate notice, explanation, or statement provided to the borrower at or before the time of signing.
 - b. Being reasonably certain the borrower knows which electronic record is being signed; and
 - c. Providing notice to the borrower that his or her electronic signature is about to be applied to, or associated with, the electronic record.
- 2. Intent to use an electronic signature may be established by an online dialog box or alert advising the borrower that continuing the process will result in an electronic signature; an online dialog box or alert indicating that an electronic signature has just been created, and giving the borrower and opportunity to confirm or cancel the signature; or a click-through agreement advising the borrower that continuing the process will result in an electronic signature.

H. Format of Electronically-Signed Records

- 1. Electronic records used for loan transactions must include all of the terms and conditions contained in the comparable paper records.
- 2. Electronic records used for loan transactions must be able to be reproduced when printed or viewed as accurately as if they were paper records.

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3. Electronically signed records must contain all the information necessary to reproduce the entire electronic record and all associated signatures in a form that permits the person viewing or printing the entire electronic record to verify: the contents of the electronic record; the method used to sign the electronic record, if applicable; and the person or persons signing the electronic record.

I. Integrity of Electronic Records

- 1. The University must ensure that electronic records signed by the borrower have not been altered.
- 2. The University must designate the signed electronic record as the "authoritative" copy. Additional copies of that record should be copied from the authoritative copy.
- 3. The University must ensure that all electronic records that reflect activities relating to a loan can be associated with the loan so that any particular transaction is identifiable, and accessible, as part of that loan history.
- 4. The University must log and account for any changes to the records and must be structured so that changes can be made only by authorized individuals.

J. Privacy and Security

The University shall respect the privacy of others when handling personal information contained in electronic loan transactions and shall take appropriate precautions to protect that information from unauthorized disclosure or use. The University shall ensure that IT systems and equipment used to conduct elect loan transactions comply with University or campus minimum security standards, relevant governmental regulations, or contractual requirements.