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HOW CAN THE GOVERNMENT SUSTAIN PEOPLE'S PRIVACY INTERESTS AS THE REAL ESTATE INDUSTRY ADOPTS AND APPLIES A FULLY ELECTRONIC SYSTEM?

DRAGO PUTICA*

INTRODUCTION

During my first year of law school, my Property professor told the class a story about how there were only two computers when he attended Harvard. One day, while working on one of the computers, the second one was being occupied by none other than Bill Gates. Mr. Gates turned to my professor and said, "One day everyone will have one of these [computers] in their home." My professor thought he was crazy and that there would never be a demand for a personal computer. The class proceeded to giggle, which may seem humorous to those who grew up with computers and the Internet, but thinking about the notion of a personal computer in the early 1970's would seem absurd.¹ The personal computer evolved into personal electronic devices such as cell phones and today, almost nine out of ten adults carry a cell phone within the United States.² New forms of technology allow industries to flourish but they have also brought about many privacy concerns which must be carefully addressed. The standard real estate transaction has always been inherently personal, however; the application of technology to real estate transactions in-

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1. Walter Isaacson, *Dawn of a Revolution*, HARVARD GAZETTE (Sept. 30, 2013), <http://news.harvard.edu/gazette/story/2013/09/dawn-of-a-revolution/>.

2. Nancy Gibbs, *Your Life is Fully Mobile*, TIME (Aug. 16, 2012), <http://techland.time.com/2012/08/16/your-life-is-fully-mobile/>.

creases concerns regarding an individual's right to privacy.

Much like my professor's initial reaction to Mr. Gates' statement about the personal computer, people are understandably skeptical of new technologies. Similarly, it can be expected that there is an initial distrust in using electronic means to purchase a home. Although the suspicion of fraud is expected when there is a lack of familiarity with adopting new technological methods, fraud has nonetheless occurred for centuries within real estate transactions as signatures on paper are susceptible to forgery or imitation.³

Purchasing a home is typically the largest single investment a person makes in his or her life. People must continue to be on alert for fraudulent transactions, and ensure they educate themselves on privacy issues relating to an electronic real estate transaction. Citizens, the government, and responsible business practices will ensure protection from privacy breaches for those entering into an electronic real estate transaction. A breach may be catastrophic for the industry and the economy as a whole. In order to protect people against fraud, the government must establish clearer measures to facilitate electronic real estate transactions.

Personal electronic devices are instrumental in modernizing industries by increasing productivity, decreasing costs, and making transactions easier for the average person. This current technological revolution is evident in the real estate industry and will continue in the industry indefinitely, creating a need for the federal government to adopt uniform legislation to protect electronic real estate transactions. The technological revolution in the real estate context namely occurs through faster transactions, due to the increase in speed for sending and receiving documents and a potential decrease in cost as there is less of a need to print or store stacks of pages.⁴ There is, however, a major concern with the cost and reliability of security related to storing highly personal information which often deals with large amounts of money. The government can examine policies relating to electronic real estate transactions and pass or amend laws to ensure the proper regulation of the industry.

Part one of this Comment is the background and consists of the steps involved in a traditional, and electronic real estate transaction, as well as the federal government's attempt to facilitate electronic transactions by adopting certain laws. Part two consists of the analysis and examines current federal and state laws involving the application of an electronic system to real estate transactions. Part three explores the concerns of those opposing the adoption of an electronic system in real estate transactions. Part four analyzes both sides of the argument and makes policy proposals, possible regulatory suggestions, and discussing available security measures to ensure safe and private

3. *Republica v. Ross*, 2 Yeates 4, 5 (Pa. 1795) (Chief Justice M'Kean explaining that the law changes over time, and people can imitate other's signatures. Since people can forge signatures, the jury must judge the credibility of person who commits fraud).

4. Kaitlin Ugolik, *Five Ways Tech is Changing Commercial Real Estate*, LAW360 (Oct. 30, 2013), <http://www.law360.com/articles/484685/five-ways-tech-is-changing-commercial-real-estate>.

real estate transactions. The Comment concludes that electronic real estate transactions will become the norm within the industry and the government must enact legislation to better manage security issues surrounding the storage of people's highly sensitive personal information.

PART ONE: BACKGROUND

The Traditional Real Estate Transaction using Paper Transactions

Under the common law, title to real property passed from one owner to the next through the livery of seisin.⁵ Traditionally, this involved a ceremony in which the seller would convey a fee interest in the property to the buyer, in the presence of witnesses, and required the physical transfer an object of some sort like a key, or dirt.⁶ The enacting of the statute of frauds in 1667 imposed a writing (signature) requirement by both parties in order to transfer a freehold interest in land at closing.⁷ A proper conveyance of land between two parties requires both sides to present a proper writing. After the contract of sale, absent fraud or mistake, the seller receives the deed in accordance with the contract of sale and the prior contract merges into the deed.⁸ Once the seller receives delivery and accepts the deed, "that deed embodies the entire agreement of the parties to a property sale; any prior agreements or understandings . . . are superseded by the deed's terms."⁹ Furthermore, the records office records the deed by creating a public record to protect the owner's interest in the land, and give notice to subsequent purchasers.¹⁰

Prior to delivery of the deed and the recordation process, many buyers must take out a mortgage loan to facilitate the transaction. It is uncommon for prospective buyers to purchase a home without financial assistance, often obtaining a mortgage from a bank. Before a bank approves a mortgage to the

5. John A. Gose, *Real Estate Conveyances from Livery of Seisin to Electronic Transfer*, 33 REAL ESTATE ISSUES, n.2 59, 59 (2008); citing Pollock & Maitland, *History of English Law*, Vol. II §12.35, 235 (2nd ed. 1898).

6. *Id.*

7. *Id.*

8. Charles S. Parnell, *Deed as Superseding or Merging Provisions of Antecedent Contract Imposing Obligations Upon the Vendor*, 38 A.L.R. 2d 1310; supplementing 84 A.L.R. 1009.

9. *Id.*

10. Richard R. Powell & Michael A. Wolf, *POWELL ON REAL PROPERTY* §82.01 (2000); Francis F. Philbrick, *Limits of recorded Search and Therefore of Notice*, 90 U. PA. L. REV. 125, 136 (1944) (there are three types of recording statutes that states adopt within the U.S. which include; race statutes, notice statutes, and race notice statutes. States who adopt race statutes hold that the first grantee to record the deed will prevail over all subsequent grantees regardless of whether the grantee has notice of an unrecorded interest. States who adopt notice statutes hold that the last bona fide purchaser will prevail over all subsequent purchasers, if that bona fide purchaser does not have notice of a prior unrecorded interest. Finally, states who adopt race notice statutes hold that the first bona fide purchaser to record prevails over other grantees, unless that bona fide purchaser has notice of a prior interest. Notice includes actual, constructive, or inquiry notice. Actual notice means that the purchaser has actual knowledge of the prior interest in the land. Constructive notice means that the purchaser is presumed to have notice of all recorded interest in the land. Inquiry notice means that the purchaser has a duty to inspect if there are facts that may suggest there may be a prior interest).

buyer, the buyer has to meet several requirements. Although buyers can apply for different kinds of mortgages, they all require buyers to first select the required amount of financing for a particular home, or the maximum amount one can obtain from a mortgage lender if the borrower has not yet chosen a specific home.¹¹ Next the applicant usually needs to provide the mortgage lender with information about the property he intends to purchase including the address, and when it was built.¹² The mortgage application requires important personal information such as a Social Security Number, birthday, marital status, and contact information.¹³ Additionally, the mortgage application requires employment information including a history of employment, monthly income, monthly expenses, tax forms, and a disclosure of assets and liabilities.¹⁴ This plethora of highly sensitive personal information needed to apply for a mortgage raises numerous privacy concerns. The government, financial institutions, brokers, and lawyers may store and transmit information electronically throughout the mortgage process.

Another exchange of highly personal information occurs within the secondary mortgage market. The secondary mortgage market began in 1985 with the passing of the Secondary Mortgage Market Enhancement Act ("SMME") allowing buyers to obtain funds from the private sector to facilitate investment in the housing market.¹⁵ Banks and investors share risk since banks acquire more capital for further lending from investors while investors have a potential profitable return on their initial investment.¹⁶ The promissory note in a real estate transaction represents the lender's ability to collect payments, while the mortgage represents the lender's ability to seize the property in the event of a failure to pay the note.¹⁷ The secondary mortgage market consists of investors purchasing a collection of notes called Collateralized Debt Obligations ("CDOs").¹⁸ These CDOs are "sliced" into investment opportunities of various degrees of risk.¹⁹ Most lenders sell the majority of their loans on the secondary mortgage market to increase their lending capabilities, while

11. *Your Step-By-Step Mortgage Guide*, FREDDIE MAC 1, 5, http://www.freddiemac.com/singlefamily/docs/Step_by_Step_Mortgage_Guide_English.pdf.

