

THE IMPLEMENTATION PLAN FOR THE UNIFORM ELECTRONIC LEGAL MATERIAL ACT

(TEXAS GOVERNMENT CODE, Chapter 2051, Subchapter E):

The General and Special Laws Passed in a Regular or Special Session of the Texas
Legislature and State Agency Rules Adopted in Accordance with Chapter 2001



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TEXAS STATE LIBRARY AND ARCHIVES COMMISSION

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Contents

Executive Summary	5
Part I: Introduction	9
About the Texas Uniform Electronic Legal Material Act	11
Authentication	12
Preservation and Security	12
Permanent Public Access	13
Part II: The Implementation Plan	15
A. Implementation Factors	16
Authentication	16
(1) Standards and Practices of Other Jurisdictions	16
(2) Most Recent Standards	19
(3) Needs of Users	22
(4) Views of Government Officials and Entities and Others	22
(5) Methods and Technologies Used in Other States	22
Preservation and Security	23
B. The General and Special Laws of Texas	25
Existing Publication Requirements and Practices	26
Authentication of General and Special Laws	26
Recommendation	26
Preservation and Security	26
Recommendations	27
Permanent Public Access	27
Recommendations	28
C. State Agency Rules	28
Recommendation	28

Executive Summary

Texas is increasingly making its state-created information available in an electronic form. This practice greatly expands public access and decreases state publishing costs. As this transition to electronic delivery continues, Texas government has directed action to ensure that the public has access to accurate, timely, and official versions of the law. The Uniform Electronic Legal Material Act (UELMA), enacted as House Bill 402 by the 86th Texas Legislature, makes a critical contribution to protecting public access to key legal information. The law, which took effect on September 1, 2019, provides guidelines for the electronic publication of legal material. In particular, UELMA requires that Texas provide for the authentication, preservation and security, and permanent accessibility of official legal material in an electronic record.

Under the law, if the official publisher publishes legal material only electronically, the electronic legal material must be designated as official and the official publisher must meet UELMA's provisions for authentication, preservation and security, and permanent accessibility. If the official publisher publishes legal material both electronically and in another format (most likely print), the electronic version may be designated as official if the official publisher complies with UELMA. Under UELMA, the Office of the Secretary of State (SOS) is the official publisher in the executive branch for the general and special laws (i.e., session laws) and state agency rules.

In addition to providing guidelines for the electronic publication of legal material, House Bill 402 required two reports to guide UELMA's implementation. The Texas State Library and Archives Commission (TSLAC) and SOS offer this implementation plan for the application of UELMA to the general and special laws passed by the Texas Legislature and to state agency rules. The Texas Legislative Council, in consultation with the Lieutenant Governor, the Speaker of the House of Representatives, the Senate Committee on Administration, and the House Committee on Administration, will separately produce a UELMA implementation plan for the Texas Constitution.

UELMA applies to legal material that is in an electronic form, designated as official, and is first published on or after January 1, 2021. Given these thresholds, UELMA provisions do not currently apply to either the general and special laws or state agency rules.¹ The SOS has not designated the electronic version of either type of legal material to be official. However, because Texas is increasingly prioritizing the electronic delivery of legal information, SOS may decide to designate the electronic materials as official under UELMA in the future. Given this status, no timeline may be established, as a change in designation of the relevant material is first needed. The publisher must determine separately the appropriate time for such action.

1 SOS no longer oversees the print publication of session laws in the *General and Special Laws of the State of Texas*. TSLAC maintains the official original print copies of the session laws. These materials do not circulate but may be used in the State Archives search room. Access to volumes for the 1st Congress through the 18th Legislature (1836-1884) is restricted due to their physical condition. Researchers may use the digital copies of these records. The preservation of these copies in a publicly accessible manner complies with the definition of "publish" under UELMA: "displaying, presenting, or releasing to the public, or causing to be displayed, presented, or released to the public, legal material by the official publisher." Tex. Gov't Code §2051.152, <https://statutes.capitol.texas.gov/Docs/GV/htm/GV.2051.htm#2051.152>.

The purpose of this report is to provide background information relevant to the future implementation of UELMA. Additionally, SOS is committed to voluntarily aligning its electronic publication of the general and special laws with the provisions of UELMA. As a result, this report also outlines SOS's plan to authenticate the electronic copy of the general and special laws posted on its website as a courtesy, as well as to further bolster SOS's and TSLAC's already robust preservation, security, and public accessibility practices regarding the general and special laws.

Overview of Recommendations

The General and Special Laws of Texas

Authentication

- While not required under the provision of HB 402, SOS should provide access on its website to authenticable electronic copies of the general and special laws from the two most recent legislative sessions.

Preservation and Security

- SOS should continue to transfer the official paper copies of the bills and resolutions to TSLAC, the official repository for the session laws. The session laws should continue to be securely stored by TSLAC in print and by both SOS and TSLAC in microfilm or other approved machine-readable format.
- Digital versions of the bills and resolutions from the 78th Legislature onward should continue to be displayed in the University of North Texas's Portal to Texas History.
- Digital versions of the bills and resolutions should be preserved and displayed in TSLAC's official repository for electronic archival records, the Texas Digital Archive (TDA).
- Permanent preservation will be provided by the ongoing practice of creating electronic backups of all records in the TDA as well as by continuing to preserve print records of the general and special laws.

Permanent Public Access

- Bills and resolutions from the two most recent legislative sessions should continue to be accessible to the public online through SOS's website as PDF files.
- Online accessibility should be expanded by adding the PDF files of legislative bills and resolutions in the TDA. In the TDA, all visible records are unrestricted and available to the public. Items can be downloaded at no charge. Users wishing to download numerous records have the option of requesting paper or digital copies in accordance with approved Texas Administrative Code provisions.²

² 13 TAC §2.51 (TSLAC, Public Records Fees), [https://texreg.sos.state.tx.us/public/readtac\\$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=13&pt=1&ch=2&rl=51](https://texreg.sos.state.tx.us/public/readtac$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=13&pt=1&ch=2&rl=51).

- Public access to print records of the general and special laws should also continue. TSLAC should continue to retain print records of the general and special laws from all legislative sessions and make these documents available to the public.
- The committee also encourages the Portal to Texas History to continue to provide access to the general and special laws, although the portal provides this accessibility as a courtesy only.

State Agency Rules

- If and when the electronic version of state agency rules is designated as official by the SOS, the steps taken to ensure UELMA compliance for the rules should follow as closely as possible the processes then in effect for similar official electronic legal material in Texas.

Part I: Introduction

In Texas, the 86th Legislature enacted House Bill 402, the Uniform Electronic Legal Material Act (UELMA), on May 10, 2019.³ The law amended Chapter 2051 of the Texas Government Code by adding a new Subchapter E.⁴ Texas’s UELMA took effect on September 1, 2019.⁵ In addition to providing guidelines for the electronic publication of legal material, the law required two reports to guide its implementation.⁶

Under UELMA, the Office of the Secretary of State (SOS) is the official publisher in the executive branch for the general and special laws (i.e., session laws) and state agency rules.⁷ The Texas State Library and Archives Commission (TSLAC) and SOS offer this implementation plan pursuant to the requirements of House Bill 402 in regard to this information.⁸ The Texas Legislative Council, in consultation with the Lieutenant Governor, the Speaker of the House of Representatives, the Senate Committee on Administration, and the House Committee on Administration, will separately produce a UELMA implementation plan for the Texas Constitution.⁹

Citizens have a right to access accurate, timely, and official versions of the laws that govern them. Most governments require by statute or constitution that the materials be made accessible. See, for example, the Texas Constitution, Article III, Section 43(a), which states, “[t]he Legislature shall provide for revising, digesting and publishing the laws.”¹⁰ Additionally, U.S. legal resources may be either official or unofficial.¹¹ As Barkan, Bintliff, and Whisner explain, “[a]n official publication is one that has been mandated by statute or governmental rule. It might be produced directly by the government, or it might be produced by a commercial entity under contract to the government or by governmental license.”¹² Official legal information is the direct word of the government and the authoritative and legitimate version of the law, which is essential for many actions, including court filings and administrative proceedings.

