THE UNIFORM COMPUTER INFORMATION TRANSACTIONS ACT

By Brian D. McDonald

The Uniform Computer Information Transactions Act ("UCITA") creates a uniform commercial code for computer information transactions. The National Conference of Commissioners on Uniform State Laws ("NCCUSL"), the drafting body for UCITA, approved and recommended UCITA for enactment in all fifty states in July 1999. UCITA provisions cover a wide variety of topics related to computer information including, but not limited to, standard software licenses, contracts for the custom development of computer programs, licenses to access online databases, website user agreements, and agreements for most Internet-based information. The NCCUSL passed UCITA in hopes of clarifying the law governing these computer information transactions and making the law uniform among the various jurisdictions.

Since UCITA's inception, efforts to establish a uniform state law governing computer information transactions have been fraught with controversy. State legislators have severely criticized UCITA provisions. As of January 2001, only two states had adopted UCITA while most other states had either refused to consider it or had tabled it indefinitely. This Note tracks the most significant of these legislative developments and analyzes their likely effect on the future of UCITA.

Part I outlines the history of UCITA and the most salient issues surrounding its drafting. Part II discusses the three most significant responses taken by the states in response to UCITA: Virginia (nearly full adoption), Maryland (qualified adoption), and Iowa (adoption of a "bomb-shelter")
statute to preempt invocation of UCITA). Finally, Part III analyzes how these three different approaches are likely to affect other states' decisions to adopt or reject UCITA-like legislation.

I. HISTORY OF UCITA

UCITA began as a joint effort of the NCCUSL and the American Law Institute ("ALI") to adapt the Uniform Commercial Code ("UCC") to the modern needs of computer-related goods and services. Initially entitled UCC Section 2B, it was drafted over a four-year period "after receiving input from database holders, the IT industry and a host of other interests." The NCCUSL lost the prestigious ALI affiliation when the Institute dropped out after four years of drafting due to irreconcilable concerns and disagreements with fundamental aspects of the proposed law. The Conference thereafter issued UCITA as its own free-standing uniform law, which was finally approved in July 1999.

Individual state reactions to UCITA have varied, a few passing it into law, others introducing legislation subject to future consideration, and

10. UCITA was written by an NCCUSL drafting committee composed of commissioners from several states in an open, public drafting process, with full participation by interested parties, including consumer representatives. The committee met in a series of 16 public drafting meetings, which occurred in major cities around the U.S. over a four-year period from 1996-1999. Interested participants from industry, trade organizations and consumer groups attended the drafting sessions, and expressed their views on all the issues. Additional interested parties submitted written comments.
Carol A. Kunze, Who Wrote UCITA, at http://www.ucitaonline.com/shpwri.html (last revised Jan. 15, 2001). It is interesting to note that there were six states that voted against UCITA as promulgated by the NCCUSL: Alaska, Iowa, Minnesota, Nebraska, North Carolina, and Utah. See John C. Lobert, Unwrapping All the Problems with UCITA, BUS. INS., Oct. 23, 2000, at 40.
12. UCITA legislation has been introduced in Delaware, the District of Columbia, Hawaii, New Jersey, Illinois, Maine, and Oklahoma. Of these states, Oklahoma has come
the majority refusing to take any action whatsoever on UCITA until its effects are better understood. The most hostile reaction has come from a few states that have contemplated "bomb shelter" statutes to prevent UCITA from governing any computer information transaction contract within their borders. Despite these divergent reactions among the states, most states approach UCITA with an air of caution due primarily to the intense opposition of consumer advocacy groups, many academics, and state government agencies. Although this Note does not discuss the criticisms of UCITA at length, the most salient critiques are briefly highlighted to put the legislative concerns—and subsequent statutory responses to these concerns—in context.

Most criticism of UCITA claims that it gives too much power to the computer information industry and strips consumers of many significant rights that would be protected in non-UCITA jurisdictions. Consumer advocacy groups, academics, and state officials concerned with the closest to official enactment. See What's Happening to UCITA in the States, at http://www.ucitaonline.com/whathap.html (last visited Jan. 15, 2001).

13. See Kevin Washington, Plugged In: Software Law Foes See Route to Harm; Regulation: Debate Rages Over Whether Licensing-Agreement Legislation Hurts the Public, BALT. SUN, June 19, 2000, at 1C (presenting the different sides of the UCITA debate).

14. Iowa was the first state to pass one of these laws, and Delaware is currently considering a comparable bill alongside the UCITA legislation currently pending. Andrea L. Foster, New Software-Licensing Legislation Said to Imperil Academic Freedom, CHRON. HIGHER EDUC., Aug. 11, 2000, at A47.


17. Such consumer advocacy groups include the Consumer Federation of America, the Consumer Project on Technology, the Consumer's Union, the National Consumer League, and the United States Public Interest Research Group. See Americans For Fair Electronic Commerce Transactions, Some Organizations That Have Opposed or Criticized UCITA, at http://www.4cite.org/oppose.html (last updated Dec. 14, 2000).
nebulous type of mass-market licenses\textsuperscript{20} condoned by UCITA, cite three potential problems: (1) oftentimes consumers must agree to the terms of the contract \textit{before} they are able to review them;\textsuperscript{21} (2) these agreements, as a license rather than a sale,\textsuperscript{22} unavoidably reduce the rights of the con-

18. \textit{See supra} note 16.
20. A "mass-market transaction" is defined by UCITA as (A) a consumer contract; or (B) any other transaction with an end-user licensee if: (i) the transaction is for information or informational rights directed to the general public as a whole, including consumers, under substantially the same terms for the same information; (ii) the licensee acquires the information or informational rights in a retail transaction under terms and in a quantity consistent with an ordinary transaction in a retail market; and (iii) the transaction is not: (I) a contract for redistribution or for public performance or public display of a copyrighted work; (II) a transaction in which the information is customized or otherwise specially prepared by the licensor for the licensee, other than minor customization using a capability of the information intended for that purpose; (III) a site license; or (IV) an access contract.

\textit{UCITA, supra} note 1, § 102(45), at 13.
21. UCITA, \textit{supra} note 1, § 209, at 122-27; John H. Minan, \textit{Consumers May Lose to Software Industry}, \textit{SAN DIEGO UNION-TRIBUNE}, July 16, 1999, at B9. Minan argues that UCITA validates the use of shrink-wrap and click-wrap mass-market licenses. Unlike most contracts where the parties know all the terms of their agreement before purchasing the product, often this is not the case with mass-market licenses of software. The terms to the license may become known only after a consumer purchases the product. When installing the program, the consumer is often greeted for the first time with the terms of the license that govern its use. Under UCITA, the purchaser may be bound by these restrictions by failing to act, so-called 'assent by silence.'

