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## Avoiding the Un-Real Estate Deal: Has the Uniform Electronic Transactions Act Gone Too Far?, 35 J. Marshall L. Rev. 311 (2002)

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# AVOIDING THE UN-REAL ESTATE DEAL: HAS THE UNIFORM ELECTRONIC TRANSACTIONS ACT GONE TOO FAR?

DEREK WITTE\*

## INTRODUCTION

The physical immediacy of paper—its touch and smell—are reassuring proof of our existence and of our past.<sup>1</sup>

Seven years ago . . . I described a mathematical utopia: algorithms that would keep your deepest secrets safe for millennia, protocols that could perform the most fantastical electronic interactions—unregulated gambling, undetectable authentication, anonymous cash—safely and securely. . . . It's just not true. Cryptography can't do any of that.<sup>2</sup>

Although the Internet has created exciting new possibilities for the practice of real estate in the future, the tangible paper used to buy and sell real property will protect us from the modern reality of digital theft, hackers, and the cyber-jungle.<sup>3</sup> We are people of substance and our history with paper has not been an

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1. Charles N. Faerber, *Book versus Byte: The Prospects and Desirability of a Paperless Society*, 17 J. MARSHALL J. COMPUTER & INFO. L. 797, 806 (1999).

2. BRUCE SCHNEIER, *Preface to SECRETS AND LIES: DIGITAL SECURITY IN A NETWORKED WORLD* xi (2000).

3. *See id.* at 1-5 (2000) (listing several prominent thefts and crimes committed on the Internet to allegedly secure web sites and databases); *see generally* Martin B. Cowan, *Introducing Twentieth-Century Technology to Real Estate Recording Practices (Before the Twenty-First Century Arrives)*, 28 REAL EST. L.J. 99 (1999) (discussing the possibility of using the Internet, global positioning, and electronic signatures to more accurately and efficiently record real estate transactions with appropriate local authorities).

In the late nineteenth century, French sociologist Emile Durkheim postulated that anomie led people to become criminals. You can extend his arguments to the hacker psychology we're seeing now: No one is connected to anyone else, people feel anonymous behind their handles, and there are no repercussions to actions; this leads some people to do antisocial things. The miasma of the Internet virtually guarantees it. SCHNEIER, *supra* note 2, at 390.

affair of convenience, but a relationship with a medium that brings the world of ideas into the world of substance. Substance is what is missing from our new digital world. As humans, we simply cannot understand the concept of owning a piece of the earth until we hold a real paper deed in our hands, and computers will not change that.

Part I of this Comment begins by introducing some basic real estate concepts. Part II analyzes whether the paperless real estate transaction will be more effective than the traditional rituals of real property exchange. Specifically, the Section will focus on the binding power of electronic signatures and the Statute of Frauds "writing" requirement, the deed as a paperless negotiable instrument, and digital recordation of title. Part III of this Comment suggests how to integrate modern technology into real estate tradition. The Comment concludes that the advocates of a paperless real estate transaction are being blinded by their love affair with the Internet, and therefore fail to see the many problems with paperless real estate transactions. As a result, no state or federal laws should allow for this practice.

#### I. FROM A CLOD OF DIRT TO AN ELECTRONIC BLIP: THE HISTORY OF THE REAL ESTATE TRANSACTION

To understand the pitfalls of a paperless real estate transaction, it is important to first understand the transaction itself.<sup>4</sup> The basic steps in the real estate transaction are negotiation, contract execution, closing, delivery, and recordation.<sup>5</sup> Specifically, the paperless real estate transaction affects three aspects of the typical real estate transaction: 1) the Statute of Frauds requirement for the purchase agreement and deed; 2) the delivery of the deed at closing; and 3) the recordation of the deed after the transaction has been completed.<sup>6</sup>

##### A. Statute of Frauds

One of the major obstacles to the paperless real estate transaction and the impetus behind electronic transaction

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4. Dale A. Whitman, *Digital Recording of Real Estate Conveyances*, 32 J. MARSHALL L. REV. 227, 228 (1999); see also Cowan, *supra* note 3, at 100 (outlining the contemporary process of real estate recordation and title searching).

5. See generally AMERICAN LAW INSTITUTE, COMMITTEE ON CONTINUING PROF'L EDUC., THE PRACTICAL REAL ESTATE LAWYER'S MANUAL NUMBER ONE (1987); PHILLIP B. BERGFELD, PRINCIPLES OF REAL ESTATE LAW (1979); DAVID M. GOLDBERG, REAL ESTATE FOR THE GENERAL PRACTITIONER (1997); CHARLES J. JACOBUS & BRUCE HARWOOD, REAL ESTATE PRINCIPLES (7th ed. 1996); JAMES KARP & ELLIOT KLAYMAN, REAL ESTATE LAW (4th ed. 1998); W.D. MILLIGAN & ARTHUR G. BOWMAN, REAL ESTATE LAW (1984).

6. Uniform Electronic Transactions Act § 16 (1999) [hereinafter UETA].

legislation is the Statute of Frauds.<sup>7</sup> In 1677, English lawmakers instituted the Statute of Frauds to prevent fraud arising from oral contracts.<sup>8</sup> The Statute of Frauds is still the law in almost every state.<sup>9</sup> Generally, the Statute of Frauds renders unenforceable any agreement or instrument affecting real estate that is not in writing.<sup>10</sup> In order to satisfy the Statute of Frauds, a real estate purchase agreement or deed must meet several requirements to be considered a "writing;" the most important of which is the manual signature of the party to be bound.<sup>11</sup>

### B. Deeds and Delivery

Even if the Statute of Frauds is satisfied, a grantor or seller cannot transfer title in real estate unless a valid deed is delivered and accepted.<sup>12</sup> The requirement of delivery is the present day equivalent of the 16th century "feoffment by livery of seisin," where a twig or clod of dirt from the property was literally exchanged for money on the site.<sup>13</sup> The modern deed replaced

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7. For a proposed way to overcome this obstacle, see Amelia H. Boss, *eCommerce: Strategies for Success in the Digital Economy: Uniform Electronic Transactions Act*, 588 A.L.I. 401/ PAT 401 (2000). The emergence of electronic commerce raises a host of questions about our existing rules and legal system. *Id.* at 393-94. One frequent plea is to remove the barriers to electronic commerce, barriers that are to a great degree, the vestiges of a commercial law system based on paper. *Id.* at 394-95. Legal requirements such as a "writing," "signature," and an "original" need to be reconsidered in the context of electronic commerce. *Id.* The goals have been to remove barriers to electronic commerce, to treat electronic communications the same as paper communications, and not to favor one technology over another. *Id.* at 394.

8. KARP & KLAYMAN, *supra* note 5, at 194-96. The authors explain and give a history for the Statute of Frauds. *Id.* at 194-95.

9. *Id.* "Nearly every state has modeled its version of a Statute of Frauds after the English statute." *Id.* at 195.

10. *Id.* "Every jurisdiction has enacted statutes that require certain types of contracts [including contracts affecting real estate] to be in writing if they are to be enforceable by the courts." BERGFELD, *supra* note 5, at 125. See also 740 ILL. COMP. STAT. 80/2 (2000) (exhibiting a typical approach to the modern Statute of Frauds). "No action shall be brought to charge any person upon any contract for the sale of lands . . . unless such contract . . . shall be in writing, and signed by the party to be charged therewith." *Id.*

11. KARP & KLAYMAN, *supra* note 5, at 195. To satisfy the writing requirement for the Statute of Frauds in most states a real estate purchase agreement must include the following: 1) the names of the parties to the contract; 2) a description of the property; 3) the purchase price; 4) essential terms and condition; and 5) "the signature of the party against whom enforcement is sought." *Id.* at 195.