3 Uniform Electronic Legal Material Act, 86th Leg., R.S., ch. 159, §§1–4 (current version at Tex. Gov’t Code §§2051.151–2051.161), <https://webservices.sos.state.tx.us/legbills/files/RS86/HB402.pdf>.

4 *Id.* §1.

5 *Id.* §4.

6 *Id.* §§2–3.

7 Tex. Gov’t Code §2051.152(3)(B), <https://statutes.capitol.texas.gov/Docs/GV/htm/GV.2051.htm#2051.152>.

8 Uniform Electronic Legal Material Act, 86th Leg., R.S., ch. 159, §2. (current version at Tex. Gov’t Code §§2051.151–2051.161), <https://webservices.sos.state.tx.us/legbills/files/RS86/HB402.pdf>.

9 *Id.* §3.

10 Tex. Const. art. III, §43(a), <https://www.tlc.texas.gov/docs/legref/TxConst.pdf>.

11 STEVEN M. BARKAN, BARBARA A. BINTLIFF & MARY WHISNER, FUNDAMENTALS OF LEGAL RESEARCH 11 (10th ed. 2015).

12 *Id.*

States are increasingly providing the legal information they create in electronic form, vastly expanding public access and decreasing state publishing costs.¹³ Every state in the U.S. has its statutes online, and almost all also have court decisions, administrative regulations, constitutions, and a variety of other legal material on their websites. Many states no longer publish print versions of certain legal material.

Texas is no exception. SOS provides electronic access to both state agency rules and to recent general and special laws.¹⁴ In addition to providing online access to the *Texas Register* and the *Texas Administrative Code*,¹⁵ SOS also continues to publish emergency, proposed, withdrawn, and adopted agency rules in the print *Texas Register*.¹⁶ However, as of the 83rd Legislature, SOS no longer oversees the print publication of session laws in the *General and Special Laws of the State of Texas*.¹⁷ Instead, SOS posts fully accessible Portable Document Format (PDF) files of the session laws on its website for the last two legislative sessions.¹⁸ SOS also permanently preserves the print official copies of rules filed with its office.¹⁹ The official copies of the session laws are bound

13 UNIFORM ELECTRONIC LEGAL MATERIAL ACT prefatory note at 1 (NATIONAL CONFERENCE OF COMMISSIONERS ON UNIFORM STATE LAWS 2011), <https://www.aallnet.org/wp-content/uploads/2018/01/2011Oct-UniformElectronicLegalMaterialAct-Final.pdf>.

14 *State Rules and Open Meetings*, TEXAS SECRETARY OF STATE, <https://www.sos.state.tx.us/texreg/index.shtml> (last visited Jan. 15, 2020); *Bills and Resolutions of the 86th Legislature*, TEXAS SECRETARY OF STATE, <https://webservices.sos.state.tx.us/legbills/index.aspx> (last visited Jan. 15, 2020).

15 SOS's website allows users to browse full issues of the *Texas Register* from the last year as either PDF files of the print publication or in HTML format (designed for webpage viewing). *State Rules and Open Meetings*, TEXAS SECRETARY OF STATE, <https://www.sos.state.tx.us/texreg/index.shtml> (last visited Jan. 15, 2020). Separately, users can search the HTML text of the *Texas Register* from February 2000 to current. *Texas Register Viewer*, TEXAS SECRETARY OF STATE, [https://texreg.sos.state.tx.us/public/regviewctx\\$.startup](https://texreg.sos.state.tx.us/public/regviewctx$.startup) (last visited Jan. 15, 2020). PDF files of older *Texas Registers* (from the first publication in 1976 to the near present) are available from the University of North Texas's Portal to Texas History, which has partnered with SOS to provide for "permanent storage and public access to the non-current electronic files of the Texas state government publication, the *Texas Register*." *Texas Register*, PORTAL TO TEXAS HISTORY, <https://texashistory.unt.edu/explore/collections/TR/> (last visited Jan. 25, 2020). In addition to providing online access to the *Texas Register*, SOS also provides online access to an up-to-date and searchable electronic *Texas Administrative Code*, where rules are codified. *Welcome to the Texas Administrative Code*, TEXAS SECRETARY OF STATE, <https://www.sos.state.tx.us/tac/index.shtml> (last visited Jan. 15, 2020). SOS does not publish a compiled version of the *Texas Administrative Code* in print. *Id.* It is available in print from private sources.

16 Tex. Gov't Code §2002.011, <https://statutes.capitol.texas.gov/Docs/GV/htm/GV.2002.htm#2002.011>.

17 Act of June 28, 2011, 82d Leg., 1st C.S., Ch. 4, §§20.01–20.04 (current version at Tex. Gov't Code §405.014), <https://texashistory.unt.edu/ark:/67531/metaph312462/m1/63/>. Thomson Reuters currently publishes the print volumes of the *General and Special Laws of the State of Texas*.

18 *Bills and Resolutions of the 86th Legislature*, TEXAS SECRETARY OF STATE, <https://webservices.sos.state.tx.us/legbills/index.aspx> (last visited Jan. 15, 2020). Images of the session laws from earlier legislative sessions are available from the University of North Texas's Portal to Texas History, Texas Laws and Resolutions Archive. *Texas Laws and Resolutions Archive*, PORTAL TO TEXAS HISTORY, <https://texashistory.unt.edu/explore/collections/TLRA/> (last visited Jan. 15, 2020). The site was established in partnership with SOS "to ensure permanent storage and public access to the non-current electronic files of the Texas Laws and Resolutions, beginning with the 78th Legislative Session." *Id.* Separately, the Portal to Texas History also provides PDF files of a number of prior volumes of the *General and Special Laws of the State of Texas* from the 81st Legislature (2009) and earlier. *General and Special Laws of Texas*, PORTAL TO TEXAS HISTORY, <https://texashistory.unt.edu/explore/collections/GSLTX/> (last visited Jan. 15, 2020).

19 Tex. Gov't Code §2001.037, <https://statutes.capitol.texas.gov/Docs/GV/htm/GV.2001.htm#2001.037>.

by SOS and ultimately sent to TSLAC for permanent preservation. TSLAC maintains the official original print copies of the session laws. These materials do not circulate but may be used in the State Archives search room. Access to volumes for the 1st Congress through the 18th Legislature (1836-1884) is restricted due to their physical condition. Researchers may use the digital copies of these records.

Providing legal information electronically comes with challenges. Like other types of electronic information, electronic legal material can be vulnerable to unauthorized modification by hackers or inattentive clerks. Electronic legal information may be made inaccessible by changing technology requirements. These are not challenges encountered in the print world, where the printed word is set once the ink meets the page.

To address these issues and allow states to meet their obligation to provide reliable legal information, the Uniform Law Commission drafted the Uniform Electronic Legal Material Act (UELMA) in 2011.²⁰ UELMA provides guidelines to states that are publishing, or will soon publish, their legal material electronically. UELMA's provisions assist states in achieving the outcomes of trustworthy, preserved, and permanently accessible legal material. As of March 2020, 21 states and the District of Columbia have enacted UELMA.²¹

The purpose of UELMA is to provide an outcomes-based set of guidelines to states publishing legal material electronically to ensure that official electronic legal material is authenticated, preserved, and permanently accessible. UELMA does not require the use of specific methods or technologies, and states have taken a number of different approaches to implementing the law.

About the Texas Uniform Electronic Legal Material Act

UELMA requires that Texas provide for the authentication, preservation and security, and permanent accessibility of official legal material in an electronic record. Each of these requirements is described below. UELMA defines "legal material" as the Texas Constitution, the general and special laws of Texas, and state agency rules adopted in accordance with Chapter 2001 of the Texas Government Code (e.g. those rules that have been properly adopted under the requirements of Texas's Administrative Procedure Act).²² Further, the "official publisher" of each of these types of legal material is identified; for the general and special laws and the state agency rules, the official publisher is SOS.²³

Under UELMA, if the official publisher publishes legal material only electronically, the electronic legal material must be designated as official and the official publisher must meet the outcomes

20 UNIFORM ELECTRONIC LEGAL MATERIAL ACT (NATIONAL CONFERENCE OF COMMISSIONERS ON UNIFORM STATE LAWS 2011), <https://www.aallnet.org/wp-content/uploads/2018/01/2011Oct-UniformElectronicLegalMaterialAct-Final.pdf>.