\textit{Id.}

22. The Prefatory Note of UCITA explains that [t]ransactions in computer information involve different expectations, different industry practices, and different policies from transactions in goods. For example, in a sale of goods, the buyer \textit{owns} what it buys and has exclusive rights in that subject matter (e.g., the toaster that has been purchased). In contrast, someone that acquires a copy of computer information may or may not own that copy, but in any case rarely obtains all rights associated with the information.

\textit{UCITA, supra} note 1, Prefatory Note, at 1-2 (emphasis added); \textit{see also id.} § 502, official cmt. (2), at 207; \textit{id.} § 613(a)(2), at 259; \textit{id.} § 613, official cmt. (4), at 262-63. Jones, \textit{supra} note 9, at 1, argues that [t]he basic model for a UCITA transaction is the license. A license conveys less than all of the rights in the computer information and restricts the use of that information. A license differs from a sales contract in that the value in a license may be primarily in the terms of the agreement, not the underlying subject matter. For example, in a con-
sumer;\textsuperscript{23} and (3) the language of the license (drafted by the licensor) determines the law governing the license, allowing the licensor to choose the jurisdiction most favorable to its interests.\textsuperscript{24} Other concerns, exacerbated by the use of mass-market licenses, include the following: "self-help" provisions, which entitle licensors to shut off or repossess the product should the licensee violate the terms of the agreement;\textsuperscript{25} the ability to change the terms of the agreement without notifying the other party directly;\textsuperscript{26} the right to disavow any implied warranties required by state law;\textsuperscript{27} permitting contract law (in lieu of federal copyright law) to govern the contract for the sale of a widget, typically the value is in the widget itself. But the value in a software license will vary widely depending upon whether the contract allows the software to be used by 10 people or 10,000 people, even though the intrinsic value of the underlying software itself is unchanged. Two typical business license transactions covered by UCITA are electronic commerce and mass-market licenses.


Characterization of these transactions as ‘licenses’ means use of an obscure legal category that consumers do not understand. Furthermore, today there is little doubt that consumer protection statutes, written so that they cover ‘sales’ of goods and services, apply to contracts for software and online services, but under UCITA this would be put in doubt.

\textsuperscript{24} UCITA, \textit{supra} note 1, § 109, at 74-75. For example, [o]ne manufacturer already has selected France and another Ireland as the places to resolve disputes. While these locales are no doubt lovely places to visit, they aren’t for this purpose. The objective is, of course, to force the buyer to accept the dispute settlement offer of the manufacturer because most buyers cannot justify hiring French or Irish lawyers and spending time and more money in those countries pursuing their cases.


\textsuperscript{26} See UCITA, \textit{supra} note 1, § 304(b), at 152; Kaner, \textit{supra} note 16, at 28 n.51; see also Fendell, \textit{supra} note 7, at 11.

\textsuperscript{27} See UCITA, \textit{supra} note 1, § 406, at 193-94; Mary Jo Howard Dively, \textit{The UCITA Revolution: The New E-Commerce Model for Software and Database Licensing}, 600 PLI/PAT 491 (2000); see also Fendell, \textit{supra} note 7, at 10.
transactions for digital information; and privacy concerns with the licensing of personal data.

These criticisms—many of which have been expressed by high-level state officials, including the attorneys general of twenty-four states—have significantly delayed both the introduction and passage of UCITA or UCITA-like legislation in most of the states. These delays, however, are not dispositive. At the very least, UCITA will receive a cursory review in most state legislatures during the next year and a half. Once the states begin to consider UCITA in earnest, their options will in large part be shaped by the proactive efforts of three states that have taken different approaches to the UCITA question.

II. THREE LEGISLATIVE MODELS

Virginia, Iowa, and Maryland have taken the most legislative action in response to UCITA. Although other state legislatures are currently in the final drafting phases of similar bills, these three states alone have completed the drafting process and have enacted—or are slated to enact—UCITA or anti-UCITA statutes. Their respective approaches represent the three likely alternatives available to states today: (1) to embrace UCITA; (2) to reject UCITA; or (3) to accept or reject specific UCITA provisions according to legislative findings and debate. As states consider these three models, their ultimate choice will be affected significantly by their respective political environments, as was the case in the highly politicized processes in Virginia, Iowa, and Maryland.

28. See UCITA, supra note 1, § 103, at 41-44; see also Fendell, supra note 7, at 9 n.21.


31. See Washington, supra note 13, at C1.


33. For example, Oklahoma is considering legislation similar to Maryland, while Delaware is leaning towards Iowa’s approach. Gasaway, supra note 5, at 53-54.
A. Virginia: A High-Tech Mecca

On March 15, 2000, Virginia became the first state to adopt UCITA. First submitted six months earlier, Virginia’s version of UCITA did not undergo extensive legislative debate or serious review by legislative committees. The debate that did ensue produced only a smattering of minor amendments, most of which passed largely unopposed. In the House, only two legislators opposed the amended bill in committee, one of them eventually voting for it in the general vote. In the Senate, the vote was unanimous in both the committee and general votes. As a result of these expeditious proceedings and sparse amendments, the final product practically reproduced the original language of UCITA as submitted to the states by the NCCUSL in 1999.

The most significant amendment related to UCITA’s choice of law provision, which allows the parties to choose which law governs the contract. The Virginia legislature changed the language to specify that in the absence of an enforceable agreement between the parties regarding choice of law, the contract will be governed by Virginia law.