12. *Id.* at 5-6,

13. *Id.* at 6,

14. *Id.*

15. Edward L. Pittman, *Economic and Regulatory Developments Affecting Mortgage Related Securities*, 64 NOTRE DAME L. REV. 497, 497 (1989).

16. Robin P. Malloy & James C. Smith, *Real Estate Transactions*, WOLTERS KLUWER, 1, 400 (4th ed. 2013).

17. *Id.* at 400-01.

18. *Id.* at 401 (CDOs are also known as mortgage backed securities. Investors rely on companies that rate the level of risk within a given pool of CDOs. Investors call low risk investments AAA, medium risk investments A or BBB, and high risk based on sub-prime mortgages and may not be rated at all).

19. *Id.* at 402 (CDOs are "sliced" into tranches of high, medium and low risk. Low risk tranche is paid out first, followed by medium and high as the borrowers pay off the mortgages. If there is a default in mortgage payments, the highest risk tranche suffers the loss first followed by medium, and then low risk tranches).

awarding investors a potential return on their initial investment.²⁰ The lenders can freely transfer their rights in the mortgage, increasing the privacy risk to the borrower because their personal information a part of these CDOs sold to investors on the secondary mortgage market.

Federal and state regulations of financial institutions' mortgage lending are problematic. State laws regulate mortgage lenders "through licensing and registration requirements as well as the imposition of restrictions on lender conduct and activities."²¹ Violations of federal and state regulations often lead to criminal sanctions or other administrative remedies.²² There are specific regulations by the federal and state governments to regulate the banking industry's lending practices. The federal and state governments must adopt more narrow legislation including penalties in order to support an electronic real estate transaction like they have in within the banking industry.

Real Estate Agents

Traditionally, buyers and sellers rely on the expertise of real estate agents because of the various forms and paperwork associated with the transaction. Additionally, a buyer's real estate agent knows the market, the type of properties that are available, and which properties coincide with the buyer's requirements. In 2014, the real estate sales market accounted for one hundred and fourteen billion dollars within the United States.²³ Today, brokers still facilitate the transaction "by assisting the parties with matters such as contract negotiation, inspections of the property, and financing arrangements."²⁴ Although buyers are now more inclined to do their own initial due diligence when searching for a home, roughly eighty-seven percent used a real

20. *Id.* at 402-3.

21. Christopher Steelman, *Mortgages and Misdemeanors: Criminal Enforcement of State Mortgage Lending License Requirements and Homeowner Protection*, 45 AM. CRIM. L. REV. 1439, 1441-42 (2008) (the purpose behind state regulation of mortgage lenders is to protect homeowners or consumers borrowing money from financial institutions and to enforce the various laws against the lenders. The regulations' enforcement uses "... (1) specialized regulatory agencies; (2) private causes of action; (3) state attorneys general bringing civil or criminal actions; (4) administrative procedures for the removal of the licensee's status ... or (5) some combination of the foregoing.").

22. *Id.* at 1442-43 (the imposition of criminal sanctions against mortgage lenders are uncommon. This may be due to the fact that state prosecutors are not aware the lenders are violating licensing statutes when the violation occurs, or the states are hesitant to file criminal sanctions. The states generally use "revocation or suspension of a license, civil or regulatory fines and other administrative remedies" as a means to punish violations of legislation by mortgage lenders. The widespread hesitation to pursue criminal sanctions against mortgage lenders contributes to insufficient protection for borrowers).

23. *Revenue of Real Estate Sales & Brokerage in the United States from 2009 to 2014*, STATISTA (Feb. 2014), <http://www.statista.com/statistics/295475/revenue-real-estate-sales-and-brokerage-in-the-us/>.

24. Robin P. Malloy & James C. Smith, *supra* note 15, at 27 ("Brokers are information specialists, which has great value because brokers' training and experience and the systems they have created to share market data." All states regulate brokers to protect the brokers' clients. "A state administrative agency, often called the *real estate commission*, or the *department of real estate*, is responsible for enforcing the laws pertaining to brokers." The state also requires brokers to be licensed).

estate agent to purchase their home in 2014.²⁵ Furthermore, when a real estate agent produces a ready, willing, and able buyer who adheres to the seller's terms, the broker is entitled to a commission.²⁶ The commission is usually around six percent for residential real estate transactions. If each party obtains their own broker, then the two brokers will split the seller's fee.²⁷ Brokers have been able to utilize information technology to manage the demands of the market by reducing costs, time, and thus increasing efficiency.²⁸ Although technology allows buyers and sellers to inform themselves about the real estate market, real estate agents have nonetheless benefitted from electronic systems in searching for homes and communicating with their clients. The communications between an agent and her client has privacy implications as there is often sensitive personal information within these electronic communications.

Electronic Means of Research in Finding the Right Home

Up until the recent technological advancements including the electronic signature, industry standards have been relatively static. New technologies within the real estate market "are streamlining the business and legal processes for designing, financing, developing and trading property, creating a new level of transparency and access."²⁹ Furthermore, the due diligence on behalf of all parties becomes more extensive and faster because of electronic means.³⁰ In 2014, buyers found homes they wanted to purchase by using the internet forty-three percent of the time, compared to only eight percent in 2001.³¹ Additionally, the use of electronic resources such as real estate web sites and e-mails as the main form of communication between parties also helped the industry.³² Roughly ninety percent of real estate firms have web

25. Brandi Snowden & Amanda Riggs, *Real Estate in a Digital Age*, NATIONAL ASSOCIATION OF REALTORS (Sept. 17, 2015), <http://www.realtor.org/reports/real-estate-in-a-digital-age>.

26. Robin P. Malloy & James C. Smith, *supra* note 15, at 39 (although the general rule is that brokers receive a commission after producing a ready, willing, and able buyer, sellers usually prevail over brokers in cases where the home is not sold. This can be solved by carefully negotiated contracts between the seller and the broker with specific provisions and expectations listed by both parties).

27. ROBERT W. HAHN ET AL., *Bringing More Competition to Real Estate Brokerage*, AEI-BROOKINGS 1, 5 (Nov. 2005).

28. Kaitlin Ugolik, *Five Ways Tech is Changing Commercial Real Estate*, LAW360 (Oct. 30, 2013), <http://www.law360.com/articles/484685/five-ways-tech-is-changing-commercial-real-estate>.

29. *Id.*

30. *Id.* ("... it has become relatively easy to find ownership and debt structure on a piece of property and ascertain the existence of any covenants or restrictions before beginning the deal process." Buyers can also access zoning information about an area they want to purchase a home in. This allows the buyer to determine past and future uses of the property which can affect the future market value of the property).

31. Brandi Snowden & Amanda Riggs, *Real Estate in a Digital Age*, NATIONAL ASSOCIATION OF REALTORS (Sept. 17, 2015), <http://www.realtor.org/reports/real-estate-in-a-digital-age>.

32. Brandi Snowden & Amanda Riggs, *Real Estate in a Digital Age*, NATIONAL ASSOCIATION OF REALTORS (Sept. 17, 2015), <http://www.realtor.org/reports/real-estate-in-a-digital-age>.

sites and over ninety percent use electronic means to communicate, such as e-mail, for work purposes.³³

Additional electronic resources brokers use include an online database called the Multiple Listing Service ("MLS") to search for their clients' potential home.³⁴ The MLS "is a private offer of co-operation and compensation by listing brokers to other real estate brokers."³⁵ Real estate firms generally pay for the MLS because it is a directory of listings allowing sellers' agents to market their property, and buyers' agents to search for properties within a desired region.³⁶ This becomes an effective tool for buyers, sellers, and brokers by decreasing the time and money used to find a home.

Federal Legislation Concerning Electronic Signatures in Transactions

i) Uniform Electronic Transactions Act ("UETA")

Forty-seven states chose to adopt the final version of the UETA since its creation in 1999.³⁷ The goal of the implementation was to ensure that parties contracting by electronic means would be able to enforce their contracts in the same manner as if they were in written form.³⁸ The initial draft notes for the UETA stated that the act applied only to transactions "defined as those interactions between people relating to business, commercial and governmental affairs."³⁹ The UETA does not cover real estate transactions since the transaction itself is not affected by filing, "[a]n exclusion of all real estate transactions would be particularly unwarranted in the event that a state chose to convert to an electronic recording system."⁴⁰ These notes clearly intended to give the states discretion on whether to apply the UETA to electronic real estate transactions, including recordation. If states choose to apply the UETA to electronic real estate transaction, it creates numerous privacy issues.

The UETA allows for the enforcement of electronic records and signa-

33. Brandi Snowden & Amanda Riggs, *supra* note 24.

34. Multiple Listing Service, <http://www.mls.com/> (last visited Oct. 15, 2015).

35. *Multiple Listing Service (MLS): What is it*, NATIONAL ASSOCIATION OF REALTORS, <http://www.realtor.org/topics/nar-doj-settlement/multiple-listing-service-mls-what-is-it> (last visited Oct. 15, 2015).