12. JACOBUS & HARWOOD, *supra* note 5, at 94. Title does not transfer until the seller voluntarily delivers the deed and accepted by the buyer or buyer's agent. *Id.* Although recordation or the buyer's possession of the deed creates a presumption that delivery has occurred, the deed will still be void if a party proves that delivery never occurred. *Id.*

13. SANDRA H. JOHNSON & PETER W. SALSICH, *PROPERTY LAW: CASES, MATERIALS AND PROBLEMS* 450 (2d ed. 1998). Under the livery of seisin, the

livery of seisin as a tangible but more convenient alternative.<sup>14</sup> However, at present, many states have gone one step further by replacing the paper deed with an electronic document.<sup>15</sup>

The concept of electronic delivery seems strange when, sometimes, even physical delivery of a paper deed does not qualify as legal "delivery."<sup>16</sup> In most states, delivery requires intent to deliver and actual surrender of control of the instrument.<sup>17</sup> Only in rare occasions are implied delivery sufficient, allowing a party's intent to replace actual physical delivery.<sup>18</sup>

### C. Recordation

If the Statute of Frauds is satisfied and a valid deed is delivered, a purchaser of real property must record his or her newly acquired title with the county recorder's office to protect his or her interests against all others.<sup>19</sup> Although after delivery the deed is valid between the buyer and seller, it is not valid against all other claimants until it is recorded.<sup>20</sup> Thus, recordation is important because otherwise someone who purchases land fraudulently or forges a deed can actually gain an interest in the bona fide purchaser's land.<sup>21</sup> Also, most states consider

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buyer and seller actually met on the property and the seller handed over a piece of earth or a twig to symbolize the transfer of real property. *Id.*

14. *Id.* The substance of the paper deed allowed for a tangible, real transaction, satisfying some of the desire for substance that motivated the original ritual. *Id.*

15. UETA § 16 (1999).

16. See *Meyer v. Wall*, 270 Cal. App. 2d 24, 29 (Cal. Dist. Ct. App. 1969) (defining delivery as requiring the intent of the seller or grantor to deliver the deed or title immediately); see also *Obranovich v. Stiller*, 220 Cal. App. 2d 205, 208 (Cal. Dist. Ct. App. 1963) (holding that whether delivery has occurred is a finding of fact); *In re Wittmond*, 732 N.E.2d 659, 664 (Ill. App. Ct. 2000) (finding that the grantor had not adequately delivered the deed during his lifetime to a land trust, because although he physically delivered the deed to the trustee, he told the trustee not to record it, and did not evince any other intention to transfer title). Unless the two requirements are met, intent and surrender, delivery has not occurred. KARP & KLAYMAN, *supra* note 5, at 339.

17. See, e.g., *Meyer*, 270 Cal. App. 2d at 29; *Obranovich*, 220 Cal. App. 2d at 208; *Wittmond*, 732 N.E.2d at 664.

18. MILLIGAN & BOWMAN, *supra* note 5, at 167.

"The best evidence of delivery is the act of handing the deed to the grantee, but manual delivery is not essential. Even though the deed is not handed to the grantee, it is deemed to be constructively delivered where, by agreement of the parties, it is understood to be delivered." *Id.* at 167. This analysis seems to open the door to electronic delivery. *Id.* However, not all scholars agree that electronic delivery is without problems. Faerber, *supra* note 1, at 797.

19. JACOBUS & HARWOOD, *supra* note 5, at 115-18. The recorder's office might also be named the County Clerk's Office, the Circuit Court Clerk's Office, the County Registrar's Office, the Bureau of Conveyances, or something else. *Id.* at 117.

20. WILLIAM ATTEBERRY ET AL., REAL ESTATE LAW 196-97 (3rd ed. 1984).

21. *Id.* Because it was not always easy to tell who owned what land,

recording to be constructive notice of ownership and the best way to protect an owner's property rights against all others.<sup>22</sup>

Even today, recorders' offices are often rather antiquated operations, where the deeds are photocopied and filed under some type of manual or rudimentary electronic indexing system.<sup>23</sup> It is therefore not surprising that many scholars (and people in the market to purchase a home) find the concept of the paperless recorders' office tantalizing. It is simple and makes title insurance companies obsolete.<sup>24</sup>

#### D. Uniform Electronic Transactions Act

The Uniform Electronic Transactions Act ("UETA") is a model act that was constructed to overcome obstacles to electronic transactions, such as the requirements of a real estate transaction described above.<sup>25</sup> The UETA is an effort by the Uniform Law Commissioners to bring electronic files and documents to the level of a "writing" for purposes of the Statute of Frauds and all other statutory requirements.<sup>26</sup> Over half of the states have adopted

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purchasers who "took" without notice of another's ownership were traditionally protected even when they bought land owned by someone else. *Id.* at 115. However, in the modern system, it is presumed that all potential purchasers of real property have read the records in the recorder's office. *Id.* at 116. Therefore, they are on "constructive notice" of the owner's property rights if the owner records his or her deed, and cannot claim any rights to that owner's land even if they purchased the land from someone they believed to be the owner. *Id.* at 115-18. This is the case even when the claimants, in reality, are unaware of the owner's rights. *Id.* at 115-18; KARP & KLAYMAN, *supra* note 5, at 389.

22. CAL. CIV. CODE § 1213 (2000); 750 ILL. COMP. STAT. § 5/30 (2000).

23. Cowan, *supra* note 3, at 100-01; JACOBUS & HARWOOD, *supra* note 5, at 121; Whitman, *supra* note 4, at 230-31. Deeds are photocopied and filed away in hard paper form. Whitman, *supra* at 230. However, these documents are often difficult to find once they are filed because they are numerous and subject to human error. *Id.* Most land record offices use a "grantor and grantee index" which locates the deed by the names of the parties; however, a few states use "tract indexes" which locate the deed using the metes and bounds of the property. JACOBUS & HARWOOD, *supra* at 230. Neither system is without difficulty. *Id.* at 231.

24. See Cowan, *supra* note 3, at 99 (advocating a more effective and uniform system of recording incorporating global positioning and computer database searches). See also Whitman, *supra* note 4, at 227-28 (encouraging a complete digitization of the recording process).

25. UETA § 5 (1999); Boss, *supra* note 7, at 393. See also Unif. Law Comm'rs, *Why States Should Adopt the Uniform Electronic Transactions Act*, at [http://www.nccusl.org/nccusl/uniformact\\_why/uniformacts-why-ueta.asp](http://www.nccusl.org/nccusl/uniformact_why/uniformacts-why-ueta.asp) [hereinafter *Why States Should Adopt*] (providing reasons why every state should adopt the UETA) (last visited Feb. 7, 2002).

26. Boss, *supra* note 7, at 393. The UETA final draft was finalized and agreed upon at the National Conference of Commissioners of Uniform State Laws in Denver, Colorado in July of 1999. *Id.* To date, thirty-nine states have implemented the UETA. *Why States Should Adopt*, *supra* note 25, at 1. The

UETA as law.<sup>27</sup> The Act treats all electronic writings, signatures and documents as if written on paper.<sup>28</sup> Also, it provides for electronic contract negotiation, electronic amendment of written contracts, electronic signing of any contract, electronic delivery of a deed, and electronic recordation of title.<sup>29</sup>

Interestingly, the earlier drafts of UETA did not include real estate transactions, because even the progressive drafters feared potential problems with electronic delivery and recordation of deeds.<sup>30</sup> Although the final draft of UETA does include real estate transactions, the drafters still expressed their concern in the preface to the current UETA.<sup>31</sup> The drafters understood that the role of paper as a negotiable instrument and tool for recordation

Act only operates when all parties have agreed to perform their transaction electronically. Boss, *supra* at 395; UETA § 5. The purpose of the Act is encapsulated in § 7 of the Act: "a record or signature may not be denied legal effect or enforceability solely because it is in electronic form." UETA § 7.