While simplifying the complex procedures for choice of law outlined by NCCUSL, this

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34. M.J. Zuckerman, Software Law Could Be a Hard Sell, USA TODAY, Mar. 29, 2000, at 3D.
35. See Ed Foster, The Gripe Line: Mid-Atlantic States Vie To Become The First To Enact The Controversial UCITA, INFOWORLD, Mar. 6, 2000, at 93.
38. This high level of support for UCITA came not only from the legislature but from the executive branch as well. Governor Gilmore has been a staunch supporter of UCITA throughout the entire ratification process. In fact, several months before the final passage of UCITA into Virginia law, he stated, “nothing could be more basic to a free market than the right of vendors and purchasers to negotiate their respective rights and responsibilities. UCITA underscores the right of software and information vendors, and their customers, to negotiate contractual terms.” James S. Heller, The Uniform Computer Information Transactions Act: Still Not Ready for Prime Time, 7 RICH J.L. & TECH. 2, 4 (2000).
39. UCITA, supra note 1, § 109, at 74-75.
41. See UCITA, supra note 1, § 109, at 74-75. UCITA holds that parties may choose the applicable law in their agreement, but in the absence of such a clause, choice of law will be determined by where the licensor was located (for access contracts), where the copy was delivered (in consumer contracts), or the location of the jurisdiction having the
change may serve to abridge rather than augment consumer welfare. By
defaulting to Virginia law, which is practically identical to UCITA, this
provision will prevent consumers in Virginia from escaping UCITA juris-
diction altogether, even when the license itself is silent regarding choice of
law.

The other significant amendment responded to consumer concerns.
Virginia senators included language providing for a study of the "impact
of UCITA on Virginia business, libraries, and consumers" to be submitted
to the General Assembly prior to the Act’s effective date. Virginia state
officials have pledged that this study will allow the legislature to give con-
sumer qualms due diligence prior to and directly following the Act’s ef-
fective date, scheduled for July 1, 2001. Although adopting a proposal
before it is thoroughly studied is an unusual tactic, Virginia legislators
claim that a year of study will provide more than enough time to iron out
any concerns expressed by consumer groups. At the same time, a year of
enacted law will probably attract other technology companies to the state.

B. Iowa: The Poison Pill

Iowa’s legislature considered UCITA while concurrently evaluating
the Uniform Electronic Transactions Act ("UETA"), a similar, but more

most significant relation to the transaction. Virginia removed this language and held that
in the absence of such a clause, Virginia law will govern. Uniform Computer Transac-

The full text of the amendment is:
The Joint Commission on Technology and Science (JCOTS) shall
study the impact of the Uniform Computer Information Transactions
Act (UCITA) on Virginia business, libraries, and consumers. JCOTS
shall appoint a subcommittee to advise the Commission on its work.
The members of the subcommittee shall include the following: two
members of the Senate, two members of the House, a representative of
the Northern Virginia Technology Council, a representative of the Vir-
ginia Manufacturing Association, a representative of the insurance in-
dustry, a representative of the public libraries and a representative of
the Richmond Technology Council. JCOTS shall issue a written report
to the General Assembly before December 1, 2000.

Amendments Proposed by the Senate Committee on General Laws, S.B. 372, 2000 Leg.
(last visited Feb. 10, 2001).

43. Michael P. Bruno, UCITA Passes Virginia Legislature, NEWSBYTES NEWS

44. Id.

45. UNIF. ELECS. TRANSACTIONS ACT, 7A U.L.A. 17; see also Jonathan Stern, Note,
The Electronic Signatures in Global and National Commerce Act, 16 BERKELEY TECH.
limited piece of legislation related to the use of electronic modes of conducting transactions. Although Iowa ratified UETA, it flatly rejected UCITA. It thereafter amended the UETA bill to include a “bomb-shelter” provision expressly forbidding any party from enforcing UCITA as the choice of law against an Iowa citizen or business.46 In short, Iowa not only rejected UCITA, but also rendered other states’ adoption of UCITA meaningless within the borders of Iowa since the provision allows Iowa consumers and businesses to override any express provision in a contract that makes UCITA the governing law.

This move is not surprising in view of the fact that Iowa’s Attorney General was one of the twenty-four in the nation strongly opposed to the model statute as it stood before the NCCUSL in July 1999.47 The bomb-shelter provision followed the Attorney General’s negotiations with America Online, which forced the company to notify users in Iowa of the change in its terms of service, a requirement that could be revoked under UCITA provisions.48 Such experiences help explain Iowa’s reluctance to implement UCITA as drafted by the NCCUSL.49

Iowa’s poison pill provision—the first of its kind—presents an option to states that many may not have considered. Like Iowa, states may now choose to evaluate UCITA and UETA separately. There is no compelling reason why they must be passed together; in fact, the changes proposed by

46. The relevant section of the statute states,
(4) A choice of law provision, which is contained in a computer information agreement that governs a transaction subject to this chapter, that provides that the contract is to be interpreted pursuant to the laws of a state that has enacted the uniform computer information transactions Act [sic], as proposed by the national conference of commissioners on uniform state laws, or any substantially similar law, is voidable and the agreement shall be interpreted pursuant to the laws of this state if the party against whom enforcement of the choice of law provision is sought is a resident of this state or has its principal place of business located in this state. For purposes of this subsection, a “computer information agreement” means an agreement that would be governed by the uniform computer information transactions Act or substantially similar law as enacted in the state specified in the choice of laws provision if that state’s law were applied to the agreement.
47. See Letter from the Attorneys General, supra note 30; see also Cem Kaner, Software Engineering and UCITA, 18 J. MARSHALL J. OF COMPUTER & INFO. L. 435, 439 (1999).
48. See Washington, supra note 13, at 1C.
49. See id.
the two laws address completely different spheres. Despite the pervasive need in the states today for uniform e-commerce law and the ability of UETA and UCITA to meet this need, these changes can be achieved separately without harming the integrity or effectiveness of either law due to the different subject matter and scope covered by the two proposals. Iowa has chosen this path for the present, but claims that it will review UCITA again during the 2001 legislative session.

C. Maryland: UCITA-Lite

On April 10, 2000, Maryland became the second state to adopt UCITA, appropriately entitling it "MCITA." Unlike Virginia, the Maryland legislature refused to accept UCITA with open arms. However, unlike Iowa, it did not reject UCITA out of hand. It opted for a middle path, a form of compromise whereby the legislature reviewed UCITA for six weeks and adopted several substantial amendments to the bill. These amendments reflected a deliberative effort to fashion UCITA to the realities of computer information transactions in Maryland.