36. ROBERT W. HAHN ET AL., *supra* note 26, at 91.

37. RICHARD RAYSMAN & PETER BROWN, *Applying the Uniform Electronic Transactions Act in Practice*, N.Y. LAW JOURNAL (Nov. 12, 2013), <http://www.newyorklawjournal.com/id=1202626880653/Applying-the-Uniform-Electronic-Transactions-Act-in-Practice?slreturn=20150914154038> (the three states that have not adopted the UETA are; Washington, Illinois, and New York. All three of these states have codified provisions within their state which act similarly to the UETA).

38. *Id.* (in order to accomplish the goal of enforcing valid electronic signatures "the essential provisions of the UETA largely focused on reiterating the viability of electronic records and signatures . . ." The UETA does not apply to "the Uniform Commercial Code, except Articles 2 and 2A (sale of goods), the Uniform Computer Information Transactions Act (UCITA) and the laws of trusts and estates, among other substantive bodies of law.").

39. Polk Wagner, *Electronic Commerce: Version 2.0*, U. PA. L. SCH. (2001), https://www.law.upenn.edu/law619/f2001/week07/contracts2_UCITA.html.

40. *Id.*

tures in business irrespective of where the negotiations take place.⁴¹ The UETA ensures that parties should be free to choose whether to participate in an electronic real estate transaction.⁴² At the time, the Act recognized that many states required paper filing in the form of a deed with their state government.⁴³ The UETA specifically states “that nothing in this Act prevents the parties from selecting paper or electronic media for all or part of their transaction.”⁴⁴ When states began adopting this Act, the predominance and acceptance of electronic transactions was steadily increasing. Although many states were initially hesitant to adopt an electronic form of recordation, the introduction of the Mortgage Electronic Registration System (“MERS”) in many states demonstrates their changing attitudes towards electronic recordation.⁴⁵ The Act is sufficiently broad to encompass future trends and changes in attitudes within the real estate market. The UETA requires further amendments to create clearer laws regarding electronic real estate transactions and allow for more competition within the real estate industry.

ii) Electronic Signatures in Global and National Commerce Act (“E-SIGN”)

In 2000, the U.S. Congress passed the E-SIGN Act which established the validity of an electronic signature to transactions affecting interstate and foreign commerce.⁴⁶ The Act states “[n]otwithstanding any statute, regulation, or other rule of law, with respect to any transaction in or affecting interstate or foreign commerce . . . a signature, contract, or other record . . . may not be denied legal effect, validity, or enforceability solely because it is in electronic form.”⁴⁷ Additionally, the consumers must consent, or have the right to a paper record of the electronic form explained to them, and possess the right to

41. Uniform Electronic Transactions Act § 7 (1999), http://www.uniformlaws.org/shared/docs/electronic%20transactions/ueta_final_99.pdf (“§ 7(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.” The comments which follow the Act create § 7(a) to ensure that no state shall require a medium to be present in order to validate an electronic signature. The comments also warn that according to § 7(b), there must be an agreement between the buyer and seller to carry out the transaction electronically. If a court cannot reasonably find a mutual agreement between the parties to contract electronically, the electronic transaction will be invalid).

42. *Id.*

43. *Id.*

44. *Id.*

45. *Calderon v. Bank of Am. N.A.*, 941 F. Supp 2d 753, 761-62 (W.D. Tex. 2013); *Merscorp, Inc. v. Romaine*, 8 N.Y. 3d 90, 96 (Ct. of App. N.Y. 2006).

46. *Moving Towards an Electronic Real Estate Transaction*, The Electronic Signature-Legal Overview (U.S.), NATIONAL ASSOCIATION FOR REALTORS (Aug. 2010), <http://www.realtor.org/sites/default/files/handouts-and-brochures/2010/E-Signature-Whitepaper-2010-08-01.pdf>; 15 U.S.C. § 7001 (2000).

47. 15 U.S.C.S. § 7001 (2000).

withdraw their consent for the use of their electronic signature.⁴⁸

Allowing parties in a real estate transaction to use electronic benefits all involved because electronic signatures save time and money.⁴⁹ The purpose of a signature in a real estate contract is to rule out fraud, demonstrate both parties' intention, and ensure both parties realize the serious implication of their agreement.⁵⁰ Similarly, the common law principle that requires each signer's intent to form an agreement still applies to electronic signatures.⁵¹ Like traditional signatures, electronic signatures are an important legal tool for electronic records and transactions in a real estate, as the conveyance will not be valid without being accompanied by a valid electronic signature.⁵²

The Deed and Recording

Mortgage industry participants fashioned the Mortgage Electronic Registration System ("MERS") to replace the conventional form of recordation.⁵³ Recordation traditionally requires the physical presentation of a promissory note which the county then records.⁵⁴ Increasing frustration with the recording process within the residential mortgage industry due to the cost and time involved lead to the creation of MERS in 1993.⁵⁵ Specifically, MERS manages the ownership and transfer of mortgages for an annual fee, and consists of mainly mortgage lenders and title companies.⁵⁶ MERS allows for the efficient transfer of the mortgage notes and record keeping so that there is no longer a

48. *Id.*

49. Kaitlin Ugolik, *supra* note 4 (parties can also save time and money by utilizing technology to find qualified individuals within the industry that can provide exceptional service to the buyer or seller. Using electronic signatures is especially helpful for parties crossing state lines to conduct real estate transactions).

50. *Moving Towards an Electronic Real Estate Transaction, supra* note 45 ("While in a paper world there is no formality required if the parties are using a pen and ink signature . . . the parties [to an electronic signature] must separately agree to use electronic signatures." Electronic delivery of documents requires that the consumer receives specific disclosures, consents to the electronic signature, and does not withdraw his or her consent. There may also be additional requirements depending on the state in which the transaction is taking place if the buyer is considered a consumer. Some states require written notice to the consumer about the various laws or regulations within the state).

51. *Id.* (requiring a signature in a real estate transaction is done to ensure there is no fraud taking place by either party. It is also done to reiterate the seriousness of the transaction to both parties).

52. *Id.*

53. Tanya Marsh, *Foreclosures and the Failure of the American Land Title Recording System*, 111 COLUM. L. REV. SIDEBAR 19, 22-3 (2011) ("MERS was created by the Mortgage Bankers Association, Fannie Mae, Freddie Mac, the Government National Mortgage Association, the Federal Housing Administration, and the Department of Veterans Affairs . . .").

54. *Id.*

55. *Id.* at 20 (reforming the way in which property is recorded is an old idea. Scholars generally make arguments based on three reasons. First, the improvement of technology, ". . . particularly with respect to organizing and searching data . . ." Second, the indexing function should be re-imagined through technology, not digital submissions. Third, the implementation of these technologies must be done gradually).

56. *Calderon v. Bank of Am. N.A.*, 941 F. Supp. 2d at 762 ("More specifically, MERS was created to streamline the mortgage process by eliminating the need to record an assignment and deliver physical possession of a promissory note, which is the conventional method of assigning a note secured by a deed of trust."); *Merscorp, Inc. v. Romaine*, 8 N.Y. 3d at 96 .

need to have multiple agents keeping track of numerous recordings within the public records.⁵⁷ MERS acts as its members' common agent and records the mortgage with the county who then names MERS as the mortgagee of record.⁵⁸ Some states are suspicious of the MERS process since MERS does not hold an interest in the property itself.⁵⁹ Since a borrower has little say in the recording of the mortgage, the legislature should adopt additional measures to ensure the protection of the borrower's privacy rights.

Societal Changes in Attitude towards Electronic Real Estate Transactions

Societal attitudes towards new technologies may be apprehensive at first. The implementation of new technology can be daunting, especially if it is transformative. Similar to the 1930s, society lacked the skills and the work force to deal with the changing environment.⁶⁰ Currently, society may be missing out on the benefits of new products and services that the technological revolution has yielded, which may explain the modest economic results within the sector.⁶¹ The creation of large profits during the technological revolution has yet to be seen.⁶² This may be the result of an aging population not fully aware of the potential benefits these technological products and services can provide. As society ages, the younger generations who have grown up with technology will undoubtedly utilize electronic transactions more. This would also include electronic real estate transactions as the younger generation will be more comfortable with new products and services created to simplify their lives. These services will be safe, trustworthy methods of transacting between parties to ensure the protection of their privacy.

As technology progresses, services become cheaper with more competition in the market and society will accept the new technologies as being the new norm. Society must be open to adopting and learning about new technol-

57. Robin P. Malloy & James C. Smith, *supra* note 15 at 405 (courts are apprehensive of MERS as it makes the foreclosure process difficult, since the mortgage note is easily transferrable and MERS would have to transfer the mortgage without debt since it is not the lender).