27. For a listing of the states that have implemented the Act, see Uniform Law Commissioners. Nat'l Conf. of Comm. of Unif. State Laws, *Introductions and Adoptions of Uniform Acts*, at [http://www.nccusl.org/nccusl/uniformact\\_factsheets-fs-ueta.asp](http://www.nccusl.org/nccusl/uniformact_factsheets-fs-ueta.asp) (last visited Feb. 7, 2002).

28. *Preface to UETA* (1999). The UETA is designed to integrate electronic transactions seamlessly into the existing laws regarding paper transactions, manual signatures and tangible documents. Boss, *supra* note 7, at 393. It is the goal of the Act that electronic transactions which fail will fail due to some substantive law that would have been applied identically had all of the "writings" been done on paper with ink. *Id.* at 397.

29. UETA §§ 5, 7, 8, 16, 17; Consumer's Union, *Uniform Electronic Transactions Act: Consumer Nightmare or Opportunity?*, at <http://www.consumer.org/finance/899nclwc.htm> (pointing out substantive weaknesses in the UETA) (last visited Feb. 7, 2002).

30. *Draft for discussion only* of UETA § 105(a)(4) (Aug. 15, 1997), at <http://www.upenn.edu/bl> (excluding the Act's applicability to any rules of law relating to the conveyance of real property) (as of Feb. 20, 2002).

The question of whether to include or exclude real estate transactions [in the proposed Uniform Electronic Transactions Act] has significant legal and practical consequences. The elimination of a writing requirement strikes to the very heart of the traditional Statute of Frauds . . . . Like the special formalities associated with the execution of wills, the execution formalities for real estate transactions are intended to promote deliberation and prevent fraud.

Faerber, *supra* note 1, at 801.

31. *Preface to UETA* (1999):

[R]eal estate transactions were considered potentially troublesome because of the need to file a deed or other instrument for protection against third parties. Because no form of filing effects the efficacy of a real estate purchase contract, or even a deed, between the parties, the question was raised why these transactions should not be validated by this Act if done via an electronic medium. No sound reason was found . . . . An exclusion of all real estate transactions would be particularly unwarranted in the event that a State chose to convert to an electronic recording system.

*Id.* ¶ 1.

challenged the "efficacy" of UETA.<sup>32</sup> Moreover, the UETA does not address or remedy the potential of fraud that would inevitably arise from a real estate deal without paper.<sup>33</sup> This Act, already law in over half of the states, sees ink and electrons as identical.<sup>34</sup> The UETA provides for three forms of electronic communication that are either unsafe or technologically impossible: 1) contract formation and execution using electronic signatures; 2) the electronic delivery of digital deeds; and 3) the electronic recordation of documents with a governmental agency<sup>35</sup>

### E. Illinois Electronic Commerce Security Act

It is unlikely that Illinois will adopt UETA, because Illinois already adopted the Illinois Electronic Commerce Security Act ("IECSA"), which redefines Illinois business for the Information Age.<sup>36</sup> The purpose and aim of IECSA is almost identical to that of UETA.<sup>37</sup> Similar to the UETA, the IECSA encourages the negotiation and execution of contracts over the Internet, and provides for electronic recordation with a governmental agency.<sup>38</sup>

32. *Id.*; Boss, *supra* note 7, at 399. "For example, real estate transactions were considered potentially troublesome because of the need to file a deed or other instrument for protection against third parties." *Preface to UETA* (1999).

33. Faerber, *supra* note 1, at 801.

34. UETA § 5(b).

35. *See id.* §§ 7-9 (establishing electronic contract negotiation and electronic signatures as equivalent to written negotiation and execution, and explaining the function, validity and definition of an electronic signature). *See also id.* § 16 cmt. 3 (defining guidelines for completely paperless transferable records, defining "authoritative copy" and laying the groundwork for delivery of a deed and legal transfer of title over the Internet, while admitting that the technology to create a completely authoritative electronic document does not yet exist); UETA § 17 (describing and defining the function and process of using the Internet to communicate electronic documents to a governmental agency where they may be kept as records: the process of electronic recordation of land title).

36. 5 ILL. COMP. STAT. 175/1-101 et seq. (2000).

37. R.J. Robertson Jr. & Thomas J. Smedinghoff, *Illinois Law Enters Cyberspace: The Electronic Security Act*, 87 ILL. B.J. 308, 309 (1999); *see also* 5 ILL. COMP. STAT. 175/1-105 (2000). The Act is intended to overcome the legal barriers that impede electronic transactions: regulations and statutes that require a "writing" and those that require some document to bear a party's "signature." Robertson & Smedinghoff, *supra*, at 309. The Act was drafted to include electronic messages and files within the definition of a "writing" and electronic signatures within the definition of a "signature," thereby putting "electronic information on an equal footing with written information for most legal purposes." +  
*Id.* at 308

38. 5 ILL. COMP. STAT. 175/5-105 (2000) (defining, exploring the effect, and discussing the security of electronic or digital signatures used to enter into binding contracts); *id.* at 175/25-101 (2000) (explaining the process and validity of electronic recordation with a governmental body).



However, IECSA differs from UETA in one fundamental way: it does not allow for title transfer or exchange of a negotiable instrument via electronic means. Therefore, pursuant to IECSA, a deed delivered over the Internet would most likely be void.<sup>39</sup> However, under the UETA, the attempt to transfer over the Internet a unique and authoritative negotiable instrument such as a deed would most likely be upheld.<sup>40</sup>

## II. ANALYSIS OF UETA, IECSA AND THE PAPERLESS REAL ESTATE TRANSACTION

This section evaluates whether real estate should be excluded from uniform electronic commerce legislation by analyzing three areas: 1) signature and writing requirements; 2) deeds and their delivery; and 3) the effects of digital recordation. Although UETA and IECSA were intended to remove all obstacles to the paperless real estate transaction, the Acts may not adequately respond to the problems created by the Statute of Frauds, the function of a deed and its delivery, and the requirements of effective land title recordation. The paper documents used in a real estate transaction have a specific legal function: they bring an abstract transaction into the realm of substance.<sup>41</sup> In addition, the papers hold legal legitimacy, prevent fraud, and are more durable than computer files.<sup>42</sup>

### A. Statute of Frauds Writing and Signature Requirements

The first obstacle to the paperless real estate transaction is the statutory writing requirement for instruments affecting real

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39. *Id.* at 175/5-115(b)(3) (2000).

[This act covers] any record that serves as a unique and transferable instrument of rights and obligations including, without limitation, negotiable instruments and other instruments of title wherein possession of the instrument is deemed to confer title, unless an electronic version of such record is created, stored, and transferred in a manner that allows for the existence of only one unique, identifiable, and unalterable original with the functional attributes of an equivalent physical instrument, that can be possessed by only one person, and which cannot be copied except in a form that is readily identifiable as a copy.

*Id.* See also Robertson & Smedinghoff, *supra* note 37, at 310 (explaining that in 5 ILL. COMP. STAT. 175/5-115 cmt. 7, the IECSA excludes negotiable instruments from its scope because no truly authoritative non-paper computer file exists that cannot be copied or fraudulently manipulated); *but see* UETA § 16, cmt. 1 (stating that although the technology does not exist for a truly authoritative electronic negotiable instrument, the drafters did not want to discourage its development by excluding its legal effect from the scope of the Act).