50. Unlike UCITA, UETA is a model law designed to help states create uniform rules for electronic transactions and signatures. See M. Michael Cramer et al., Uniformity in State Laws, 33 Md. B.J. 48 (2000). Its scope extends only to the conduct of electronic transactions, whereas UCITA covers all other computer information transactions. For example, when a consumer is purchasing a product over the Internet, UETA would cover the enforceability of any signature(s) sent over the Internet related to the transaction. On the other hand, UCITA would cover the remaining contract rights of the seller and the buyer as parties to the sale of the product itself. In fact, the terms of UETA expressly limit its application to transactions not within the scope of UCITA. Perhaps that is why UETA takes up a few pages while UCITA occupies a few hundred. Margaret Jane Radin, Humans, Computers, and Binding Commitment, 75 Ind. L.J. 1125, 1140 (1999). Both UCITA and UETA are also remarkably different in their approach to the adaptation of the law to the online world. "UETA retains the contract-as-consent model and merely aims to remove specific obstacles in the way of contracting electronically; whereas UCITA moves significantly toward the contract-as-product model and aims to change the substantive law in that direction." See id. Unlike UCITA, UETA does not attempt to create a new substantive system of legal rules for electronic commerce, but rather codifies clear rules giving legal and binding force to transactions conducted in an electronic format. Jonathan Angel, Electronic Signatures and Contracts Made Via PKI Are Legally Valid, but the Jury's Still Out on How Enforceable They're Going to Be—PKI and the Law, NETWORK MAGAZINE, Oct. 1, 2000, at 48.

51. See Washington, supra note 48, at 1C.


54. See Reyna, supra note 52.
Perhaps the most significant change Maryland made to UCITA relates to the UCITA provision upholding choice of law clauses in the context of a consumer contract or a mass-market license.\textsuperscript{55} Under MCITA, all lawsuits regarding mass-market licenses in Maryland are governed by Maryland law, rather than the state law of the licensor's choosing (such as one that has a less adulterated version of UCITA). This is more significant than Virginia's choice of law amendment, which only defaults to Virginia law in the absence of a clear choice of law provision, regardless of the form of contract. The MCITA provision offers greater protection to consumers in Maryland than Virginia by forcing companies doing business in Maryland to operate under Maryland's revised, more consumer-friendly version of UCITA.\textsuperscript{56}

The legislature also made several significant changes to UCITA's provisions regarding mass-market licenses. First, the license cannot be contrary to public policy, including fundamental public policies concerning competition or innovation.\textsuperscript{57} This is a significant limitation since it gives wide latitude to courts to find the license invalid. Second, a mass-market license in Maryland that contains a provision limiting its duration\textsuperscript{58} must be conspicuous.\textsuperscript{59} This prevents licensors from selling licenses of limited duration without adequately notifying potential licensees. Third, regarding shrinkwrap\textsuperscript{60} and clickwrap agreements,\textsuperscript{61} a major concern of consumer advocacy groups,\textsuperscript{62} MCITA takes the same approach as the Seventh Cir-

\begin{itemize}
  \item \textsuperscript{55} UCITA states: \[ \text{the parties in their agreement may choose the applicable law. However, the choice is not enforceable in a consumer contract or a mass-market license to the extent it would vary a rule that may not be varied by agreement under the law of the jurisdiction whose law would apply under subsections (b) and (c) of this section in the absence of the agreement.} \]
  \textit{UCITA, supra} note 1, § 109(a), at 74.
  \item \textsuperscript{56} \textit{See} Maryland Uniform Computer Information Transactions Act, H.D. 19, 2000 Md. Laws ch. 11 § 21-110(A)(2) (Contractual Choice of Forum) (Md. 2000).
  \item \textsuperscript{57} \textit{Id.} § 21-209(A)(2) (Mass-Market License).
  \item \textsuperscript{58} For example, such a provision might be included in a license to use Microsoft Word declaring that the license expires in three years.
  \item \textsuperscript{59} Maryland Uniform Computer Information Transactions Act, H.D. 19, 2000 Md. Laws ch. 11 § 21-209(D) (Mass-Market License) (Md. 2000).
  \item \textsuperscript{60} "Shrinkwrap licenses are a special form of mass-market license. [Their terms] are not revealed until after an initial agreement to acquire a product; in other words, there is no opportunity to review terms before payment." Shah, \textit{supra} note 16, at 91.
  \item \textsuperscript{61} Clickwrap licenses are also a special form of mass-market license. The terms are revealed beforehand but assent is required before the consumer can use, purchase, download, or oftentimes even view the product.
  \item \textsuperscript{62} \textit{See} Minan, \textit{supra} note 21, at B9.
\end{itemize}
cuit in ProCD Inc. v. Zeidenberg\textsuperscript{63} and Hill v. Gateway 2000, Inc.\textsuperscript{64} That is, MCITA implicitly acknowledges the validity of such agreements so long as the user has a reasonable opportunity to review the terms and manifests assent to such terms.\textsuperscript{65} Maryland's version of UCITA, however, inserts additional language providing that the terms are only part of a license where they are available for viewing in a printed form or an electronic format both before and after a purchaser grants assent.\textsuperscript{66} This language permits consumers in Maryland to ignore terms in licenses that were not available to them both before and after they granted assent to such terms.

The Maryland legislature also took another important step by reinstating a manufacturer's implied warranties of merchantability for all consumer contracts.\textsuperscript{67} Under the original language of UCITA, many producers could use clickwrap or shrinkwrap agreements to explicitly disclaim all warranties of merchantability and to disavow the state's implied warranty law regarding software sales (which says that programs must do what they purport to do).\textsuperscript{68} MCITA prevents vendors from disclaiming such warranties in cases of mass-market sales.\textsuperscript{69} Maryland lawmakers also prohibited remote disabling in mass-market licenses, a self-help practice sanctioned by UCITA that allows manufacturers to remotely disable a user's product (typically software) by reaching in through the Internet and disabling it in the event that the user fails to abide by the license agreement.\textsuperscript{70} MCITA also contains language in the statute addressing concerns voiced by preemption critics—notably regarding the effect of UCITA on fair use—that explicitly prevents UCITA from undermining, or in any way invalidating, federal copyright law.\textsuperscript{71} Finally, Maryland legislators also envisioned alternative dispute resolution under Maryland's version of UCITA, an option not included in the original version of UCITA.\textsuperscript{72}