58. *Calderon v. Bank of Am. N.A.*, 941 F. Supp. 2d at 762; *Merscorp, Inc. v. Romaine*, 8 N.Y. 3d at 96 (MERS members appoint MERS as their common agent through a contract. "When a MERS member first executes a mortgage, it is recorded in the County Clerk's real property records with MERS names on the instrument as nominee or mortgagee of record." The original lender, who is a MERS member, can transfer ownership to other MERS members while the mortgage is still in effect. There are no records of these types of transfers within the county's real property records).

59. Tanya Marsh, *supra* note 52, at 23 (some state courts expressly allow MERS to record deeds, while others view MERS suspiciously. The suspicious courts' concerns are due to the creation of a "legal fiction" within basic mortgage law since MERS cannot be the "mortgagee of record" and not possess an interest in the property).

60. Paul Krugman, *The Big Meh*, N.Y. TIMES (May 25, 2015), <http://www.nytimes.com/2015/05/25/opinion/paul-krugman-the-big-meh.html>.

61. *Id.* (optimism ran high in the 1990's that the technological revolution would increase productivity and provide for better services. The U.S. was at the forefront of this revolution. Instead of an increase in productivity and better services, there has only been a brief spurt of a technological revolution. The plateau of the technological revolution seems evident as modern technology is mainly concerned with phones).

62. *Id.*

ogies as they have the ability to save time and money, especially within the real estate context. As the younger generations grow, their familiarity and knowledge of technology will most likely facilitate fully electronic real estate transactions.

PART TWO: ANALYSIS

Federal Legislation on Electronic Real Estate Transactions and how the UETA and E-SIGN Interact with One Another

The federal government adopted additional legislation after the enactment of the UETA to facilitate an electronic transaction. E-SIGN allows for the validity of electronic "signature[s], contract[s] or other record[s]," absent fraud.⁶³ The drafters of the UETA "acknowledged at the time of the passage of E-SIGN, the two laws overlap significantly insofar as each validates the use of electronic records and signatures in contract formation."⁶⁴

Some argue the differences between the two Acts are subtle, however most courts have found them to be marginal.⁶⁵ The differences have not led the courts to widely inconsistent opinions on matters involving either of the Acts for electronic transactions.⁶⁶ There are additional provisions within the E-SIGN, most notably the consent requirements which differ from the UETA.⁶⁷ Additionally, E-SIGN exempts "default notices under mortgage loans on or leases of primary residence[s]."⁶⁸ There are differences of opinions between states regarding the application of E-SIGN to the electronic real estate transaction.⁶⁹ The inconsistencies between states and counties require a legislative reform to ensure electronic real estate transactions are uniform and valid.

State Legislation on Electronic Real Estate Transactions

As the federal statutes regarding electronic transactions have demonstrated, the states are left with a vast amount of discretion in whether to allow electronic transactions, and in what industries. Similar to the UETA, the E-

63. 15 U.S.C.S. § 7001 (2000).

64. Richard Raysman & Peter Brown, *supra* note 36 (court rulings demonstrate that the UETA presents some problems because states choose to adopt the UETA in different contexts which has an adverse affect on the way courts interpret these specific adoptions).

65. *Id.*

66. *Id.*

67. Robert A. Wittie & Jane K. Winn, *Electronic Records and Signatures under the Federal E-SIGN Legislation and the UETA*, 56 BUS. LAW 293, 297 (2000) ("All of the differences between UETA and E-SIGN will raise significant interpretive issues as determinations must be made as to which state law provision on electronic signatures and records are preempted by E-SIGN, and which UETA provisions 'supersede' federal law.").

68. *Id.* at 323 (other exceptions include; "... court notices and pleadings, notices terminating utility services or health or life insurance benefits . . . and product recall notices, as well as documents required to accompany the transport of hazardous materials.").

69. *Id.* at 324-325 (E-SIGN contains a "... limited, express preemption of state law . . ." Instead of maintaining "that the Act preempts 'inconsistent' state laws or simply allowing the preemption of inconsistent state laws to be an implicit result of the supremacy clause of the Constitution." E-SIGN instead gives circumstances where state law will not be pre-empted).

SIGN also gives states discretion as to the extent of adopting E-SIGN. The act begins with “notwithstanding any statute, regulation, or other rule of law” which implies that states have an ability to allow or modify transactions by electronic means within their state.⁷⁰ This discretion creates inconsistencies between states and these inconsistencies do not promote electronic transactions in the real estate context. Moreover, Section 102 of the E-SIGN Act “gives states limited authority to ‘modify, limit or supersede’ the provisions of section 101 of the Act with respect to state law.”⁷¹ By granting states the authority to change provisions in a federal act, inconsistencies are inevitable and will hinder an electronic real estate transaction.

Consequently, E-SIGN “explicitly does not pre-empt the 1999 official version of the UETA (official UETA), irrespective of any inconsistency between that uniform statute and the Act, while E-SIGN . . . requires all other laws to comply with two standards: consistency with E-SIGN and technical neutrality.”⁷² This allows states to form their own statutes regarding electronic signatures, and E-SIGN will not preempt them, so long as they comport with the two standards set in the Act.

The first standard, consistency, “prevents any state law (other than official UETA) from either adding to or subtracting from the requirements that E-SIGN imposes.”⁷³ Nearly all states that adopted the UETA amended it in some form, which is still valid under E-SIGN, so long as applying those amendments are done to the whole, non-conforming UETA.⁷⁴ The second standard, neutrality, maintains that a state law cannot “‘require’ nor ‘accord greater legal status or effect to . . . specific technology or technical specification for performing the functions of creating, storing, generating, receiving, communicating, or authenticating electronic records or electronic signatures.”⁷⁵ The UETA is relatively broad so state legislation is valid so long as it does not favor a specific technology.

Contracting parties can become uncertain in identifying whether the other party actually sent the document, and that it was not altered by technological means.⁷⁶ Legislative history shows that the neutrality requirement concerning security is “intended to prevent a state from giving a leg up or imposing an additional burden on one technology or technical specification that is not applicable to all others.”⁷⁷ The legislative history also reveals that

70. 15 U.S.C.S. § 7001 (2000).

71. Robert A. Wittie & Jane K. Winn, *supra* note 66, at 324.

72. *Id.* at 325.

73. *Id.* at 326, 327 (“For example, a state could not provide that only certain types of electronic records may be considered legally effective or used to satisfy a writing requirement because to do so would be inconsistent with E-SIGN’s base validity rule.”).

74. *Id.* at 327.

75. *Id.* at 333.

76. *Id.* at 334.

77. Robert A. Wittie & Jane K. Winn, *Electronic Records and Signatures under the Federal E-SIGN Legislation and the UETA*, 56 BUS. LAW. 293, 334 (2000) (an example of a law showing “preference” would be the “digital signatures” laws found in the Utah Digital Signature Act. This Act gives legal significance to only “asymmetric cryptosystems” using public and private keys. The

“the provision is not intended ‘to prevent a state . . . from developing, establishing, using or certifying a certificate authority system.’”⁷⁸

The purpose of the UETA was to create uniformity among the states. Some states have enacted a uniform version of the UETA, some have amended it, while others chose to adopt their own statutes imitating the UETA. There is an exception for a state agency to favor a particular technology or performance standards relating to recordation and contract retention so long as there is a compelling governmental interest.⁷⁹ Additionally, E-SIGN’s “prohibition against favoring a particular technology also does not apply to any statutes, regulations or other rules of law governing procurement by any Federal or State government, or any Federal or State agency or instrumentality.”⁸⁰

New York is an example of a state that has enacted its own version of UETA in 1999, called the Electronic Signatures and Records Act (ESRA).⁸¹ New York’s statute is voluntary and, similar to the UETA, gives electronic signatures the same force as written signatures.⁸² The statute requires the signature to be “‘secure’ in that it must be unique, capable of verification, and under the sole control of the person using it.”⁸³ Digital signatures that use certificate authorities to validate electronic signatures have an obligation under the statute to ensure the protection of confidential information.⁸⁴ Obligating people to ensure protection of sensitive personal information may amount to a duty on behalf of the certificate authority to the client.

Electronic records under the ESRA carry the same weight as written records however the Act is unclear on whether electronic records apply only to state and local government agencies, or to private entities as well.⁸⁵ The ESRA requires attaching an electronic signature to the data in the electronic record and, if private transactions do not apply, then the requirement is to attach the electronic signature to a paper document.⁸⁶ New York’s statute exemplifies

preference found in the Act would be inconsistent with the neutrality requirement found in E-SIGN and would therefore be invalid under E-SIGN).

78. *Id.*

79. The Committee on Uniform State Laws, *Report on the Uniform Electronic Transaction Act, the Electronic Signatures in Global and National Commerce Act and the Electronic Signatures and Records Act*, 56 THE RECORD 457, 484-86 (2001).

80. *Id.* at 486.

81. *Id.* at 487.

82. *Id.*

83. *Id.* at 488.