40. UETA § 16, cmt. 7.

41. See generally sources accompanying *supra* note 5.

42. See generally sources accompanying *supra* note 5.

property.<sup>43</sup> This requirement serves at least four purposes: 1) to prevent fraud; 2) to caution parties before binding them; 3) to channel agreements into a distinguishable form; and 4) to clarify ambiguities.<sup>44</sup> However, the prevention of fraud is the most important.<sup>45</sup> Therefore, the efficacy of a paperless real estate transaction should be determined by its ability to prevent fraud.<sup>46</sup>

An analysis of recent case law suggests that electronic writings and signatures do not adequately prevent fraud. Before the enactment of UETA and IECSA, several state and federal courts strictly construed statutory "writing" requirements to exclude alternatives such as faxes and electronic documents.<sup>47</sup> For instance, in *In re Kaspar*, the Tenth Circuit held that a statement of financial condition orally communicated to a credit company and then recorded as a computer file was not a sufficient writing and did not satisfy the bankruptcy code requiring non-dischargeable credit agreements be in writing.<sup>48</sup> Moreover, the court stated that electronic records do not satisfy statutory "writing" requirements because solemn transactions, such as the one in *In re Kaspar*, require a degree of formalism that "stand as a bulwark . . . to protect both sides."<sup>49</sup> This holding re-affirms that electronic writings should be analyzed based on their resistance to

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43. See Boss, *supra* note 7, at 393 (explaining that the Statute of Frauds creates the most significant barrier to electronic commerce, and therefore is the most important reason for drafting uniform legislation which mandates that electronic writings are writings for purposes of the Statute of Frauds).

44. Christopher B. Woods, *Commercial Law: Determining Repugnancy in an Electronic Age: Excluded Transactions Under Electronic Writing and Signature Legislation*, 52 OKLA. L. REV. 411, 425-28 (1999) (analyzing the function and importance of a writing and determining whether those functions are equally satisfied by electronic and pen and ink writings).

45. See *Parma Tile, Mosaic & Marble Co. v. Estate of Short*, 663 N.E.2d 633, 635 (N.Y. 1996) (holding that the primary purpose of the Statute of Frauds writing requirement is to prevent the enforcement of agreements that were never made). A faxed transmission cannot satisfy the "writing" requirement of the statute and bind a party to an agreement affecting real property. *Id.*

46. *Hessenthaler v. Farzin*, 564 A.2d 990, 992 (Pa. 1989). See Woods, *supra* note 44, at 435-36 (explaining that electronic documents used in a real estate transaction should satisfy the Statute of Frauds only if they can prevent fraud).

47. *In re Kaspar*, 125 F.3d 1358, 1359 (10th Cir. 1997). A credit company cannot claim a creditor's debt to be non-dischargeable during a bankruptcy proceeding if the credit account was based upon a statement of financial condition made only in the form of an electronic file. *Id.* Bankruptcy statutes that require a "writing" cannot be satisfied with electronic files. *Id.* See also *Norris v. Dep't. of Transp.*, 486 S.E.2d 826, 828 (Ga. 1997) (Hines, J., dissenting) (arguing that a claim against the state would only be allowed if plaintiff gave written notice of injury to the appropriate state agent). A fax transmission could not satisfy the written notice requirement. *Id.* at 829.

48. *Kaspar*, 125 F.3d at 1359.

49. *Id.* at 1361; 11 U.S.C. §§ 523(a)(2)(A)&(B) (2000).

fraud, and probably do not meet the necessary standards which pen and ink writings do.<sup>50</sup>

In addition, a handful of cases regarding fax transmissions that are analogous to electronic writings are directly on point.<sup>51</sup> Although the Supreme Court of Georgia was not presented with the issue, the dissent in *Norris v. Department of Transportation*, noted that a fax could not satisfy the writing requirement of a state law controlling tort actions against government agencies.<sup>52</sup> Likewise, in *Parma Tile v. Short*, the New York Court of Appeals held that a fax transmission containing the sender's name and a summary of a sub-contractor contract did not bind the sender to the agreement because the fax was not a "writing."<sup>53</sup>

Although this precedent favors pen and ink documents, proponents of the paperless real estate transaction argue that electronic signature technology and encryption methods provide as much protection against fraud as traditional writings and signatures that may be forged by expert criminals.<sup>54</sup> Also, proponents argue that weaknesses in digital signature technology can be improved through the development of biological verifications, or biometrics, such as retinal scans or fingerprint analyses that would verify the person using the digital signature is authorized to do so.<sup>55</sup>

Furthermore, the proponents of the paperless transaction argue that the consent requirement of UETA and IECSA removes the transaction's validity from attack because the parties have willingly contracted to proceed electronically, despite the risks of fraud.<sup>56</sup> Accordingly, parties concerned about fraud can simply not consent to the electronic transaction.<sup>57</sup> However, when parties do not give express consent, the act of proceeding electronically itself, such as responding to an e-mail or pressing an "accept" button on

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50. *Kaspar*, 125 F.3d at 1361.

51. *Norris*, 486 S.E.2d at 826; *Parma*, 663 N.E.2d at 633.

52. *Norris*, 486 S.E.2d at 829 (Hines, J., dissenting).

53. *Parma Tile*, 663 N.E.2d at 635.

54. Whitman, *supra* note 4, at 246-47; Woods, *supra* note 44, at 435. "[A] visual inspection of a handwritten signature is a rather poor authenticator of identity, and forgeries are common." Whitman, *supra* at 247.

55. Woods, *supra* note 44, at 417-18. See also R.R. Jueneman & R.J. Robertson, Jr., *Biometrics and Digital Signatures in Electronic Commerce*, 38 JURIMETRICS J. 427, 428 (1998) (introducing and analyzing the various forms of biometric technology that might be used to verify the source of electronic signatures, including retinal scans, facial patterns, iris patterns, voice prints and others). See also SCHNEIER, *supra* note 2, at 141-45 (providing a detailed explanation of biometric technology and its limitations within electronic commerce).

56. UETA § 5(b) (1999).

57. R.J. Robertson Jr., *The Illinois Electronic Commerce Security Act: A Response to Martin Behn*, 24 S. ILL. U. L.J. 473, 504-05 (2000).

a web page, is considered sufficient evidence of prior consent.<sup>58</sup> Thus, the UETA prior consent requirement is meaningless because simply performing an electronic transaction implies that the parties have given prior consent.<sup>59</sup> As a result, the only argument remaining in favor of electronic signatures and paperless real estate agreements is that the present technology is indeed fraud-proof.<sup>60</sup>

In that respect, electronic signature technology fails. Although biometric signatures are promising, they exist primarily in theory. The only digital signature technology available today is Public Key Infrastructure ("PKI") technology.<sup>61</sup> Although PKI signature keys guarantee that an electronic document or communication was signed with the key itself, they cannot guarantee who used the key.<sup>62</sup> For instance, if an executive using PKI technology allowed his or her secretary to sign a document with his or her electronic signature key, the technology could not verify for the recipient that the executive had not signed it himself or herself.<sup>63</sup>

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58. UETA § 5(b) cmt. 4; Robertson, *supra* note 57, at 506. "In this context it is essential that the parties' actions and words be broadly construed in determining whether the requisite agreement exists." UETA § 5 cmt. 4.

59. UETA § 5(b) cmt. 4; Robertson, *supra* note 57, at 506.

60. Whitman, *supra* note 4, at 247.

61. Cowan, *supra* note 3, at 112; Whitman, *supra* note 4, at 253-55. See Jueneman & Robertson, *supra* note 55, at 457 ("Unfortunately, to date no comparable objective, agreed-upon measures have been devised for biometric identification devices proposed for use in electronic commerce."). See also SCHNEIER, *supra* note 2, at 141-45 (defining biometrics and analyzing its shortfalls for use in electronic commerce). "The moral is that biometrics work great only if the verifier can verify two things: one, that the biometric came from the person at the time of verification, and two, that [it] . . . matches the master biometric on file. If the system can't do both, it is insecure." *Id.* at 144.