21 *Electronic Legal Material Act*, UNIFORM LAW COMMISSION, <https://www.uniformlaws.org/committees/community-home?CommunityKey=02061119-7070-4806-8841-d36afc18ff21> (last visited Mar. 18, 2020).

22 Tex. Gov't Code §2051.152(2), <https://statutes.capitol.texas.gov/Docs/GV/htm/GV.2051.htm#2051.152>.

23 *Id.* §2051.152(3)(B).

described to comply with UELMA's authentication, preservation and security, and permanent accessibility provisions.²⁴ If the official publisher publishes legal material both electronically and in another format (most likely print), even if the non-electronic version is designated as official, the electronic version may also be designated as official if the official publisher complies with UELMA.²⁵

Authentication

The purpose of UELMA's authentication requirement is to assure users that the official electronic legal material they are consulting is trustworthy and that the electronic text has not been changed since its publication. Electronic legal material should be as trusted as print legal material. Providing a method to ensure electronic legal material is authentic is important because electronic information is vulnerable to alteration as it is transferred between computers and servers.²⁶

Section 2051.155(b) of the Texas Government Code addresses authentication, defining it as "a method with which a person viewing the electronic record is able to determine that the electronic record is unaltered from the official record published by the official publisher."²⁷ In its most basic sense, this means that someone using official Texas electronic legal information should be able to tell immediately if there has been any alteration of the legal material. This is done by sending an automated request to the state server that provides the information, using a system provided by the state. The state server's response assures the user that the legal material is authentic or notifies the user to be wary in using the information. As described below, this should be accomplished in a straightforward manner requiring no more than one or two mouse clicks.²⁸

Legal material in an electronic record authenticated under Section 2051.155 is presumed to be an accurate copy of the document.²⁹

Preservation and Security

The preservation and security of legal material is of critical importance. Reference to the law may guide and inform a huge range of issues including individual and group rights, property ownership, a child's parentage, inheritance rights, and even personal liberty. Legal material must be consulted for citizens to understand their rights and responsibilities. Even historical legal information remains important, despite subsequent amendment, repeal, renumbering, or other

24 *Id.* §2051.154(a), <https://statutes.capitol.texas.gov/Docs/GV/htm/GV.2051.htm#2051.154>.

25 *Id.* §2051.154(b).

26 UNIFORM ELECTRONIC LEGAL MATERIAL ACT prefatory note at 1 (NATIONAL CONFERENCE OF COMMISSIONERS ON UNIFORM STATE LAWS 2011), <https://www.aallnet.org/wp-content/uploads/2018/01/2011Oct-UniformElectronicLegalMaterialAct-Final.pdf>.

27 Tex. Gov't Code §2051.155(b), <https://statutes.capitol.texas.gov/Docs/GV/htm/GV.2051.htm#2051.155>.

28 One example of a straightforward approach to authentication is the Government Publishing Office's method of authenticating PDFs using Adobe. GPO provides a helpful explanation of this method on <https://www.govinfo.gov/about/authentication>.

29 Tex. Gov't Code §2051.156, <https://statutes.capitol.texas.gov/Docs/GV/htm/GV.2051.htm#2051.156>.

changes.³⁰ Historical legal material must be consulted to determine the legitimacy of actions taken when that material was in effect. Legal material must be securely preserved, and UELMA provides guidelines for the secure preservation of electronic legal material that is currently, or was previously, designated as official.

UELMA provides that states must ensure long-term preservation and security of official electronic legal material to prevent changing technologies from rendering older electronic versions inaccessible.³¹ Preservation may be in an electronic format or in print.³² If the official publisher of official electronic legal material chooses to preserve the legal material electronically, UELMA requires that “the official publisher shall:

- (1) ensure the integrity of the record;
- (2) provide for backup and disaster recovery of the record; and
- (3) ensure the continuing usability of the legal material in the record.”³³

Permanent Public Access

Permanent public access to legal information is critical to ensuring an informed public and preserving the democratic process.³⁴ Citizens must know what the law is to adhere to its provisions. UELMA addresses permanent accessibility, stating that the official publisher must ensure that legal material in an official electronic record “is reasonably available for use by the public on a permanent basis.”³⁵ The implementation plan below will describe the current systems already in place for permanent public access to the general and special laws and agency rules and will discuss how the official publisher, SOS, partners with TSLAC to ensure that public access is maintained and extended in the future.

30 UNIFORM ELECTRONIC LEGAL MATERIAL ACT §8 cmt. at 15 (NATIONAL CONFERENCE OF COMMISSIONERS ON UNIFORM STATE LAWS 2011), <https://www.aallnet.org/wp-content/uploads/2018/01/2011Oct-UniformElectronicLegalMaterialAct-Final.pdf>.

31 Tex. Gov’t Code §2051.157, <https://statutes.capitol.texas.gov/Docs/GV/htm/GV.2051.htm#2051.157>.

32 *Id.* §2051.157(a).

33 *Id.* §2051.157(b).

34 UNIFORM ELECTRONIC LEGAL MATERIAL ACT §8 cmt. at 15 (NATIONAL CONFERENCE OF COMMISSIONERS ON UNIFORM STATE LAWS 2011), <https://www.aallnet.org/wp-content/uploads/2018/01/2011Oct-UniformElectronicLegalMaterialAct-Final.pdf>.

35 Tex. Gov’t Code §2051.158, <https://statutes.capitol.texas.gov/Docs/GV/htm/GV.2051.htm#2051.158>.

Part II: The Implementation Plan

House Bill 402 requires development of a UELMA implementation plan that provides strategies for the authentication, preservation, and permanent public accessibility for each type of legal material covered by the act and establishment of a timeline for compliance.³⁶ For the legal material for which SOS is designated the official publisher—the general and special laws and state agency rules—the Texas State Library and Archives Commission is jointly responsible with SOS for the development of an implementation plan.³⁷ The plan may be phased in over time.³⁸ TSLAC must provide the implementation plan to the legislature not later than September 1, 2020.³⁹

Currently, UELMA does not apply to either the general and special laws or state agency rules as the state has not declared the electronic copy of either to be official. The official version of the state agency rules is the print copies on file with SOS. The official version of the general and special laws is the paper copies of the legislative bills and resolutions that are bound for permanent retention by SOS and held in a publicly accessible manner by TSLAC.⁴⁰ Given these circumstances, a timeline for implementation should be developed by the publisher when the status of the materials changes. As a result, this report will provide background information relevant to future implementation of UELMA as related to these legal materials. Further, the report will describe SOS’s plan to voluntarily authenticate the electronic copy of the general and special laws posted on its website as a courtesy, and to support the electronic preservation of the general and special laws.

Texas does not currently authenticate electronic legal material. Therefore, to fully implement UELMA in the future, an authentication method for official electronic legal material must be identified. Texas has robust structures in place to facilitate compliance with UELMA’s requirements for preservation and security and permanent public access. When necessary, these methods can be employed and adapted to satisfy the requirements of UELMA. Because SOS and TSLAC plan to voluntarily alter their practices regarding the authentication and preservation of general and special laws to better mirror the provisions of UELMA, this report will provide detailed information about current and recommended practices for authenticating and preserving the general and special laws. Agency rules are also briefly addressed at the end of this report.

36 Uniform Electronic Legal Material Act, 86th Leg., R.S., ch. 159, §§2–3, 2019 (current version at Tex. Gov’t Code §§2051.151–2051.161), <https://webservices.sos.state.tx.us/legbills/files/RS86/HB402.pdf>.

37 *Id.* §2(b).

38 *Id.* §2(c).

39 *Id.* §2(d).

40 TSLAC maintains the official original print copies of the session laws. These materials do not circulate but may be used in the State Archives search room. Access to volumes for the 1st Congress through the 18th Legislature (1836-1884) is restricted due to their physical condition. Researchers may use the digital copies of these records.