84. *Id.* at 490-491 (the ESRA requires that any certificate authority must publically disclose their practices if any person requests them, when doing business with a governmental entity. There are additional requirements when doing business with a government entity are; “. . . describing business entities with which [they do business], [their] identification and authentication policy, [and their] key management policy describing security measures taken to protect its cryptographic keys and critical security parameters . . .” This includes the “. . . management of keys from generation, through storage and usage, to archiving and destruction . . .,” local, technical, and operations policies, legal liabilities, defining the individuals responsible for registration and maintenance, and an audit policy).

85. *Id.* at 491.

86. The Committee on Uniform State Laws, *Report on the Uniform Electronic Transaction Act, the Electronic Signatures in Global and National Commerce Act and the Electronic Signatures and Records Act*, 56 THE RECORD 457, 492 (2001).

the difficulties E-SIGN and UETA have created among states. There is an exception for “[a]ny conveyance or other instrument recordable pursuant to Article 9 of the Real Property Law. A deed or mortgage is an example of such an instrument.”⁸⁷ This exception makes New York’s legislation requirement confusing as it is unclear whether one must attach his electronic signature to a conveyance or recordable instrument in an electronic real estate transaction. Uncertainty arises with whether the ESRA’s exception applies to only public real estate transactions or to private ones as well.

In Illinois, the Illinois Electronic Commerce Security Act (“IECSA”) does not assume the legality of an electronic signature’s authenticity or record, merely because it is in electronic form, however “highly secure forms of electronic signature[s] will be given preferred legal status.”⁸⁸ E-SIGN does not preempt the IECSA since the IECSA sets a standard for secure electronic signatures which can potentially be applied to any technology.⁸⁹ This illustrates that the careful drafting of state laws and the use of the UETA can seemingly contradict the E-SIGN provision not allowing the preference of a specific technology. E-SIGN does not preempt state law so long as the technology utilized is applicable to all other technologies within the state.

The UETA does not preempt the IECSA in electronic recording for real estate transactions. The IECSA strongly encourages electronic transactions, and allows for government agencies to electronically record.⁹⁰ The authenticity of an electronic signature within this Act leaves vast discretion with the court as the Act does not assume anything with regards to the signature’s authenticity.⁹¹ The statute also calls for proof of authenticity of an electronic signature in any manner, including showing that a party used a symbol or security procedure.⁹²

The IECSA largely coincides with the UETA, but differs in that it does not explicitly encompass title transfers or exchanges of negotiable instruments.⁹³ Nevertheless, the IECSA does allow for the validity of an electronic signature for a title transfer or negotiable instrument only where there is an unalterable original electronic version of the record, which parties not privy to the contract cannot copy, and the original is kept by one person.⁹⁴ The Illinois statute is more encompassing than the New York statute within the electronic real

87. *Id.* at 494.

88. Robert A. Wittie & Jane K. Winn, *supra* note 66, at 335.

89. *Id.* at 335-336.

90. Derek Whitte, Comment, *Avoiding the Un-Real Estate Deal: Has the Uniform Electronic Transactions Act Gone too Far?*, 35 J. MARSHALL L. REV. 311, 317 (2002).

91. Roaa Al-Heeti, *Electronic Signatures*, ATTORNEYS’ TITLE GUARANTEE FUND, <https://www.atgf.com/tools-publications/pubs/electronic-signatures>.

92. *Id.* (“A security procedure is a ‘methodology or procedure used for the purpose of (1) verifying that an electronic record is that of a specific person or (2) detecting error or alteration in the communication, content, or storage of an electronic record since a specific point in time’ and includes ‘the use of algorithms or codes, identifying words or numbers, encryption, answer back or acknowledgement procedures, or similar security devices.’”).

93. Derek Whitte, *supra* note 88, at 318.

94. Roaa Al-Heeti, *supra* note 89.

estate transaction context. There should be more uniformity among states with the adoption of the UETA and E-SIGN Acts to ensure the protection of people's personal privacy. Although most states have adopted the UETA or E-SIGN, states still have an enormous amount of discretion in how to interpret and adopt portions of each.

PART THREE: PRIVACY CONCERNS IN AN ELECTRONIC TRANSACTION

Privacy Issues with Hacking; E-Mails, International Transactions, and Stealing Payment Information

The government should protect and uphold privacy concerns whenever feasible because sharing personal information, unless expressly stated otherwise, is not tolerable. Within a real estate transaction, parties share large amounts of personal information at various stages in the transaction. The first established relationship between parties within a real estate transaction is between the owner or seller and the real estate broker. Roughly ninety-three percent of real estate brokers prefer to communicate using e-mail as their primary form of communication.⁹⁵

E-mail communications between the prospective buyer and real estate agent contains pertinent information regarding the real estate transaction. Parties must protect e-mail communications to ensure the safety of sensitive personal information within a real estate transaction. A recent scam involved a hacker breaking into the e-mail communications of brokers and obtaining the buyer's information about an upcoming sale.⁹⁶ The hackers then send an e-mail which seems to come from their agent's e-mail account using detailed, accurate data about the sale, and propose new wiring instructions or routing information.⁹⁷

Purchasing a home is one of the largest investments a person will make in their lifetime and often involves a substantial amount of money. E-mail hacking allows the hacker to gain access to highly sensitive personal banking information which has the potential to ruin someone financially. This is especially true in the real estate context as purchasing a home is often a buyer's largest single purchase of his or her life. A successful real estate agent, or a real estate agent working for a larger firm, has more clientele and is more likely to have e-mail exchanges containing sensitive information. Communicating over e-mail always poses a risk within an electronic transaction; however it is potentially more serious when it concerns large amounts of money or access to a greater number of people.

Although e-mail attacks have been occurring for a while, the methods

95. Brandi Snowden & Amanda Riggs, *supra* note 24.

96. *Alert: Wire Fraudsters Targeting Real Estate Transactions*, NAT'L ASS'N OF REALTORS (May 18, 2015), <http://www.realtor.org/articles/alert-wire-fraudsters-targeting-real-estate-transactions>.

97. *Id.* (detailed, accurate information includes; "... existing wire and banking information, file numbers, and key dates, names, and addresses." Furthermore, the e-mail can come from a seemingly legitimate e-mail address or even the actual e-mail address of the broker).

hackers use evolves over time. Another large e-mail scandal occurred in 2014, when hackers attacked Sony. The hackers were able to steal documents, clear internal data centers, and destroy a majority of the company's servers.⁹⁸ A successful cyber-attack on a large corporation like Sony, who has undoubtedly taken precautions against this type of attack, reveals how easily obtainable personal information can be by an unauthorized party.

Similar to stealing the sensitive information in Sony's documents, hackers have the potential to target individuals within real estate transactions which consists of a much larger group than only the employees of one corporation. Like in the Sony attack, another major concern is with hackers being able to clear internal data servers within the real estate context. Clearing people's personal information from storage would affect mortgage applications, the deed, and the recordation of the deed. Without adopting secure preventative measures, people's privacy in an electronic real estate transaction will be in jeopardy.

Similarly, a cyber attack targeting another website occurred earlier in 2015. Ashley Madison's thirty-seven million members had their "names, user names, addresses, phone numbers and birth dates as well as details of credit card transactions" released for public viewing.⁹⁹ The hackers told Ashley Madison to shut down and claimed to have attacked it because they were upset the web site claimed users could pay a fee and have their data deleted.¹⁰⁰ This attack seems to be nothing more than a group of hackers trying to show people that data is incapable of being deleted on the internet. The hackers' demonstration reiterates many people's fears of uploading sensitive person information on the internet.

A trend is developing with cyber-attackers targeting larger corporations to demonstrate that information on the internet is not safe. The Ashley Madison hack is important to analyze since Ashley Madison is a privately held Canadian internet firm that makes the majority of its money from subscriptions, not advertising.¹⁰¹ Of the many exposed e-mail addresses, the cyber-attack specifically exposed over fifteen thousand e-mail addresses directly from U.S.

98. Michael Cieply & Brooks Barnes, *Sony Cyberattack, First a Nuisance, Swiftly Grew Into a Firestorm*, N.Y. TIMES (Dec. 30, 2014), <http://www.nytimes.com/2014/12/31/business/media/sony-attack-first-a-nuisance-swiftly-grew-into-a-firestorm-.html> (documents included sensitive company information including; "[c]ontracts[,] salary lists[,] film budgets[,] medical records[,] social security numbers[,] personal emails[,] and] five entire movies . . .").

99. Daniel Victor, *The Ashley Madison Data Dump, Explained*, N.Y. TIMES (Aug. 19, 2015), <http://www.nytimes.com/2015/08/20/technology/the-ashley-madison-data-dump-explained.html> (cyber-security experts assert that the information posted about the members may not be reliable. Alternatively, some members have found that their information was in fact stolen from the company).