\textsuperscript{63} 86 F.3d 1447 (7th Cir. 1996).
\textsuperscript{64} 105 F.3d 1147 (7th Cir. 1997).
\textsuperscript{65} Moulsdale & Tiller, supra note 53, at 25.
\textsuperscript{67} See id. § 21-406 (Disclaimer or Modification of Warranty)
\textsuperscript{68} See UCITA, supra note 1, § 406, at 193-94.
\textsuperscript{69} See Maryland Uniform Computer Information Transactions Act, H.D. 19, 2000 Md. Laws ch. 11 § 21-406 (Disclaimer or Modification of Warranty) (Md. 2000).
\textsuperscript{70} Id. § 21-816 (Limitations on Electronic Self-Help).
\textsuperscript{71} Id. § 21-105 (Relation to Federal Law; Fundamental Public Policy; Transactions Subject to Other State Law).
\textsuperscript{72} Id. § 21-110(c) (Contractual Choice of Forum).
Although these multifarious amendments by the Maryland legislature serve to enhance consumer rights vis-à-vis the software industry, critics argue that they are purely cosmetic, leaving the dangerous UCITA provisions largely untouched. Furthermore, the amendments incorporated into MCITA are severely limited in scope by other UCITA provisions. For example, although MCITA enhances consumer rights in mass-market licenses, according to MCITA’s narrow definition of “consumer” and “mass-market transaction” (without which one does not have a “mass-market license”) many transactions will not be provided the extra protections granted by Maryland’s version of UCITA. For instance, Internet

73. See Ed Foster, The Gripe Line: Maryland Legislature Caves to UCITA, But Iowa May Offer a Safe Haven from Law, INFOWORLD, Apr. 24, 2000, at 121.

74. Although several amendments to the bill provide for specific consumer protections missing in UCITA, most businesses and those who work at home will not benefit from these changes due to the narrow definition of “consumer” in the Maryland statute: an individual who is a licensee of information or informational rights that the individual at the time of contracting intended to be used primarily for personal, family, or household purposes. The term does not include an individual who is a licensee primarily for professional or commercial purposes, including agriculture, business management, and investment management other than management of the individual’s personal or family investments.


75. According to the Maryland statute, a “mass market transaction” is (a) a consumer contract; or (b) any other transaction with an end-user licensee if: (i) the transaction is for information or informational rights directed to the general public as a whole, including consumers, under substantially the same terms for the same information; (ii) the licensee acquires the information or informational rights in a retail transaction under terms consistent with an ordinary transaction in a retail market; and (iii) the transaction is not: 1. A contract for redistribution or for public performance or public display of a copyrighted work; 2. A transaction in which the information is customized or otherwise specially prepared by the licensor for the licensee, other than minor customization using a capability of the information intended for that purpose; 3. A site license; or 4. An access contract.


76. According to this definition, a New Jersey legislative commission, after studying the UCITA reporter’s comment on mass-market transactions, noted that “[I]n light of the comment, it would appear that the purchase of a single shrink-wrapped copy of Microsoft Office at a mass-market retail outlet such as Staples or OfficeMax by a four-person law firm would not fall within the UCITA definition of a ‘mass market transaction.’” Foster, supra note 35, at 93. As a result, the strict requirements and limitations issued in Maryland on such transactions will have less impact.
service providers and other access contracts are excluded from the definition of a mass-market transaction. Therefore, as one critic has pointed out, "the strongest protections afforded by MCITA to consumers are generally not available in connection with one of the most prevalent types of standard license forms directed to the general public."  

Another example of MCITA's limited scope relates to self-help. Although MCITA takes a strong stand against such practices, it does not absolutely prohibit them. In fact, outside the context of mass-market licenses, they are generally allowed so long as there is valid consent by both parties, opportunity to cure by the breaching party, and substantial notice by the manufacturer of intent to repossess. Therefore, the amendments incorporated into MCITA may appear to shift the balance in favor of consumers, but other provisions will serve to limit the extent of these protections. The amendments to MCITA certainly give Maryland consumers an advantage over their neighbors in Virginia. The true magnitude of this advantage, however, is yet to be determined.

Despite Maryland's serious reservation with UCITA's original language, the uniform law became effective in Maryland before Virginia. Maryland was the first state in the country to enforce UCITA provisions on October 1, 2000. Nevertheless, Maryland officials have insisted that the statute retain language creating a legislative oversight commission to study the act and recommend additional revisions in the near future.

D. The Political Reality behind the Statutes

The statutes drafted in Virginia, Iowa, and Maryland envision three distinct approaches to the technological transformation of contract law prompted by UCITA. This divergence among the states has arguably resulted from pervasive lobbying by consumer advocacy and software manufacturing groups. While the software industry has concentrated their efforts in high-technology states such as Virginia and Maryland, it has less political leverage in states such as Iowa where the technology industry is not as prevalent. Nevertheless, all three states have been forced to contend with these rival forces to a certain degree, and their political interaction has shaped the outcome of UCITA enactment in all three states.

77. Moulsdale & Tiller, supra note 53, at 25.
79. Id.
80. Id.
81. See Vijayan, supra note 32, at 72.
82. Gasaway, supra note 5, at 53-54.
The Virginia legislature allegedly glossed over consumer concerns with UCITA in hopes of attracting high-technology industries in the near future.\(^8\) Technology industries have voiced their strong support for UCITA and have indicated that they would prefer to do business in states with UCITA-friendly legislation.\(^8\) By retaining most of the original UCITA language, Virginia has established a significant competitive advantage over the other states in the increasingly cutthroat industry of recruiting Internet businesses. Furthermore, Virginia has a strong interest in retaining the business it already has and not losing it to other states—such as Maryland. Northern Virginia is home to many Internet-related companies likely to be affected by UCITA, including both America Online and MCI subsidiary UUNET Technologies, two powerhouses in the world of commercial Internet service providers.\(^8\)

Like Virginia, Maryland's adoption of UCITA was part and parcel of a larger plan to attract technology companies to the state by creating a technology-friendly legal climate aptly entitled the eMaryland Agenda.\(^8\) Only hours away from the technology corridor in northern Virginia, Maryland's passage of UCITA aims at drawing many of these companies northward by providing an amicable legal environment. Although Maryland significantly amended the original UCITA language, these changes have left most of the controversial, pro-software industry provisions intact. As a result, Maryland's version of UCITA remains a highly attractive forum for technology firms.

Unlike Virginia and Maryland, Iowa does not have to appease substantial technology industries within its state borders. As a primarily agricultural state, its consumers of technology dramatically outnumber its producers. Although it might attempt to change this imbalance in the future, there is no such indication that it desires to do so at present. Consequently, Iowa lawmakers naturally focus on consumers' rights when formulating state law related to computer information transactions. Since UCITA has tremendous potential to affect citizens outside the state that enacts it (due to choice of governing law provisions), Iowa is best serving the interests


\(^8\) See Betts & Johnston, supra note 83, at 12.