A. Implementation Factors

The Texas UELMA requires that SOS consider the following factors in implementing the statute:

- “(1) the standards and practices of other jurisdictions;
- (2) the most recent standards regarding authentication, preservation, and security of and public access to legal material in an electronic record and other electronic records, as adopted by national standards-setting bodies;
- (3) the needs of users of legal material in electronic records;
- (4) the views of governmental officials and entities and other interested persons; and
- (5) to the extent practicable, the methods and technologies for the authentication, preservation, and security of and public access to legal material that are compatible with the methods and technologies used by official publishers in other states that have adopted a law that is substantially similar to this subchapter.”⁴¹

In light of the existing preservation and security and permanent public access practices of TSLAC and TSLAC’s partnership with SOS on the relevant legal material, the following discussion of the implementation factors will focus on authentication.

Authentication

(1) Standards and Practices of Other Jurisdictions

There are two main ways other jurisdictions and entities approach authentication of electronic information: digital signatures and free and low-cost solutions.

Digital Signatures. A common approach to authentication is the use of a digital signature that uses both public and private electronic “keys” to establish authenticity of a document in PDF, DOC, or XML format.⁴² Adobe is a widely recognized supplier of digital signature software. A digital signature is created using a hash algorithm.⁴³ A hash algorithm is a calculation made by a software program that identifies and analyzes a digital document and produces a series of unique letters and numbers associated with that document.⁴⁴ This series of letters and numbers

41 Tex. Gov’t Code §2051.159, <https://statutes.capitol.texas.gov/Docs/GV/htm/GV.2051.htm#2051.159>.

42 Anna Russell & Jane Larrington, *Authenticating the John Hancock of Online Primary Legal Materials: The Technical and Policy Concerns at Play*, AALL SPECTRUM, June 2013, at 17–18, https://www.researchgate.net/publication/260364335_Authenticating_the_John_Hancock_of_Online_Primary_Legal_Materials. The article by Russell and Larrington provides information about digital signatures in the context of UELMA.

43 JASON ANDRESS, *THE BASICS OF INFORMATION SECURITY: UNDERSTANDING THE FUNDAMENTALS OF INFOSEC IN THEORY AND PRACTICE* 80 (2d ed. 2014), <https://doi.org/10.1016/B978-0-12-800744-0.00005-1>.

44 Anna Russell & Jane Larrington, *Authenticating the John Hancock of Online Primary Legal Materials: The Technical and Policy Concerns at Play*, AALL SPECTRUM, June 2013, at 18, https://www.researchgate.net/publication/260364335_Authenticating_the_John_Hancock_of_Online_Primary_Legal_Materials.

is referred to as a “hash digest.”⁴⁵ Two associated “keys” are also used in this process, a public key and a private key.⁴⁶ The digital signature is created by using the private key to encrypt the hash digest, linking them together.⁴⁷ The private key is secured and never shared.⁴⁸

The digital signature can only be decrypted using the associated public key.⁴⁹ The public key is openly available⁵⁰ and is typically included with the electronic document.⁵¹ Signature validation usually happens automatically or with only the click of a mouse.⁵² As part of signature validation, the public key is compared to the private key.⁵³ If the public and private key are compatible, the hash algorithm re-checks the document to make sure it is unchanged and still has the same hash digest.⁵⁴ Even a very small change to the document will result in a different hash digest.⁵⁵

The public key and the private key will only be compatible and decrypt the digital signature if the hash digest is unchanged, meaning there are no changes to the document. If the keys are compatible, the digital signature is decrypted.⁵⁶ By successfully decrypting the digital signature and comparing the hash digests, the recipient receives assurance that the document did in fact come from the organization and its content is unchanged.⁵⁷

45 *Id.*

46 JASON ANDRESS, *THE BASICS OF INFORMATION SECURITY: UNDERSTANDING THE FUNDAMENTALS OF INFOSEC IN THEORY AND PRACTICE* 80 (2d ed. 2014), <https://doi.org/10.1016/B978-0-12-800744-0.00005-1>.

47 *Id.*

48 *Security Tip (ST04-018): Understanding Digital Signatures*, CYBERSECURITY AND INFRASTRUCTURE SECURITY AGENCY (Nov. 14, 2019), <https://www.us-cert.gov/ncas/tips/ST04-018>.

49 JASON ANDRESS, *THE BASICS OF INFORMATION SECURITY: UNDERSTANDING THE FUNDAMENTALS OF INFOSEC IN THEORY AND PRACTICE* 80 (2d ed. 2014), <https://doi.org/10.1016/B978-0-12-800744-0.00005-1>.

50 *Security Tip (ST04-018): Understanding Digital Signatures*, CYBERSECURITY AND INFRASTRUCTURE SECURITY AGENCY (Nov. 14, 2019), <https://www.us-cert.gov/ncas/tips/ST04-018>.

51 Anna Russell & Jane Larrington, *Authenticating the John Hancock of Online Primary Legal Materials: The Technical and Policy Concerns at Play*, AALL SPECTRUM, June 2013, at 18, https://www.researchgate.net/publication/260364335_Authenticating_the_John_Hancock_of_Online_Primary_Legal_Materials.

52 *Validating Digital Signatures*, ADOBE (June 5, 2020), <https://helpx.adobe.com/ca/acrobat/using/validating-digital-signatures.html>.

53 JASON ANDRESS, *THE BASICS OF INFORMATION SECURITY: UNDERSTANDING THE FUNDAMENTALS OF INFOSEC IN THEORY AND PRACTICE* 80 (2d ed. 2014), <https://doi.org/10.1016/B978-0-12-800744-0.00005-1>.

54 *Id.*

55 Anna Russell & Jane Larrington, *Authenticating the John Hancock of Online Primary Legal Materials: The Technical and Policy Concerns at Play*, AALL SPECTRUM, June 2013, at 18, https://www.researchgate.net/publication/260364335_Authenticating_the_John_Hancock_of_Online_Primary_Legal_Materials.

56 JASON ANDRESS, *THE BASICS OF INFORMATION SECURITY: UNDERSTANDING THE FUNDAMENTALS OF INFOSEC IN THEORY AND PRACTICE* 80 (2d ed. 2014), <https://doi.org/10.1016/B978-0-12-800744-0.00005-1>.

57 *Id.*

To keep digital signatures secure, most entities using digital signatures depend on a trusted third party to handle the process. These third parties may be within the same organization or may be a separate, commercial company (such as Entrust, DigiCert, and GlobalSign).⁵⁸ These third parties, referred to as Certificate Authorities (CAs), add another layer of security. CAs verify the identity of the document's source by affixing a digital certificate with additional, embedded authentication data.⁵⁹ The data in the certificate typically includes the certificate authority's name, the public key, the document's hash digest, and the period for which the certificate is valid.⁶⁰

Adobe works with several pre-approved CAs to facilitate digital signature validation.⁶¹ Several states that have implemented UELMA, including California, Colorado, and Illinois, use Adobe and a commercial CA to authenticate their legal material using digital signatures.⁶² The U.S. Government Publishing Office (GPO) also authenticates documents using Adobe and commercial CAs.⁶³

Free and Low-Cost Software. Free and low-cost software, including in-house developed solutions, provide for cost-effective authentication. Open Law Platform is a software system for publishing legal information that meets UELMA specifications.⁶⁴ The nonprofit Open Law Library created and maintains Open Law Platform, and the software is currently used by Washington, D.C., to publish legal material under UELMA.⁶⁵ Open Law Library offers both bulk authentication

58 Anna Russell & Jane Larrington, *Authenticating the John Hancock of Online Primary Legal Materials: The Technical and Policy Concerns at Play*, AALL SPECTRUM, June 2013, at 17, https://www.researchgate.net/publication/260364335_Authenticating_the_John_Hancock_of_Online_Primary_Legal_Materials; *Learn about Certified Document Services*, ADOBE (Oct. 31, 2018), <https://helpx.adobe.com/acrobat/kb/certified-document-services.html>.

59 Anna Russell & Jane Larrington, *Authenticating the John Hancock of Online Primary Legal Materials: The Technical and Policy Concerns at Play*, AALL SPECTRUM, June 2013, at 18, https://www.researchgate.net/publication/260364335_Authenticating_the_John_Hancock_of_Online_Primary_Legal_Materials.