62. Cowan, *supra* note 3, at 110-12; Stephen G. Myers, *Potential Liability under the Illinois Electronic Commerce Security Act: Is it a Risk Worth Taking?*, 17 J. MARSHALL J. COMPUTER & INFO. L. 909, 937-39 (1999); Whitman, *supra* note 4, at 253. Presently, the only way to guarantee that one's electronic signature key is being used fraudulently is to do everything possible to prevent others from finding and using it. Cowan, *supra* note 3, at 112. Moreover, because the electronic signature key must be stored somewhere, such as the hard drive of a computer, floppy disk, or other storage device, a "clever thief" can always find a way to locate, copy and use an electronic signature key. Whitman, *supra* at 253. Even Biometric signature technology, considered the safest digital signature technology on the horizon, is "potentially subject to compromise" and fraudulent impersonation. Jueneman & Robertson, *supra* note 55, at 457.

63. Cowan, *supra* note 3, at 110. See also SCHNEIER, *supra* note 2, at 225 (explaining that although mathematical cryptography can virtually guarantee that a document was signed with a particular signature key, there is no way to know who has control of that key). "Digital Signature is a terrible name for what is going on, because it is not a signature." *Id.* at 225.

Another indication that electronic writings and signatures are not reliable is that the Illinois Secretary of State, who is responsible for authorizing such technology, has not authorized any form of electronic writings or signatures.<sup>64</sup> Although IECSA creates the possibility of a "secure digital signature" and describes a process for approving such a signature through the Secretary of State,<sup>65</sup> the Secretary of State has not deemed any form of electronic signature technology reliable through this process.<sup>66</sup> Presumably, if PKI technology were reliable, the Illinois Secretary of State would have certified its use.<sup>67</sup>

In sum, recent case law suggests that electronic records and fax transmissions, in the absence of legislation such as UETA or IECSA, do not satisfy the Statute of Frauds.<sup>68</sup> Furthermore, present digital signature technology can guarantee neither that the "signing" party intends to be bound, nor that it is even that party "signing" the electronic agreement.<sup>69</sup> In addition, the consent requirements in UETA and IECSA may actually bind parties to an electronic transaction regardless of whether they gave actual consent.<sup>70</sup> As a result, paperless real estate agreements as allowed under UETA and IECSA are more susceptible to fraud and protect parties less than traditional pen and ink writings and signatures.<sup>71</sup>

### B. Deeds and Delivery

Even if an electronic document can satisfy the Statute of Frauds, the question remains whether technology exists to create an electronic deed that can be delivered over the Internet. A paper

64. 5 ILL. COMP. STAT. 175/10-135(a) (2001); Martin I. Behn, *The Electronic Commerce Security Act: Too Much Too Soon or Too Little Too Late?*, 24 S. ILL. U. L.J. 201, 212 (2000).

65. 5 ILL. COMP. STAT. 175/10-135(a) (2001); Behn, *supra* note 64, at 212. The Illinois Secretary of State may deem an electronic signature to be "secure" and "qualified" by applying a three-part test to the technology. Behn, *supra* at 213. If the Secretary of State does so, this type of signature will bind all parties who use it. *Id.* However, to date, no type of electronic signature has passed the test. *Id.*

66. Behn, *supra* note 64, at 211-13.

67. 5 ILL. COMP. STAT. 175/10-110(a), 115(a), 135(a) (2001); Behn, *supra* note 64, at 211-13.

68. *In re Kaspar*, 125 F.3d 1358, 1362 (10th Cir. 1997); *Norris v. Dep't. of Transp.*, 486 S.E.2d 826, 828 (Ga. 1997); *Parma Tile, Mosaic and Marble Co. v. Estate of Short*, 663 N.E.2d 633, 635 (N.Y. 1996).

69. Behn, *supra* note 64, at 205-06; Cowan, *supra* note 3, at 110-15; Myers, *supra* note 62, at 938-39; Robertson, *supra* note 57, at 499-507; Whitman, *supra* note 4, at 253-54.

70. UETA § 5(b) cmt. 4; Robertson, *supra* note 57, at 506.

71. *Kaspar*, 125 F.3d at 1358; *Norris*, 486 S.E.2d at 826; *Parma Tile*, 663 N.E.2d at 633; Behn, *supra* note 64, at 205-06; Cowan, *supra* note 3, at 110-15; Myers, *supra* note 62, at 938-39; Robertson, *supra* note 57, at 499-507; Whitman, *supra* note 4, at 253-54; Woods, *supra* note 44, at 425.

deed is essentially a negotiable instrument, and whoever controls a validly executed and acknowledged deed owns the unique piece of real property that it represents.<sup>72</sup> Therefore, the creation and delivery of an electronic deed requires more precision and care than a simple electronic transaction.<sup>73</sup> Unlike other transactions where the ownership of something tangible outside of cyberspace is being transferred using digital tools, in a paperless real estate transaction, the ownership of the deed, which is a completely electronic document, is being transferred.<sup>74</sup> Presently, no technology exists to create or deliver such an electronic document.<sup>75</sup>

An electronic deed cannot exist because no existing technology allows for a completely unique, transferable computer file that cannot be copied or altered.<sup>76</sup> In short, there is no electronic equivalent to a paper deed.<sup>77</sup> The brief history of computers and electronic records has shown that, although convenient, the medium is prone to abuse and infiltration by industrious thieves and hackers.<sup>78</sup> Moreover, even if a truly secure and unique electronic deed could exist, the problems with electronic signatures, execution, and authentication would persist.

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72. MILLIGAN & BOWMAN, *supra* note 5, at 167. Although deed requirements vary from state to state, each state generally requires the name of the grantee and grantor, a description of the land, some "operative words of conveyance," the signature of the grantor or seller and an acknowledgment. Woods *supra* note 44, at 436. The acknowledgment is usually performed by a notary and, joined with the grantor's signature, is the most difficult deed function to re-create electronically. *Id.* at 438.

73. E. Benjamin Beard, *Transferable Records Under the Uniform Electronic Transactions Act*, 37 A.L.I. 249, 251 (1999).

74. UETA § 16; Beard, *supra* note 73, at 251; Woods, *supra* note 44, at 436-37. The drafters of the UETA, although very anxious to accommodate the legal power of a paperless or electronic negotiable instrument, admit that no such technology exists. UETA § 16 cmt. 1.

75. UETA §§ 15, 16; R. David Whitaker, *Rules Under the Uniform Electronic Transactions Act for an Electronic Equivalent to a Negotiable Promissory Note*, 55 BUS. LAW 437, 451-53 (1999); Woods, *supra* note 44, at 436-37.

76. Whitaker, *supra* note 75, at 442. "At this point, it is not clear whether or not it will be possible to have a true negotiable promissory note in an electronic environment." *Id.*

77. Beard, *supra* note 73, at 251.

The extreme difficulty, and some would say impossibility at this time, of creating a unique electronic token which embodies the singular attributes of a paper negotiable document or instrument, requires that the rules relating to negotiable documents and instruments can not be simply amended to allow the use of an electronic record for the requisite paper writing [UETA].

*Id.*

78. See Robertson, *supra* note 57, at 479 (describing the malleability of digital information, the vast potential for fraud, and the inability to discern a digital original from a digital copy).

The reliability of electronic signatures, as discussed above, would cast doubt over the binding effect of an electronic deed and create an opportunity for a seller to challenge a deal.<sup>79</sup>

In addition, because a deed is unlike a land sale contract and requires the additional safeguard of acknowledgment or notarization, the paperless system would be challenged again to create such a function in cyberspace.<sup>80</sup> Although cyber-notaries and certification authorities do exist on the Internet, they are simply third party computer programs that verify the electronic signature used by the signor or grantor has as its source the unique electronic signature key allegedly controlled by the signing party.<sup>81</sup> This process, performed by a software program, cannot provide the same safeguards as a human notary, because human notaries have a surety bond, witness the execution of a deed in the physical presence of the grantor and, as a result, can visually verify the identity of the parties.<sup>82</sup>

Inextricably related to the technological impossibility of a valid electronic deed is the inability to deliver such a document.