\(^8\) In fact, the day after signing UCITA into law, Maryland Governor Parris Glendenning headed to Silicon Valley for a visit with industry heavy-hitters. Reyna, supra note 52.
of its constituents in the foreseeable future by enacting a bomb-shelter statute.

Nevertheless, Iowa is not advocating an antitechnology approach to future contract law. When it comes to goods and services, Iowa understands the innumerable benefits that technology and innovation can bring to a state. As discussed above, Iowa was one of several states to pass UETA this year, indicating its support for a shift in the law governing goods and services to better fit the technological aspects of modern commerce. However, Iowa's participation in the "technological revolution" is tempered by UCITA's controversy. UETA provisions codify law that has been largely accepted by many states, unlike UCITA, which has only been adopted by two state legislatures and has been severely criticized in both the private and public sector. Until states like Iowa view UCITA as an objectively beneficial advancement in contract law for both states with and without significant technology sectors, UCITA's chances of becoming uniform law remain small.

III. THE FUTURE OF UCITA: TWO STEPS FORWARD, ONE STEP BACK

This Part evaluates UCITA's prospects in the remaining state legislatures following the recent developments in Virginia, Iowa, and Maryland. Using a model of state competition entitled the "race-to-the-top," this Part explores the negative perceptions held by a significant number of states and the dynamics of interstate competition that will likely result from such perceptions. The Note concludes that until a positive perception of UCITA emerges, a majority of the states will not adopt UCITA as a uniform law.

A. The Uniform Law Process

UCITA was created by the NCCUSL, an august body that has drafted model laws for well over a hundred years. NCCUSL commissioners are appointed by the governors of each state and are then assigned by the NCCUSL to various drafting committees. Typically, these committees are a mixture of practicing lawyers, judges, and professors that aim to promote uniformity in the law among the states where desirable and practi-
The committees generally solicit the opinions and viewpoints of numerous interested groups, which then actively participate in the exhaustive drafting process. The final product is presented for debate to the NCCUSL. If approved, it is sent to the states for enactment as a uniform law or a model act.

Of course, passage of a uniform law by the NCCUSL does not necessarily assure uniform adoption by the states. Although many academics believe that uniform laws are practically guaranteed passage, the NCCUSL has often failed to achieve uniform adoption in all fifty states. While uniform adoption is not a prerequisite for success, it is highly desirable and drafters have consistently "measured the success of each uniform drafting effort by counting the number of uniform adoptions."

The likelihood of eventual uniformity, however, is quite difficult to assess early on in the adoption phase. The ratification process is slow and deliberative; it takes a long time for states to review a uniform law proposal, study its provisions, determine its likely effects, and move it through the state legislature. Even the most successful uniform laws have languished in the halls of legislatures for decades before being enacted by

90. Id.
91. Id.
92. Id.
93. Id.
94. [T]here's no greater blessing a piece of legislation can receive than to be called "uniform" or "model." Many lawmakers seem to feel that if it's one of those, then it should become the law—no questions asked. It's virtually impossible to amend one of these darlings, and once it starts moving through the legislative process, trying to stop it is like standing in front of a steamroller.

Lobert, supra note 10, at 40.

95. For example, the NCCUSL has drafted hundreds of acts in various fields: commercial, family, criminal, probate, real estate property law, and more, only a fraction of which have been adopted as uniform law by the states. See Cramer et al., supra note 50, at 49.

96. For example, the UCC is considered one of the NCCUSL's greatest achievements despite the fact that it was never fully ratified in Louisiana. See Lane H. Blumenfeld, Russia's New Civil Code: The Legal Foundation for Russia's Emerging Market Economy, 30 INT'L LAW. 477, 491 (1996).

97. Lobert, supra note 10, at 40 (arguing that “[u]niformity among the states is desirable. . . . It creates and fosters certainty that everyone will ostensibly be treated the same way on the same subject in every state”).


99. Such as the UCC, which was not very successful at first, but caught on over a twenty year period. Blumenfeld, supra note 96, at 491.
a majority of the states. Despite these difficulties, however, there are ways of forecasting the reaction of states to a uniform law proposal early in the process based on distinct patterns that have emerged over the years in the drafting and ratification process. One such pattern is the state competition model described by Edward Janger.

B. The Double-Edged Sword of Federalism

Janger notes that a clear and identifiable competition exists among the states to enact uniform laws that will enhance a state’s attractiveness to business. When legislation enacted in one state serves to attract corporate charters, rival states will expedite consideration of similar legislation to increase their own attractiveness to business. In the same vein, if a uniform law in another state fails to lure business corporations, rival states will avoid similar proposals. This competition among the states can take two routes.

The first and most ideal form of competition fosters the adoption of the most efficient form of law for all sectors of society. In corporate law, this has been termed the “race-to-the-top,” where “states compete to offer, and managers compete to use, beneficial sets of legal rules.” Although this competition aims to ease corporate rules so as to attract corporations to the state, several authors have noted that races-to-the-top generally produce laws that are beneficial for both shareholders and management.

100. For example, although the UCC was eventually adopted by all fifty states, this entire process took well over twenty years, not including the ten years required to draft it. "Id. Others admit that UCITA is slow to be adopted in many states because “the process of adopting uniform laws usually takes several years. Virginia and Maryland got a little ahead of the game here.” MacMillan, supra note 8 (quoting David Crane, Manager of Government Affairs and Corporate Counsel at Autodesk, Inc.).


102. See id. at 578.


104. Easterbrook, supra note 103, at 545.
Moreover, despite the fact that this competition among states takes place primarily in the realm of corporate law, this theory can also be applied to other areas of state-led legislative efforts, such as the uniform law process. UCITA is no exception to this rule.

The other model of state competition is aptly titled the "race-to-the-bottom." Justice Brandeis described such a race as "one not of diligence but of laxity... the great industrial States yielded in order not to lose wholly the prospect of the revenue and the control incident to domestic incorporation." Therefore, in a race-to-the-bottom, states enact more flexible corporate laws, typically at the expense of consumer interests, not only to attract more corporate capital but also to preserve the corporate capital they already have. Such races may cause dramatic reductions in consumer welfare both inside and outside the state.