60 *Id.*

61 *Learn about Certified Document Services*, ADOBE (Oct. 31, 2018), <https://helpx.adobe.com/acrobat/kb/certified-document-services.html>; *Adobe Approved Trust List*, ADOBE, <https://helpx.adobe.com/acrobat/kb/approved-trust-list2.html> (last visited Jan. 19, 2020).

62 Documents authenticated using a digital signature and a commercial CA will indicate which CA was used when the document is opened in Adobe. California, Colorado, and Illinois all use Entrust.

63 *Authentication*, GOVINFO.GOV, <https://www.govinfo.gov/about/authentication> (last visited Jan. 26, 2020). The federal government's broader system of authentication is complex and includes the federal government itself acting as a certification authority. *E.g.*, *Certification Authorities*, FEDERAL PUBLIC KEY INFRASTRUCTURE GUIDES, <https://fpki.idmanagement.gov/ca/> (last visited Jan. 26, 2020).

64 VINCENT CHUANG & DAVID GREISEN, OPEN LAW LIBRARY, A DIGITAL PUBLICATION AND ARCHIVAL PLATFORM FOR LEGAL DOCUMENTS 2 (2018), <http://www.openlawlib.org/files/UELMA-Open-Law-White-Paper.pdf>.

65 *Id.* at 1–2. Information about Open Law Platform and about Open Law Library's work with the Washington, D.C. Council may be found on Open Law Library's website. OPEN LAW LIBRARY, <http://www.openlawlib.org/> (last visited Jan. 16, 2020). Open Law Library may be contacted at info@openlawlib.org or (858) 412-0530.

(or “archival authentication” of, for example, an entire code) and the authentication of particular documents (“transient authentication,” the focus of this implementation plan).⁶⁶

Data Seal, which was developed by U.S. Open Data, is free software that complies with UELMA, using a drag-and-drop interface.⁶⁷

States may also choose the option of developing their own approach to authenticating documents. In Minnesota, which developed a UELMA-compliant software program, a user uploads a document onto the secure Office of the Revisor of Statutes’ website to check its hash against that of the document stored in the revisor’s database.⁶⁸ Utah similarly facilitates the authentication of electronic legal material using hash comparison.⁶⁹

(2) Most Recent Standards

In Texas, multiple state laws and regulations address the use of electronic records and digital signatures by state agencies. The Texas Government Code addresses the use of digital signatures.⁷⁰ Section 2054.060 of the Government Code states that digital signatures may be used to authenticate written electronic communications sent to a state agency if the agency complies with relevant rules adopted by the Texas Department of Information Resources (DIR).⁷¹ Additionally, the Texas Business and Commerce Code addresses the acceptance and distribution of electronic records by government agencies.⁷² In particular, section 322.017 of the Business and Commerce Code states that, subject to record retention laws, each state agency must determine whether and to what extent the agency will send, accept, and otherwise use electronic records

66 VINCENT CHUANG & DAVID GREISEN, OPEN LAW LIBRARY, A DIGITAL PUBLICATION AND ARCHIVAL PLATFORM FOR LEGAL DOCUMENTS 6–8 (2018), <http://www.openlawlib.org/files/UELMA-Open-Law-White-Paper.pdf>.

67 DATA SEAL: MAKING UELMA COMPLIANCE TRIVIAL, <http://dataseal.org/> (last visited Jan. 16, 2020). U.S. Open Data is no longer an active organization. U.S. OPEN DATA, <https://usopendata.org/> (last visited June 18, 2020); *Concluding U.S. Open Data*, U.S. OPEN DATA, <https://usopendata.org/2016/06/16/sunset/> (last visited June 18, 2020). It was created as a temporary organization funded by the Shuttleworth Foundation, the Knight Foundation, and the Alfred P. Sloan Foundation. *Id.* Dataseal.org provides limited information about the free, open source software. Data Seal may be downloaded for free from GitHub: <https://github.com/unitedstates/data-seal/>. Additionally, Silicon Valley Software Group provides paid Data Seal hosting: <https://svsg.co/data-seal/>.

68 OFFICE OF THE REVISOR OF STATUTES, MINNESOTA LEGISLATURE, PROTOTYPE FOR AUTHENTICATION OF OFFICIAL ELECTRONIC RECORD AND PRICING (2012), https://www.revisor.mn.gov/revisor/pubs/Minnesota_Authentication_Prototype.pdf.

69 Melissa J. Bernstein, Utah Legislature Enacts UELMA, UTAH B. J., Nov.–Dec., at 26, https://www.utahbar.org/wp-content/uploads/2018/11/Nov_Dec_2018_FINAL.pdf; *Utah Provides Authentication of Administrative Rules Publications*, UTAH OFFICE OF ADMINISTRATIVE RULES (Sep. 17, 2007), <https://rules.utah.gov/rulesnews/2007/09/17/utah-provides-authentication-of-administrative-rules-publications/>.

70 Tex. Gov’t Code §2054.060, <https://statutes.capitol.texas.gov/Docs/GV/htm/GV.2054.htm#2054.060>.

71 *Id.* §2054.060(a).

72 Tex. Bus. & Com. Code §322.017, <https://statutes.capitol.texas.gov/Docs/BC/htm/BC.322.htm#322.017>.

and electronic signatures.⁷³ The section further authorizes DIR and TSLAC to establish specific requirements for the use of electronic records and electronic signatures by state agencies.⁷⁴

DIR has issued rules regarding state agency use of electronic transactions and signed records.⁷⁵ These rules in part describe the Guidelines for the Management of Electronic Transactions and Signed Records, which were created pursuant to Section 322.017 of the Texas Business and Commerce Code by the Uniform Electronic Transactions Act Task Force, a group that was formed by DIR and TSLAC.⁷⁶ The guidelines were created in 2004 and may be accessed on the DIR website.⁷⁷ They address the use of electronic signatures generally as well as digital signatures specifically, which the guidelines define as “a particular type of electronic signature that is created by cryptographic means involving the use of two mathematically related keys.”⁷⁸

The DIR rules specifically address the acceptance of digital signatures by state agencies.⁷⁹ The rules also delineate acceptable digital signature technologies and require that a digital signature be created by technology authorized as acceptable by DIR.⁸⁰ Currently, the only digital signature technology on the list of acceptable technologies is public-key cryptography.⁸¹ The department has detailed requirements for acceptable public-key cryptography technology, including that the digital signature must be unique to the person using it, that it be computationally infeasible to determine the private key based on the public key, and that it be computationally infeasible to alter the data of the message or digital signature without rendering the digital signature invalid.⁸² The department’s rules also specify how new technologies can be added to the List of Acceptable Technologies.⁸³ The rules further state that the department will maintain an “Approved List of PKI

73 *Id.* §322.017(a).

74 *Id.* §322.017(b).

75 1 TAC §§203.20–203.27 (Dep’t of Info. Res., State Agency Use of Electronic Transactions and Signed Records), [https://texreg.sos.state.tx.us/public/readtac\\$ext.ViewTAC?tac_view=5&ti=1&pt=10&ch=203&sch=B&rl=Y](https://texreg.sos.state.tx.us/public/readtac$ext.ViewTAC?tac_view=5&ti=1&pt=10&ch=203&sch=B&rl=Y).

76 1 TAC §203.20 (Dep’t of Info. Res., Guidelines), [https://texreg.sos.state.tx.us/public/readtac\\$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=1&pt=10&ch=203&rl=20](https://texreg.sos.state.tx.us/public/readtac$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=1&pt=10&ch=203&rl=20); 1 Tex. Admin. Code §203.22 (Dep’t of Info. Res., Contents), [https://texreg.sos.state.tx.us/public/readtac\\$ext.TacPage?sl=T&app=9&p_dir=N&p_rloc=174483&p_tloc=&p_ploc=1&pg=2&p_tac=&ti=1&pt=10&ch=203&rl=20](https://texreg.sos.state.tx.us/public/readtac$ext.TacPage?sl=T&app=9&p_dir=N&p_rloc=174483&p_tloc=&p_ploc=1&pg=2&p_tac=&ti=1&pt=10&ch=203&rl=20).