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79. See generally *In re Kaspar*, 125 F.3d 1358 (10th Cir. 1997); *Norris v. Dep't of Transp.*, 486 S.E.2d 826 (Ga. 1997); *Parma Tile, Mosaic & Marble Co. v. Estate of Short*, 663 N.E.2d 633 (N.Y. 1996); Behn, *supra* note 64, at 204-06; Cowan, *supra* note 3, at 110-15; Myers, *supra* note 62, at 938-39; Robertson, *supra* note 57, at 499-507; Whitman, *supra* note 4, at 253-54; Woods, *supra* note 44, at 425. "For example, the typical legal battle that will emerge in digital signature cases, as regulated by the [UETA], will involve the unauthorized use of a subscriber's private key and the damage it caused to the relying party." Myers, *supra* at 937.

80. Woods, *supra* note 44, at 437.

81. See Myers, *supra* note 63, at 919-20 (explaining that the certification authority or cyber notary is like a warehouse of public keys which when sent back to the signor's computer will verify the authenticity of the private electronic key the signor is using to "sign" the document being notarized). The certification authority will then issue an electronic certificate guaranteeing the connection between the signor and their electronic signature key. Woods, *supra* note 45, at 416.

82. Myers, *supra* note 63, at 933-40; Robertson, *supra* note 57, at 479. The certification authority cannot reliably identify the sender of an electronic record. Robertson, *supra* at 479. The cyber-notary or certification authority, unlike an actual notary, need not meet any of the requirements of an actual notary who must be at least eighteen years of age, have a surety bond to insure mistakes, and be physically present for the execution of the documents. Myers, *supra* at 932-36. See also SCHNEIER, *supra* note 2, at 234 (describing how certification authorities work and why they are not inherently trustworthy).

PKIs and CAs have a raft of other problems. For example, what does it mean when a CA claims that it is trusted? In the cryptographic literature, this only means that it handles its own private keys well. This doesn't mean you can necessarily trust a certificate from that CA for a particular purpose: making a small payment or signing a million dollar purchase order.

*Id.* at 234.

Delivery is essentially the intent to relinquish control.<sup>83</sup> In other words, if the seller retains control, delivery has not occurred.<sup>84</sup> Therefore, whether the buyer or seller controls the deed becomes a dispositive question.<sup>85</sup> According to UETA, a person has control of an electronic document when a computer system “reliably establishes” that “a single authoritative copy” of the transferable record has been delivered to the person claiming control.<sup>86</sup> However, the drafters admit that no technology exists which can create a “single authoritative [electronic] copy” of a deed or negotiable instrument, and have drafted UETA in the hope that someone will develop the technology.<sup>87</sup> Nonetheless, an original cannot be distinguished from a copy, “control” as defined by UETA does not exist, and delivery of an electronic deed is impossible.<sup>88</sup>

### C. Recordation

Removed from any discussion of land sale contracts, deeds, or delivery, owners of real property cannot protect their ownership rights unless they record their deed pursuant to local recordation statutes; therefore, recordation is the final obstacle to the paperless real estate transaction.<sup>89</sup> UETA and IECSA must allow for effective recordation if the Acts are to include real estate

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83. *In re Wittmond*, 732 N.E.2d 659, 664 (Ill. App. Ct. 2000); *Meyer v. Wall*, 270 Cal. App. 2d 24, 29 (Cal. Dist. Ct. App. 1969); *Obranovich v. Stiller*, 220 Cal. App. 2d 205, 208 (Cal. Dist. Ct. App. 1963).

84. *See Wittmond*, 732 N.E.2d at 664 (holding that if the grantor physically gave a deed to a third person with instruction to deliver it after his death yet retained the right to reclaim the deed at any time during his life, valid delivery had not occurred).

85. *Id.*

86. UETA §§ 16(b),(c) (1999).

87. *Id.* § 3 cmt. 6, (admitting that control requires the existence of a truly “unique electronic token” which does not exist) *available at* <http://www.nccusl.org> (last visited Feb. 20, 2002).

88. UETA § 16(b) (1999); Robertson, *supra* note 57, at 475. “A person has control of a transferable record if a system employed for evidencing the transfer of interests in the . . . record reliably establishes that person as the person to which the . . . ‘single authoritative copy’ was issued or transferred.” UETA §§ 16(b),(c), *available at* <http://www.nccusl.org> (last visited Feb. 20, 2002). Although the drafters consider Section 16 as a “substitute for possession,” they admit that no technology exists which allows for the possession of “a unique electronic token.” UETA § 3 cmt. 6, *available at* <http://www.nccusl.org> (last visited Feb. 20, 2002).

89. *See Abington v. Shaubhut*, 5 Minn. 323, 330-32 (1861) (explaining in clear and authoritative fashion the function of recordation in American real property law). Irrespective of the arrangements between the buyer and seller, a party who claims to own a piece of land cannot enforce his or her rights unless he or she has recorded his or her interest with the appropriate authority. *Id.* at 330. *See also* Cowan, *supra* note 3, at 103-06 (summarizing the recordation process and the importance of the title search in modern American real estate law).



transactions.<sup>90</sup> Yet, the ability of an anonymous hacker to manipulate title recordation from a remote computer might encourage fraud, and the fragility of electronic media could threaten the durability of the records.<sup>91</sup>

On the other hand, proponents of the paperless real estate transaction suggest that electronic recordation of title would not threaten an owner's property rights. They claim that such a paperless system would be easier and less prone to fraud, because digital signatures could be used to prevent undue manipulation of records.<sup>92</sup> In addition, advocates of the paperless real estate transaction argue that on-line recordation with digital signatures would allow recorders' offices to operate at reduced expense, title companies to save money, and records to be more accurate.<sup>93</sup> Moreover, they argue that electronic recordation, in conjunction with global positioning technology, may allow a virtually infallible system of recordation and retrieval which would enable consumers to simply log on and research chain of title from home.<sup>94</sup> For these reasons, UETA even encourages state enactment of digital land title recordation.<sup>95</sup> However, this may be an overly optimistic view.

Opponents of digital recordation agree that fraud at the recorder's office would still be possible in a digital world, and could take many forms. For instance, a clever thief could record a false deed electronically and then, posing as the owner, immediately sell the land and disappear with the money.<sup>96</sup> This scenario would be more likely to occur in a digital recordation system because deeds can be created on a computer, falsified with anonymous electronic signatures, and certified by untrustworthy software programs.<sup>97</sup> It is therefore conceivable that the buyer who checks the chain of title on-line would find the fraudulent owner's deed digitally recorded and continue with the sale before the mistake is

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90. CAL. CIV. CODE § 1213 (2000); 750 ILL. COMP. STAT. 5/30 (2000); HARWOOD, *supra* note 5, at 115-18.

91. Faerber, *supra* note 1, at 807.

92. See Cowan, *supra* note 3, at 114 (explaining that digital signatures on documents help alleviate fraudulent practices); Whitman, *supra* note 4, at 233 (outlining the benefits of available computer technology that would modernize the existing recording system).

93. See Whitman, *supra* note 4, at 233 (outlining the proposed benefits of new recordation technology and focusing on the ease and efficiency of these new methods while glossing over the problems of digital signatures by merely claiming that they are fraud-proof "if properly administered").