Although races-to-the-top and races-to-the-bottom can both result in ratification by a substantial number of states, a race-to-the-top is far more likely to create efficient and effective legislation by inducing states to adopt the rule most beneficial to all sectors of society. On the other hand, "if such competition is likely to yield a race-to-the-bottom, the effect will be to cause the promulgation and uniform adoption of an inefficient or otherwise inappropriate rule." Even if a majority of states enact a uniform law via a race-to-the-bottom, the process will inevitably under-

105. See generally Fischel, supra note 103; Dodd & Leftwich, supra note 103; Winter, supra note 103. Analogizing the corporate system to a democratic government, legislators act like corporate directors and must report to their constituents just as much as directors must report to shareholders. At the same time, directors and legislators must attract capital to the state and the corporation respectively. Therefore, as in a corporation, there is a system of incentives and accountability requiring state legislators to pass laws which will benefit both consumers and producers alike. See Jesse H. Choper, John C. Coffee, Jr. & Ronald J. Gilson, Cases and Materials on Corporations 539-40 (2000).

106. Janger, supra note 98, at 591 (noting that this competition among states also takes place in environmental protection, occupational safety, child labor laws, welfare, and tort reform).

107. This phrase was first coined by William L. Cary in 1974 in Federalism and Corporate Law: Reflections Upon Delaware, 83 Yale L.J. 663, 705 (1974), although the concept may have been developed initially by Justice Brandeis as a "race of laxity." Liggett Co. v. Lee, 288 U.S. 517, 557-60 (1933) (Brandeis, J., dissenting).


109. See Janger, supra note 98, at 580.

110. Id.

111. Id.
mine its long-term prospects for success since a law enacted via a race-to-the-bottom is based on inefficient policy favoring one group over another.\footnote{112}{See \textit{id.} at 579-80.} Therefore, the preferred mode of enactment for a lasting and successful uniform law is a race-to-the-top.

C. UCITA’s Ever-Elusive “Race-to-the-Top”

Although both Virginia and Maryland raced to adopt UCITA, the rest of the states have failed to follow in their wake. A few states are currently considering UCITA bills, but most states have tabled discussion of UCITA indefinitely, not to mention states like Iowa that have taken proactive steps to pass anti-UCITA legislation. Consequently, it is safe to say that UCITA’s race-to-the-top has not yet emerged.

This section argues that the primary reason why most states have failed to adopt or even consider UCITA is that they view the current race to adopt UCITA as one headed for the bottom rather than the top. Although Virginia and Maryland aggressively pursued UCITA “to claim a political prize in the race to be perceived as the most progressive state in the technology stakes,”\footnote{113}{Moulsdale & Tiller, \textit{supra} note 53, at 23.} these efforts may have backfired as many have likely perceived the race between Virginia and Maryland to be one of laxity rather than progress. That is, states fear that the competition to adopt UCITA is primarily aimed at appeasing the software industry, promoting the adoption of inefficient rules that are unfair and harmful to consumers.

These perceptions are primarily driven by two factors: (1) the high potential for “capture” of the NCCUSL and the state legislatures in Maryland and Virginia by the software industry; and (2) the likelihood that UCITA, as drafted, is a law that unavoidably engenders a race-to-the-bottom rather than a race-to-the-top. If these suspicions prove accurate, other states will not only be highly reluctant to adopt the language as promulgated by the NCCUSL, but may in fact adopt bomb-shelter statutes to protect themselves from the language implemented in other states.

1. \textit{Capture the State}

One reason why states perceive UCITA to be a race-to-the-bottom is the possibility that the software industry heavily influenced both the drafting of UCITA by the NCCUSL and the adoption of UCITA legislation by Virginia and Maryland. Regarding the NCCUSL, the states probably suspect that the commission was “captured” by technology interest groups,
which in turn influenced the drafting of key UCITA provisions.\textsuperscript{114} The abandonment of the drafting process by the ALI further supports this theory. Furthermore, the NCCUSL has consistently met with criticism over the years that most uniform laws blatantly favor big business over consumers, implying that the commission has been captured from time to time.\textsuperscript{115}

At first blush, it would seem that such capture is highly unlikely. The NCCUSL employs a remarkably deliberative process involving representatives from all fifty states—often prominent judges, law professors, and lawyers.\textsuperscript{116} Moreover, the Commission’s primary concern is to secure passage of uniform legislation in as many states as possible.\textsuperscript{117} To allow the interests of one group to trump the interests of another would seriously endanger this objective. Nevertheless, capture of such a respected body is not as implausible as it might seem, particularly when lobbied by such an effective group as the software industry. In fact, some academics hold that when there is only one interest group participating heavily in the process, private legislatures such as the NCCUSL are relatively easy to capture.\textsuperscript{118} Even Janger himself notes that the NCCUSL is extremely vulnerable to capture, particularly when “uniform enactment creates a rule that benefits a concentrated group at the expense of a diffuse group.”\textsuperscript{119}

Second, the software industry might also have captured the state legislatures in Maryland and Virginia. As one academic surmised, the technology industries “played the two off each other—they said, ‘If Maryland

\begin{itemize}
\item[114.] For example, the primary drafter of UCITA, Ray Nimmer, also serves as counsel to Microsoft Corporation and has testified on its behalf. Shah, \textit{supra} note 16, at 86 n.9. Some authors take the NCCUSL’s capture as a foregone conclusion: “Is there any question that the giant software manufacturers have somehow gotten to NCCUSL? ... Why has this been allowed to happen to such a respected body?” Lobert, \textit{supra} note 10, at 40.
\item[115.] “Indeed, the history of the Code raises the concern that the uniform laws process simply may be unable to accommodate the interests of consumers at all because provisions protecting consumer interests routinely have been excluded to avoid the possibility that their inclusion would impair enactment.” Kathleen Patchel, \textit{Interest Group Politics, Federalism and the Uniform Law Process: Some Lessons from the Uniform Commercial Code}, 78 MINN. L. REV. 83, 124 (1993).
\item[116.] See Lobert, \textit{supra} note 10, at 40.
\item[117.] See Cramer et al., \textit{supra} note 50, at 49.
\item[118.] See Alan Schwartz & Robert E. Scott, \textit{The Political Economy of Private Legislatures}, 143 U. PENN L. REV. 595, 644-45 (1995) (presenting evidence from the drafting process of Articles 3 and 4 of the Uniform Commercial Code that private legislatures are easy to capture when one dominant interest group participates in the private legislature’s law-creation process).
\item[119.] See Janger, \textit{supra} note 98, at 586.
\end{itemize}
doesn't do it first, we'll move all the high-tech jobs to Virginia."120 Such capture is of even greater concern to the general public since the NCCUSL only proposes laws while state legislatures enact them. Once enacted, choice of law provisions implicate the citizens of every other state. Therefore, while states are concerned with capture of the NCCUSL, they are probably even more concerned with capture of state legislatures.