77 UETA TASK FORCE, GUIDELINES FOR THE MANAGEMENT OF ELECTRONIC TRANSACTIONS AND SIGNED RECORDS (2004), [https://pubext.dir.texas.gov/portal/internal/resources/DocumentLibrary/Texas%20Uniform%20Electronic%20Transactions%20Act%20\(UETA\)%20Guidelines.pdf](https://pubext.dir.texas.gov/portal/internal/resources/DocumentLibrary/Texas%20Uniform%20Electronic%20Transactions%20Act%20(UETA)%20Guidelines.pdf).

78 *Id.*

79 1 TAC §203.23 (Dep’t of Info. Res., Digital Signatures), [https://texreg.sos.state.tx.us/public/readtac\\$ext.TacPage?sl=T&app=9&p_dir=N&p_rloc=174484&p_tloc=&p_ploc=1&pg=3&p_tac=&ti=1&pt=10&ch=203&rl=20](https://texreg.sos.state.tx.us/public/readtac$ext.TacPage?sl=T&app=9&p_dir=N&p_rloc=174484&p_tloc=&p_ploc=1&pg=3&p_tac=&ti=1&pt=10&ch=203&rl=20).

80 1 TAC §203.24 (Dep’t of Info. Res., Acceptable Digital Signature Technology).

81 *Id.*

82 *Id.*

83 1 TAC §203.27 (Dep’t of Info. Res., Adding New Technologies), [https://texreg.sos.state.tx.us/public/readtac\\$ext.TacPage?sl=T&app=9&p_dir=N&p_rloc=160929&p_tloc=&p_ploc=1&pg=6&p_tac=&ti=1&pt=10&ch=203&rl=20](https://texreg.sos.state.tx.us/public/readtac$ext.TacPage?sl=T&app=9&p_dir=N&p_rloc=160929&p_tloc=&p_ploc=1&pg=6&p_tac=&ti=1&pt=10&ch=203&rl=20).

Service Providers” that are “authorized to issue certificates for digitally signed communications sent to state agencies or otherwise provide services in connection with the issuance of certificates.”⁸⁴ The DIR Approved List of PKI Service Providers is available on the DIR website.⁸⁵

There are a number of other standards that relate to document authentication. For example, the Organization for the Advancement of Structured Information Standards (OASIS) has published standards relevant to authentication, particularly Digital Signature Service Core Protocols, Elements, and Bindings Version 1.0, which addresses digital signatures in the context of XML documents.⁸⁶ Further, the International Organization for Standardization (ISO) in conjunction with the International Electrotechnical Commission (IEC) provides standards related to authentication,⁸⁷ such as ISO/IEC 9798-3:2019 (IT Security Techniques — Entity Authentication — Part 3: Mechanisms Using Digital Signature Techniques), which describes authentication systems using digital signatures.⁸⁸

The U.S. federal government’s National Institute of Standards and Technology (NIST), which is part of the U.S. Department of Commerce, has published a number of standards relevant to authentication practices.⁸⁹ For example, Federal Information Processing Standard 186-4 (FIPS 186-4) Digital Signature Standard (DSS), which is currently in the process of being updated,⁹⁰ defines permissible methods of creating, verifying, and validating digital signatures.⁹¹ The standard applies specifically to federal departments and agencies and the publication also

84 1 TAC §203.25 (Dep’t of Info. Res., Acceptable PKI Service Providers), [https://texreg.sos.state.tx.us/public/readtac\\$ext.TacPage?sl=T&app=9&p_dir=P&p_rloc=117770&p_tloc=&p_ploc=1&pg=7&p_tac=&ti=1&pt=10&ch=203&rl=20](https://texreg.sos.state.tx.us/public/readtac$ext.TacPage?sl=T&app=9&p_dir=P&p_rloc=117770&p_tloc=&p_ploc=1&pg=7&p_tac=&ti=1&pt=10&ch=203&rl=20).

85 *Resources*, DEPARTMENT OF INFORMATION RESOURCES, <https://dir.texas.gov/View-Resources/Landing.aspx> (last visited Mar. 17, 2020).

86 OASIS, DIGITAL SIGNATURE SERVICE CORE PROTOCOLS, ELEMENTS, AND BINDINGS VERSION 1.0 (April 11, 2007), <http://docs.oasis-open.org/dss/v1.0/oasis-dss-core-spec-v1.0-os.pdf>. The main standards table also provides access to separate documents related to the standard. *Standards*, OASIS, <https://www.oasis-open.org/standards#dssv1.0> (last visited Jan. 25, 2020).

87 *Standards by ISO/IEC JTC 1/SC 27 Information Security, Cybersecurity and Privacy Protection*, INTERNATIONAL ORGANIZATION FOR STANDARDIZATION, <https://www.iso.org/committee/45306/x/catalogue/p/1/u/0/w/0/d/0> (last visited Jan. 25, 2020).

88 *ISO/IEC 9798-3:2019 IT Security Techniques — Entity Authentication — Part 3: Mechanisms Using Digital Signature Techniques*, INTERNATIONAL ORGANIZATION FOR STANDARDIZATION, <https://www.iso.org/standard/67115.html> (last visited June 18, 2020).

89 *E.g., Cryptographic Standards and Guidelines*, NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY, <https://csrc.nist.gov/projects/cryptographic-standards-and-guidelines> (last updated Oct. 15, 2019).

90 FIPS 1860-5 (Draft) Digital Signature Standard (DSS), NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY (Oct. 2019) <https://csrc.nist.gov/publications/detail/fips/186/5/draft>.

91 INFORMATION TECHNOLOGY LABORATORY, NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY, FEDERAL INFORMATION PROCESSING STANDARDS PUBLICATION 186-4 (FIPS PUB 186-4) 1 (July 2013), <http://dx.doi.org/10.6028/NIST.FIPS.186-4>.

states that “[t]he adoption and use of this Standard is available to private and commercial organizations.”⁹²

(3) Needs of Users

TSLAC has extensive experience in creating and offering information services that meet the needs of Texas citizens. In developing a new service, TSLAC has a range of criteria that are considered, including authoritativeness of the creator/author, authenticity and verifiability of source information, availability of information in a variety of formats and through multiple access points, compliance with ADA accessibility standards in the display of information, ease of access and use for all user levels, and the availability of free information to all users. TSLAC will be involved in the development stage by providing input regarding search and display functionality and in assessing the user experience, relevant documentation, and instructions as necessary.

(4) Views of Government Officials and Entities and Others

To meet UELMA’s specification that SOS and TSLAC consider the views of other government entities, SOS and TSLAC will solicit the feedback of the Records Management Interagency Coordinating Council (RMICC) and the Texas Historical Records Advisory Board (THRAB). RMICC was created in 1995 as part of TSLAC’s Sunset reauthorization to oversee and coordinate records management activities in the state.⁹³ THRAB was established by Governor Dolph Briscoe in 1976 and facilitates funding for archives and records management programs and works to support and improve archival and records storage in Texas.⁹⁴

(5) Methods and Technologies Used in Other States

Digital Signatures. Most of the states that have implemented UELMA,⁹⁵ including California, Colorado, and Illinois, use Adobe and a commercial CA to authenticate their legal material using digital signatures. As a result, it is an accepted and well-understood means of authenticating legal material. The U.S. Government Publishing Office (GPO) also authenticates documents using Adobe and commercial CAs.

92 *Id.* at ii.

93 *About RMICC*, RECORDS MANAGEMENT INTERAGENCY COORDINATING COUNCIL, <https://rmicc.state.tx.us/about.html> (last visited Jan. 17, 2020).

94 *About THRAB*, TEXAS HISTORICAL RECORDS ADVISORY BOARD, <https://www.tsl.texas.gov/thrab> (last visited Jan. 17, 2020).