94. See Cowan, *supra* note 3, at 116 (stating that modern global positioning technology, in concert with several satellites, could allow officials to calculate and accurately record property lines to within five millimeters). This technology might completely usurp the often-unreliable process of surveying, and prevent disputes over real property boundaries. *Id.*

95. UETA § 17 (1999).

96. Cowan, *supra* note 3, at 114.

97. See generally cases and sources cited *supra* note 71.

discovered.<sup>98</sup>

Fraud, however, is not the only problem with digital recordation. Electronic records are considerably less durable than paper.<sup>99</sup> This is a fundamental problem because the function of a recorder's office is to preserve records of land title for posterity.<sup>100</sup> Although paper documents might be lost in a fire, they are more durable than electronic records that can be lost due to magnetic forces, deterioration over time, a power surge, computer viruses, and programming deficiencies (such as the once-feared Y2K disaster).<sup>101</sup>

Moreover, computer files that survive against the odds may outlive their own technology.<sup>102</sup> Due to constant innovation in information technology, reading a ten-year-old computer file is as impossible as playing an eight track tape on a MP3 player.<sup>103</sup> This inevitable change in technology would threaten all digitally recorded deeds and require public officials to constantly transfer and update files to avoid their obsolescence.<sup>104</sup> As a result, paperless or digital recordation should not replace the current paper-based system because it would allow more fraud and the records would not be durable.<sup>105</sup>

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98. See SCHNEIER, *supra* note 2, at 1-4 (illustrating the prevalence of crimes committed on the Internet by hackers and listing the numerous secure web pages and databases infiltrated by hackers). "Even as we learn more about security—how to design cryptographic algorithms, how to build secure operating systems—we build things with less security." *Id.* at 5. See also Whitman, *supra* note 4, at 233 (advocating a system of recordation where computer produced deeds are recorded via e-mail, signed digitally, notarized by an electronic certification authority, and authorized by a recordation software relying on the certification authority).

99. See Faerber, *supra* note 1, at 807 (stating that paper rescues the computer by providing or replacing backup for digital data lost in a "crash").

100. CAL. CIV. CODE § 1213 (2000); 750 ILL. COMP. STAT. 5/30 (2000); *Abbington v. Shaubhut*, 5 Minn. 323 (1861). See generally HARWOOD & JACOBUS, *supra* note 5, at 115-18; KARP & KLAYMAN, *supra* note 5, at 389.

101. See Faerber, *supra* note 1, at 808-10 (stating that electronic documents whether saved on disk, hard drive, or any new storage device are surprisingly fragile). They may be lost to one of a myriad of occurrences, including but not confined to the touch of a finder, a scratch from a ball-point pen, a drop of fluid, heat, moisture, solvents, dust, dirt, food, smoke, and extreme flexing or pressure. *Id.*

102. *Id.* at 812.

103. See *id.* at 812-14 (stating that software, hardware, and computer files are becoming obsolete at a quickening rate). For example, the 5-1/4 inch floppy diskette, which was the standard storage mechanism just ten years ago, is now obsolete, and removing information from one of these disks is nearly impossible. *Id.* Moreover, several computer models popular during the past twenty years are now obsolete and all information written on them is lost, "written on the wind, leaving not a trace." *Id.*

104. See generally *id.* at 812-14.

105. See UETA § 17 (1999) (stating that each state will determine the extent to which a government agency will create and retain electronic records and

### III. PROPOSED RESPONSES TO UETA, IECSA, AND THE PAPERLESS REAL ESTATE TRANSACTION

Despite the nationwide movement toward paperless real estate transactions, some lawmakers admit that such a practice takes electronic commerce too far.<sup>106</sup> For instance, the drafters of UETA originally intended to exclude real estate transactions from the scope of the Act.<sup>107</sup> Moreover, Minnesota has actually amended their adoption of UETA to exclude all documents affecting the transfer of real estate.<sup>108</sup> Thus, this Comment proposes three responses to present electronic transactions legislation: 1) homebuyers and attorneys should refuse to buy or sell real estate over the Internet by explicitly, and in (pen-and-ink) writing, refusing to perform the real estate transaction electronically; 2) states that have already adopted UETA in its entirety should amend their law to exclude real estate; and 3) no state should adopt UETA or draft similar uniform electronic legislation until technological safeguards equal to those provided by paper documents become available.

#### A. *Buyers and Sellers of Real Estate Should not Consent to Perform Paperless Transactions*

Buyers and sellers of real estate should not use paperless transactions because the courts may not recognize the transfer as valid. In addition, people who shop on-line should be careful not to inadvertently consent to a sale. Internet portals and real estate entrepreneurs already offer web sites upon which nearly the entire real estate transaction can be performed on-line.<sup>109</sup> In fact, homebuyers are demanding an Internet location where real estate can be purchased in one unified, paperless step.<sup>110</sup> Yet, although UETA and IECSA seem to make a paperless real estate transaction enforceable, no case law exists in which a party to such a transaction has tried to get out of a paperless real estate transaction.<sup>111</sup> Conceivably, either party could challenge the

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convert written records to electronic records).

106. See Draft for Discussion only to UETA § 105(a)(4) (Aug. 15, 1997), at <http://www.upenn.edu/bll> (excluding the Act's applicability to any rules of law relating to the conveyance of real property) (as of Feb. 20, 2002).

107. *Id.*

108. See generally MINN. STAT. ANN. § 507.24 (2000).

109. See Steve Kerch, *Even a Yard Sign is Part of Internet Home-buying Deal*, CHI. TRIB., Nov. 12, 2000, Real Estate at 1 (stating that a number of companies recently unveiled web sites that home buyers may visit prior to buying a house or securing a mortgage).

110. See *id.* (describing the numerous real estate web sites and their functions). "Consumers go everywhere else expecting to get a unified transaction, and that is what they will expect in real estate." *Id.* at 2.

111. Robertson, *supra* note 57, at 475. No cases in any jurisdiction hold that a computer file satisfies the Statute of Frauds. *Id.*

authenticity of an electronic signature, claim that he or she did not consent to proceed electronically, claim the deed was never delivered, or even challenge the application of the Act. For these reasons, no buyer should purchase real estate on-line, even if the service is offered.

Additionally, buyers who compare prices on-line or do part of their shopping on the web should be careful not to consent to anything. A buyer who follows a link to an on-line realtor and presses a "buy now" will be inadvertently bound, despite lack of prior consent.<sup>112</sup> Therefore, homebuyers who research on-line should be vigilant and avoid any links or screens with which they are not comfortable. Furthermore, if a party wants to communicate or exchange documents with a prospective buyer or seller over the Internet, the party should write, sign, and send a registered letter containing an explicit refusal to perform the pending real estate deal electronically.<sup>113</sup> Because both UETA and IECSA rely on consent, a party can bring the transaction, even if it is performed partly by electronic means, outside the scope of either Act by simply and clearly refusing consent.<sup>114</sup>

*B. States Which Have Adopted UETA Should Limit Its Scope to Exclude Real Estate Transactions*

Because the drafters of UETA originally planned to exclude real estate from the Act's scope, and because as this Comment has shown, the paperless real estate transaction is not advisable and perhaps not enforceable, those states that have adopted UETA or similar legislation should limit its scope. Minnesota, which originally adopted UETA *in toto*, recently amended its version of the Act to exclude real estate transactions.<sup>115</sup> The author of the Minnesota Bill, mindful of the importance of real estate documents, does not think that the drafters of UETA have fully considered the effects of the paperless real estate transaction.<sup>116</sup> Likewise, other states that have adopted UETA should limit its scope and refuse to create statutes that make paperless real estate

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112. UETA § 5(b) (1999); *see also* Robertson, *supra* note 57, at 506 (stating that the actual act of proceeding with a transaction over the Internet may be sufficient evidence to prove that the parties involved consented to perform the transaction electronically, and may be considered in place of actual explicit prior consent).