As with the NCCUSL, such capture might initially appear highly unlikely due to the sheer size of the legislative bodies in the two states as well as the diversity of interests represented. Moreover, the entire legislative process is open to public scrutiny and oversight,121 creating a sense of accountability that may force legislators to rebuff such attempts at capture. Nonetheless, it is a serious possibility. As Janger notes, "[l]egislatures are, from time to time, captured by the representatives of special interests who then turn the public process of legislation to their private ends."122 Considering the heavy influence of the software industry in both Virginia and Maryland, coupled with the relatively expeditious passage of UCITA in both states, it is easy to understand why other states might be convinced that the legislatures were captured by the software industry.

2. UCITA's Race-to-the-Bottom

Another reason why states are hesitant to consider UCITA is that it is especially conducive to a race-to-the-bottom. Professor Lucian Bebchuck of Harvard University has identified several factors which are present in proposed legislation that tends to generate a race-to-the-bottom.123 According to Bebchuck, a race-to-the-bottom is likely where the law creates both a collective action problem on the part of one interested group and the opportunity of state legislators to externalize costs of the legislation to citizens of another state.124 Both of these factors are clearly present in UCITA as it currently stands. First, computer information contracts—and mass-market licenses in particular—involves a notable collective action problem on the part of consumers vis-à-vis the software industry. Although an admirable campaign has been waged against UCITA by consumer groups, academics, and government officials, they simply do not have the resources or the unity of purpose that drives the software indus-

121. See Janger, supra note 98, at 580.
122. See id. at 584.
124. See id. at 1484.
try. Second, regarding externalization of costs, UCITA explicitly allows states adopting UCITA to transfer their costs onto the consumers of other states via the choice of law provision. For example, states are already complaining about the “Maryland minefield,” which is the “burgeoning practice of inserting clauses in IT contracts that call for disputes to be governed by Maryland law.” Therefore, Maryland reaps the benefits of attracting high-tech corporations while forcing other states to bear the costs of such legislation.

3. Difficult Policy Choices

As a result of these concerns, a race-to-the-top is not likely to emerge for several years. In the interim, states will have two alternatives: to adopt a bomb-shelter statute like Iowa or to wait and see how UCITA legislation will play itself out in Maryland and Virginia. Although fears of cost-externalization such as the “Maryland minefield” might convince many states to follow Iowa’s lead, most states appear to be interested in at least giving UCITA a chance to prove itself in Virginia and Maryland. Only

125. The very nature of consumer interests versus those of business interests makes it less likely that consumer interests will receive adequate representation, even in representative bodies, such as the state legislatures and the Congress. ‘Consumers’ is a broad category of individuals—almost as broad as the public itself. Interest group theory, however, indicates that smaller groups are those most likely to form an effective coalition to advance their collective interests. Patchel, supra note 115, at 127.

126. See Bebchuck, supra note 123, at 1485-86.

127. UCITA Is the Wrong Answer, EWEEK FROM ZDWARE, Dec. 3, 2000, at 58. For example, Horizon Blue Cross/Blue Shield of New Jersey was forced to sign a contract with an unnamed software vendor that adamantly insisted that a version of the law enacted in Maryland at the start of this month be applied to the contract. Patrick Thibodeau, Users Look to FTC for Help on Reigning in UCITA, INFOWORLD DAILY NEWS, Oct. 26, 2000.

128. See Holly A. Heyser, Virginia Law Enforces Software Licensing Agreements, VIRGINIAN-PILOT, Feb. 24, 2000, at D1. As UCITA opponent Mary Alice Baish of the American Association of Libraries saw in a consistent pattern outside of Maryland, “These things get looked at, then legislators learn about the controversy and table it.” Washington, supra note 48, at 1C; see also Foster, supra note 35, at 93.

Nevertheless, at least this gives Virginia a year to realize it’s made a mistake. And since many other states were waiting to see what Virginia would do, many of them will now wait to see what, if any, changes the advisory committee makes to the draft. After all, as a uniform state law, UCITA is supposed to be adopted in the same form by all states, but uniformity may be very difficult to achieve.

Id.
by testing the statutes empirically will the states be able to truly evaluate UCITA's potential—for better or for worse.\footnote{129}

Should the states find the law to be successful in both attracting Internet business and placating consumer concerns, UCITA will probably be adopted by a majority of the states in short order. However, should they find Iowa's concerns to be justified, even in small part, they may enact their own bomb-shelter statutes against the present draft of UCITA, significantly delaying any hopes of a race-to-the-top for UCITA. Although such poison pills will not entirely prevent future efforts to pass UCITA-like legislation, it would certainly doom the current draft of UCITA and force Maryland and Virginia to rethink seriously their "legislative achievements."

IV. CONCLUSION

Immediately following the release of UCITA, several states quickly snatched up the uniform law to attract technology capital while others sought to shield themselves from UCITA jurisdiction altogether. Most states, however, have not taken a position on UCITA one way or the other. Rather, they are patiently waiting on the sidelines for the dust to settle.

For UCITA to become uniform law throughout the United States, it is essential that a majority of such states move from the sidelines into a race-to-the-top. Such a race is unlikely to emerge, however, until the current fears and suspicions discussed above have been largely placated. Until states manage to overcome concerns that the NCCUSL and state legislators in Virginia and Maryland were captured by the software industry, and that efforts to enact UCITA resemble a race-to-the-bottom, UCITA will not become uniform law.

Perhaps the one development that would alleviate most of these concerns would be UCITA's success in Virginia and Maryland. If UCITA proves successful in Virginia and Maryland, adoption by most states will probably follow shortly thereafter. If, however, their suspicions prove correct, UCITA will not be adopted and contract law will continue to lack adequate means to deal with computer information transactions. Therefore, UCITA's success or failure largely depends on its performance in Virginia and Maryland. States will be watching these two states very closely over the next few years to figure out whether Iowa's bomb-shelter statute was reactionary and anachronistic or a necessary brake on the rapid and unbridled development of technology law.

\footnote{129. See Fischel, supra note 103, at 920.}
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ADDITIONAL DEVELOPMENTS