100. *Id.*

101. Paul R. La Monica, *Who is Ashley Madison?*, CNN MONEY (Jul. 20, 2015), <http://money.cnn.com/2015/07/20/technology/ashley-madison-hack-avid-life-media/>.

government and military servers.¹⁰² As exemplified by Ashley Madison, the internet facilitates international transactions with ease. The same can be said of real estate transactions as electronic transactions become more popular. Exposing personal information online from a real estate transaction would be detrimental to the industry internationally. Companies like MERS or real estate firms have enormous amounts of private, personal information on their servers. Similar to the breach of privacy in the case of the Ashley Madison hack, a breach in electronic real estate transactions could become an international epidemic if hackers seized personal information from a major law firm, real estate agency, or company dealing with an international electronic real estate transaction. This could lead to hackers exposing things like people's occupations, personal banking information, and home addresses to name a few.

Another important example of a cyber attack to the real estate transaction would be where the hackers used information for monetary gain, not seemingly personal gratification. Recently, attacks on Target saw as many as forty million customers' data stolen from their credit and debit cards amounting to an estimated eighteen billion dollars.¹⁰³ The customers may be liable for roughly four billion dollars which includes uncovered losses and other costs associated with the hack.¹⁰⁴ This hack occurred because Target "lack[ed] the virtual walls and motion detectors found in secure networks like many banks."¹⁰⁵ This reiterates the importance of preventative measures and the issues associated with liability should a cyber attack occur.

The stolen information from Target's customers is a dismal reminder of the importance of protecting consumer data. Additionally, consumers may be liable for almost a quarter of the total estimated funds stolen by a hacker. A similar cyber-attack on real estate transactions for monetary gain could mean access to a potentially larger market with larger transaction costs. Also, within any given real estate transaction there is considerable personal information, including sensitive banking information, which could potentially be stolen. Parties to an electronic real estate transaction must take preventative measures to uphold people's privacy rights when utilizing e-mails, international transactions, or sensitive banking information.

Privacy Issues in Electronic Real Estate Transactions

In addition to these cyber-attacks, there is concern with electronic trans-

102. Daniel Victor, *supra* note 97; Cory Bennett, *15,000 Government Emails Revealed in Ashley Madison Leak*, THE HILL (Aug. 19, 2015), <http://thehill.com/policy/cybersecurity/251431-ashley-madison-leak-appears-real-includes-thousands-of-government-emails> (the City of Washington D.C. has the most memberships on the website compared to any other city. Some of the e-mails may be tied to the State Department and Department of Homeland Security, and even the House and Senate. Some tech outlets have also connected e-mail addresses to the British government, U.N. employees, and Vatican staff).

103. Elizabeth A. Harris *et. al.*, *A Sneaky Path Into Target Customers' Wallets*, N.Y. TIMES (Jan. 17, 2014), <http://www.nytimes.com/2014/01/18/business/a-sneaky-path-into-target-customers-wallets.html>.

104. *Id.*

105. *Id.*

actions within the real estate market. As discussed in the background portion of this paper, there is a division between states about what constitutes a valid electronic signature. In *Cunningham v. Zurich American Insurance Co.*, the Court held that generating an electronic signature via a signature block is not valid.¹⁰⁶ The Court's reasoning is that one of the parties did not type out a name intended to be a signature and there was a lack of evidence that the parties agreed to transact by electronic means.¹⁰⁷ Conversely, in *International Casings Group Inc. v. Premium Standard Farms Inc.*, the Court construed the electronic signature more broadly by recognizing a valid signature where the parties intended to contract, and their names were in a header within the e-mail even though neither party typed their names at the bottom of the document.¹⁰⁸ A uniform rule of law is absent in considering what constitutes a valid electronic signature. Without a uniform rule states are not promoting interstate electronic real estate transactions. The current legislation creates complications for people trying to purchase a home or property electronically, especially if the buyer is trying to purchase a home in another state.

Proponents for the traditional real estate transaction argue that paperless real estate transactions are more susceptible to fraud because they provide less protection as opposed to paper transactions.¹⁰⁹ Some states such as New York have been reluctant to adopt the electronic signature in real estate transactions because of a concern that it might encourage fraud.¹¹⁰ Recently, in New York, Governor Andrew Cuomo signed the "Real Property Amendment" which became effective in 2012 specifically to allow electronic signatures when conveying real property.¹¹¹ Despite this amendment, most counties in New York have not opted in, citing concern with fraud and liability, expenses associated with going electronic, or lack of pressure from the real estate community.¹¹²

Proponents adhering to the antiquated system of recordation in a real estate transaction are concerned with fraud and the preservation of records.¹¹³ Additionally, there are differing opinions in some states, including New York, where skepticism in adopting an electronic recording system is evident be-

106. *Cunningham v. Zurich Am. Ins. Co.*, 352 S.W.3d 519, 530 (2011).

107. *Cunningham v. Zurich Am. Ins. Co.*, 352 S.W.3dat 530.

108. *Int'l Casings Group, Inc. v. Premium Std. Farms, Inc.*, 358 F. Supp. 2d 863, 873 (W.D. Mo. 2005) (the Court is granting a preliminary injunction to a buyer who negotiated with a supplier via e-mail to purchase hog casings. The preliminary injunction requires the supplier to not sell the hog cases to a third party buyer since the goods are not readily available for immediate purchase on the market. Furthermore, the Court cites to developing case law to show that electronic signatures in an e-mail conforms to the writing requirement set out in the Statute of Frauds; *Cloud Corp. v. Hasbro Inc.*, *Roger Edwards, LLC v. Fiddes & Son, LTD, Cent. Ill. Light Co. v. Consolidation Coal Co.*, *Commonwealth Aluminum Corp. v. Stanley Metal Associates*, *Resenfeld v. Zerneck, Shattuck v. Clotzbac*, and *Amedisys, Inc. v. JP Morgan Chase Bank Manhattan Bank*).

109. Derek Whitte, *supra* note 88, at 322.

110. Kaitlin Ugolik, *supra* note 4.

111. *Id.*

112. *Id.*

113. Derek Whitte, *supra* note 88, at 326-27.

cause of the possibility of fraud.¹¹⁴ In *Merscorp, Inc. v. Romaine*, Justice Ciparick's concurring opinion highlighted the fact that a transfer of a mortgage without debt is null which is exactly what MERS does since MERS is not the party lending the funds for the purchase.¹¹⁵ Moreover, Justice Ciparick is concerned with MERS monopolizing and turning the recording industry into a private entity with no state involvement.¹¹⁶ Privatization is not necessarily a bad thing, especially if it can save the government money. Alternatively, there should be a serious concern with liability if MERS ever breaches a duty to the borrowers or lenders.

PART FOUR: THE INEVITABILITY OF ELECTRONIC REAL ESTATE TRANSACTIONS

Protecting Privacy in Electronic Real Estate Transactions

There are numerous preventative measures parties can take to protect their privacy which may differ depending on the stage of the electronic real estate transaction. Real estate brokers can take preventative measures to ensure the protection of e-mail communications between them and their clients. The broker can protect herself by not sending or requesting banking information over e-mails with a client, regularly changing the username and password on the e-mail account, and using encrypted e-mails if important personal information must be sent.¹¹⁷ Buyers can protect themselves mainly by using common sense, which includes not opening suspicious e-mails, changing usernames and passwords, and using updated anti-virus software.¹¹⁸

Additionally, one can take many precautionary steps to protect a client's privacy whether it is a lawyer or a broker in a real estate transaction. First, conducting business using a public Wi-Fi network, especially when there is sensitive personal information susceptible to attack, should be avoided since hackers tend to use public networks to prey on people.¹¹⁹ Second, instead of using a generic e-mail service provider that stores e-mails being sent and received, parties can register a domain for under one hundred dollars per year, or set up a personal e-mail server for less.¹²⁰ Every real estate agent, their firms, and real estate attorneys must adopt these two preventative measures. Neither is difficult to do and both are modestly priced, especially considering the vast amount of personal sensitive information they protect.

"SignEasy" is a form of privacy protection for individuals contracting

114. *Merscorp, Inc. v. Romaine*, 8 N.Y. 3d 90, 100 (N.Y. 2006). (J. Ciparick concurring).

115. *Id.* (J. Ciparick concurring).

116. *Id.* (J. Ciparick concurring).

117. *Alert: Wire Fraudsters Targeting Real Estate Transactions*, *supra* note 94.

118. *Id.*

119. Kate Murphy, *How to Muddy Your Tracks on the Internet*, N.Y. TIMES (May 2, 2015), <http://www.nytimes.com/2012/05/03/technology/personaltech/how-to-muddy-your-tracks-on-the-internet.html>.