113. *See* UETA § 5(b) ("This [Act] applies only to transactions between parties each of whom has agreed to conduct transactions by electronic means.").

114. *Id.*

115. MINN. STAT. ANN. § 507.24; Faerber, *supra* note 1, at 802. In Minnesota, all instruments affecting real estate "must contain original signatures" of the parties and the notary public. MINN. STAT. ANN. § 507.24 subd. 2

116. Faerber, *supra* note 1, at 802.

transactions enforceable until problems with electronic signatures, paperless deeds, and digital recordation are resolved.

*C. A Minimum Technological Threshold for any Electronic Real Estate Transaction Legislation Should Be Established*

The concept behind both UETA and IECSA is that a real estate transaction should not fail simply because the documents that comprise the transaction are written on a disk or hard drive rather than on a piece of paper.<sup>117</sup> The Acts seek to make paper documents and digital documents legally equivalent.<sup>118</sup> However, if the digital documents in a real estate transaction are considered equivalent to paper, then they should at least perform the same functions as paper documents. Yet, this Comment has established that they do not. In response, UETA and IECSA resort to a prior consent requirement.<sup>119</sup> However, this type of electronic commerce is pointless because its component tools are not in themselves binding and lack legal power. Therefore, no statute should mandate the enforceability of a paperless real estate transaction until: 1) digital signatures are as reliable as manual signatures and bind parties regardless of consent; and 2) the technology is developed to create a truly unique electronic deed.

A manual signature is a legal identifier that is reasonably resistant to fraud, can be linked to the signor, and can be reliably authenticated.<sup>120</sup> Thus, a digital signature, in order to bind a party, should have the same qualities as a manual signature. PKI signatures, the only digital signatures available for use, can neither be reliably linked to the signing party nor prevent fraud.<sup>121</sup>

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117. See *Preface to UETA* (1999) (regarding real estate transactions, pen and paper writing requirements create "real barriers to the effective use of electronic media"); see also Boss, *supra* note 7, at 393 (finding that the UETA is an attempt to remove barriers to commerce erected by requirements of "paper-based" communications).

118. *Preface to UETA* (1999); see also Boss, *supra* note 7, at 393 (stating that the purpose of the IECSA is "to facilitate and promote electronic commerce, by eliminating barriers resulting from uncertainties over writing and signature requirements, and promoting the development of the legal and business infrastructure necessary to implement secure electronic commerce").

119. UETA § 5(b).

120. Jueneman & Robertson, *supra* note 55, at 427. A manual signature is considered a reliable means of party identification, because it "changes slowly and is very difficult to erase, alter, or forge without detection." *Id.*

121. Cowan, *supra* note 3, at 110; Jueneman & Robertson, *supra* note 55, at 457; Myers, *supra* note 62, at 937. PKI signature technology can be compromised, making impersonation and fraud possible. Jueneman & Robertson, *supra* at 457. See SCHNEIER, *supra* note 2, at 225 (comparing digital and paper signatures).

A digital signature is a mathematical operation on a bucket of bits that only a certain key can do. This operation can be verified with another, corresponding, key. The signing key is only known by Alice . . . . The problem with this model is that it assumes that the signing key is a

However, this does not mean that digital signatures can never equal manual signatures.

Perhaps if Biometrics technology were used in conjunction with PKI technology, digital signatures could afford parties the same level of protection as manual signatures.<sup>122</sup> For instance, PKI Technology could be used to verify that an electronic document originated from the signor's key, and the use of the signature key could be restricted by a voice recognition program or retinal scan.<sup>123</sup> Unfortunately, until this technology escapes the realm of theory and is available for widespread use, digital signatures will not afford parties the same protection as manual signatures, and should not be used to bind parties to a real estate transaction.<sup>124</sup>

There is even less technological progress towards the creation of a comparable electronic deed.<sup>125</sup> A paper deed is a representation of property rights, and its ownership and control are equivalent to ownership of the real property it represents.<sup>126</sup>

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secret only known to Alice. All we can really stipulate by verifying the signature is that Alice's key signed the message; we cannot say anything about whether or not Alice did . . . . When we see Alice's handwritten signature on a paper document, we can make statements about her volition: She read and signed the document, she understood the terms. When we get a document signed with Alice's private key, we don't even know if Alice ever saw the document in the first place. 'Digital Signature' is a terrible name for what is going on, because it is not a signature.

*Id.*

122. Jueneman & Robertson, *supra* note 55, at 457; *see* Woods, *supra* note 45, at 417 (stating that biometric technology, such as retinal scans or voice recognition programs, could verify the source of a digital signature and establish a link to the signing party as identifiable and unique as one's handwriting). *See also* SCHNEIER, *supra* note 2, at 141-45 (defining the present limitations of biometric technology). "As a whole biometrics will only get better and better." *Id.* at 142. Biometrics may eventually become an effective form of authentication if used properly. *Id.* at 145.

123. Cowan, *supra* note 3, at 111; Jueneman & Robertson, *supra* note 55, at 457; Myers, *supra* note 62, at 937. Biometric technology is an excellent "gatekeeper guarding access to the user's private key." Jueneman & Robertson, *supra* at 428.

124. SCHNEIER, *supra* note 2, at 225-39. *See* Jueneman & Robertson, *supra* note 55, at 457 ("[F]ew if any of the biometric approaches that have been proposed have been fully disclosed to the technical community, much less received the technical and scientific community's endorsement through recognized standards.").

125. Woods, *supra* note 45, at 437. "Of course, a transfer of real property is not complete without the delivery of a validly executed deed, and . . . [t]wo important points of consideration are whether a deed itself can be electronic and whether a deed can be electronically recorded." *Id.*

126. 5 ILL. COMP. STAT. 175/5-115 (2000); *see also* UETA § 16 cmt. 1 ("The extreme difficulty of creating a unique electronic token which embodies the singular attributes of a paper negotiable document or instrument dictates that the rules relating to negotiable documents and instruments not be simply

Accordingly, its exact duplication must be impossible.<sup>127</sup> Likewise, in order to transfer property rights, a digital deed must have the same attributes. No valid transfer of real property can occur over the Internet until a truly unique electronic deed, impervious to duplication, alteration, or control by multiple parties, can be delivered from seller to buyer. Presently, however, the prospect of such technology fails to exist.<sup>128</sup> Electronic deeds simply do not exist, nor can they be delivered. Therefore, no legislation should mandate enforcement of a paperless real estate transaction when a vital component of the transaction, the deed, does not even exist.

Thus, the minimum technological threshold that must be crossed before any legislation can mandate the enforcement of a paperless real estate transaction should be: 1) electronic signature technology that verifies the source of the document and the identity of the signor; and 2) the ability to create a truly unique electronic deed.

#### *D. Final Conclusion*

The paper documents used in a real estate transaction cannot simply be replaced with digital counterparts. The land sale contract, signed in pen and ink, the paper deed, and the process of title recordation prevent fraud and protect the interests of the parties to a real estate transaction in ways that digital technology simply cannot. Thus, until information technology can create digital documents equivalent to paper documents, the benefits of the paperless real estate transaction will be outweighed by the dangers. Therefore, at this time, no state legislation should mandate the enforcement of a completely paperless real estate transaction.

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amended to allow the use of an electronic record for the requisite paper writing.”).

127. See UETA § 16 cmt. 1 (1999), and Whitaker, *supra* note 75, at 443 (noting the difficulty in moving from paper negotiable instruments to an electronic environment).

128. Whitaker, *supra* note 75, at 442. “At this point, it is not clear whether or not it will be possible to have a true negotiable promissory note in an electronic environment, in the sense of a unique self-contained physical token.” *Id.*