95 A number of states have enacted the law, but have not yet implemented it.

Free and Low-Cost Software. Minnesota and Utah have developed in-house software solutions to UELMA compliance.⁹⁶ Other free or low-cost options include Data Seal from U.S. Open Data and Open Law Platform from Open Law Library.⁹⁷

Preservation and Security

TSLAC has robust policies and procedures in place to ensure the continued preservation and security of both the hard-copy and digital records it holds in trust for Texas. Hard-copy (print) records are stored in a secure, environmentally controlled storage environment at the Lorenzo de Zavala State Archives and Library Building and electronic records are maintained in the Texas Digital Archive (TDA).

The digital preservation platform used by TSLAC is based on the International Organization for Standards (ISO) 14721 standard for an open archival information system (OAIS) and provides for accessible, trustworthy, and lasting preservation. Preservation systems frequently rely on the ISO 14721 model as a foundation for their activities.⁹⁸

Records in the TDA are stored in a digital preservation and access system in the Amazon Web Services (AWS) Government Cloud. Digital records in the TDA are encrypted while they are being transferred to and stored in the AWS Government Cloud repository. When added to the TDA, all objects are assigned a checksum, a unique sequence of numbers and letters that is used to check the document for errors (current TSLAC policy uses SHA-256). The system periodically monitors checksums throughout the repository to ensure that files have not changed over time; a change to the document will affect its checksum and trigger a notification.

All objects in the TDA are also assigned an individual identification number (a “persistent unique identifier” or PUI) that allows every record to be tracked and accessed down to the file level. As records are uploaded into the repository, security tags are applied that identify if the record is immediately available for public access or if permission is required for access. For added security only a copy of a file is pushed out to the public website. The preservation master copy (the original file) is never accessible to the end user.

96 OFFICE OF THE REVISOR OF STATUTES, MINNESOTA LEGISLATURE, PROTOTYPE FOR AUTHENTICATION OF OFFICIAL ELECTRONIC RECORD AND PRICING (2012), https://www.revisor.mn.gov/revisor/pubs/Minnesota_Authentication_Prototype.pdf; Melissa J. Bernstein, *Utah Legislature Enacts UELMA*, UTAH B. J., Nov.–Dec., at 26, https://www.utahbar.org/wp-content/uploads/2018/11/Nov_Dec_2018_FINAL.pdf; *Utah Provides Authentication of Administrative Rules Publications*, UTAH OFFICE OF ADMINISTRATIVE RULES (Sep. 17, 2007), <https://rules.utah.gov/rulesnews/2007/09/17/utah-provides-authentication-of-administrative-rules-publications/>.

97 DATA SEAL: MAKING UELMA COMPLIANCE TRIVIAL, <http://dataseal.org/> (last visited Jan. 16, 2020); *Open Law Platform: From Start to Finish, the Tools You Need to Succeed*, OPEN LAW LIBRARY, <http://www.openlawlib.org/platform/> (last visited June 18, 2020).

98 LEAH PRESCOTT ET AL., UELMA PRESERVATION GROUP, PRESERVATION OF ELECTRONIC LEGAL MATERIALS 4 (2018), <https://www.aallnet.org/wp-content/uploads/2018/04/Preservation-of-Electronic-Legal-Materials-White-Paper.pdf>; ISO 14721:2012 *Space Data and Information Transfer Systems — Open Archival Information System (OAIS) — Reference Model*, INTERNATIONAL ORGANIZATION FOR STANDARDIZATION, <https://www.iso.org/standard/57284.html> (last visited Feb. 2, 2020).

TSLAC has a set of detailed transfer procedures for electronic records. The process for transferring records from SOS requires that the records be submitted in an agreed-upon format (typically as a PDF) and that a checksum be applied immediately to each file. An inventory, or manifest, of what is contained in the transfer (including number of files, date span covered, and folder structure, if applicable) accompanies each transfer. TDA staff verify checksums to monitor the integrity of the transfer process. After successful checksum validation the records are included in the TDA.

Taken together, these procedures and practices provide a highly secure environment for Texas' digital records, including those transferred to the TDA from SOS. Any records implicated by UELMA and handled by TSLAC and the TDA are provided with multiple and enhanced levels of security. In addition, the TDA is well-acquainted with the preservation of digital records as is TSLAC for the preservation of hard-copy materials. All requirements of UELMA are already met by existing practices.

Texas has a number of laws and regulations that impact state records preservation and security practices.⁹⁹ For example, in regard to electronic preservation and security, TSLAC has adopted rules regarding standards and procedures for the management of electronic records.¹⁰⁰ These rules “establish minimum standards and procedures for the creation, protection, maintenance, retention, storage, disposition, and preservation of electronic state records as part of the records management program required in state agencies by Texas Government Code §441.183.”¹⁰¹ Among minimum requirements for electronic state records are technological components that support preservation, access, and readability or provide for extraction or migration, and that follow the security requirements of Title 1, Chapter 202 of the Texas Administrative Code regarding security programs.¹⁰² TSLAC provides a list of supplemental resources to support state agencies' fulfillment of minimum electronic records requirements.¹⁰³ The list includes resources addressing security and long-term digital preservation.¹⁰⁴

Other states that have enacted UELMA, and the federal government, use a variety of methods to preserve and make their legal material secure. A 2018 report by the UELMA Preservation Group

99 *Records Management Publications*, TEXAS STATE LIBRARY AND ARCHIVES COMMISSION, <https://www.tsl.texas.gov/slrmpubs> (last visited Mar. 17, 2020).

100 13 TAC §§6.91–6.98 (Dep't of Info. Res., Standards and Procedures for Management of Electronic Records), [https://texreg.sos.state.tx.us/public/readtac\\$ext.ViewTAC?tac_view=5&ti=13&pt=1&ch=6&sch=C&rl=Y](https://texreg.sos.state.tx.us/public/readtac$ext.ViewTAC?tac_view=5&ti=13&pt=1&ch=6&sch=C&rl=Y).

101 13 TAC §6.91(b) (Dep't of Info. Res., General Provisions), [https://texreg.sos.state.tx.us/public/readtac\\$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=13&pt=1&ch=6&rl=91](https://texreg.sos.state.tx.us/public/readtac$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=13&pt=1&ch=6&rl=91).

102 13 TAC §6.94 (Dep't of Info. Res., Minimum Requirements for all Electronic State Records), [https://texreg.sos.state.tx.us/public/readtac\\$ext.TacPage?sl=T&app=9&p_dir=N&p_rloc=185255&p_tloc=&p_ploc=1&pg=4&p_tac=&ti=13&pt=1&ch=6&rl=91](https://texreg.sos.state.tx.us/public/readtac$ext.TacPage?sl=T&app=9&p_dir=N&p_rloc=185255&p_tloc=&p_ploc=1&pg=4&p_tac=&ti=13&pt=1&ch=6&rl=91).

103 *Electronic Records Resources for Bulletin 1*, TEXAS STATE LIBRARY AND ARCHIVES COMMISSION (Oct. 2019), <https://www.tsl.texas.gov/slrmpubs/bulletin1resources>.

104 *Id.*

describes evolving best practices for preservation and provides case studies of UELMA-compliant preservation practices.¹⁰⁵ The UELMA Preservation Group was formed with the help of the American Association of Law Libraries' (AALL) Government Relations Office to provide guidance regarding UELMA-compliant preservation strategies.¹⁰⁶

In addition to general advice and guidance, the AALL group's report provides a detailed description of UELMA-compliant preservation practices in California and Minnesota, and more generally discusses Washington, D.C.'s publication of its source code on the Open Law Platform. For preservation, California relies on standard internal storage and also implemented cloud storage on a trial basis, while Minnesota created custom in-house software called KEEPS (Keep Electronic Edicts Preserved and Secure).¹⁰⁷ KEEPS preserves new documents, identifies errors in legal material, and runs without reliance on other software.¹⁰⁸

B. The General and Special Laws of Texas

The 82nd Legislature (Regular Session, 2011) repealed the requirement that SOS publish the General and Special laws also known as the state session laws, in print and required instead that the records be published online.¹⁰⁹ Starting with the 83rd Legislature, SOS ceased publication of the print *General and Special Laws of the State of Texas* and began posting PDF files of the bills and resolutions on its website.