120. *Id.* (a person can register a domain through servers like Hover or BlueHost who charge between fifty-five to eighty-five dollars annually. Both companies give personal addresses and also assure the privacy of their users. Starting a personal mail server can cost fifty dollars. In order to avoid junk mail one can pay additional fees).

through electronic means. It requires a user to first create an account and then format a signature to fit the document.¹²¹ Once the signed document is complete, with the final signature attached, the program requires consent on behalf of both parties to transact electronically.¹²² The sender then chooses whether to send the document “via e-mail or to a cloud storage system such as Dropbox, Evernote, or Google Drive.”¹²³ SignEasy is a simple procedure which gives security to parties contracting electronically. There are also more secure programs available with better encryption and audit operations.¹²⁴

The validation of a party’s signature can only truly be met by taking measures to ensure the protection of the transaction and the personal information contained in it. One of these measures, “[c]ryptographed signatures[,] are regarded as the most secure and reliable method of relaying a signature that today’s technology has to offer, especially in larger transactions.”¹²⁵ Public Key Infrastructure (“PKI”) allows for a valid electronic signature using cryptographic symbols and keys to produce and distinguish the signature.¹²⁶ PKI technology presents a valid signature of the party who signed the document, the time it was signed, and any changes made to the original document or signature.¹²⁷ PKI is relatively simple to use and the benefits can largely outweigh the costs depending on the amount of money involved in the transaction. The process consists of simple steps to protect one’s privacy. First, the receiver has a private key which she uses to encrypt the document and send back to the sender who then uses a public key to de-encrypt the signature.¹²⁸ The creation of the private key uses PKI software on the receiver’s desktop instead of sending the contract or document over the internet.¹²⁹

“DocuSign” is another secure form of privacy protection for individuals contracting by electronic means. Similar to SignEasy, the user creates an account, uploads his documents, adds the name of the other contracting party, and places tags where signatures are required within the document.¹³⁰ A link is then sent by e-mail where the other party is able to access the document.¹³¹ DocuSign encrypts the documents to ensure only authorized individuals can access the document.¹³² It also produces an algorithm for the original document to ensure that there are no modifications made to the original docu-

121. Steven G. Mehta, *Computer Counselor: Procedures and Applications for Obtaining Electronic Signatures*, 37 L.A. LAWYER 41, 41 (2014).

122. *Id.*

123. *Id.*

124. *Id.*

125. Roaa Al-Heeti, *supra* note 89.

126. *Id.*

127. *Id.*

128. *Id.*

129. *Id.*

130. DocuSign, *How it Works*, <https://www.docusign.com/how-it-works/electronic-signature> (last visited Oct. 30, 2015).

131. *Id.*

132. *Id.*

ment.¹³³ The program uses PKI, is admissible in court, and includes the; "signing parties' names, digital signatures, e[-]mail addresses, public IP addresses, signing location (if provided), chain of custody (sent, viewed signed, etc.), and timestamps."¹³⁴ The federal legislature should require the use of technology such as DocuSign in an electronic real estate transaction. This form of PKI software is very secure and will ensure the protection of the parties' highly personal information.

Although PKI is very secure, it can be burdensome and expensive so currently only large corporations create their own PKI networks.¹³⁵ Smaller companies generally agree to outsource their PKI needs to a respectable company that often provides warranties should fraud occur.¹³⁶ Some companies utilize more sophisticated PKIs which requires the use of biometric technology.¹³⁷ This includes "the use of fingerprint readers, retina scanners or saliva tests to verify a signer's identity."¹³⁸ It is clearly evident that advancements in security measures are rapidly expanding. As this technology becomes more common, costs will decrease and the implementation and use of PKIs will protect people's privacy in an electronic real estate transaction.

There are also variations of PKI software. One of these, called Zipform, allows a party to upload the document in need of a signature onto a server, and then send an e-mail to the receiver requesting a signature.¹³⁹ Once the uploaded signature is on the document, the program sends an e-mail to the original sender informing him or her of the signature.¹⁴⁰ The program assigns a new electronic signature to a party whenever he or she logs on to the server.¹⁴¹ This is relatively secure as the party does not generate an electronic signature and therefore makes it harder for fraud to occur since neither party knows what the generated signature will look like. Generating electronic signatures that are unknown to both parties after signing the document may become the norm within the electronic real estate market one day. Although it may be expensive at the moment, like all technology, once it becomes more popular and there is more competition within the document security industry, the prices will drop. There will undoubtedly be cheaper, more efficient, and safer means to contract with other parties electronically as technology develops.

133. *Id.*

134. *Id.*

135. Roaa Al-Heeti, *supra* note 89.

136. *Id.*

137. *Id.* (some of the companies that provide these services include; VeriSign, RSA Security, Entrust Authority and UniCERT).

138. *Id.*

139. *Id.*

140. Roaa Al-Heeti, *Electronic Signatures*, ATTORNEYS' TITLE GUARANTEE FUND, <https://www.atgf.com/tools-publications/pubs/electronic-signatures>.

141. *Id.*

Liability for Allowing a Breach of Privacy to Occur in an Electronic Real Estate Transaction

The enactment of federal laws and penalties within the United States try to manage many of the present fraud issues.¹⁴² For example, laws concerning fraud in connection with electronic mail may have a sentence of up to five years in prison and a fine for which there is no maximum amount.¹⁴³ Additionally, identity theft has a maximum term of imprisonment of up to two years.¹⁴⁴ Computer-related fraud has a maximum of ten years, a fine, or both and twenty years if the offense occurs after the conviction of a party for a prior offense.¹⁴⁵ Additionally, unlawful access to stored communications has a maximum term of imprisonment of five years, a fine, or both for a first offense and ten years for any subsequent offense.¹⁴⁶ The imposition of these penalties is relatively fair on guilty parties as there is no maximum amount set for fines. This is clearly because of the hacker's capabilities in fraudulently gaining access to a substantial amount of money. Still, the legislature could create a separate penalty in the electronic real estate transaction context because of the amount of people it affects and the potential for gaining access to a larger pool of people.

Although the penalties are quite strict for the individual perpetrator, the question remains whether the individual or company should remain liable for any portion of the damages suffered by the client or customer. There is a lack of legislation in this area, specifically towards the parties to an electronic real estate transaction who are negligent in allowing hackers to gain access to their servers.

Another example of protection of privacy enacted in electronic transactions is New York's ESRA, which includes a provision to protect personal privacy.¹⁴⁷ These protections apply to both the government and private entities that authenticate electronic signatures and require them not to disclose personal information to third parties.¹⁴⁸ It is important to adopt legislation which requires protection of people's personal privacy to ensure the security of people's personal information. This is especially important in an electronic real estate transaction given the vast amount of sensitive and personal infor-

142. 18 U.S.C. prec. § 1.

143. 18 U.S.C. § 1037 (2004).

144. 18 U.S.C. § 1028A (2000).

145. 18 U.S.C. § 1030(c)(1)(A)&(B) (2002).

146. 18 U.S.C. § 2701(b)(1)(A)&(B) (2002).

147. The Committee on Uniform State Laws, *supra* note 78 at 494-495 ("ESRA contains personal privacy protections applicable both to government and to any private entity that acts as an 'authenticator' of electronic signatures." The ESRA codifies the privacy requirement for electronic signatures and personal information. Personal information includes "... home address, work address, telephone number, e-mail addresses, social security number, birth date, gender, marital status, mother's maiden name, and health data.").

148. *Id.* at 494-495 ("[T]he statute broadly defines 'personal information' to include: home, address, work address, telephone number, e-mail address, social security number, birth date, gender, marital status, mother's maiden name, and health data" and is not limited to that list).

mation that goes into the transaction itself.

Policy Considerations to Encourage the Inevitable Electronic Real Estate Transaction

The U.S. must pass more comprehensive legislation to facilitate electronic real estate transactions or the country will be falling behind internationally. In Ontario, Canada, the provincial government enacted legislation allowing parties to “electronically sign agreements of purchase of sale, as well as deeds and mortgages creating or transferring ownership of land.”¹⁴⁹ However, the electronic signatures will only be legal if the parties can successfully identify one another as signing or attaching their signature to the document.¹⁵⁰ The federal government must narrow existing legislation so there is more uniformity between and within the states. This is especially true with MERS as counties have the ability to choose whether they want to adopt MERS or not. The states have a responsibility to compel their counties to adopt the electronic recording of deeds. This trend adopted by Canada will save time and money for prospective buyers and sellers of real estate if adopted in the United States, as well as facilitating regional and international electronic real estate transactions.

Legislators should narrow the definition of what constitutes an electronic signature. The current definition is overly-broad and does not facilitate international and interstate commerce because different states and even counties have different requirements. To create uniformity, the federal legislature should adopt a more narrow definition. This definition should still require the mutual intent of both parties to contract, but requiring that the entire transaction be electronic like in E-SIGN is somewhat cumbersome to both parties. Some parties may feel more comfortable transacting certain portions of their contract online, while other portions remain in paper form.

A symbol within an electronic signature may be too vague when compared to a traditional signature. A paper signature does not allow a person to simply place a line or a dot in the signature portion of a document in order to satisfy the writing requirement in the Statute of Frauds. There should be more specificity as to what forms of electronic signatures will satisfy the writing requirement of the Statute of Frauds. There would be a decrease in cases of alleged fraud within electronic transactions if the legislature adopts a clear definition.

The federal government should also adopt a minimum level of security within an electronic real estate transaction. The government should require the use of PKI software between all necessary parties to an electronic real estate transaction to ensure the protection of the parties' privacy. This would not only make the transacting parties feel more comfortable with electronic real estate transactions, but also allow for more competition and development

149. Bob Aaron, *Electronic Signatures legal in real estate deals starting July 1, 2015*, THE STAR (Jun. 26, 2015), <http://www.thestar.com/life/homes/2015/06/26/electronic-signatures-legal-in-real-estate-deals-starting-july-1-2015.html>.

150. *Id.*

in PKI software. The price for such a service would become more affordable if it is made mandatory by the federal government and is in widespread use.

Inevitably, in this growing technological society, future generations will become more comfortable transacting electronically and there will undoubtedly be more security within the technology industry. This will expand the number of people who use electronic means to contract and allow for more people to participate in electronic transactions. It would undoubtedly translate into the real estate market as well and allow for more efficiency within the industry, thus making the process of purchasing a home more affordable.¹⁵¹

As with any new developments in the law, the judiciary has the ability to interpret the legislature's intent for adopting the new law in the first place. Legislation is also subject to amendment where there is inconsistency among the states hindering commerce. States like New York and New Jersey have not adopted electronic signatures in real estate transactions because they are concerned with fraud; however, these states are lagging behind in enacting legislation which will inevitably come with today's vast electronic system.¹⁵² The legislature should realize E-SIGN is too broad and should be more narrowly tailored so there is more uniformity among states. This uniformity would most likely make the public feel more secure with electronic transactions in the real estate context.

A provision must be added to E-SIGN which specifically addresses electronic real estate transactions. Real estate affects nearly every person living in the United States in some form or another. As previously stated, real estate transactions require taking numerous steps to complete. Similar to the insurance provision within the E-SIGN Act, the Act should provide for a separate section concerning real estate. The insurance provision in 15 U.S.C.S. § 7001(j) lays out the liability for the insurance agents and brokers.

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 the contract if – (1) the agent or broker has not engages in negligent, reckless, or intentional tortuous 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.

This provision within E-SIGN clearly sets a standard for insurance agents and brokers with regards to their liability. A similar provision should be adopted specifically for real estate agents and lawyers in an electronic real estate transaction. Like the insurance industry, the real estate industry is extremely large and they both affect a vast number of people. By clearly establishing when an agent is liable for an electronic real estate transaction, the

151. Kaitlin Ugolik, *supra* note 4.

152. *Id.*

federal government would create more trust in the emerging industry. As mentioned previously, this would amount to saving time and money for the contracting parties, as well as to brokers and lawyers in the industry. It would also ensure that there is accountability from the buyer's and seller's agents should there be a breach of their highly sensitive personal information.

Additionally, the federal government should also create a law for the electronic recording of deeds. Allowing a private company such as MERS to continue to control electronic recordings can be troublesome because a security breach on personal information such as the recording of deeds would have catastrophic consequences on the industry as a whole. There are already problems arising with MERS in the foreclosure context because MERS is "legally unable to foreclose on mortgage liens . . . because [the] MERS organization itself does not hold any interest in the mortgage, it has no legal standing to bring a foreclosure action."¹⁵³

The only state to have "multi-jurisdictional recording offering e-recording in every county" is Colorado.¹⁵⁴ In Colorado, ". . . [c]ounty [clerks] and [p]ublic [t]rustees jointly helped to pass legislation for an Electronic Filing Fund which provided counties the necessary monies needed to purchase technology to move this process [electronic recordation] forward."¹⁵⁵ The Property Records Industry Association ("PRIA") was instrumental in allowing Colorado to achieve a fully electronic recording system.¹⁵⁶ PRIA continues to have discussions with the government ". . . for the identification, research, discussion, development, drafting, and implementation of national standards, best practices, and new technology solutions to promote the integrity of the public records system."¹⁵⁷ The federal government must provide funding to states that are not able to fully fund electronic recordation. By providing the funding the federal government will be encouraging electronic real estate transactions and is able to control these recordings through the public records system, and not a private company which the government has little control over.

The government should enact legislation so that like the paper transac-

153. Jessica K. Kranz, *Expedition E-Recording, First Stop URPERA: How Universal E-Recording Under URPERA Could Revolutionize Real Estate Recording in the United States and Why it Should*, 13 MINN. J.L. SCI. & TECH. 383, 391 (2012).

154. *Id.* at 393.

155. *Colorado Attains 100 Percent Engagement*, PROPERTY RECORDS INDUSTRY ASS'N, http://www.pria.us/files/public/News/Press_Releases/PRIA/2011/Colorado_Reaches_100_Percent.pdf (Apr. 11, 2011) ("Electronic recording (eRecording) is the automated process in a land records office of receipt, examination, fee calculation and payment, endorsing of recording information and return of recorded electronic documents.").

156. *PRIA History*, PROPERTY RECORDS INDUSTRY ASS'N, <http://www.pria.us/i4a/pages/index.cfm?pageID=3870> (last visited Nov. 27, 2015) (the idea behind PRIA is that ". . . government and business can work together, with mutual respect and without acrimony, to address issues of common concern in the world of property transactions." The creation of PRIA is to facilitate meaningful discussions between people within the real estate industry to evaluate and discuss issues. The discussion leads to agreements and allows the industry as a whole to set standards and resolve issues to allow for a more fluid industry. The federal government should also engage itself in discussions with people in the real estate industry in order to amend current legislation and allow for more uniform laws within the U.S.).

157. *Id.*

tion in real estate, the county must adopt electronic records. The county should also be in charge of keeping the electronic records instead of a private company like MERS. Since the initial startup costs to switch to electronic recording would be high, the federal government should give states and municipalities incentives to begin setting up electronic recording of deeds which are directly controlled by the counties. This would ensure more security and uniformity among the states and allow the electronic real estate market to flourish.

CONCLUSION

Electronic real estate transactions will become prevalent within a relatively short period of time; however, the government should be preserving people's privacy by creating more uniformity among the states. There must be an amendment to federal legislation to facilitate uniformity among the states to encourage electronic real estate transactions. This will encourage interstate, as well as international, commerce within the U.S. real estate market. Furthermore, there are serious privacy concerns within electronic transactions; however the legislature can take steps such as requiring preventative measures to protect one's privacy. Although some of these preventative measures are not currently economically feasible for the average person, they are becoming more cost effective as demand increases and the market becomes more competitive.

Amending federal legislation will allow the real estate industry to expand and flourish because it affects so many people. As the recent recession has demonstrated, the real estate industry is massive and represents a vital portion of the U.S. economy. Adopting narrow, uniform legislation sooner will make purchasing a home more affordable as it will cut down on costs and make the market as a whole more lucrative and attractive. In doing so, the federal government must ensure the uniform legislation also includes provisions to protect the exchange of highly sensitive person information between parties.

In the near future, home buyers and sellers will accept electronic real estate transactions as ordinary. There is a sense of pride in the U.S. and admiration internationally for the successful capitalist ideologies which have been implemented and allow markets to flourish. Furthermore, the U.S. promotes technological advancements in various industries to save time and money for the average consumer. Federal and state legislation must be more narrowly tailored to continue this trend in America. By amending E-SIGN, the UETA, or creating a separate federal legislation specifically for electronic real estate transactions, the U.S. will once again act as a model nation to which others will admire and adopt similar legislation.

If legislators choose not to amend the current federal E-SIGN Act, societal pressure will eventually require legislators will amend it in the future. As future generations grow, electronic transactions will become more prevalent in

society. The younger generation is more comfortable with technology and will urge the federal government to amend E-SIGN to encompass uniform legislation. This will translate in the electronic real estate market and make housing prices fall, although it has yet to be seen whether it will dramatically affect the market pricing of housing. It will however increase the speed and reduce time in buying a house, thus making for a more lucrative real estate market.

The U.S. has traditionally been on the cusp of technological advancement and a leader which other nations follow. If this trend is to continue, federal government must amend legislation to encourage electronic real estate transactions. The federal government must adopt new funding schemes to encourage electronic recording by counties. This will eliminate the inconsistent court rulings with the foreclosure process and MERS. The federal government must also amend the E-SIGN Act and create a separate section for electronic real estate transactions to ensure participants' privacy rights are upheld. The federal government must mandate a minimum amount of security measures throughout the electronic real estate transaction process to ensure people's privacy rights. Federal legislation must also be uniform with respect to which parties are liable in the event of a breach. The U.S. must adopt uniform legislation to continue to be dominant technologically on an international level for electronic real estate transactions.