The SOS posts PDF files of bills and resolutions from the two most recent legislative sessions on its website. Copies of the PDF files are forwarded to the Portal to Texas History at the University of North Texas, which provides online access to a number of primary and historical Texas resources.¹¹⁰ The original print copies of the legislative bills and resolutions are bound for permanent retention by SOS and held by TSLAC. The SOS is committed to authenticating the electronic version of the general and special laws that appears on its website and to making its already strong preservation, security, and public accessibility practices even more robust.

105 LEAH PRESCOTT ET AL., UELMA PRESERVATION GROUP, PRESERVATION OF ELECTRONIC LEGAL MATERIALS (2018), <https://www.aallnet.org/wp-content/uploads/2018/04/Preservation-of-Electronic-Legal-Materials-White-Paper.pdf>.

106 *Id.* at 2.

107 *Id.* at 15, 19.

108 *Id.* at 20.

109 Act of June 28, 2011, 82d Leg., 1st C.S., ch. 4, §§20.01–20.04 (current version at Tex. Gov. Code §405.014), <https://texashistory.unt.edu/ark:/67531/metaph312462/m1/63/>.

110 The University of North Texas's Portal to Texas History includes a database of archived images of the session laws from earlier legislative sessions called the Texas Laws and Resolutions Archive. *Texas Laws and Resolutions Archive*, THE PORTAL TO TEXAS HISTORY, <https://texashistory.unt.edu/explore/collections/TLRA/> (last visited Jan. 15, 2020). SOS's website points to the portal for access to older PDF files of the general and special laws. Electronic versions of past SOS publications of the *General and Special Laws of the State of Texas* are on a separate Portal to Texas History database called the General and Special Laws of Texas. *General and Special Laws of Texas*, THE PORTAL TO TEXAS HISTORY, <https://texashistory.unt.edu/explore/collections/GSLTX/> (last visited Oct. 5, 2019).

Existing Publication Requirements and Practices

SOS is responsible for authenticating the publication of the laws. By statute, the SOS is responsible for binding enrolled bills and resolutions from each legislative session in volumes and publishing them electronically on its website.¹¹¹ SOS's authentication requirement differs from the UELMA authentication requirement of ensuring that an electronic document has not been altered. SOS's authentication mandate is fulfilled by adding SOS's signature and date stamp to the original print general or special law document received from the Governor's office.

Authentication of General and Special Laws

Authenticating the general and special laws involves a relatively small number of documents, approximately five boxes of documents each legislative session. As a representative example, the 86th legislative session produced five and a half regular archive boxes that fit a legal-size document (approximately five and half linear feet). This translated to 1,564 individual PDF files, including both bills and resolutions.

Recommendation

The committee makes the following recommendation:

While not required under the provisions of House Bill 402, the SOS should provide access on its website to authenticable electronic copies of the bills and resolutions from the two most recent legislative sessions.

Preservation and Security

UELMA's requirements for preservation and security are well met by existing practices of SOS and TSLAC. Several methods to preserve and secure materials covered by UELMA are used, providing multiple means for meeting the law's requirements.

SOS currently provides for the preservation of the general and special laws by binding the physical official copies of the legislative bills and sending them to TSLAC for secure storage in a preservation environment. This meets UELMA's requirements, under which a state may preserve

¹¹¹ Article 4, Section 21 of the Texas Constitution requires that SOS "authenticate the publication of the laws." Tex. Const. art. IV, §21, <https://www.tlc.texas.gov/docs/legref/TxConst.pdf>.

Section 405.014(b) of the Texas Government Code states that at each legislative session, SOS must obtain the bills that have become law and, immediately after the closing of a legislative session "bind all enrolled bills and resolutions in volumes on which the date of the session is placed." Tex. Gov't Code §405.014(b), <https://statutes.capitol.texas.gov/Docs/GV/htm/GV.405.htm#405.014>.

Section 405.014(b) further states the following:

"As soon as practicable after the closing of each session of the legislature, the secretary of state shall publish and maintain electronically the bills enacted at that session. The electronic publication must be:

- (1) indexed by bill number and assigned chapter number for each bill; and
- (2) made available by an electronic link on the secretary of state's generally accessible Internet website."

and secure its legal material in print format, among other options. Further, microfilm images of the bills and resolutions are held by both SOS and TSLAC. The electronic records of the general and special laws are maintained on SOS's website for two legislative sessions, after which they are transferred to the Portal to Texas History at the University of North Texas (UNT). In the future, they will also go to the Texas Digital Archive (TDA). SOS has an agreement in place with UNT for permanent retention of the PDF files for each legislative session. The agreement includes a clause that provides for the files to be returned to SOS should UNT ever be unable to continue providing this service.

Recommendations

The committee makes the following recommendations:

1. SOS should continue to transfer the official paper copies of the bills and resolutions to TSLAC, the official repository for the session laws. The session laws should continue to be securely stored by TSLAC in print and by both SOS and TSLAC in microfilm or other approved machine-readable format.
2. Digital versions of the bills and resolutions from the 78th Legislature onward should continue to be displayed in UNT's Portal to Texas History.
3. Digital versions of the bills and resolutions should be preserved and displayed in TSLAC's Texas Digital Archive.
4. Permanent preservation will be provided by the TDA's standard protocol of creating electronic backups of all records within the TDA as well as by continuing to preserve print records of the general and special laws.

Permanent Public Access

UELMA's requirements for permanent public access are well met by existing practices of SOS and TSLAC. Several methods are used, providing multiple approaches for ensuring preservation and security.

Official paper copies of the general and special laws are available to the public at TSLAC, accessible on the same basis as other records held in its facilities. TSLAC maintains the official original print copies of the session laws. These materials do not circulate but may be used in the State Archives search room. Access to volumes for the 1st Congress through the 18th Legislature (1836-1884) is restricted due to their physical condition. Researchers may use the digital copies of these records. SOS posts the electronic laws and resolutions from the two most recent legislative sessions on its website. Additionally, historical copies of the laws and resolutions, as

well as the SOS's General and Special Laws of the State of Texas publication, are accessible online through the Portal to Texas History and in libraries across Texas.¹¹²

Recommendations

The committee makes the following recommendations:

1. The general and special laws should continue to be accessible to the public online through SOS's website as PDF files of the two most recent legislative sessions' bills and resolutions.
2. Online accessibility should be extended by adding the PDF files of legislative bills and resolutions in the TDA. In the TDA, all visible records are unrestricted and available to the public. Items can be downloaded at no charge. Users wishing to download numerous records have the option of requesting paper or digital copies in accordance with approved Texas Administrative Code provisions.¹¹³
3. Public access to print records of the general and special laws should also continue. TSLAC should continue to retain print records of the general and special laws from all legislative sessions and make these documents available to the public.
4. The committee also encourages the Portal to Texas History to continue to provide access to the general and special laws, although the portal provides this accessibility as a courtesy.

C. State Agency Rules

UELMA is not immediately applicable to Texas state agency administrative rules. The rules are officially published in print and SOS has not designated its electronic record of the rules as official. There are no current plans to make the electronic copy of the state agency rules official. At this time, SOS does not plan to authenticate electronic agency rules or to alter preservation, security, or public accessibility practices regarding the rules. Therefore, the committee makes just a single recommendation regarding state agency rules.

Recommendation

The committee recommends that, if and when the electronic version of the state agency rules is designated as official, the steps taken to ensure UELMA compliance for the rules track as closely as possible to the processes then in effect for other official electronic legal material in Texas. This would be the most efficient and cost-effective compliance method and would also be the most seamless in terms of required state action and public accessibility.

112 *Texas Laws and Resolutions Archive*, THE PORTAL TO TEXAS HISTORY, <https://texashistory.unt.edu/explore/collections/TLRA/> (last visited Jan. 15, 2020); *General and Special Laws of Texas*, THE PORTAL TO TEXAS HISTORY, <https://texashistory.unt.edu/explore/collections/GSLTX/> (last visited Oct. 5, 2019).

113 13 TAC §2.51 (TSLAC, Public Record Fees), [https://texreg.sos.state.tx.us/public/readtac\\$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=13&pt=1&ch=2&rl=51](https://texreg.sos.state.tx.us/public/readtac$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=13&pt=1&ch=2&rl=51).



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